



Payment Cards and Card Transactions

Payment Statistics

2016

Year III · July 2017



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Overview of the cards market of the Republic of Croatia

Payment card issuers

25 credit institutions
2 electronic money institutions

Acquirers of payment cards at EFTPOS terminals

19 credit institutions
2 electronic money institutions

Card schemes (in alphabetic order)

Four-party card schemes

- MasterCard®
- Visa®

Three-party card schemes

- American Express®
- Diners Club International®

Basic statistics of the Republic of Croatia

Population/business entities

Population: **4.285** million
Business entities (non-consumers): **0.255** million
Surface: **56,594** km²

Number of cardholders

Consumers: **3.342** million
Business entities (non-consumers): **0.207** million

Number of payment cards

Debit: **6.944** million
Credit: **1.878** million

National card payments (issuers in the RC)

Number: **379.03** million
Value: HRK **131,904.86** million

Infrastructure

EFTPOS terminals: **106,081**
ATMs: **4,543**

Payment instruments (purchase of goods and services – fiscalisation)

Number:
88% cash
11% payment card
1% other

Value:
58% cash
38% payment card
4% other

1 Introduction

Competitive and efficient financial services markets are very important for every economy, including the economy of the Republic of Croatia (hereinafter referred to as 'RC'). A clear and transparent legal framework is one of the preconditions for an efficient and competitive market. The Payment Services Directive 2007/64/EC¹, whose provisions have been transposed into the Payment System Act (Official Gazette 133/2009 and 136/2012; hereinafter referred to as 'PSA'), regulates the payment services for the entire European Economic Area in a uniform manner, this first time this has been the case. The PSA regulates payment services, payment service providers, the obligations of payment service providers to provide payment service users with information as well as other rights and obligations related to the provision and use of payment services, transaction accounts, the establishment, operation and supervision of payment institutions and the establishment, operation and supervision of payment systems. The service of issuing and acquiring payment cards is one of the payment services regulated by the PSA.

The payment card is the most frequently used payment instrument in the RC, and the market of payment cards and card payments has recorded constant growth and development. Over ten years, the number of national card-based payment transactions increased by 86%, i.e. from the 203.68 million executed in 2006 to the 379.05 million executed in 2016. In addition, in the same period the value of national card-based payment transactions increased by 55%, i.e. from HRK 85,331.34 million to HRK 131,904.86 million.

Card payments are the most frequently used form of payment in EU countries (hereinafter referred to as 'EU'). According to data of the European Central Bank (hereinafter referred to as 'ECB'), in 2000, the number of card-based payment transactions was at the level of about 13 billion transactions a year.² According to the same ECB data, the number of card-based payment transactions increased by 47%, i.e. from the 37,092.02 million executed in 2011 to the 52,952.76 million executed in 2015. In addition, in the same period, the value of national card-based payment transactions increased by 35%, i.e. from EUR 1,911.32 billion to EUR 2,583.42 billion. Moreover, the number of card-based payment transactions per capita is still rising in all EU countries.

1 Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market.

2 European Central Bank data.

The purpose of this publication is to provide a comprehensive overview of the market of payment cards and card-based payment transactions in the RC in 2016, with a comparison of the data with those for 2015, which should be equally useful to users, payment service providers and the public in general.

1.1 Structure of the publication

The publication is divided into seven chapters.

The first chapter is the Introduction, which gives, in addition to the purpose and structure of the publication, a brief overview of the legal framework from which statistical data and basic methodological explanations have been collected.

The second chapter, under the title of ‘Structure of the card market and payments infrastructure’, gives an insight into the models of card schemes and an overview of the basic accepting devices for payment cards (ATMs and EFTPOS terminals).

In the third chapter, Payment cards market in the RC, data are presented on the number of payment cards and the degree of their technological development.

Card-based payment transactions, i.e. the fourth chapter, gives an insight into data submitted by payment service providers – issuers for all national and international card-based payment transactions made using payment cards, issued by these same issuers.

The fifth chapter, Acquiring of payment cards, provides insight into data submitted by payment service providers – acquirers for all national and international transactions of acquiring of payment cards. A comparison of the use of payment cards and cash in the RC is also given.

The sixth chapter is a glossary.

The seventh chapter contains a list of tables, figures and boxes from the publication.

1.2 Legal framework

The Republic of Croatia has completely aligned its legislation with the acquis in the area of payment operations. The PSA regulates payment services in the RC in the same way as they are regulated in the EU. Thus the services of payment cards issuing and acquiring are among the payment services defined by Article 3, item (5) of the PSA.

Statistical data on payment cards, card-based payment transactions and accepting devices for payment cards are collected according to the Decision on the obligation to submit data on the payment system and electronic money (Official Gazette 147/2013; hereinafter referred to as 'Decision'), which entered into force on 1 January 2014. The Decision prescribes the obligation of reporting to the Croatian National Bank (hereinafter referred to as 'CNB') on data with regard to the payment system and electronic money, as well as the content and manner of such reporting and reporting deadlines.

The Decision was adopted pursuant to two acts:

- the Payment System Act (Official Gazette 133/2009 and 136/2012); and
- the Electronic Money Act (Official Gazette 139/2010).

The Decision prescribes the scope of the data and also the reporting entities. In addition to data on national payment transactions, data on international payment transactions are also collected, and the reporting period is a month.

Pursuant to the Decision, the reporting entities are the following:

1. credit institutions (banks and savings banks) with registered offices in the RC;
2. electronic money institutions with registered offices in the RC;
3. payment institutions with registered offices in the RC;
4. branches of third-country credit institutions (or branches of banks) with registered offices in the RC;
5. branches of third-country electronic money institutions with registered offices in the RC;
6. branches of credit institutions from other member states with registered offices in the RC;
7. branches of electronic money institutions from other member states with registered offices in the RC;
8. branches of payment institutions from other member states with registered offices in the RC;

9. agents of payment service providers from other member states with registered offices in the RC, through which these payment service providers provide payment services in the RC, provided that these agents have been authorised to provide payment services; and
10. the Financial Agency.

The Decision prescribes the compilation and submission of data on the payment system and electronic money through 11 Reports:

- “Credit transfer” Report;
- “Money remittance” Report;
- “Direct debit” Report;
- “Credits to/debits from the accounts by simple book entry” Report;
- “Cash” Report;
- “Cheques and bills of exchange” Report;
- “Issuing of payment cards” Report;
- “Accounts” Report;
- “Infrastructure” Report;
- “Acquiring of payment cards” Report; and
- “Legal authority” Report.

The publication gives an overview of payment cards and card-based payment transactions for 2016 with a comparison of data with the data for 2015 and partially for 2014 through statistical data collected in three reports: Issuing of payment cards, Acquiring of payment cards and Infrastructure.

1.3 Methodology

The methodology of collecting data in accordance with the Decision is based on predefined terms, which are harmonised with legal provisions, the ECB’s Regulation (EU) No 1409/2013 of 28 November 2013 on payment statistics (ECB/2013/43)³ and other standards accepted in the cards market.

It was data obtained from payment service providers (reporting entities) that were primarily used in preparing the publication. A much smaller share of data was collected from business entities – providers of card infrastructure services (Sub-chapter 2.2) and in the data of the Ministry of Finance of the Republic of Croatia – Tax Administration (Sub-chapter 5.2).

³ Regulation (EU) No 1409/2013 of the European Central Bank of 28 November 2013 on payment statistics (ECB/2013/43).

The payment service providers (reporting entities), whose data were used in the preparation of the publication include:

1. credit institutions (banks) that have obtained authorisation from the CNB, which includes authorisation to provide the payment services of issuing and acquiring of payment cards; and
2. electronic money institutions⁴ that have obtained authorisation from the CNB to provide the payment services of issuing and acquiring of payment cards.

The publication provides a complete overview of the cards market in the RC for 2016, i.e. it presents aggregated statistical data on:

- payments infrastructure – shown with the balance at the end of the last day of the reporting period (month);
- payment cards – shown at a monthly level or with the balance at the end of the last day of the reporting period (month);
- card-based payment transactions – shown at a monthly or an annual level;
- transactions of the acquiring of payment cards – shown at a monthly or an annual level.

Data on card-based payment transactions are collected in the original currency, i.e. in the currency in which the transaction takes place (transaction currency). For the purposes of the publication, all transactions in other currencies are recalculated in kuna at the CNB's midpoint exchange rate on the last day of the reporting period. Data on the par value of transactions are shown in kuna without lipa.

Detailed methodological explanations related to the individual terms of the Report are given in each chapter separately.

The basic terms defined by the PSA, which refer to the area of payment cards and card-based payment transactions, are the following:

- **'payment card'** means a payment instrument enabling its holder to make payments for goods and services either through an accepting device for payment cards or remotely, and/or to withdraw cash and/or use other services at an ATM or another self-service device;
- **'national payment transaction'** means a payment transaction the execution of which involves a payer's payment service provider and a payee's payment service provider, or only one payment service provider, operating in the RC;

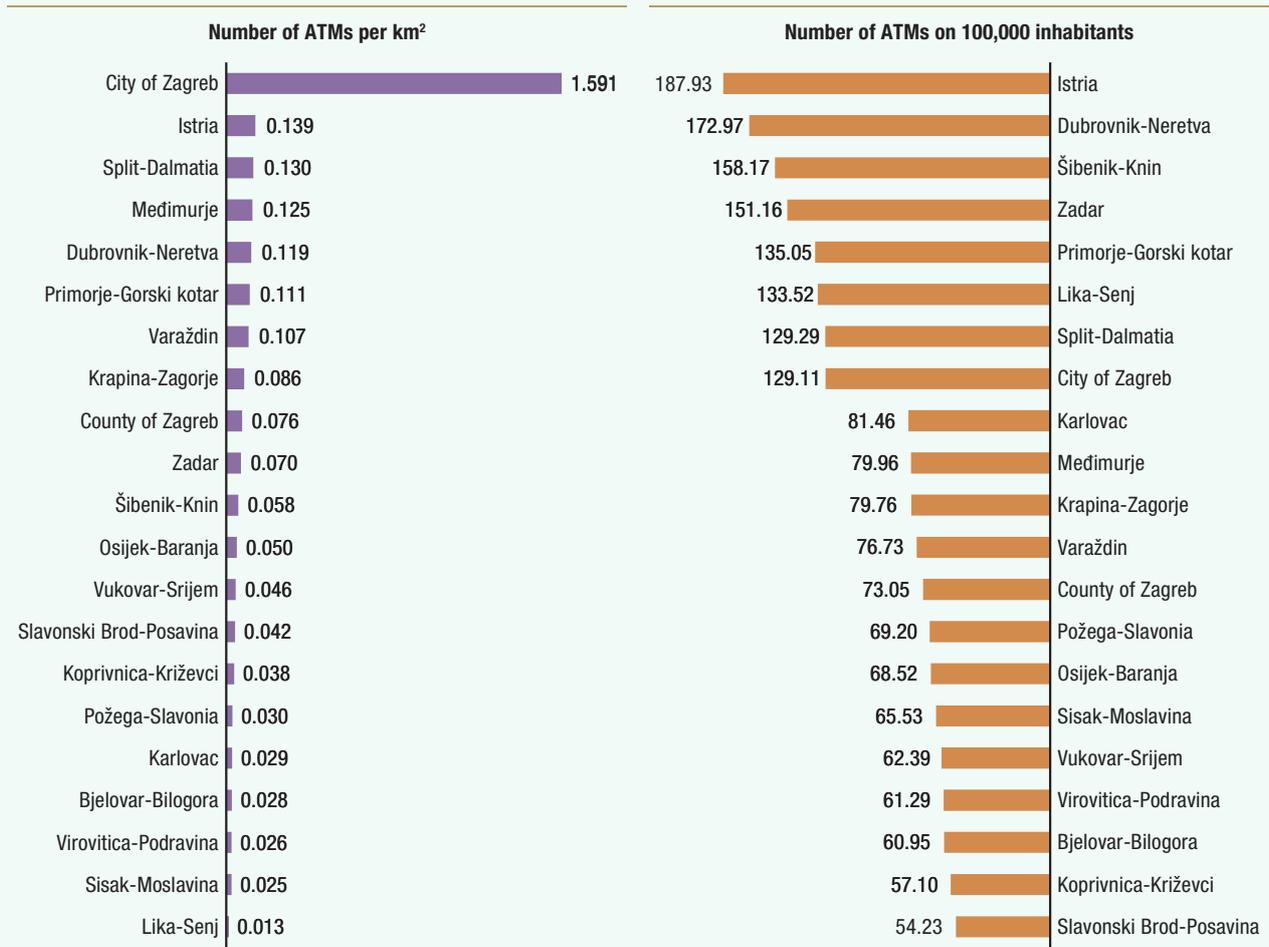
⁴ Not including data submitted by electronic money institutions that at the same time carry out the activity of telecommunications services.

- **‘international payment transaction’** means a payment transaction the execution of which involves two payment service providers one of which (of either the payer or the payee) operates in the RC, while the other payment service provider (of either the payer or the payee) operates pursuant to the regulations of a third country or another member state;
- **‘card payment scheme’** means a set of functions, procedures, rules and devices enabling the holder of a payment card to effect a payment and/ or cash withdrawal transaction with a payment service provider.

2 Structure of the card market and payments infrastructure

This chapter shows card payment schemes (Sub-chapter 2.1) and payments infrastructure by accepting devices for payment cards, such as ATMs and EFTPOS terminals (Sub-chapter 2.2).

Box 1 Distribution of terminals in the RC on 31 December 2016



ATMs and EFTPOS terminals in the RC

Total number of ATMs	4,543
Total number of EFTPOS terminals	106,081
Number of ATMs on 100,000 inhabitants	106.02
Number of EFTPOS terminals on 100,000 inhabitants	2,475.70
Number of ATMs per km ²	0.08
Number of EFTPOS terminals per km ²	1.87

Source: CNB.

2.1 Card payment schemes

‘Card payment scheme’ means a set of functions, procedures, rules and devices enabling the holder of a payment card to effect a card-based payment transaction and/or cash withdrawal with a payment service provider.

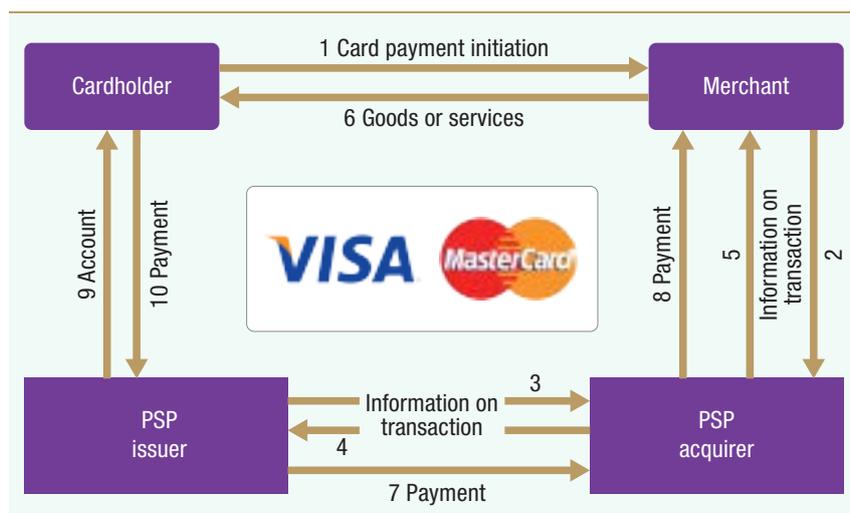
In the RC, two models of card schemes are recognised: the model with four stakeholders, i.e. the four-party card scheme and the model with three parties or stakeholders, i.e. the three-party card scheme.

Four-party card scheme in the RC

In the four-party card scheme in the RC the stakeholders are: the cardholder – payer, the merchant – payee, the payment service provider as the payment card issuer (hereinafter referred to as ‘issuer’) and the payment service provider as the payment card acquirer (hereinafter referred to as ‘acquirer’).

- **Cardholder – payer:** consumer and/or non-consumer, i.e. a natural and/or legal person initiating a card-based payment transaction using a payment card.
- **Merchant – payee:** legal or natural person accepting a payment card issued by the issuer that has established an agreement with the acquirer.
- **Issuer:** payment service provider that has issued the cardholder (payer) with the payment card that serves to initiate card-based payment transactions.

Chart 1 Four-party card scheme in the RC



Note: The figure shows the course of a card-based payment transaction between the cardholder, the merchant, the acquirer and the issuer at a physical point of sale (EFTPOS terminal) with the physical presence of the cardholder.

Source: CNB.

- **Acquirer:** payment service provider that provides payment card acquiring and the processing of a card-based payment transaction for the payee (merchant), which results in the transfer of cash to the payee (merchant).

The course of execution of a card payment in the four-party card scheme between the cardholder, the merchant, the acquirer and the issuer at a physical point of sale, i.e. EFTPOS terminal with the physical presence of the cardholder:

1. The cardholder uses a payment card at a merchant's to initiate a card payment for the purchase of goods and services.
2. The cardholder initiates a card-based payment transaction to the acquirer at an EFTPOS terminal, through the merchant, i.e. data are transmitted to the acquirer through the EFTPOS terminal.
3. The acquirer forwards the data on the transaction to the issuer for authorisation.
4. The issuer verifies and authorises the transaction and notifies the acquirer about it.
5. After receiving the authorisation from the issuer, the acquirer notifies the merchant about it through the EFTPOS terminal.
6. After the transaction has been authorised, the merchant delivers the goods and services to the cardholder.
7. The issuer forwards the amount to the acquirer for the purchase of goods and services carried out through a payment card.
8. The acquirer makes funds available to the merchant.
9. The issuer sends data on the cost of the transaction made through the payment card to the cardholder.
10. The cardholder settles the obligation for the transaction made through the payment card.

