

LATVIJAS BANKA REVIEW OF SOCIAL COSTS OF RETAIL PAYMENT INSTRUMENTS IN LATVIA IN 2014

CONTENTS

EXECUTIVE SUMMARY	3
INTRODUCTION	5
1. PAYMENT INSTRUMENTS	7
2. CASH PAYMENTS	8
2.1 Costs of cash payments incurred by the credit institution system and the interbank payment infrastructure operator	9
2.2 Cash payment handling costs incurred by companies	11
2.3 Total social costs of cash payments	12
3. CARD PAYMENTS	13
3.1 Costs of cash payments incurred by credit institutions and the interbank payment infrastructure operator	14
3.2 Costs of handling card payments incurred by companies	16
3.3 Total social costs of card payments	17
4. CREDIT TRANSFERS	18
4.1 Costs of ensuring credit transfers incurred by credit institutions and the interbank payment infrastructure operator	19
4.2 Credit transfer handling costs incurred by companies	20
4.3 Total social costs of credit transfers	21
5. TOTAL SOCIAL COSTS OF PAYMENT INSTRUMENTS	21
6. COMPARISON WITH 2009 INFORMATION	23

Details may not add because of rounding-off.

– – no costs in the period.

0 – the indicator is below 0.1 but over 0, or the result of the computation of the indicator is 0.

EXECUTIVE SUMMARY

The purpose of this review is to identify the costs incurred by traders, service providers and financial institutions to enable the public, i.e. natural and legal entities, to make payments for goods and services in Latvia. Such costs are called the social costs of payment instruments and they comprise the costs of all required resources, excluding the fees to other stakeholders involved in the payment chain. Latvijas Banka has compiled the data on the payment instruments most-widely used by natural and legal entities in 2014, i.e. cash payments, card payments and credit transfers, based on information provided by credit institutions, retailers and service providers (hereinafter, companies), interbank payment infrastructure operators and Latvijas Banka. The data on the resources spent by private individuals (time and costs) to make payments as well as the data on the payments outside the retail trade sector and with public institutions have not been examined.

In 2014, the social costs of all payment instruments in Latvia amounted to 206.3 million euro or 0.86% of gross domestic product (hereinafter, GDP). Those included the costs incurred by the credit institution system (credit institutions and Latvijas Banka) amounting to 111.0 million euro and the costs of companies totalling 95.3 million euro.

Roughly half of the total social costs of payment instruments consisted of the costs associated with cash payments (103.0 million euro). The remaining part comprised the non-cash payment costs: card payment costs (54.1 million euro) and credit transfer costs (49.2 million euro).

In comparison with 2009, the total social costs of payment instruments have increased by 33.4 million euro or 19.3% whereas the total number of payments has grown by 4.2 million. The social costs of card payments have increased by 17.0 million euro or 45.7% with the number of such payments rising by 77.6 million, the social costs of credit transfers have grown by 7.1 million euro or 16.8% with the number of such payments increasing by 35.6 million euro, whereas the social costs of cash payments have increased by 9.4 million euro or 10.0% and the number of such payments has declined by 109.0 million.

Same as in 2009, non-cash payments had the highest social costs per transaction: 48.9 cents and 31.5 cents in the case of credit transfers and card payments respectively. The unit social costs of a cash payment were 16.4 cents. In comparison with 2009, the social costs per cash-less payment decreased for both credit transfers and card payments (by 24.6% and 20.2% respectively), whereas the social costs per cash payment grew by 29.1%.

Latvijas Banka would like to express gratitude to all credit institutions and companies who provided data for this review in 2015: JSC ABLV Bank, JSC Air Baltic Corporation, ALBERT MANAGEMENT Ltd., AUGSTCELTNE Ltd., Baltijas Biroju Serviss Ltd, BENU Aptieka Latvija Ltd., BITE Latvija Ltd., BROČĒNU SILTUMS Ltd., CITA SANTEHNIKA Ltd., DEPO DIY Ltd., Faberlic Baltija Ltd., First Data Latvia Ltd., Grāmatu nams "Valters un Rapa" Ltd., GULBENES AUTOBUSS Ltd., IMPRO CEĻOJUMI Ltd., IRVE Ltd., Jaunais Rīgas teātris State Ltd., JĀNIS ROZE Ltd., Jūrmalas siltums Ltd., JSC Latvenargo, Latvia Tours Ltd., Latvijas Mobilais Telefons Ltd., SJSC Latvijas Pasts, JSC LIDO, LIELKALNU CENTRS Ltd., LPP Latvia Ltd, MAIZNĪCA FLORA Ltd., NARVESEN BALTIJA Ltd., Neo prim Ltd., NESTE LATVIJA Ltd., JSC NORVIK BANKA, Pie Lietas Ltd., POLAR BEK DAUGAVA Ltd., JSC RAUTAKESKO, Rīga Municipal Company Rīgas satiksme Ltd., RIMI LATVIJA Ltd., JSC SEB banka, SKAI BALTIJA Ltd., JSC Swedbank, Tiger

Shop Ltd., JSC TRASTAKOMERCBANKA, Municipal company Ventpils reiss Ltd., VESELOVO UN KO Ltd., VIASTOR Ltd., Xnet Ltd. and ZEMGALES OLIMPISKAIS CENTRS Ltd. as well as the Central Statistical Bureau of Latvia.