Currently, MasterCard® and Visa® four-party card schemes are operational in the territory of the RC. Both debit and credit payment cards are issued in the four-party card scheme. In 2016, in all 26 issuers/ stakeholders of the four-party card scheme were recorded.

Three-party card scheme in the RC

In the three-party card scheme in the RC the stakeholders are: the cardholder – payer, the merchant – payee, the payment service provider as the payment card issuer (hereinafter referred to as ‘issuer’), which is at the same time the payment service provider as the payment card acquirer (hereinafter referred to as ‘acquirer’).

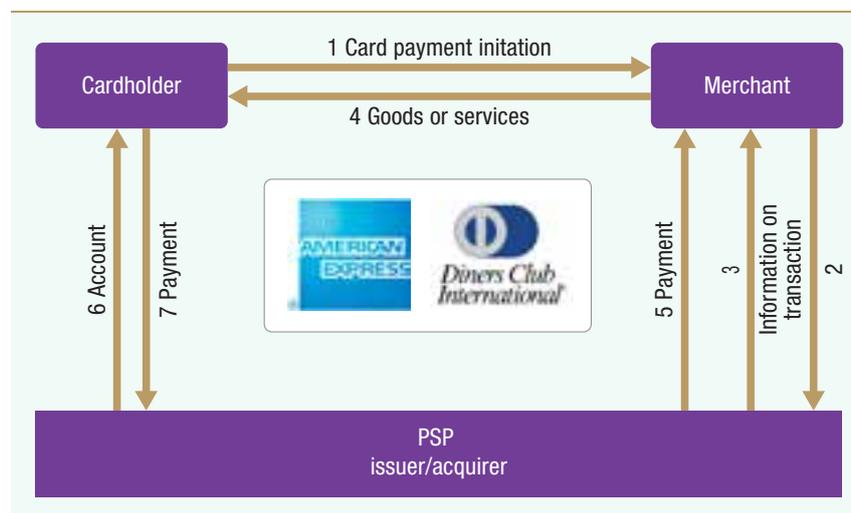
- **Cardholder – payer:** consumer and/or non-consumer, i.e. a natural and/or legal person initiating a card transaction using a payment card.

- **Merchant – payee:** legal or natural person/payee, accepting the payment card issued by the issuer that has established an agreement with the acquirer.
- **Issuer/acquirer:** in the three-party card scheme, the same payment service provider is the issuer and the acquirer.

As the issuer, the payment service provider is bound by a contract with the cardholder, and it has issued the cardholder (the payer) with a payment card, which serves for initiating card-based payment transactions.

As the acquirer, the payment service provider is bound by a contract with the payee (merchant), to whom it ensures the acquiring of the payment card and the processing of the card-based payment transaction, which results in the transfer of funds to the payee (merchant).

Chart 2 Three-party card scheme in the RC



Note: The figure shows the course of a card-based payment transaction between the cardholder, the merchant, the issuer that is at the same time the acquirer at a physical point of sale (EFTPOS terminal) with the physical presence of the cardholder.

Source: CNB.

The course of execution of a card payment in a three-party card scheme between the cardholder, the acquirer and the issuer at a physical point of sale, i.e. EFTPOS terminal involving the physical presence of the cardholder:

1. The cardholder uses a payment card at a merchant's to initiate a card payment for the purchase of goods and services.
2. The cardholder initiates a card-based payment transaction to the acquirer at an EFTPOS terminal, through the merchant, i.e. data are transmitted to the acquirer through the EFTPOS terminal.
3. The issuer/acquirer verifies and authorises the transaction and notifies the merchant about it through the EFTPOS terminal.

4. After the transaction has been authorised, the merchant delivers the goods and services to the cardholder.
5. The issuer/acquirer makes funds available to the merchant.
6. The issuer/acquirer sends data on the cost of the transaction made through the payment card to the cardholder.
7. The cardholder settles the obligation for the transaction made through the payment card.

Three-party card schemes are usually credit card schemes and no debit cards are issued under them. A total of two payment service providers – stakeholders in the three-party scheme were recorded in 2016. Diners Club International® and American Express® are three-party card schemes in the territory of the RC.

2.2 Payments infrastructure

Data on the payments infrastructure are collected from payment service providers and from legal persons that are the owners of accepting devices for payment cards (EFTPOS terminals and ATMs) through which payment service providers – acquirers provide the payment service of acquiring payment cards.

In the market of the RC, on 31 December 2016, there were 111,560 terminals at which cards are accepted, of which 4,453 were ATMs, 106,081 EFTPOS terminals and 936 EFTPOS terminals for withdrawal and deposit that allow cardholders to initiate only the payment transactions of withdrawal and/or deposit of cash through a payment card, but not the payment of goods and services (Table 1).

Table 1 Total number of terminals acquiring payment cards in the RC

Accepting terminals	Total on 31 December 2014	Total on 31 December 2015	Total on 31 December 2016
ATMs	4,222	4,418	4,543
EFTPOS terminals	99,515	103,434	106,081
EFTPOS terminals for withdrawal and deposit	1,519	1,633	936

Source: CNB.

ATM

An ATM is an electromechanical terminal allowing cardholders to make cash withdrawals and/or deposits and to use the service of providing information and other services.

On 31 December 2016, 4,543 ATMs were recorded in the territory of the RC. The largest number of ATMs was recorded in the City of Zagreb (1,020), and the smallest number of ATMs was recorded in Virovitica-Podravina County (52) (Table 2). The total number of ATMs in the RC increased by 2.8% from 31 December 2015 (Table 1).

ATMs can be broken down by functions and features.

Table 2 Number of ATMs by counties in the RC
on 31 December 2016

County	Total number of ATMs
County of Zagreb	232
Krapina-Zagorje	106
Sisak-Moslavina	113
Karlovac	105
Varaždin	135
Koprivnica-Križevci	66
Bjelovar-Bilogora	73
Primorje-Gorski kotar	400
Lika-Senj	68
Virovitica-Podravina	52
Požega-Slavonia	54
Slavonski Brod-Posavina	86
Zadar	257
Osijek-Baranja	209
Šibenik-Knin	173
Vukovar-Srijem	112
Split-Dalmatia	588
Istria	391
Dubrovnik-Neretva	212
Međimurje	91
City of Zagreb	1,020
Total	4,543

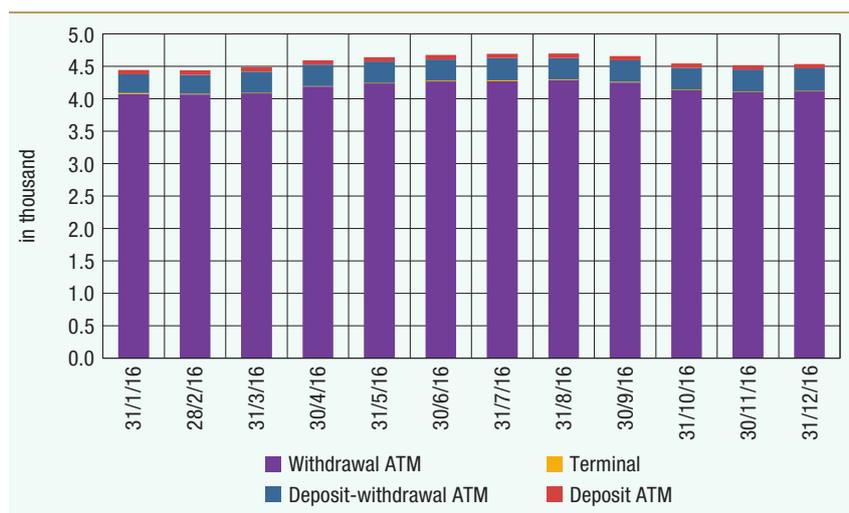
Source: CNB.

ATM functions are divided by payment services, i.e. by the function of cash deposit and the function of cash withdrawal.

The breakdown of ATMs by functions also shows the data on ATMs that allow users to use different services, such as the review of payment account transactions, the purchase of vouchers, the use of electronic banking, etc., at which it is not possible to effect the payment services of cash deposits, cash withdrawals and execution of credit transfers. For the purposes of the publication, such an ATM is called a 'terminal'.

According to their functions, we can distinguish four types of ATM in the territory of the RC (Figure 1).

Figure 1 Number of ATMs in the RC according to functions



Note: Data refer to the balance on the last day of each reporting month in 2016.
Source: CNB.

On 31 December 2016, 4,113 withdrawal ATMs, 346 deposit-withdrawal ATMs, 10 terminals and 66 deposit ATMs were recorded in the territory of the RC (Figure 1).

On 31 December 2016, of the total number of ATMs, 1,454 of them were in a video surveillance system and 946 were in a secure location. ATMs in a secure location are ATMs located in a special, enclosed area for that purpose, and physical access is ensured by applying adequate measures of physical and/or technical protection. An ATM can be categorised in both of the above features.

EFTPOS terminal

An EFTPOS terminal (electronic funds transfer at point of sale) is an electronic terminal allowing cardholders to initiate card-based payment transactions at a point of sale.

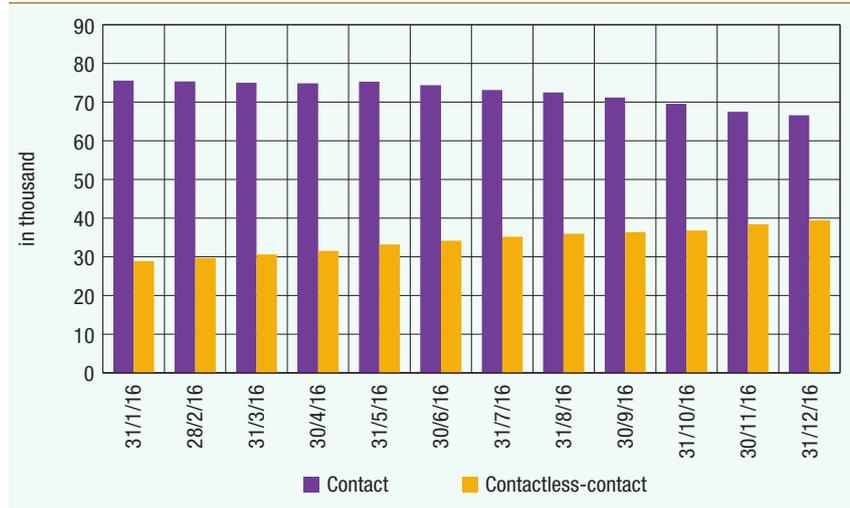
On 31 December 2016, a total of 106,081 EFTPOS terminals were recorded, a 2.6% increase from 31 December 2015 (Table 1).

EFTPOS terminals can be divided into contact and contactless-contact terminals. Contact EFTPOS terminals support the acquiring of payment cards, which contain records based only on a chip and/or magnetic stripe. Contactless-contact EFTPOS terminals support the acquiring of payment cards, which, in addition to the record based on a magnetic stripe and/or chip, also contain records based on contactless technology (proximity card reading, NFC, etc.).

As in 2015, in 2016, within the category of EFTPOS terminals, the number of contact EFTPOS terminals continued to decline from 75,027,

as recorded on 31 December 2015, to 66,621, as recorded on 31 December 2016. However, the number of contactless-contact terminals continued to increase from 28,407 to 39,458, accounting for 37% of all EFTPOS terminals on 31 December 2016 (Figure 2).

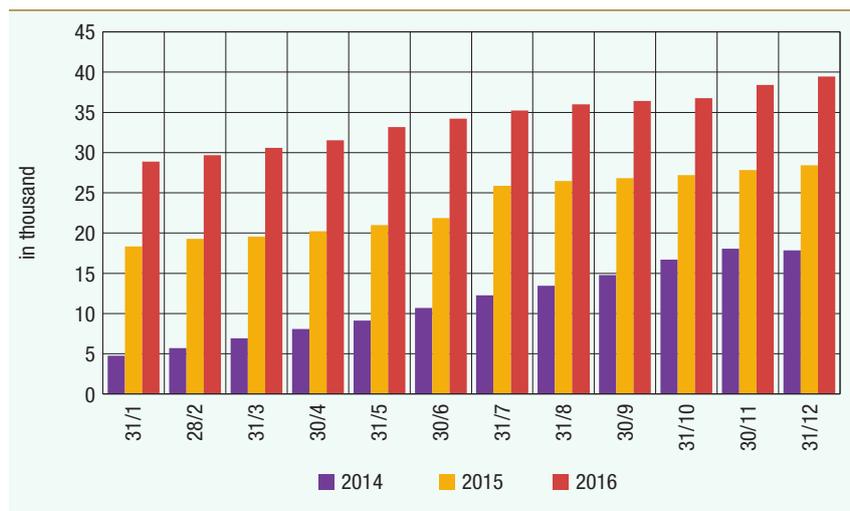
Figure 2 Number of EFTPOS terminals in the RC



Note: Data refer to the balance on the last day of each reporting month in 2016.
Source: CNB.

The number of contactless-contact terminals increased from January 2014. On 31 December 2015, 28,407 contactless-contact EFTPOS terminals were recorded, accounting for a 59% increase from 31 December 2014. In addition, on 31 December 2016, 39,458 contactless-contact EFTPOS terminals were recorded, a 39% increase from 31 December 2015 (Figure 3).

Figure 3 Number of contactless-contact EFTPOS terminals in the RC



Note: Data refer to the balance on the last day of each reporting month.
Source: CNB.

EFTPOS terminal for withdrawal and deposit

An EFTPOS terminal for withdrawal and deposit is a terminal that allows cardholders to initiate only the payment transactions of the withdrawal and/or deposit of cash using a payment card. This terminal is most frequently located in the premises of a third person, which, pursuant to a contract, operates on behalf and for the account of the payment service provider (e.g. the Financial Agency, Hrvatska pošta, etc.).

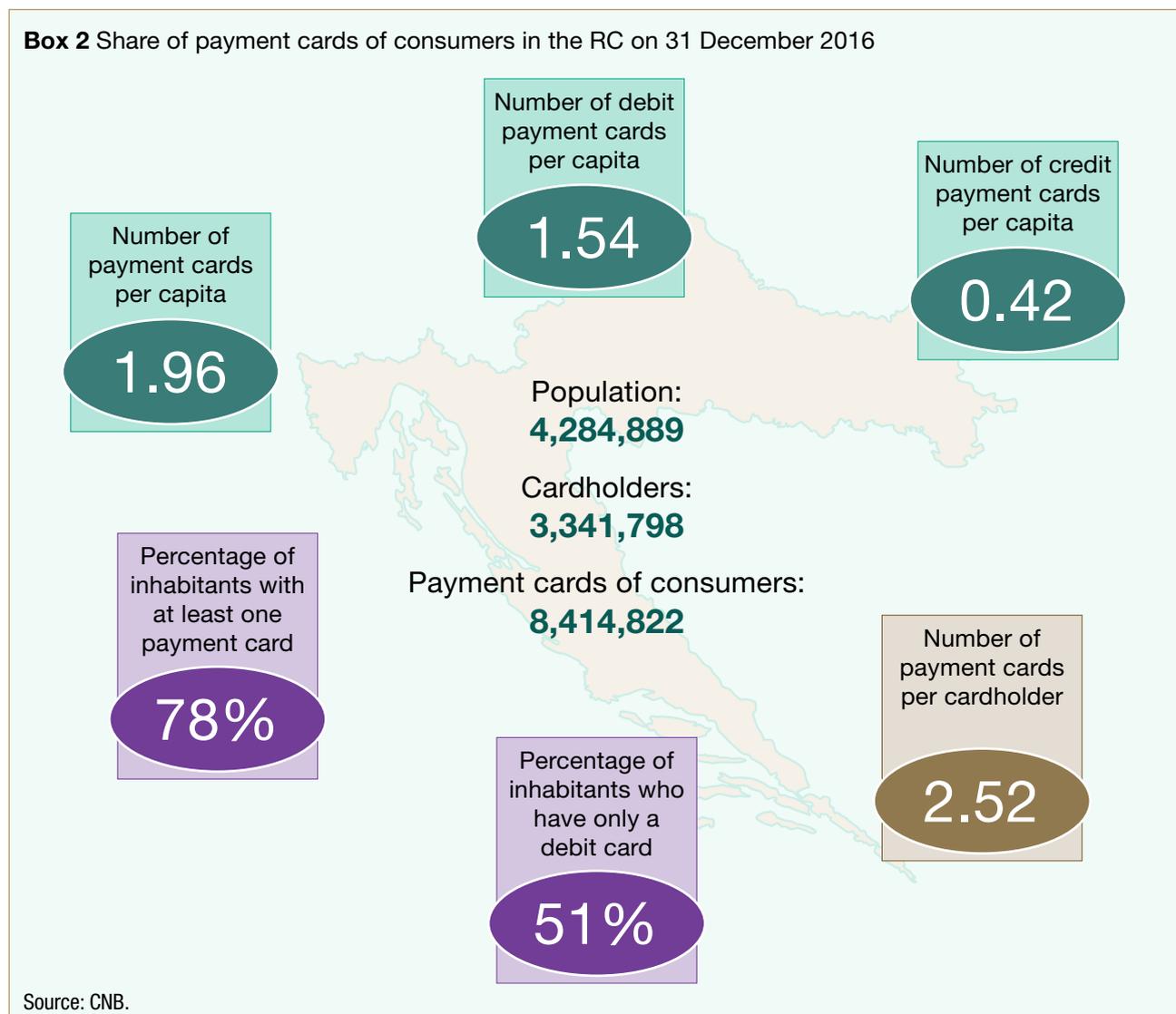
On 31 December 2016, a total of 936 EFTPOS terminals for withdrawal and deposit were recorded, while on 31 December 2015, there were 1,633 EFTPOS terminals for withdrawal and deposit (Table 1). The decline in the number of EFTPOS terminals for withdrawal and deposit is due to the technological improvement of some of the terminals, which in addition to deposits and withdrawals also allow purchases of goods and services, so that such terminals are categorised as EFTPOS terminals.

3 Payment cards market in the RC

Statistical data on payment cards issued by payment service providers – issuers in the RC are presented in this chapter.

Payment service providers – issuers (hereinafter referred to as ‘issuers’) in the RC include:

1. credit institutions (banks) that have obtained authorisation from the CNB, which includes the authorisation to provide the payment service of the issuance of payment cards; and
2. electronic money institutions⁵ that have obtained the authorisation of the CNB to provide the payment service of issuing payment cards.



⁵ Not including data submitted by electronic money institutions that at the same time carry out the activity of telecommunications services.

The issuer may issue several payment cards to a single cardholder. Also, a cardholder may have payment cards issued by several issuers.

The chapter is divided into three parts:

- the first part contains an overview of the number of payment cards in the market of the RC (Sub-chapter 3.1);
- the second part contains an overview of the degree of technological development of payment cards (Sub-chapter 3.1.1);
- the third part contains an overview of the number of payment cards by holder (Sub-chapter 3.2).

3.1 Payment cards

‘Payment card’ means a payment instrument enabling its holder to make payments for goods and services either through an accepting device for payment cards or remotely, and/or to withdraw and deposit cash and/or use other services at an ATM or at other accepting devices for payment cards.

The basic breakdown of payment cards is according to maturity and settlement of expenses, i.e. according to the moment when the holder settles the expenses incurred on a payment card. Accordingly, payment cards are divided into debit (pay now), credit (pay later) and prepaid cards⁶ (pay in advance).

- **Debit payment cards** (hereinafter referred to as ‘debit cards’) allow the holder to pay for goods and services and withdraw cash through the ATM, other terminals and over the counter at credit institutions. When using a debit card, the cardholder’s payment account is debited for the incurred expense immediately after the execution of the card-based payment transaction, provided that there is coverage in the account. The coverage in the account also includes the amount of any unused allowed overdraft.
- **Credit payment cards** (hereinafter referred to as ‘credit cards’) allow the holder to pay for goods and services and withdraw cash through the ATM and other terminals.

The use of a credit card does not require the holder to ensure coverage in the payment account for the execution of a payment transaction at the time of its initiation. A credit line (limit) is granted to the credit card user for the execution of a payment transaction. Expenses incurred by using the credit card during a specific period are charged within deadlines

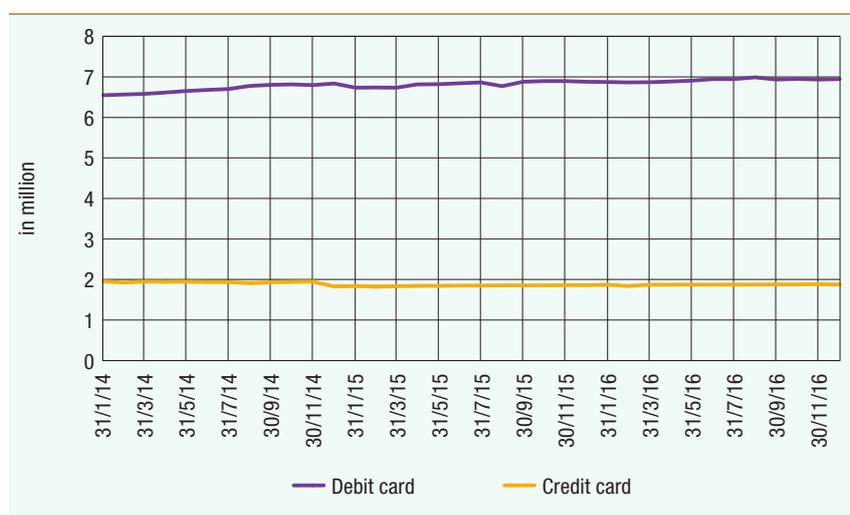
⁶ Statistical data on prepaid payment cards are not included in the overview of this publication.

defined by the agreement on the issuing of the credit card, i.e. after a specific time.

Credit cards include credit, charge, revolving, delayed debit and membership cards.

On 31 December 2016, a total of 8,822,820 payment cards of consumers and business entities (non-consumers) were recorded in the RC, of which 6,944,246 were debit cards (79%) and 1,878,574 were credit cards (21%). On 31 December 2016, the total number of payment cards increased by 1.9% from 31 December 2015. In the same period, the number of debit and credit cards increased by 0.9% and 1% respectively (Figure 4).

Figure 4 Number of payment cards



Note: Data refer to the total number of used, unused and blocked payment cards on the last day of each reporting month.

Source: CNB.

Payment cards are issued to consumers and/or legal persons (non-consumers). A consumer may be issued a basic and an additional payment card. A payment card user that is a business entity (non-consumer) may be issued only the basic payment card.

Table 3 Number of payment cards issued in the RC by user

on 31 December 2016

Type of payment card	Consumer		Non-consumer	Total
	Basic	Additional	Basic	
Debit card	5,519,722	1,088,701	335,823	6,944,246
Credit card	1,634,878	171,521	72,175	1,878,574
Total	7,154,600	1,260,222	407,998	8,822,820

Note: Data refer to the total number of payment cards on 31 December 2016.

Source: CNB.

On 31 December 2016, a total of 8,414,822 payment cards issued to consumers were recorded in the RC, 85% of which were basic payment cards (Table 3).

As explained in the introduction, payment cards are broken down into debit and credit cards. Credit cards can also be broken down by the type of contract between the issuer and cardholder and by the agreed manner of cost repayment. In accordance with the above, cards are broken down into debit cards, charge cards, revolving cards, delayed debit cards, credit cards and certain combinations of the above options.

On 31 December 2016, of the total number of cards in the RC, the most represented were debit cards with the share of 79%, followed by charge cards with the share of 8%, and cards with the delayed debit function and revolving cards with a 6% and 5% share respectively. The breakdown of payment cards by types is shown in Table 4.

Table 4 Number of payment cards issued in the RC by type of card on 31 December 2016

Type of payment card	Number of payment cards	Share
Debit card	6,944,246	78%
Charge card	670,997	8%
Delayed debit card	491,224	6%
Revolving card	409,551	5%
Credit card	187,246	2%
Other/membership	119,556	1%
Total	8,822,820	100%

Note: Data refer to the total number of payment cards on 31 December 2016.
Source: CNB.

A payment card may be in/on the following carrier mediums:

- a plastic card; and
- another carrier medium, such as the mobile phone, sticker (a payment card is stored or attached to/on another carrier medium), etc.

Of the total number of all payment cards, on 31 December 2016, 57,009 card stickers were recorded, of which 54,308 debit and 2,701 credit cards.

Payment cards by scheme

As explained in Sub-chapter 2.1, in the RC, debit and credit cards are issued in the four-party card scheme and only credit cards are issued in the three-party card scheme. Thus, a total of 7,881,322 or 89% of all payment cards were issued in the four-party card scheme system, of which 6,944,246 were debit cards and 937,076 were credit cards.

On 31 December 2016, in the RC, of the total number of credit cards, 937,076 or 49.88% of them were issued in the three-party card scheme system, while 941,498 or 50.12% of them were issued in the four-party card scheme system.

Payment cards statuses

An issued payment card may have one of these statuses: used, unused and blocked. The sum of used, unused and blocked payment cards makes up the total number of payment cards issued in the RC shown on the last day of each reporting month.

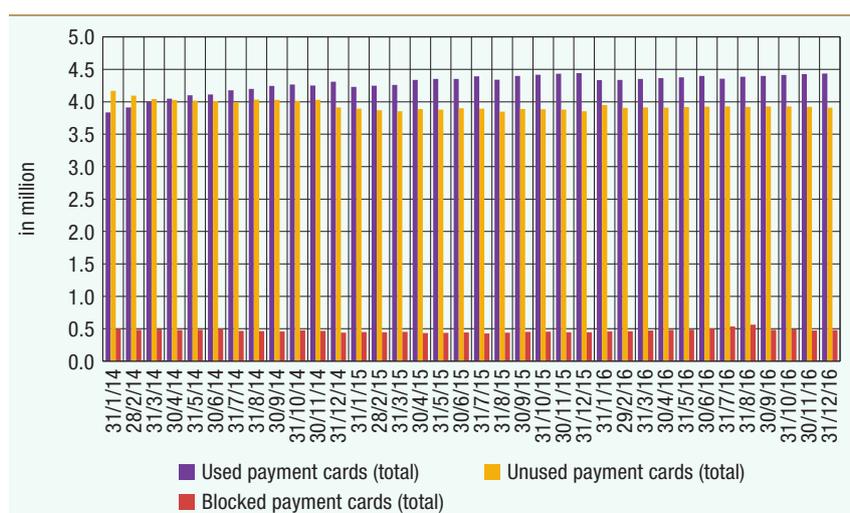
The term 'used' means that at least one card-based payment transaction was executed with the payment card over the past year, and the term 'unused' means that no card-based payment transaction was executed with the payment card over the past year. The term 'over the past year' means one year from the last day of the reporting period (month), and not a calendar year.

A 'blocked payment card' means a payment card in circulation that temporarily cannot be used for card-based payment transactions.

In 2016, the average monthly number of:

- used payment cards stood at 4.38 million;
- unused payment cards stood at 3.92 million;
- blocked payment cards stood at 0.49 million.

Figure 5 Number of used, unused and blocked payment cards



Note: Data refer to the total number of used, unused and blocked payment cards on the last day of each reporting month.

Source: CNB.

The received data on payment cards show that unused cards accounted for as much as 44.6% per month of the total number of payment cards in 2016. Used cards accounted for 49.8% and blocked cards for 5.6%.

A presentation of the number of used, unused and blocked payment cards at the end of each month in 2014, 2015 and 2016 is shown in Figure 5.

Newly issued and deactivated payment cards

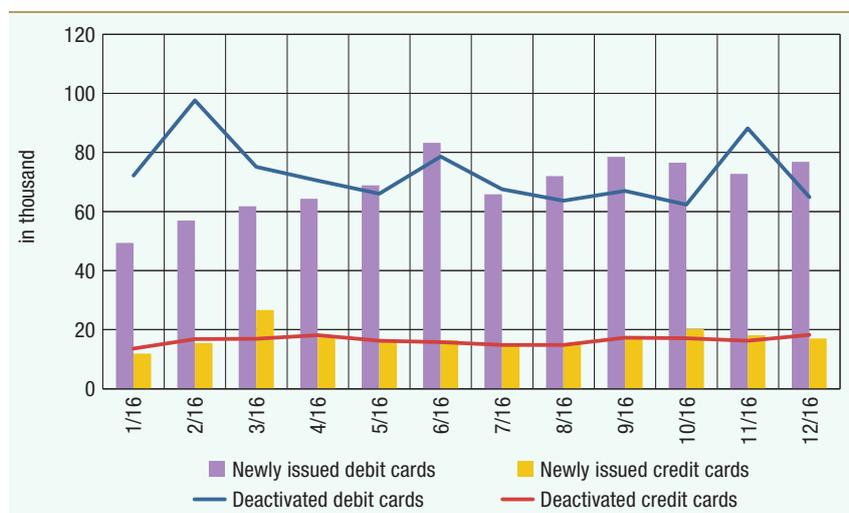
‘Newly issued payment card’ means a payment card that is issued to the holder for the first time during the reporting month. A payment card provided to the holder on the occasion of a regular reissue of the card, for instance, because of the expiry of the card’s validity period, card damage, etc., is not included in this status.

Data on payment cards with the status of ‘newly issued’ refer to the newly issued cards throughout the reporting month, and not to their status on the last day of the reporting month.

In 2016, a total of 1,033,382 payment cards were newly issued, of which 827,113 or 80% were debit cards and 206,269 or 20% were credit cards (Figure 6). In 2016, the average monthly number of newly issued debit cards was 68,926, and the average monthly number of newly issued credit cards was 17,189.

‘Deactivated payment card’ means a payment card the use of which for card-based payment transactions has been permanently disabled. Data

Figure 6 Number of newly issued and deactivated payment cards by type of card



Note: Data refer to the total number of newly issued and deactivated payment cards during each reporting month in 2016.

Source: CNB.

on payment cards with the status of 'deactivated' refers to deactivated cards throughout the reporting month.

In 2016, a total of 1,069,802 payment cards were deactivated, of which 873,714 or 82% were debit cards and 196,088 or 18% were credit cards (Figure 6).

A payment card can be deactivated at the user's initiative, or it can be deactivated by the issuer.

Of the total number of deactivated payment cards, 677,852 or 63% of them were deactivated at the user's initiative, while 391,950 or 37% of them were deactivated by the issuer.

3.1.1 Degree of technological development of payment cards in the RC

Employing different technologies, payment card issuers issue EMV chip cards, chip cards, magnetic and contactless cards and combinations of them to users.

Payment cards that possess both an EMV chip and a magnetic stripe (hereinafter referred to as 'EMV payment cards') currently prevail in the market of the RC, while the number of cards possessing only a magnetic stripe is constantly on the decline.

The EMV standard was started by a working group created in 1993 by the world's payment organisations: Europay, MasterCard and Visa. In fact, the name EMV is derived from the first letter of each of these three institutions. The standard covers the processing of microchip-based credit and debit cards (smart cards), i.e. it defines a set of rules with the aim of setting up secure and smooth communication between smart cards and accepting devices for payment cards. EMV standard-based cards are a significant improvement over magnetic stripe-based cards, primarily because of the higher level of security and the prevention of card fraud.

The total number of EMV payment cards:

- on 31 December 2014, stood at 8,039,663, accounting for 93% of the total number of all payment cards;
- on 31 December 2015, stood at 8,145,400, accounting for 93% of the total number of all payment cards;
- on 31 December 2016, stood at 8,259,687, accounting for 94% of the total number of all payment cards.

Contactless and contact payment cards

Depending on the applied technology of initiation of payment transactions, all payment cards can be divided in two basic types: contact and contactless.

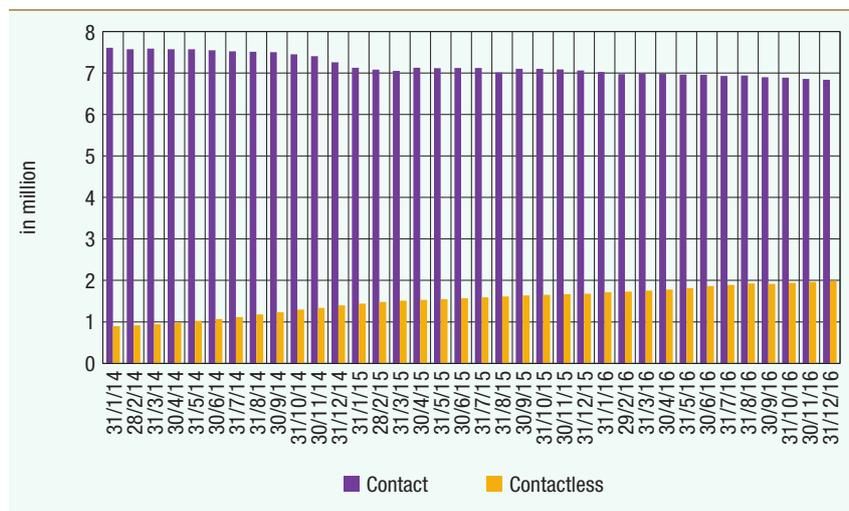
- **‘Contact payment card’** means a payment card that enables the execution of contact card-based payment transactions and contains records based on a chip and/or magnetic stripe. Contact card-based payment transactions are initiated by swiping or inserting a payment card through/into a device (e.g. an EFTPOS terminal).
- **‘Contactless payment card’** means a payment card that enables the execution of contact and contactless card-based payment transactions and contains records based on a chip and/or magnetic stripe, and records based on contactless technology. Contactless card-based payment transactions are initiated by the payment card being brought close to the accepting device for payment cards (e.g. an EFTPOS terminal), which possesses readers for contactless payments. As a rule, contactless payment cards retain all the functionalities of contact payment cards and have the additional possibility of initiating contactless card-based payment transactions.

Table 5 Number of contact and contactless payment cards issued in the RC on 31 December 2016

Type of payment card	Contact	Contactless	Total
Debit card	5,094,017	1,850,229	6,944,246
Credit card	1,743,731	134,843	1,878,574
Total	6,837,748	1,985,072	8,822,820

Note: Data refer to the total number of payment cards on 31 December 2016.
Source: CNB.

Figure 7 Number of contact and contactless payment cards



Note: Data refer to the total number of contact and contactless payment cards on the last day of each reporting month. Includes used, unused and blocked payment cards.
Source: CNB.

On 31 December 2016, of the total number of payment cards, 6,837,748 or 77.5% of them were contact and 1,985,072, i.e. 22.5% were contactless (Table 5). The share of contactless payment cards in total payment cards increased from 19.2%, as recorded on 31 December 2015, to 22.5%, as recorded on 31 December 2016. Of the total number of contactless payment cards, 1,850,229 or 93% were debit cards.