INTRODUCTION

In 2012, Latvijas Banka published the first review of the costs associated with producing the cash and non-cash retail payment instruments and making them available to the general public that are incurred by institutions and companies involved in the payment chain.

As at that time Latvijas Banka participated in the European Central Bank's study of the social costs of retail payment instruments in the European Union, the 2012 report was based on the methodology developed by the European Central Bank and it comprised data on 2009, whereas the present review presents the data on 2014 and highlights the changes in the social costs and usage of payment instruments following the euro changeover. The same European Central Bank's methodology was also used for this review.

The objective of the review is to promote the public awareness and understanding of the costs of cash and non-cash payments (the most widely used retail payment instruments) directly associated with the production of payment instruments for the general public, mostly private individuals, in order to ensure the possibility to make payments in the retail trade and services sectors, i.e. of the social costs of payment instruments, providing information about the differences in the social costs of various payment instruments, the composition of these costs and the stakeholders they relate to.

Social costs of payment instruments are the sum of all resource costs incurred by the professional stakeholders involved in the payment chain, i.e. companies, credit institutions, interbank payment infrastructure operators, cash-in-transit and processing companies, and Latvijas Banka, to produce and cash and non-cash payment instruments and make them available to the general public.

Social costs of payment instruments do not include the fees to other stakeholders involved in the payment chain. Fees to other stakeholders are excluded from the social costs of payment instruments as they are not directly related to the production of payment instruments. The social costs of payment instruments also do not comprise the resources (time) spent by the private individuals themselves on making payments since the resources of private individuals are not directly related to the production of payment instruments either.

Latvijas Banka assessed the social costs of cash payments, debit and credit card payments, and credit transfers with the help of a costs survey. In order to identify these costs, the private costs of all stakeholders involved in the production and supply of the respective type of payment instruments were compiled or assessed.

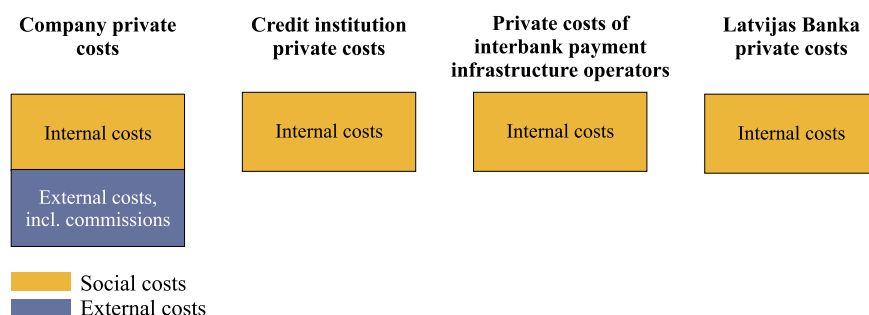
Private costs are payment for the resources spent by a stakeholder directly or indirectly involved in the payment transaction, to carry out its tasks in a specific production or processing stage of the payment instrument. There are internal and external private costs.

Internal private costs are payment for the resources used by the stakeholder involved in the payment chain itself.

External private costs are payment to other stakeholders involved in the payment chain, e.g. the paid commissions.

The social costs of payment instruments were calculated as follows: the private costs incurred by the stakeholders involved in the production of payment instruments minus external costs, i.e. commissions or other fees paid to other stakeholders (see Chart 1).

Chart 1

Costs of payment instruments

Data on private costs were provided by Latvijas Banka and all interbank payment infrastructure operators. As the number of credit institutions and companies operating in Latvia is huge, it was impossible to collect data on the private costs incurred by each; hence, to assess those private costs, Latvijas Banka focussed on the credit institutions which were the major providers of the respective payment services as well as companies which were prominent trade representatives or service providers to individuals in the specific sector. In addition, Latvijas Banka also identified the private costs of small and medium-sized companies and small credit institutions. Latvijas Banka attributed the private costs of the credit institutions and companies involved in the data compilation to all credit institutions and companies by way of various extrapolation methods (see Sections 2–4 for further information on the calculation of the private costs of credit institutions and companies).

Latvijas Banka also used balance sheet data of credit institutions, turnover statistics of the retail trade and services sectors, employment indicators in particular sectors of the economy, payment and interbank payment system statistics of credit institutions to identify and analyse the private costs.