In 2016, the number of contact payment cards continued to decrease from 7,059,590, as recorded on 31 December 2015, to 6,837,748, as recorded on 31 December 2016, which represents a fall of 3%. In the same period, the number of contactless payment cards increased by 18.3%, i.e. from 1,679,403, as recorded on 31 December 2015, to 1,985,072, as recorded on 31 December 2016 (Figure 7). It can be assumed that further growth in the share of contactless cards will also depend on the dynamics of the usual replacement of old cards with new ones by the issuer.

3.2 Cardholders

This chapter gives an overview of the number of payment cards by holder. As already explained in the introduction, several payment cards may be issued to a single cardholder by the same issuer. Also, a cardholder may have payment cards issued by several issuers. This overview covers payment cards issued by issuers in the RC.

A cardholder may be a consumer and a business entity (non-consumer).

Consumer

On 31 December 2016, a total of 3,341,798 cardholders (consumers) were recorded, i.e. of the total RC population of 4,284,889⁷, 78% had at least one payment card.

Sixty-five per cent of all cardholders (consumers) hold payment cards issued by only one issuer, 26% hold payment cards issued by two issuers, and 9% of consumers hold payment cards issued by three or more issuers (Table 6).

On 31 December 2016, the total number of cardholders (consumers) holding a debit card stood at 3,324,778, i.e. 78% of the population of the RC hold at least one debit card. In addition, on 31 December 2015 the number of cardholders holding only a debit card stood at 2,205,337, i.e.

⁷ Croatian Bureau of Statistics: *Census of population, households and dwellings in 2011*.

Table 6 Number of cardholders in the RC (consumers)

Number of PSP issuers	Number of holders	Total debit cards	Total credit cards	Total payment cards
One	2,157,213	3,398,619	424,015	3,822,634
Two	869,867	2,109,415	776,671	2,886,086
Three	248,923	814,820	423,022	1,237,842
Four	54,535	225,498	141,751	367,249
Five and more	11,260	60,071	40,940	101,011
Total	3,341,798	6,608,423	1,806,399	8,414,822

Note: Data refer to the total number on 31 December 2016.

Source: CNB.

66% of the population of the RC hold only debit cards, i.e. do not hold a credit card. The total number of cardholders (consumers) holding a credit card stood at 1,136,461 or 27% of the population of the RC.

Business entities (non-consumers)

On 31 December 2016, a total of 207,313 cardholders – business entities (non-consumers) were recorded.

Table 7 gives a presentation of the number of cardholders – business entities (non-consumers) by the number of issuers. It is evident that the largest number of cardholders – business entities (non-consumers), 79.15% of them, hold payment cards issued by one issuer (Table 7).

Table 7 Number of cardholders in the RC – business entities (non-consumers)

Number of PSP issuers	Number of holders	Total debit cards	Total credit cards	Total payment cards
One	164,092	222,520	24,390	246,910
Two	35,770	82,932	26,634	109,566
Three	5,946	21,151	14,444	34,595
Four	1,213	5,845	4,828	10,673
Five and more	292	3,375	1,879	5,254
Total	207,313	335,823	72,175	407,998

Note: Data refer to the total number on 31 December 2016.

Source: CNB.

Of the total number of cardholders (non-consumers), 54% hold only one payment card, and 29% hold two payment cards. In addition, of the total number of cardholders (non-consumers), 85.24% hold only debit cards, 11.96% hold debit and other payment cards, and 2.8% hold other payment cards.

4 Card-based payment transactions

This chapter presents statistical data on the total number and value of national and international payment transactions made using payment cards issued by payment service providers – issuers in the RC.

Payment service providers – issuers (hereinafter referred to as ‘issuers’) in the RC include:

1. credit institutions (banks) that have obtained authorisation from the CNB that includes authorisation to provide the payment service of the issuance of payment cards; and
2. electronic money institutions⁸ that have obtained the authorisation of the CNB to provide the payment service of issuing payment cards.

‘Card-based payment transaction’ means a service based on a payment card’s acquiring infrastructure and card scheme business rules to make a payment transaction by means of a debit or a credit card.

Card-based payment transactions may be:

- **national card-based payment transactions** – card-based payment transactions the execution of which involves a payer’s payment service provider (issuer) and a payee’s payment service provider (acquirer), or only one payment service provider (the issuer, which is at the same time the acquirer), both of which operate in the RC.

The total number and value of card-based payment transactions executed in the RC by consumers and business entities (non-consumers) with an issuer’s payment cards are included.

- **international card-based payment transactions** – card-based payment transactions the execution of which involves two payment service providers, one of which (the issuer) operates in the RC, and the other (the acquirer) operates pursuant to the regulations of a third country or another member state.

The total number and value of payment transactions executed outside the RC (in other member states or third countries) by consumers and business entities (non-consumers) with issuer’s payment cards are included.

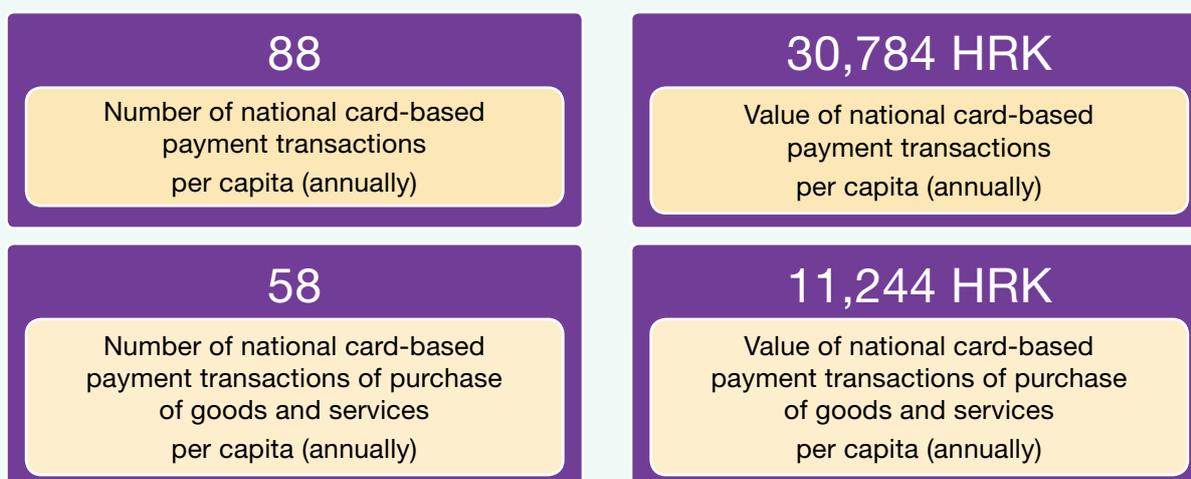
⁸ Not including data submitted by electronic money institutions that at the same time carry out the activity of telecommunications services.

Along with the development of the payment cards market, card-based payment transactions have also developed, for they are no longer restricted to the transactions of the purchases of goods and services through EFTPOS terminals and transactions of cash withdrawal and deposit at ATMs, but also cover the transactions of the purchases of goods and services through the Internet, direct debit and standing order transactions through a payment card and cash withdrawals through an EFTPOS terminal and other channels and methods.

The chapter is divided into three parts:

- the first part shows the total number and value of national and international card-based payment transactions executed using issuers' payment cards (Sub-chapter 4.1);
- the second part shows the total number and value of national card-based payment transactions executed using issuers' payment cards (Sub-chapter 4.1.1);
- the third part shows the total number and value of international card-based payment transactions executed using issuers' payment cards (Sub-chapter 4.1.2).

Box 3 National card-based payment transactions per capita in 2016



Source: CNB.

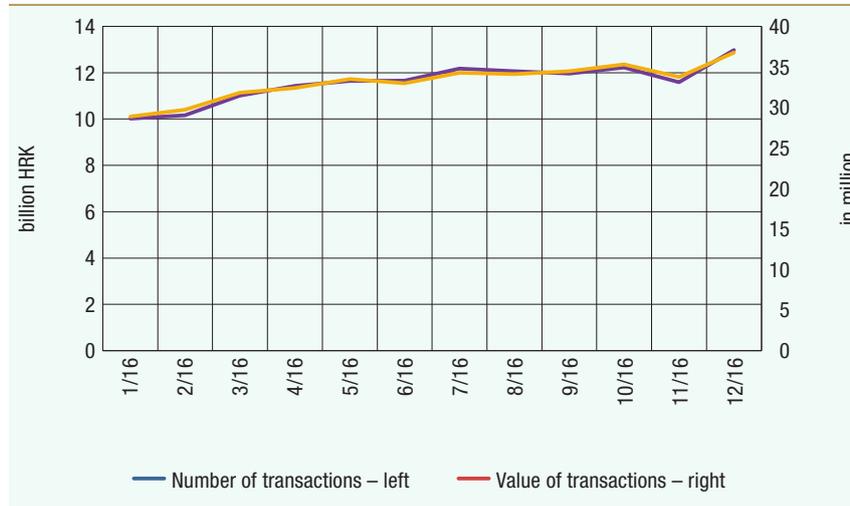
4.1 Total card-based payment transactions

This sub-chapter presents statistical data on national and international card-based payment transactions executed by issuers' payment cards.

In 2016, 25 credit institutions and 2 electronic money institutions were recorded; they issue payment cards in the RC, and their users executed a total of 397.97 million of card-based payment transactions with a total

value of HRK 138,912.29 million (Figure 8). In 2016, the number of total card-based payment transactions increased by 8.7%, and their value increased by 4.8% from 2015.

Figure 8 Number and value of national and international card-based payment transactions



Note: Data refer to the total number and value of national and international card-based payment transactions in 2016.
Source: CNB.

The average monthly number of card-based payment transactions stood at 33.16 million, and the average monthly value of transactions at HRK 11,576.02 million.

On average, 7.6 card-based payment transactions were executed monthly per used payment card issued in the RC, worth a total of HRK 2,641.

4.1.1 National card-based payment transactions

This sub-chapter presents statistical data on national card-based payment transactions executed by an issuer's payment cards.

National card-based payment transactions include:

- payment transactions of the purchases of goods and services using a payment card;
- payment transactions of cash withdrawals using a payment card;
- payment transactions of cash deposits using a payment card;
- standing orders and direct debits charged through a payment card; and
- fees, membership fees, interest and similar, charged from an issuer through a payment card.

Table 8 Number and value of national card-based payment transactions by type of payment card in HRK

Type of payment card	Purchases of goods and services	Cash withdrawals	Cash deposits	Contractual debit	Total
Number of transactions					
Debit payment card	165,442,546	98,334,133	3,310,568	–	267,087,247
Credit payment card	82,623,571	4,945,202	7,494	24,366,451	111,942,718
Total	248,066,117	103,279,335	3,318,062	24,366,451	379,029,965
Value of transactions					
Debit payment card	27,823,948,160	70,443,626,298	7,209,845,669	–	105,477,420,127
Credit payment card	20,353,846,222	4,878,637,422	8,475,283	1,186,480,791	26,427,439,718
Total	48,177,794,382	75,322,263,720	7,218,320,952	1,186,480,791	131,904,859,845
Average value of transaction					
Debit payment card	168	716	2,178	–	395
Credit payment card	246	987	1,131	49	236
Total	194	729	2,175	49	348

Note: Data refer to the total number and value of national card-based payment transactions in 2016.
Source: CNB.

A total of 379.03 million national card-based payment transactions worth a total of HRK 131,904.86 million were executed in the RC in 2016. In 2016, the total number of national card-based payment transactions increased by 8%, and their value increased by 5.3% from 2015.

Of all national card-based payment transactions, 267.09 million transactions, or 70%, were executed using debit cards, worth a total of HRK 105,477.42 million or 80% (Table 8). In 2016, the total number of national payment transactions executed using debit cards increased by 11%, and the value increased by 7% from 2015.

Of the total number of national card-based payment transactions, 111.94 million transactions, or 30%, were executed using credit cards, worth a total of HRK 26,427.44 million or 20% (Table 8). In 2016, the total number of national payment transactions executed using credit cards increased by 2% from 2015, while the value of transactions remained at the same level.

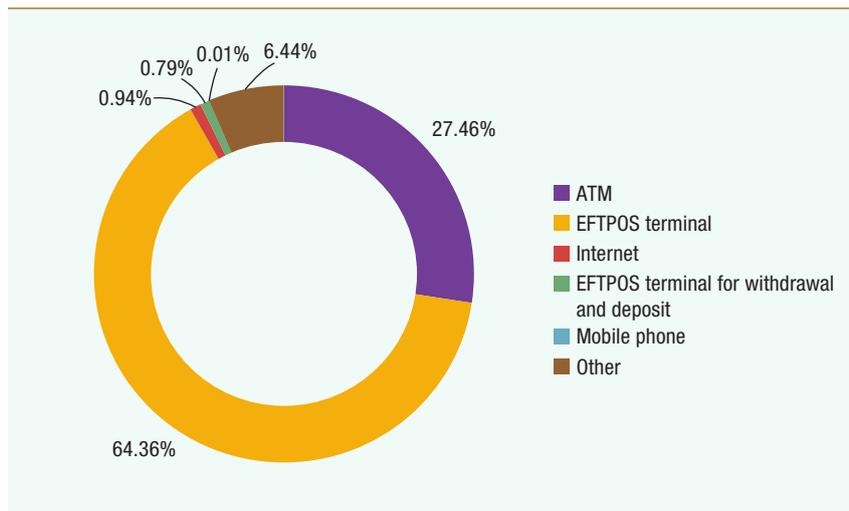
National card-based payment transactions by accepting devices for payment cards

Of the total number of national card-based payment transactions in 2016, broken down by accepting devices for payment cards, the following were executed:

- **through ATMs:** 104.07 million card-based payment transactions worth a total of HRK 77,543.74 million;
- **through EFTPOS terminals:** 243.97 million card-based payment transactions worth a total of HRK 47,133.71 million;

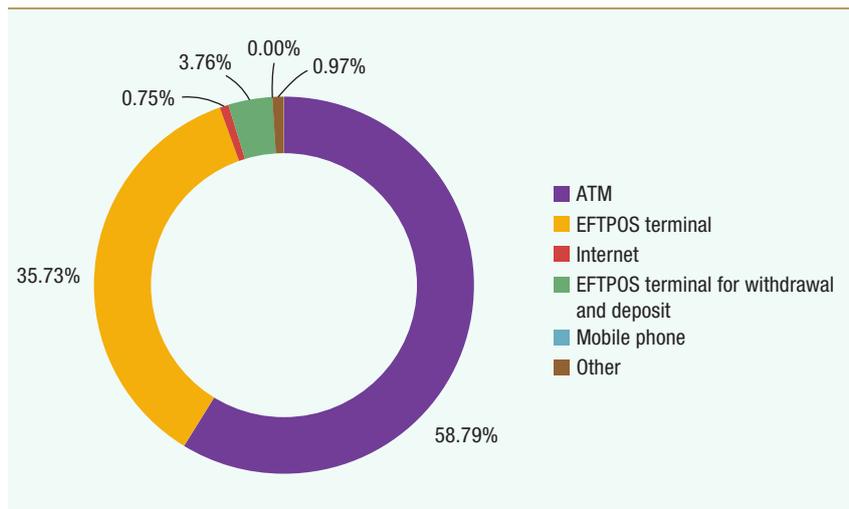
- **through the Internet:** 3.56 million card-based payment transactions worth a total of HRK 991.15 million;
- **through EFTPOS terminals for withdrawal and deposit:** 2.99 million card-based payment transactions worth a total of HRK 4,954.30 million;
- **by mobile telephone:** 0.02 million card-based payment transactions worth a total of HRK 2.07 million; and
- **other:** covers 24.40 million direct debit, standing order, fee, interest and commission transactions, worth a total of HRK 1,279.88 million.

Figure 9 Number of national card-based payment transactions by accepting devices for payment cards



Note: Data refer to the total number of national card-based payment transactions in 2016.
Source: CNB.

Figure 10 Value of national card-based payment transactions by accepting devices for payment cards

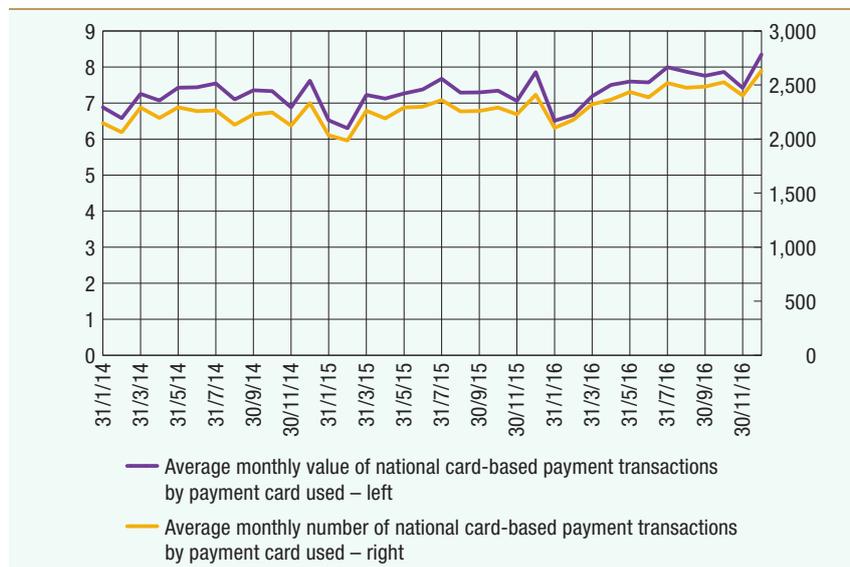


Note: Data refer to the total value of national card-based payment transactions in 2016.
Source: CNB.

It is evident from the data shown that 64.37% of national card-based payment transactions were executed through EFTPOS terminals, and 27.46% through ATMs (Figure 9). The value of transactions, however, shows an inverse ratio: in terms of the total value of national card-based payment transactions, ATM transactions accounted for 58.79% and EFTPOS terminals 35.73% (Figure 10).

Per one payment card used in the RC, on average 7.9 national card-based payment transactions were executed monthly, worth a total of HRK 2,783 (Figure 11).

Figure 11 Average monthly number and value of national card-based payment transactions by payment card used in HRK



Note: Data refer to the average number and value of national card-based payment transactions during each reporting month.
Source: CNB.

Purchases of goods and services

The term ‘purchases of goods and services’ includes all card-based payment transactions for the purchases of goods and services executed using the issuer’s payment card through EFTPOS terminals, the Internet, mobile phone, SMS and through ATMs.

A total of 248.07 million national card-based payment transactions of the purchases of goods and services, worth a total of HRK 48,177.79 million, were executed in 2016. Of this number, 165.44 million national card-based payment transactions (67%) were executed using debit cards, worth a total of HRK 27,823.94 million or 58%. The remaining 82.62 million (33%) national card-based payment transactions of purchases of goods and services, worth a total of HRK 20,353.84 million (42%) were made using credit cards.

In 2016, the total number of national payment transactions of the purchases of goods and services increased by 11.8%, and the total value increased by 7.6% from 2015.

In 2016, the average value of a national card-based payment transaction of the purchase of goods or services stood at HRK 194. The average value of a national card-based payment transaction of the purchase of goods or services in which a debit card was used stood at HRK 168, and in which a credit card was used stood at HRK 246 (Table 8).

Of the above 248.07 million national card-based payment transactions, a total of 235.42 million transactions were executed using consumer payment cards, worth a total of HRK 42,641.14 million. Accordingly, 95% of the number and 89% of the value of national card-based payment transactions of the purchases of goods and services were executed using consumer payment cards.

The average value of a national card-based payment transaction of the purchase of goods or services in which a consumer payment card was used stood at HRK 181, while the average for a similar transaction in which a payment card of a business entity (non-consumer) was used was HRK 438.

Card-based payment transactions of the purchases of goods and services can be broken down by the function of the payment card used. The cardholder selects the function when initiating the card-based payment transaction through an accepting device for payment cards. We distinguish the following functions:

- **debit function** – coverage on the payment account is ensured for the execution of a card-based payment transaction at the moment of its initiation, and the card-based payment transaction is charged immediately and directly from that cardholder's payment account;
- **charge function** – the amount of total expenses incurred through the use of this function is settled in full, in a specified time interval, most frequently by a credit transfer;
- **delayed debit function** – the amount of total expenses incurred through the use of this function is settled in full, in a specified time interval, most frequently by direct debit of the cardholder's payment account;
- **credit function** – every card-based payment transaction initiated using the credit function is automatically divided, at the time of its initiation, into the agreed number of repayment instalments, in other words, according to the agreed model;
- **revolving function** – the amount of total expenses incurred through the use of this function is settled, in a specified time interval, in a percentage of the total amount; and

- **function of payment in instalments** – the amount of transactions incurred through the use of this function is divided to the number of repayment instalments in a specified time interval, according to the choice of the cardholder, within the model agreed at the point of sale.

Of all national card-based payment transactions of the purchases of goods and services, 66% were executed using the debit function. The value of transactions executed by the debit function accounted for 54% of the total value of national card-based payment transactions of the purchases of goods and services. An overview of the number and value of national card-based payment transactions of the purchases of goods and services by function is presented in Table 9.

Table 9 Number and value of national card-based payment transactions of purchases of goods and services by function

in HRK

Function	Number of transactions of purchases of goods and services	Value of transactions of purchases of goods and services	Average value of the transaction of purchase of goods or services
Debit function	162,521,883	25,870,382,503	159
Charge function	45,277,238	9,693,595,140	214
Function of repayment in instalments	6,074,664	6,556,997,583	1,079
Delayed debit function	22,644,088	4,015,410,292	177
Revolving function	10,032,655	1,618,307,460	161
Credit function	1,515,589	423,101,404	279
Total	248,066,117	48,177,794,382	194

Note: Data refer to the total number and value of national card-based payment transactions of purchases of goods and services in 2016.

Source: CNB.

The largest average value of the national card-based payment transaction of the purchase of goods or services in the amount of HRK 1,079 was recorded for card-based payment transactions using the function of repayment in instalments (Table 9).

Cash withdrawals

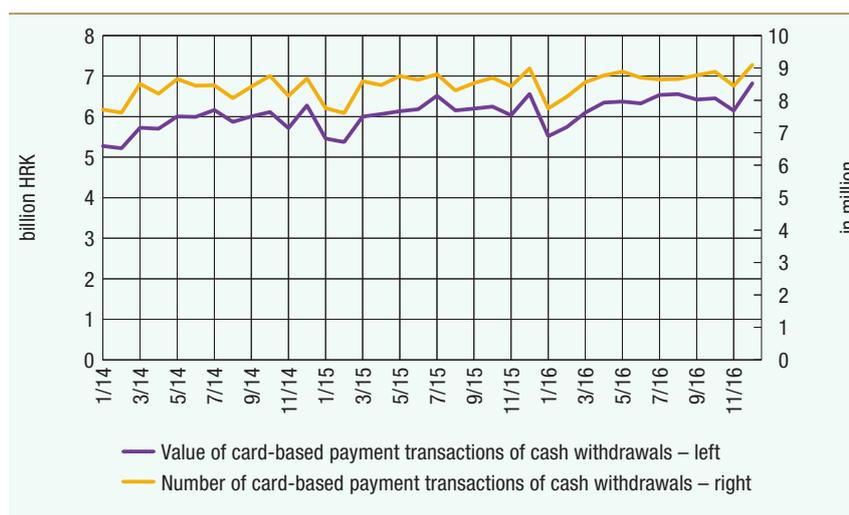
‘Cash withdrawals’ covers card-based payment transactions of cash withdrawals executed using the issuer’s payment card through an ATM, EFTPOS terminal and EFTPOS terminal for withdrawal and deposit.

In all, 103.28 million national card-based payment transactions of cash withdrawals, worth a total of HRK 75,322.26 million, were executed in 2016. Debit cards accounted for 98.33 million (95%) executed national card-based payment transactions of cash withdrawals, worth a total of HRK 70,443.62 million (94%; Table 8). Credit cards accounted for 4.95 million (5%) executed

national card-based payment transactions of cash withdrawals, worth a total of HRK 4,878.64 million (6%; Table 8).

In 2016, the total number of national card-based payment transactions of cash withdrawals increased by 1.7%, and their value increased by 3.3% from 2015 (Figure 12).

Figure 12 Number and value of national card-based payment transactions of cash withdrawals



Note: Data refer to the total number and value of national card-based payment transactions during each reporting month.

Source: CNB.

Of the total number of national card-based payment transactions, 100.1 million (97%) cash withdrawal transactions using consumer payment cards and 33.17 million (3%) using business entity (non-consumer) payment cards were executed.

Of the total value of national card-based payment transactions, HRK 69,751.56 million (93%) cash withdrawal transactions using consumer payment cards and HRK 5,570.70 million (7%) using business entity (non-consumer) payment cards were executed.

In 2016, the average value of a national card-based payment transaction of a cash withdrawal stood at HRK 729 (with the use of a debit card stood at HRK 716, while that with the use of a credit card was HRK 987).

The average value of a national card-based transaction of a cash withdrawal in which a consumer payment card was used stood at HRK 697, and the corresponding value in which a payment card of a business entity (non-consumer) was used was HRK 1,754.

Of the total number of national card-based payment transactions of cash withdrawals, 95% were executed using the debit function. The

value of transactions executed using the debit function accounted for 93% of the total value of national card-based payment transactions of cash withdrawals. An overview of the number and value of national card-based payment transactions of cash withdrawals by function is presented in Table 10.

Table 10 Number and value of national card-based payment transactions of cash withdrawals by function

in HRK

Function	Number of transactions of cash withdrawals	Value of transactions of cash withdrawals	Average value of the transaction of a cash withdrawal
Debit function	98,193,942	70,333,302,118	716
Charge function	1,187,061	1,524,400,075	1,284
Function of repayment in instalments	141,828	111,435,028	786
Delayed debit function	1,833,427	2,158,866,548	1,178
Revolving function	1,460,657	775,744,851	531
Credit function	462,420	418,515,100	905
Total	103,279,335	75,322,263,720	729

Note: Data refer to the total number and value of national card-based payment transactions of cash withdrawals in 2016.

Source: CNB.

The largest average value of a national card-based payment transaction of a cash withdrawal in the amount of HRK 1,284 was recorded for card-based payment transactions using the charge function (Table 10).

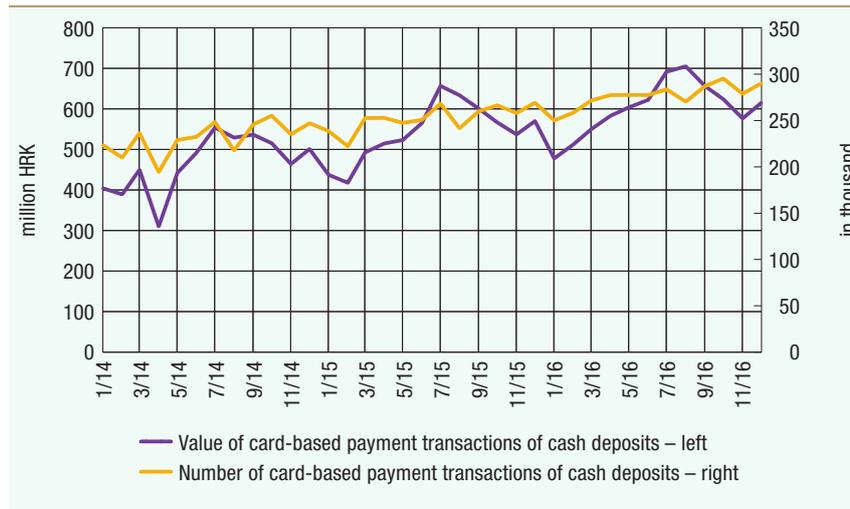
Cash deposits

‘Cash deposits’ covers card-based payment transactions of cash deposits to the account for payment using the issuer’s payment card through ATMs and EFTPOS terminals for withdrawal and deposit and other methods (channels), but it does not include the payment transactions of cash deposits into a day/night deposit box.

In 2016, a total of 3.31 million national card-based cash deposit payment transactions, worth a total of HRK 7,218.32 million were executed, 3 million transactions of which, worth a total of HRK 5,941.42 million, were executed through ATMs. Over 99.8% of all national card-based cash deposit payment transactions, in both number and value, were executed with the use of debit cards.

Of the total of 3.31 million national card-based payment transactions, 2.5 million (75.4%) cash deposit transactions were executed using consumer payment cards, worth a total of HRK 3,754.42 million, or 52%, while 0.81 million (24.6%) transactions, worth a total of HRK 3,463.90 million, or

Figure 13 Number and value of national card-based payment transactions of cash deposits



Note: Data refer to the total number and value of national card-based payment transactions during each reporting month.
Source: CNB.

48%, were executed using the payment cards of business entities (non-consumers).

In 2016, the total number of national card-based cash deposit payment transactions increased by 9.6%, the value having increased by 10.8% from 2015 (Figure 13).

In 2016, the average value of a national card-based payment transaction of a cash deposit stood at HRK 2,175. The average value of a national card-based payment transaction of a cash deposit in which a debit card was used stood at HRK 2,178, and the average in which a credit payment card was used was HRK 1,131.

The average value of a national card-based payment transaction of a cash deposit using a consumer payment card stood at HRK 1,500, while that in which a payment card of a business entity (non-consumer) was used was HRK 4,248.

Contractual debit

‘Contractual debit’ includes payment transactions for which collection through a payment card is contracted in advance, initiated by or through the payee; it may have the elements of a standing order or direct debit, including the cardholder’s obligations to the issuer, such as fees, commissions, interest, membership fees, etc. The contractual debit may be agreed for all types of payment cards, except debit cards.

A total of 24.36 million transactions of contractual debits, worth a total of HRK 1,186.48 million, were executed in 2016. The largest number of transactions, 21.36 million (87.7%) of them, worth a total of HRK 823.36 million (69.4%), were fee, membership fee, interest and similar transactions, which cardholders paid through payment cards to the issuers. The remaining 2.99 million transactions (12.3%) are payment transactions of direct debits executed through payment cards, with a total value of HRK 363.11 million (30.6%).

In 2016, the average value of a contractual debit transaction stood at HRK 49. The average value of interest, fee, membership fee and similar transactions, which cardholders paid through payment cards stood at HRK 39, while the average value of payment transactions of direct debits executed through payment cards stood at HRK 121.

Unauthorised use (fraud)

‘Unauthorised use’ includes all card-based payment transactions in which unauthorised use of a payment card, or fraud, is established.

A total of 11,345 national card-based payment transactions of unauthorised use were established in 2016, worth a total of HRK 5,841,232. In 2016, the average value of a national card-based payment transaction in which unauthorised use was established stood at HRK 753.

Of the total national card-based payment transactions, 9,013 (79%) transactions of unauthorised use using consumer payment cards were identified, worth a total of HRK 4,571,540, or 78%, while 2,332 or 21% transactions, worth a total of HRK 1,269,692, or 22%, were identified in transactions using the payment cards of business entities (non-consumers).

4.1.2 International card-based payment transactions

This sub-chapter shows statistical data on international card-based payment transactions executed using issuers’ payment cards.

International card-based payment transactions include:

- payment transactions of the purchases of goods and services using an issuer’s payment cards executed outside the RC (in other member states or third countries); and

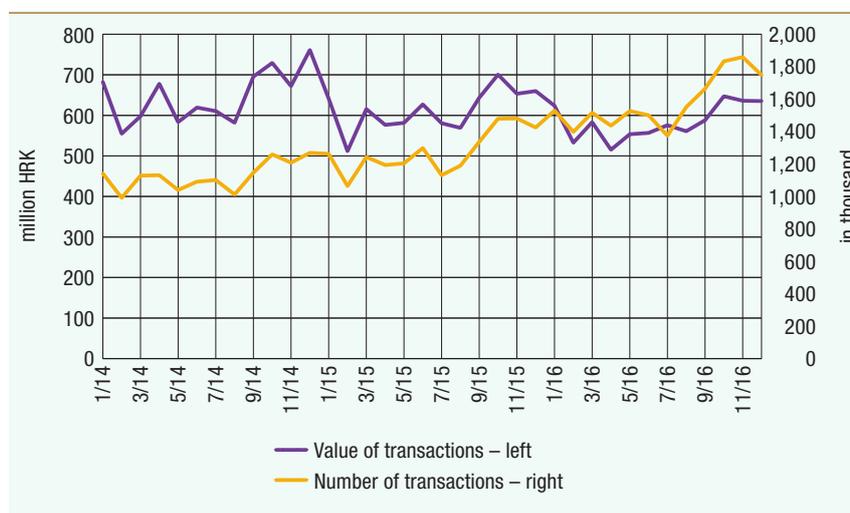
- payment transactions of cash withdrawals using an issuer's payment cards executed outside the RC (in other member states or third countries).

Data on international card-based payment transactions are shown in kuna, i.e. the original currency of the card-based payment transaction is converted to kuna at the CNB's exchange rate on the last day of the reporting period, i.e. the month for which the data are shown.

A total of 18.94 million international card-based payment transactions, worth a total of HRK 7,007.44 million were executed in 2016. The average value of an international card-based payment transaction stood at HRK 370.

The average monthly number of international card-based payment transactions stood at 1.58 million, and the average monthly value of transactions at HRK 583.95 million. In 2016, the total number of international card-based payment transactions increased by 23.77% from 2015, while the total value of international card-based payment transactions decreased by 4.79% in the same period (Figure 14).

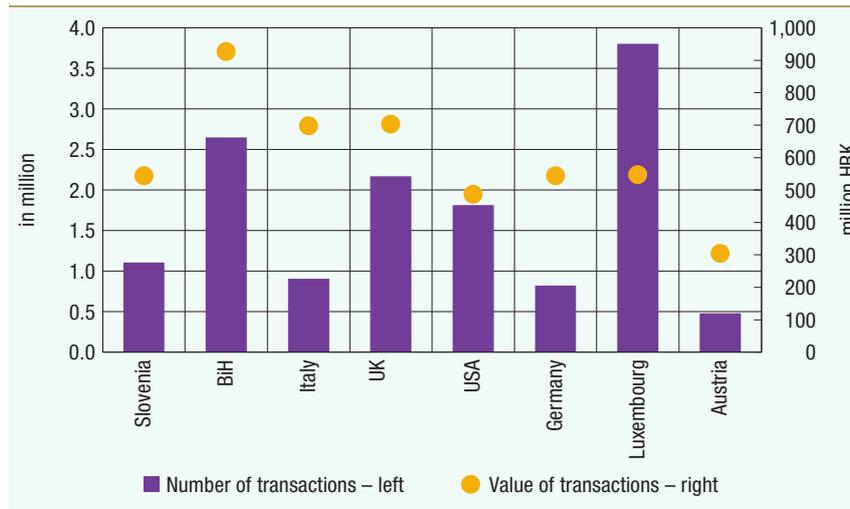
Figure 14 Number and value of international card-based payment transactions in HRK



Note: Data refer to the total number and value of international card-based payment transactions during each reporting month.
Source: CNB.

Of the total number and value of international card-based payment transactions, 93% of the number and 83% of the value of international card-based payment transactions were executed with the use of consumer cards, while 7% of the number and 17% of the value of international card-based payment transactions were executed with the use of the cards of business entities (non-consumers).

Figure 15 Number and value of international card-based payment transactions for the eight most represented countries



Note: Data refer to the total number and value of international card-based payment transactions in 2016.

Source: CNB.

International card-based payment transactions were executed in 137 currencies and 218 countries.

From the received data on international card-based payment transactions broken down by countries it is evident that in the eight most represented countries (Bosnia and Herzegovina, Slovenia, Germany, Italy, the United States, the United Kingdom, Luxembourg and Austria) the total value of card-based payment transactions stood at HRK 4,756.77 million, accounting for 68% of the total value of all international card-based payment transactions (Figure 15).

Figure 15 also shows that the holders of payment cards issued in the RC realised the highest value of card-based payment transactions in Slovenia, then in Bosnia and Herzegovina, Italy, the United Kingdom, the United States, Germany, Luxembourg and Austria.

5 Acquiring of payment cards

This chapter shows statistical data on the number and value of transactions in which payment service providers – acquirers have provided the payment service of acquiring of payment cards through an accepting device for payment cards.

Payment service providers – acquirers (hereinafter referred to as ‘acquirers’) in the RC include:

1. credit institutions (banks) that have obtained authorisation from the CNB, which includes authorisation to provide the payment service of acquiring of payment cards; and
2. electronic money institutions⁹ that have obtained authorisation from the CNB to provide the payment services of acquiring payment cards.

An acquirer may acquire a payment card from:

- a payment service provider – issuer that has obtained its authorisation or the authorisation for the provision of the service of issuing of payment cards from the CNB (hereinafter referred to as ‘a Croatian issuer’); or
- a payment service provider – issuer that has obtained its authorisation or the authorisation for the provision of the service of issuing of payment cards from one of the competent bodies of other EU member states or third countries (hereinafter referred to as ‘a foreign issuer’).

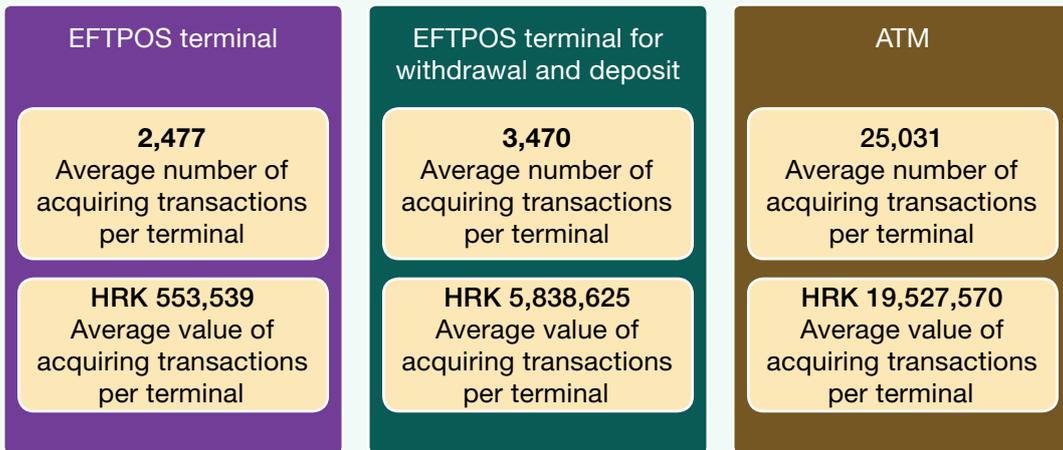
The acquiring of payment cards of Croatian issuers is divided into the acquiring of payment cards the acquirer itself has issued and the acquiring of payment cards of other Croatian issuers.

The chapter is divided into four parts:

- the first part shows the total number and value of transactions of the acquiring of payment cards of Croatian and foreign issuers (Sub-chapter 5.1);
- the second part shows the total number and value of transactions of the acquiring of payment cards, i.e. own cards and cards of other Croatian issuers (Sub-chapter 5.1.1);
- the third part shows the total number and value of transactions of the acquiring of payment cards of foreign issuers (Sub-chapter 5.1.2);
- the fourth part gives a comparison of the use of payment cards and the use of cash in the RC (Sub-chapter 5.2).

⁹ Not including data submitted by electronic money institutions that at the same time carry out the activity of telecommunications services.

Box. 4 Transactions of the acquiring of payment cards according to accepting devices for payment cards in 2016



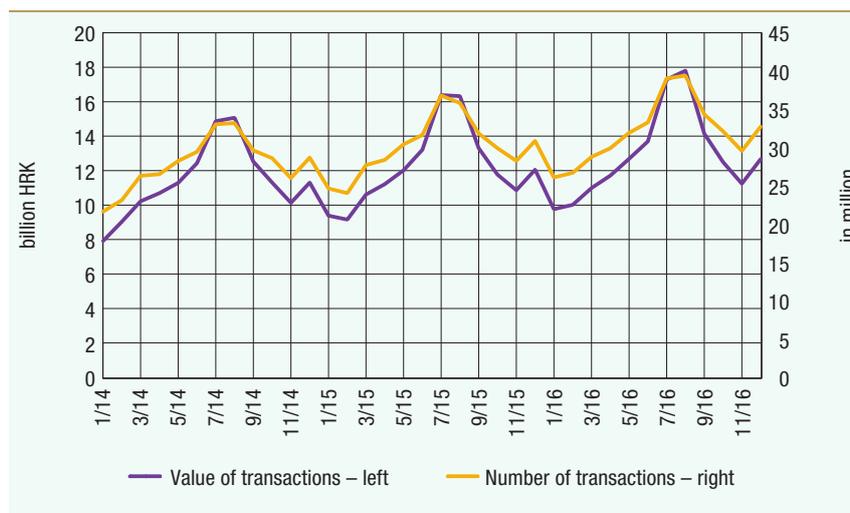
Source: CNB.

5.1 Total acquiring of payment cards

This sub-chapter shows statistical data on the total number and value of transactions of the acquiring of payment cards of Croatian and foreign issuers.

In all, 384.03 million payment card acquiring transactions, worth a total of HRK 154,507.24 million, were executed in 2016 (Figure 16). In 2016, the total number of payment card acquiring transactions increased by 6.5%, and their value increased by 5.6% from 2015.

Figure 16 Number and value of transactions of acquiring in the RC



Note: Data refer to the total number and the total value of transactions in HRK during the reporting month.

Source: CNB.

A total of 26.1 million acquiring transactions, worth a total of HRK 9,759.60 million, were recorded in January 2016. During the subsequent months, the number and value of acquiring transactions grew until August in which they reached the highest level, 39.4 million transactions, worth a total of HRK 17,804.65 million. From September, the number and value of acquiring transactions had a downward trend until December in which 32.7 million acquiring transactions were recorded, with a total value of HRK 12,669.66 million.

The acquiring service is provided at contractual merchants, i.e. business entities that pursuant to a contract with the acquirer offer the possibility of payment by payment cards through accepting devices for payment cards at their point of sale (EFTPOS terminal and Internet). On 31 December 2016, a total of 34,253 contractual merchants were recorded, of which 2,014 offer the possibility of payment by payment cards through the Internet at their point of sale. Of the total number of contractual merchants (34,253), 31,620 offer the possibility of payment by payment cards only through EFTPOS terminals. Furthermore, 619 contractual merchants offer the possibility of payment by payment cards through the Internet, i.e. without the possibility of purchase through the physical EFTPOS terminal. The above number of contractual merchants is shown independently of the number of acquiring locations the merchant is using. A retail chain is thus recorded as a contractual merchant, regardless of the number of points of sale and accepting devices for payment cards that are used.

Of the total of the above 34,253 contractual merchants, 15,538 or 45% of them have the service of acquiring contracted with only one payment service provider – acquirer, 9,486 (28%) of them have the service of acquiring contracted with two acquirers, and 7,673 (22%) with three acquirers.

Accepting devices for payment cards through which the acquiring service is provided include the ATM, the EFTPOS terminal, the Internet and the EFTPOS terminal for withdrawal and deposit (Table 11).

Of the total number of acquiring transactions, 29.61% of transactions were acquired through ATMs, 68.41% through EFTPOS terminals, 1.12% through the Internet, 0.85% through EFTPOS terminals for withdrawal and deposit and 0.01% were other transactions.

Of the total value of acquiring transactions, 57.42% of transactions were acquired through ATMs, 38.00% through EFTPOS terminals, 0.98% through the Internet, 3.54% through EFTPOS terminals for withdrawal and deposit and 0.06% were other transactions.

Table 11 Number and value of transactions of the acquiring of payment cards by accepting device for payment cards

Payment service provider – acquirer	ATM	EFTPOS terminal	Internet	EFTPOS terminal for withdrawal and deposit	Other	Total
Number of transactions						
Credit institutions	112,602,364	87,065,572	169,718	3,092,807	–	202,930,461
Electronic money institutions	1,115,161	175,658,601	4,148,003	154,825	24,733	181,101,323
Total	113,717,525	262,724,173	4,317,721	3,247,632	24,733	384,031,784
Value of transactions, in HRK						
Credit institutions	87,454,433,816	20,404,871,184	113,365,808	5,037,449,231	–	113,010,120,039
Electronic money institutions	1,259,315,081	38,315,084,226	1,407,136,319	427,504,156	88,076,937	41,497,116,719
Total	88,713,748,897	58,719,955,410	1,520,502,127	5,464,953,387	88,076,937	154,507,236,758

Note: Data refer to the total number and value of transactions of acquiring in 2016.

Source: CNB.

In all, 113.71 million transactions, worth a total of HRK 88,713.75 million, were acquired through ATMs in 2016. Credit institutions participated in the transactions of acquiring payment cards, executed for the purpose of cash withdrawals through ATMs with a share of 99% in the number and value of transactions.

In all, 262.72 million transactions, worth a total of HRK 58,719.95 million, were acquired through EFTPOS terminals in 2016. Electronic money institutions accounted for 67% of the share in the number of transactions and 65% in the value of transactions of the total payment card acquiring executed through EFTPOS terminals.

The total number of transactions of the acquiring of payment cards executed through the Internet in 2016 stood at 4.32 million with a total value of HRK 1,520.5 million. Of the total service of the acquiring of payment cards through the Internet, electronic money institutions accounted for a share of 96% in the number of transactions and 93% in the value of transactions.

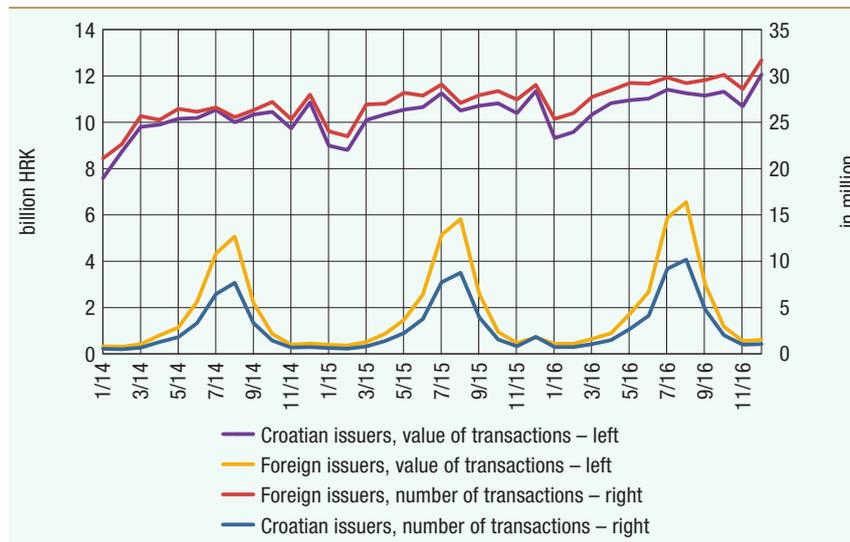
The average value of a transaction of the acquiring of a payment card stood at HRK 402 in 2016:

- **through EFTPOS terminals:** HRK 224;
- **through the Internet:** HRK 352;
- **through ATMs:** HRK 780; and
- **through EFTPOS terminals for withdrawal and deposit:** HRK 1,683.

Of the total of 384.03 million transactions of the acquiring of payment cards executed in 2016, 90% refers to payment cards of Croatian issuers, and 10% to those of foreign issuers. In 2016, of the total HRK

154,507.24 million transactions of the acquiring of payment cards executed, 84% refers to payment cards of Croatian issuers, and 16% to payment cards of foreign issuers (Figure 19). In 2016, the total number of transactions of the acquiring of payment cards of foreign issuers increased by 12.72%, and their value increased by 11.08% from 2015.

Figure 17 Total number and value of transactions of the acquiring of payment cards according to payment card issuer



Note: Data refer to the total number and value of transactions of the acquiring of payment cards.

Source: CNB.

In 2016, the total number of transactions of the acquiring of payment cards of Croatian issuers increased by 5.37%, and their value increased by 4.21% from 2015.

In 2016, a total of 344.96 million transactions of the acquiring of payment cards of Croatian issuers were executed, worth a total of HRK 129,918.58 million, of which the following were acquired (Figure 18):

- **payment cards of consumers:** 328.62 million transactions, worth a total of HRK 116,276.64 million, and
- **payment cards of non-consumers (business entities):** 16.35 million transactions, worth a total of HRK 13,641.94 million.

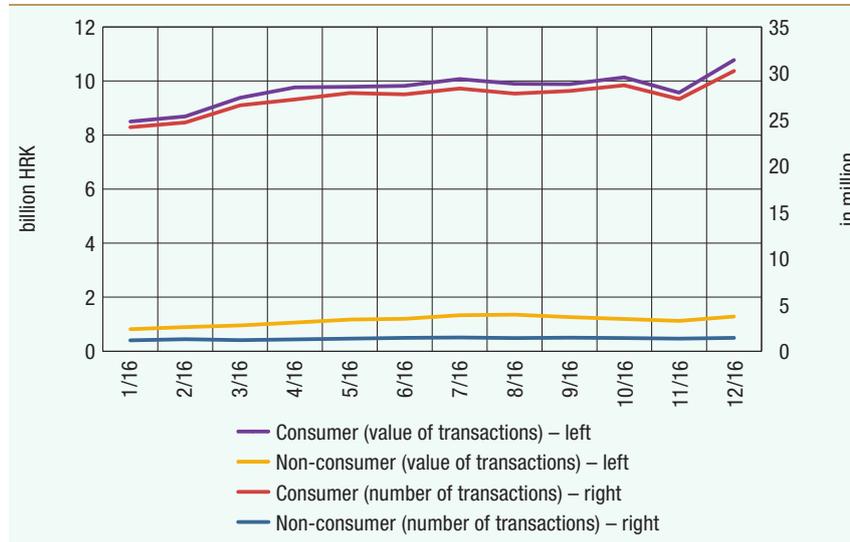
In 2016, in all 39.07 million transactions of acquiring payment cards of foreign issuers were executed, worth a total of HRK 24,588.65 million, of which the following were acquired (Figure 19):

- **payment cards of consumers:** 37.37 million transactions, worth a total of HRK 23,479.33 million, and
- **payment cards of non-consumers (business entities):** 1.70 million transactions, worth a total of HRK 1,109.33 million.

The service of acquiring of payment cards may be provided for:

- the purchase of goods or services using a payment card;
- cash withdrawal and deposit using a payment card.

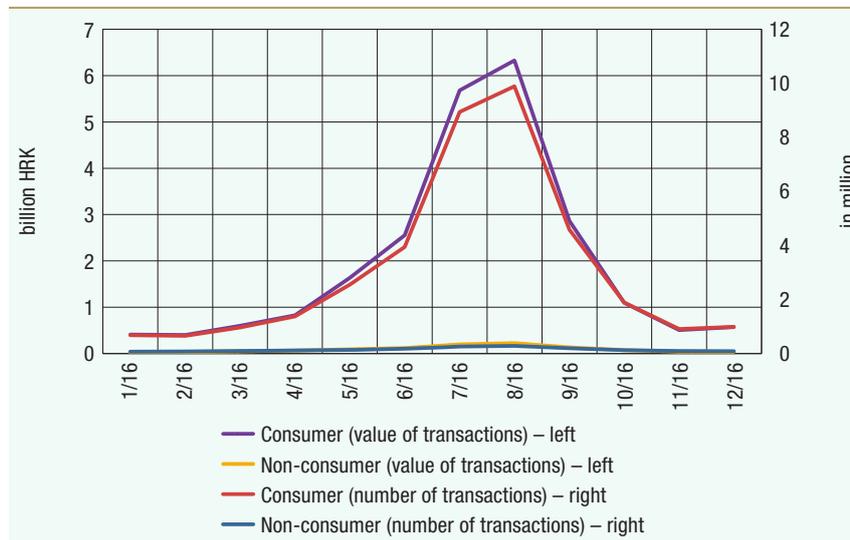
Figure 18 Total number and value of transactions of the acquiring of payment cards of Croatian issuers according to cardholder



Note: Data refer to the total number and value of transactions of acquiring of Croatian issuers' payment cards.

Source: CNB.

Figure 19 Total number and value of transactions of acquiring of the payment cards of foreign issuers according to cardholder



Note: Data refer to the total number and value of transactions of acquiring of foreign issuers' payment cards.

Source: CNB.

Of the total number of payment card acquiring transactions, purchases of goods and services accounted for 69.7%, cash withdrawals accounted for 29.4% and cash deposits for 0.9%. In terms of value, a somewhat inverse ratio is seen: of the total value of payment card acquiring transactions, purchases of goods and services accounted for 39.01%, cash withdrawals accounted for 56.32% and cash deposits for 4.67%.

The term 'purchases of goods and services' includes the transactions of the acquiring of payment cards for the purchased goods and services executed through EFTPOS terminals, the Internet and ATMs.

In all, 267.75 million transactions of the acquiring of payment cards for the purchases of goods and services, worth a total of HRK 60,268.77 million (own cards, cards of other Croatian issuers and cards of foreign issuers) were executed in 2016. In 2016, the total number of payment card acquiring transactions for the purchases of goods and services increased by 8.4%, and their value increased by 7.0% from 2015.

'Cash withdrawals' covers payment card acquiring transactions of cash withdrawal executed through an ATM, EFTPOS terminal and EFTPOS terminal for withdrawal and deposit. In 2016, the total number of payment card acquiring transactions of cash withdrawal came to 112.95 million, with a total value of HRK 87,020.99 million, an increase of 2.3% in the number of transactions and 4.25% in the value of transactions from 2015.

'Cash deposits' covers payment card acquiring transactions of cash deposits executed through an ATM and EFTPOS terminal for withdrawal and deposit.

In 2016, the total number of payment card acquiring transactions of cash deposits came to 3.33 million, with a total value of HRK 7,217.47 million, an increase of 9.47% in the number of transactions and 10.79% in the value of transactions from 2015.

5.1.1 Acquiring of payment cards issued in the RC

This chapter shows statistical data on the number and value of the transactions of acquiring of payment cards of Croatian issuers.

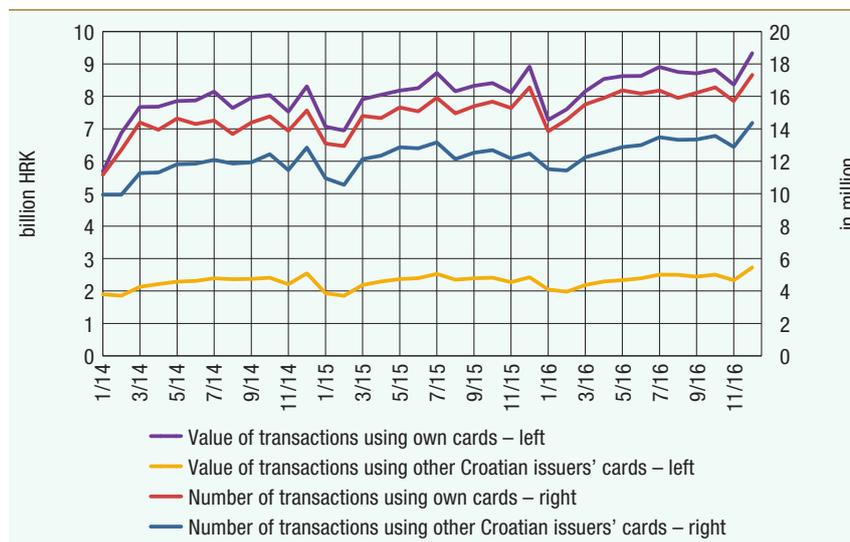
The acquiring of payment cards of Croatian issuers is divided into the acquiring of payment cards the acquirer itself has issued (hereinafter referred to as 'own cards') and the acquiring of payment cards of other Croatian issuers (hereinafter referred to as 'other Croatian issuers').

In 2016, a total of 344.96 million transactions of acquiring payment cards of Croatian issuers were executed, worth a total of HRK 129,918.58 million, of which the following were acquired (Figure 20):

- **own cards:** 190.42 million transactions, worth a total of HRK 101,700.33 million; and
- **cards of other Croatian issuers:** 154.55 million transactions, worth a total of HRK 28,218.25 million.

In 2016, the total number of transactions of acquiring payment cards of Croatian issuers increased by 5.37%, and the total value increased by 4.21% from 2015.

Figure 20 Number and value of transactions of the acquiring of payment cards issued in the RC



Note: Data refer to the total number and value of transactions of acquiring during each reporting month.

Source: CNB.

Figure 20 shows the total number and value of transactions of the acquiring of payment cards by issuer at a monthly level in 2014, 2015 and 2016. It is evident that acquirers most frequently acquired their own cards, i.e. the cards they have issued themselves. Of the total number of transactions of acquiring of Croatian issuers' payment cards, 30.28% of transactions were acquired through ATMs, 67.74% through EFTPOS terminals, 1.07% through the Internet and 0.91% through EFTPOS terminals for withdrawal and deposit. If total values of transactions of acquiring of Croatian issuers' payment cards are observed, 60.08% of transactions were acquired through ATMs, 35.11% through EFTPOS terminals, 0.82% through the Internet and 3.99% through EFTPOS terminals for withdrawal and deposit.

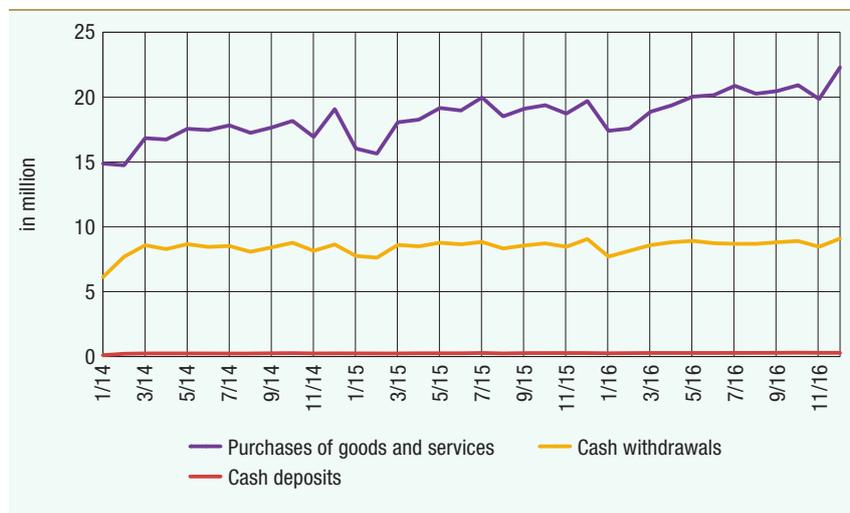
In 2016, the average value of a transaction of the acquiring of Croatian issuers' payment cards stood at:

- through EFTPOS terminals: HRK 195,
- through the Internet: HRK 289,
- through ATMs: HRK 747, and
- through EFTPOS terminals for withdrawal and deposit: HRK 1,658.

In 2016, the average number of transactions of acquiring of payment cards issued in the RC stood at 28.75 million a month, and the average value of transactions was HRK 10,826.55 million a month.

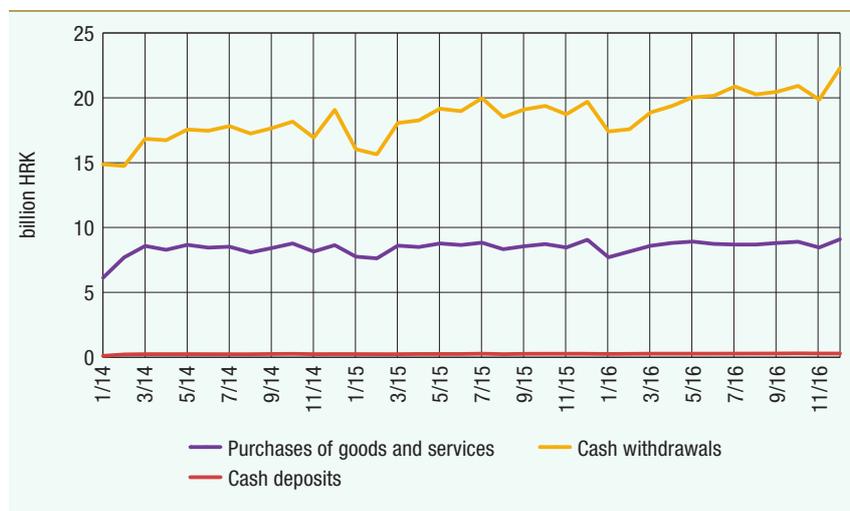
From a review of the transactions of acquiring of payment cards according to type of transaction, cash withdrawals were the most represented, accounting in the total value of acquiring transactions for

Figure 21 Number of transactions of the acquiring of payment cards issued in the RC by type of transaction



Note: Data refer to the total number of transactions of acquiring during each reporting month. Source: CNB.

Figure 22 Value of transactions of the acquiring of payment cards issued in the RC by type of transaction



Note: Data refer to the total value of transactions of acquiring during each reporting month. Source: CNB.

58.55%, followed by the purchases of goods and services with 35.89%, and cash deposit with 5.56% (Figures 21 and 22).

Purchases of goods and services

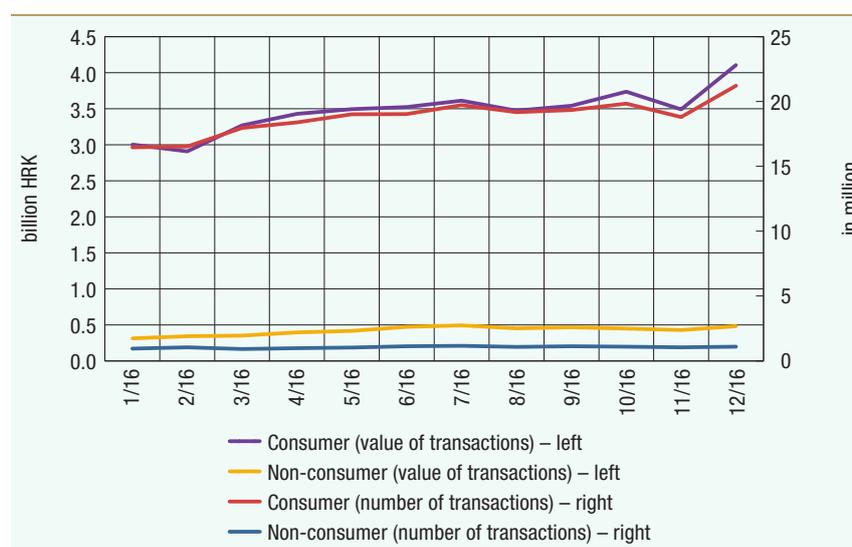
The term ‘purchases of goods and services’ includes the transactions of the acquiring of payment cards for the purchased goods and services executed through EFTPOS terminals, the Internet and ATMs.

In 2016, 238.07 million transactions of acquiring of payment cards of Croatian issuers for the purchases of goods and services were recorded, worth a total of HRK 46,627.92 million, executed by payment cards issued in the RC.

Of the total transactions of acquiring of payment cards for the purchases of goods and services, executed using payment cards of Croatian issuers:

- **through EFTPOS terminals:** 233.60 million transactions (98.12%) were acquired, worth a total of HRK 45,515.32 million (97.60%);
- **through the Internet:** 3.7 million transactions (1.55%) were acquired, worth a total of HRK 1,067.55 million (2.29%); and
- **through ATMs:** 0.77 million transactions (0.33%) were acquired, worth a total of HRK 49.42 million (0.11%) (most frequently purchase of phone vouchers, plane tickets, etc.).

Figure 23 Total number and value of acquiring transactions for the purchases of goods and services



Note: Data refer to the total number and value of transactions of acquiring of Croatian issuer's payment cards for the purchases of goods and services.

Source: CNB.

The average value of transactions of acquiring of payment cards for the purchases of goods and services, executed using payment cards of Croatian issuers in 2016 stood at:

- **through EFTPOS terminals:** HRK 195,
- **through the Internet:** HRK 289, and
- **through ATMs:** HRK 59.

Of the total transactions of acquiring of payment cards for the purchases of goods and services, executed using payment cards of Croatian issuers (Figure 23):

- **consumers:** 225.45 million transactions (95%) were acquired, worth a total of HRK 41,577.77 million (89%); and
- **non-consumers:** 12.63 million transactions (5%) were acquired, worth a total of HRK 5,050.15 million (11%).

Cash withdrawals

'Cash withdrawals' covers payment card acquiring transactions of cash withdrawals executed through ATMs, EFTPOS terminals and EFTPOS terminals for withdrawal and deposit using a payment card and other means (over the counter, certain applications, etc.).

In all, 103.56 million transactions of acquiring of payment cards of Croatian issuers for cash withdrawals, worth a total of HRK 76,073.2 million, were executed in 2016.

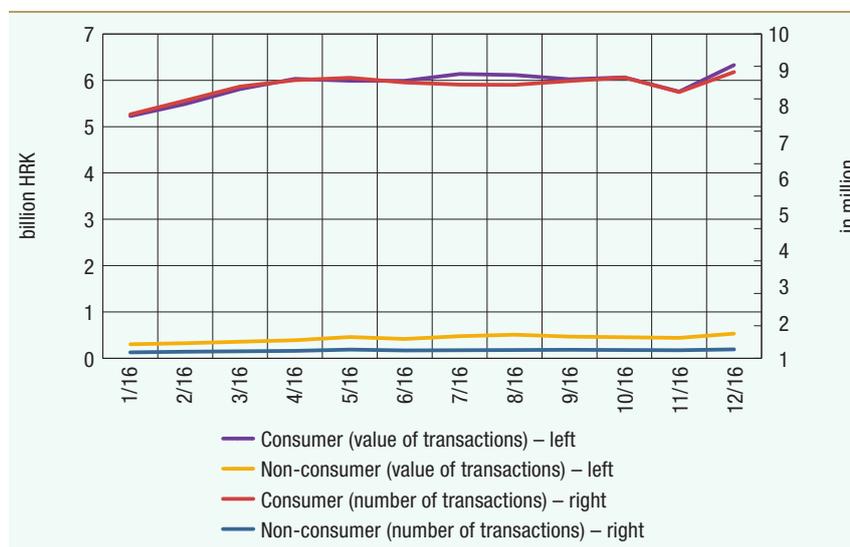
Of all the transactions of acquiring of payment cards for cash withdrawals executed using payment cards issued in the RC:

- **through ATMs:** 100.66 million transactions (97.20%) were acquired, worth a total of HRK 72,060.34 million (94.73%);
- **through EFTPOS terminals for withdrawal and deposit:** 2.8 million transactions (2.71%) were acquired, worth a total of HRK 3,905.93 million (5.13%);
- **through EFTPOS terminals:** 0.07 million transactions (0.07%) were acquired, worth a total of HRK 18.86 million (0.02%); and
- **through other means:** 0.02 million transactions (0.02%) were acquired, worth a total of HRK 88.07 million (0.12%).

The average value of transactions of acquiring of payment cards for cash withdrawals executed using payment cards issued in the RC in 2016 stood at:

- **through ATMs:** HRK 716;
- **through EFTPOS terminals for withdrawal and deposit:** HRK 1,393;
- **through EFTPOS terminals:** HRK 260; and
- **other:** HRK 3,561.

Figure 24 Total number and value of acquiring transactions for cash withdrawals



Note: Data refer to the total number and value of transactions of acquiring of Croatian issuers' payment cards for cash withdrawals.

Source: CNB.

Of all the transactions of acquiring of payment cards of Croatian issuers for cash withdrawals executed using payment cards of (Figure 24):

- **consumers:** 100.67 million transactions (97%) were acquired, worth a total of HRK 70,947.87 million (93%); and
- **non-consumers:** 2.89 million transactions (3%) were acquired, worth a total of HRK 5,125.32 million (7%).

Cash deposits

'Cash deposits' covers payment card acquiring transactions of cash deposits executed through ATMs and EFTPOS terminals for withdrawal and deposit.

A total of 3.33 million transactions of acquiring of payment cards of Croatian issuers for cash deposits, worth a total of HRK 7,217.47 million, were recorded in 2016.

Of all the transactions of acquiring of payment cards for cash deposits executed using payment cards issued in the RC:

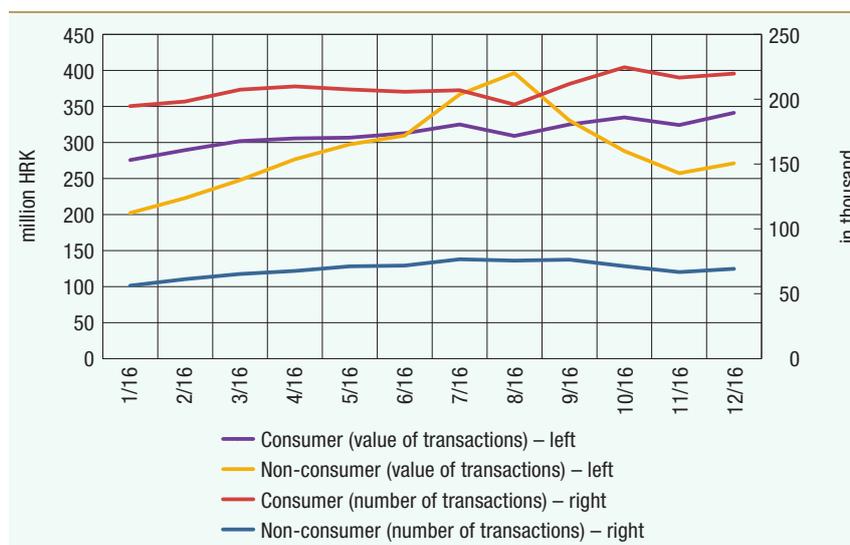
- **through ATMs:** 3 million transactions (90%) were acquired, worth a total of HRK 5,942.45 million (82%); and

- **through EFTPOS terminals for withdrawal and deposit:** 0.32 million transactions (10%) were acquired, worth a total of HRK 1,275.02 million (18%).

The average value of transactions of acquiring of payment cards for cash deposits executed using payment cards issued in the RC in 2016 stood at:

- **through ATMs:** HRK 1,975; and
- **through EFTPOS terminals for withdrawal and deposit:** HRK 3,983.

Figure 25 Total number and value of acquiring transactions for cash deposits



Note: Data refer to the total number and value of transactions of the acquiring of Croatian issuers's payment cards for cash deposits.

Source: CNB.

Of all the transactions of acquiring of payment cards for cash deposits executed using payment cards of Croatian issuers (Figure 25):

- **consumers:** 2.5 million transactions (75%) were acquired, worth a total of HRK 3,751.00 million (52%); and
- **non-consumers:** 0.83 million transactions (25%) were acquired, worth a total of HRK 3,466.46 million (48%).

5.1.2 Acquiring of payment cards issued abroad

This chapter shows statistical data on the number and value of the transactions of acquiring of payment cards issued outside the RC, i.e. of foreign issuers.

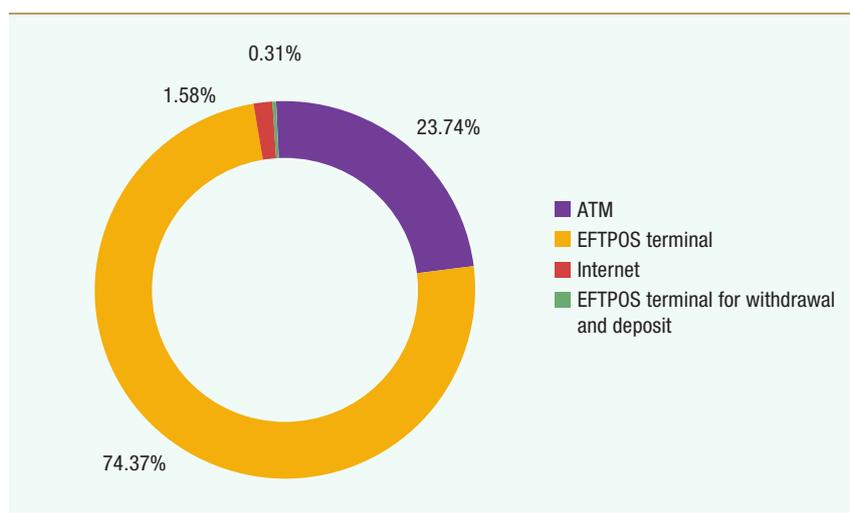
In 2016, 39.07 million transactions of acquiring of payment cards of foreign issuers, worth a total of HRK 24,588.65 million, were executed using payment cards of foreign issuers. In 2016, the total number of

transactions of acquiring of payment cards of foreign issuers increased by 12.72%, and their value increased by 11.08% from 2015.

In the first three months of 2016, the value of acquiring transactions related to payment cards of foreign issuers on average stood at HRK 509.32 million. An upward trend was noticeable until August, when it reached the level of HRK 6,552.12 million, starting to decline in September. In December 2016, the value of the transactions of acquiring of payment cards of foreign issuers stood at HRK 610.68 million.

Also, from an overview of the value of acquiring transactions it is evident that the holders of payment cards issued abroad used both ATMs and EFTPOS terminals equally, with the remark that three times as many acquiring transactions were executed through EFTPOS terminals than through ATMs (Figures 26 and 27).

Figure 26 Number of transactions of the acquiring of payment cards of foreign issuers by accepting devices for payment cards



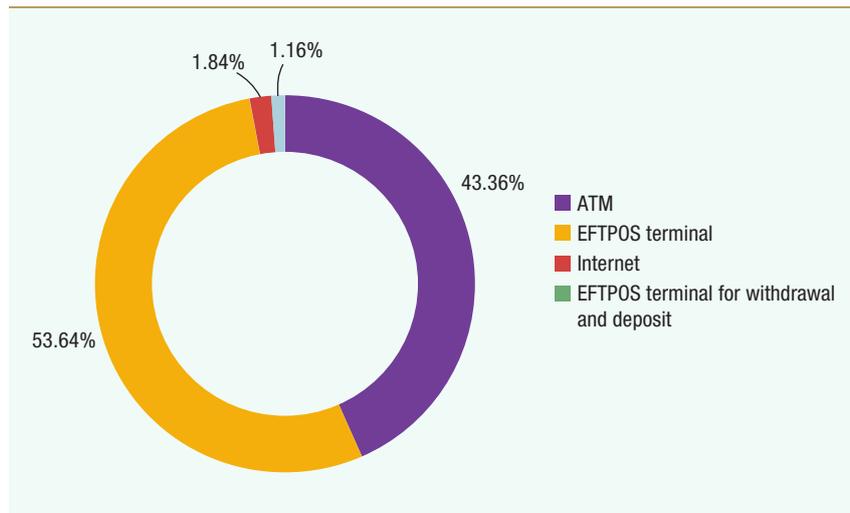
Note: Data refer to the total number of transactions of the acquiring of payment cards of foreign issuers in 2016.

Source: CNB.

Of all transactions of the acquiring of payment cards of foreign issuers in 2016:

- **through ATMs:** 9.28 million transactions were acquired, worth a total of HRK 10,661.54 million;
- **through EFTPOS terminals:** 29.05 million transactions were acquired, worth a total of HRK 13,190.15 million;
- **through the Internet:** 0.62 million transactions were acquired, worth a total of HRK 452.95 million;
- **through EFTPOS terminals for withdrawal and deposit:** 0.12 million transactions were acquired, worth a total of HRK 284.01 million.

Figure 27 Value of transactions of acquiring payment cards of foreign issuers by accepting devices for payment cards in HRK



Note: Data refer to the total value of transactions of the acquiring of payment cards of foreign issuers in 2016.
Source: CNB.

In 2016, relative to 2015, the acquiring of payment cards of foreign issuers recorded the largest growth in transactions executed through the Internet, i.e. in the number of transactions by 38% and in value by 13%.

The average value of transactions of the acquiring of payment cards of foreign issuers stood at:

- **through EFTPOS terminals:** HRK 454;
- **through the Internet:** HRK 733;
- **through ATMs:** HRK 1,149; and
- **through EFTPOS terminals for withdrawal and deposit:** HRK 2,314.

In 2016, 29.68 million (76%) transactions of acquiring of payment cards of foreign issuers for the purchases of goods and services were recorded, worth a total of HRK 13,640.86 million (55%), and 9.39 million (24%) transactions of acquiring of payment cards for cash withdrawals, worth a total of HRK 10,947.79 million (45%).

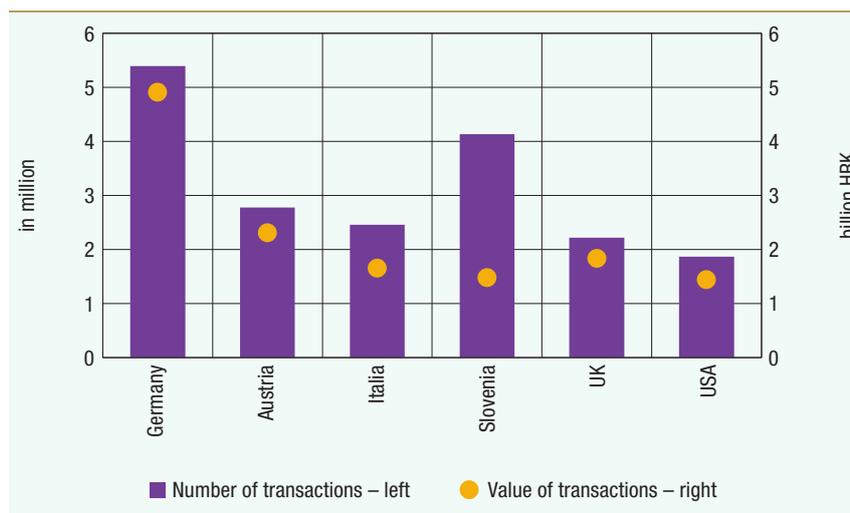
In 2016, acquiring transactions executed with the use of payment cards of foreign issuers were recorded in a total of 185 countries. The acquiring of payment cards issued in the six most represented countries (Germany, Austria, Italy, the United Kingdom, Slovenia and the United States), accounted for 48% in the total number of transactions of the acquiring of payment cards of foreign issuers and for 55% in the total value of transactions of the acquiring of payment cards of foreign issuers.

Table 12 Number and value of transactions of the acquiring of payment cards of foreign issuers by accepting devices for payment cards and cardholders

User		Payment transaction	ATM	EFTPOS terminal	Internet	EFTPOS terminal for withdrawal and deposit	Total
Consumer	Number of transactions	Purchases of goods and services	12,563	27,473,067	583,705		28,069,335
		Cash withdrawals	9,175,315	6,034		119,764	9,301,113
	Value of transactions	Purchases of goods and services	993,403	12,270,017,633	401,647,916		12,672,658,952
		Cash withdrawals	10,530,093,141	3,206,484		273,367,536	10,806,667,161
Non-consumer	Number of transactions	Purchases of goods and services	255	1,572,664	34,059		1,606,978
		Cash withdrawals	87,986	101		2,990	91,077
	Value of transactions	Purchases of goods and services	31,277	916,865,544	51,302,845		968,199,666
		Cash withdrawals	130,421,675	59,050		10,646,812	141,127,537
Total number of transactions		Purchases of goods and services	12,818	29,045,731	617,764	0	29,676,313
		Cash withdrawals	9,263,301	6,135	0	122,754	9,392,190
		Total	9,276,119	29,051,866	617,764	122,754	39,068,503
Total value of transactions		Purchases of goods and services	1,024,680	13,186,883,177	452,950,761	0	13,640,858,618
		Cash withdrawals	10,660,514,816	3,265,534	0	284,014,348	10,947,794,698
		Total	10,661,539,496	13,190,148,711	452,950,761	284,014,348	24,588,653,316

Note: Data refer to the total number and value of transactions of the acquiring of payment cards of foreign issuers in 2016.
Source: CNB.

Figure 28 Number and value of transactions of the acquiring of payment cards of foreign issuers by the country of issuer – the six most represented



Note: Data refer to the total number and value of the acquiring of payment cards of foreign issuers in the RC.
Source: CNB.

As can be seen, only one of the six countries mentioned is a non-EU country, i.e. the United States. In 2016, the total number of acquiring transactions executed using payment cards issued in the United States, stood at 1.87 million, worth a total of HRK 1,443.7 million. In 2016, of the six countries, the largest value of transactions of the acquiring of payment cards was executed by payment cards issued in Germany, standing at HRK 4,909.16 million. In consequence, the largest average value by card transaction in the amount of HRK 910 was generated using German issuers' cards, and the smallest using Slovenian issuers' cards (Figure 28).

5.2 Comparison of the use of payment cards and of cash

It can be seen from the data shown that the obligors of fiscalisation¹⁰ issued a total of 2,337.43 million invoices in 2016, worth a total of HRK 158,691.34 million. In addition, of the total number of issued invoices, 88% of them were paid in cash, 11% by payment cards and 1% by other means (through transaction accounts, cheques, etc.). Of the total value of issued invoices, 58% refers to cash payments, 38% to payment by payment cards and 4% to payment by other means.

In 2016, the total number and value of issued invoices increased by 0.42% and 2.67% from 2015 respectively.

Figure 29 Comparison of use of different payment instruments – number

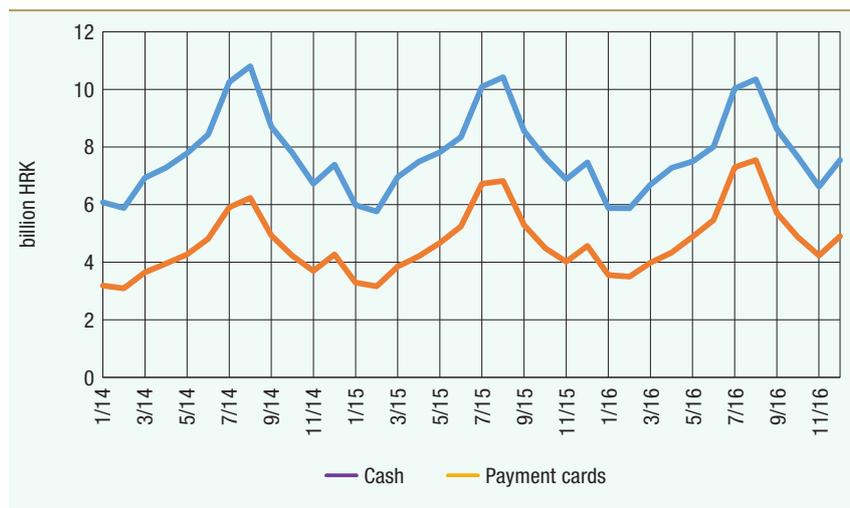


Note: Data refer to the total number during a single reporting period. Data for cash refer to the total number of issued invoices paid in cash. Data for payment cards refer to the total number of card-based payment transactions of the purchase of goods or services using Croatian and foreign cards.

Sources: Ministry of Finance of the RC – Tax Administration and CNB.

10 According to the data of the Ministry of Finance of the RC – Tax Administration, collected based on the Cash Transaction Fiscalisation Act (Official Gazette 133/2012).

Figure 30 Comparison of use of different payment instruments – value in HRK



Note: Data refer to the total value during a single reporting period. Data for cash refer to the value of issued invoices paid in cash in HRK. Data for payment cards refer to the total value of card-based payment transactions of the purchase of goods or services using Croatian and foreign cards.

Sources: Ministry of Finance of the RC – Tax Administration and CNB.

Figures 29 and 30 give a comparative presentation of the number and value of issued invoices paid in cash in the RC and the number and value of card-based payment transactions of the purchase of goods or services executed using the payment cards of Croatian and foreign issuers. The presentation shows that cash is also considerably more represented than payment cards in the number and value of transactions in 2016. However, in 2016, relative to 2015, the number of issued invoices paid in cash declined by 0.7%, while the value of issued invoices paid in cash fell by 1.5%. In addition, in 2016, relative to 2015, the value and number of card-based payment transactions of the purchase of goods or services executed using the payment cards of Croatian and foreign issuers increased by 7% and 8.4% respectively.

The average value of a cash payment transaction in 2016 stood at HRK 45, and the average value of a national card-based payment transaction stood at HRK 225.

6 Glossary

- **‘Charge card’** means a payment card in which at the moment a payment transaction is initiated, coverage in the payment account is not ensured, payment transactions most often being executed up to an approved credit line (limit). The user settles the expenses incurred by using a card with a charge function within a specified time interval in full at the end of a specified period, most frequently by a credit transfer.
- **‘Card payment scheme’** means a set of functions, procedures, rules and devices enabling the holder of a payment card to effect a payment and/or cash withdrawal transaction with a payment service provider.
- **‘Card-based payment transaction’** means a service based on a payment card’s acquiring infrastructure and card scheme business rules to make a payment transaction by means of a debit or a credit card.
- **‘Credit card’** means a payment card in which coverage on the payment account is not ensured, the user being approved a credit line (a limit) for the execution of the payment transaction. The payment card user can execute payments up to the amount of the approved credit line (the limit). The amount of each transaction executed with the use of a payment card with a credit function within a specified time interval is automatically divided into the agreed number of repayment instalments according to the agreed model.
- **‘Debit card’** means a payment card issued to payment account holders. The expenses incurred by this card are charged by debiting the payment account, most frequently immediately.
- **‘Delayed debit card’** means the payment card that is most frequently issued to payment account holders. At the moment a payment transaction is initiated, the coverage on the payment account is not ensured, and payment transactions can most often be executed up to an authorised limit. The total expenses incurred with the use of a payment card with a delayed debit function within a specified time interval are settled in full at the end of the specified time interval with the service of direct debit from the payment account.
- **‘International payment transaction’** means a payment transaction the execution of which involves two payment service providers one of which (of either the payer or the payee) operates in the RC, while the other payment service provider (of either the payer or the payee) operates pursuant to the regulations of a third country or another member state.

- **‘Member state’** means a contracting party to the Agreement on the European Economic Area.
- **‘National payment transaction’** means a payment transaction the execution of which involves a payer’s payment service provider and a payee’s payment service provider, or only one payment service provider, operating in the RC.
- **‘Payment instrument’** means any personalised device and/or set of procedures agreed between a payment service user and a payment service provider and used by the payment service user in order to initiate a payment order.
- **‘Payment card’** means a payment instrument enabling its holder to make payments for goods and services either through an accepting device for payment cards or remotely, and/or to withdraw cash and/or use other services at an ATM or another self-service device.
- **‘Payment service provider’** means the institution defined by Article 5 of the PSA.
- **‘Payment service provider – issuer’** means the institution that has issued the payment card.
- **‘Payment service provider – acquirer’** means the institution that ensures the acquiring of the payment card.
- **‘Revolving card’** means a payment card in which at the moment a payment transaction is initiated the coverage on the payment account is not ensured, and the user is most often granted a revolving credit line (limit) for the execution of the payment transaction. The user pays the amount of expenses incurred by using the card with a revolving function within a specified time interval partially in a determined percentage of the specific spending.
- **‘Third country’** means any foreign country that is not a member state.

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