External costs (commissions on cash deposits and payments made, fees paid to cash-in-transit companies, card association fees) were analysed entirely based on company survey data. The costs of the credit institution system and interbank payment infrastructure operator were presented together in this review.

Data on the costs incurred by the following respondents were used to prepare this review:

- 1) Latvijas Banka;
- 2) five credit institutions operating in Latvia in 2014: JSC ABLV Bank, JSC NORVIK BANKA, JSC SEB banka, JSC Swedbank and JSC TRASTA KOMERCBANKA.

Overall, 21 credit institutions¹ operated in Latvia in 2014. As all credit institutions did not offer the same payment instruments, the number of the surveyed credit institutions differed in case of each payment instrument as well as the group of credit institutions to which the payment instrument costs were attributed;

- 3) interbank payment infrastructure operators: First Data Latvia Ltd. and Latvijas Banka;

- 4) 40 companies of the retail trade and services sectors:

- a) retail trade companies: AUGSTCELTNE Ltd., BENU Aptieka Latvija Ltd.,

¹ Because of their specific business models, the data on JSC Danske Bank Latvia Branch, JSC Bigbank Latvia Branch and Scania Finans Aktiebolag Latvia Branch were not collected and analysed.

CITA SANTEHNIKA Ltd., DEPO DIY Ltd., Faberlic Baltija Ltd., Grāmatu nams "Valters un Rapa" Ltd., JĀNIS ROZE Ltd., LPP Latvia Ltd, MAIZNĪCA FLORA Ltd., NARVESEN BALTIJA Ltd., Neo prim Ltd., NESTE LATVIJA Ltd., RAUTAKESKO Ltd., RIMI LATVIJA Ltd., SKAI BALTIJA Ltd., Tiger Shop Ltd., VESELOVO UN KO Ltd., VIASTOR Ltd. and Xnet Ltd;

b) companies operating in the services sector: JSC Air Baltic Corporation, ALBERT MANAGEMENT Ltd., Baltijas Biroju Serviss Ltd., BITE Latvija Ltd., BROČĒNU SILTUMS Ltd., GULBENES AUTOBUSS Ltd., IMPRO CEĻOJUMI Ltd., IRVE Ltd., Jaunais Rīgas teātris State Ltd., Jūrmalas siltums Ltd., JSC Latvenergo, Latvia Tours Ltd., Latvijas Mobilais Telefons Ltd., SJSC Latvijas Pasts, JSC LIDO, LIELKALNU CENTRS Ltd., Pie Lietas Ltd., POLAR BEK DAUGAVA Ltd., Riga Municipal Company Rīgas satiksme Ltd., Municipal company Ventpils reiss Ltd. and ZEMGALES OLIMPISKAIS CENTRS Ltd.

Following Latvijas Banka request, the Central Statistical Bureau of Latvia provided aggregated statistical data on the turnover and number of employees of the respective industries of the retail trade and services sectors in 2014, broken down by large, medium-sized and small companies, as well as on the number of companies operating in the respective sectors. According to the above data, 27 562 companies operated in Latvia in 2014 in the retail trade and services sectors offering goods and services to private individuals.

Experts selected respondents from both retail trade and services sectors as well as respondents representing small, medium-sized and large enterprises. Overall, questionnaires were sent to 130 respondents and 40 filled-in questionnaires were returned.

Certain respondents explained their unwillingness to participate in the survey by data confidentiality issues, additional costs to be incurred by companies outsourcing accounting services, shortage of staff and time, inability to see the value added from such a survey. Some company representatives that were approached thought the questionnaire to be too complicated and time-consuming.

Companies provided general information about issues concerning accounting and the process of customer servicing as well as replied to questions about the funds and time spent on handling payments. To obtain overall data about Latvia, Latvijas Banka estimated the data based on the share of the retail trade turnover of the surveyed companies in the retail trade turnover of the respective industry and the share of the turnover of the surveyed service providers in the turnover of the respective services industry.

1. PAYMENT INSTRUMENTS

Latvijas Banka assessed the social costs of retail payments (i.e. non-critical payments up to an equivalent of 50 000 euro) made by private individuals for the purchase of goods and services in the retail trade and services sectors.

A payment transaction is an act initiated by the payer or by the payee with an aim of placing, transferring or withdrawing funds irrespective of any obligations underlying the legal relationship between the payer and the payee.

(Law on Payment Services and Electronic Money; effective as of 31 March 2010)

Data on large-value payments and those made between financial intermediaries, e.g. interbank payments and the financial market payments, on wholesale trade payments as well as inter-company payments and their costs were not compiled as they are not related to providing payment services to the public in the retail

trade and services sectors. Data on payments between private individuals without the intermediation of a company were also disregarded.

Latvia became the 18th member of the euro area on 1 January 2014. Since that day euro is legal tender in Latvia and payments in retail trade and services sectors are made in euro. Both cash and non-cash instruments, i.e. credit cards, debit cards and credit transfers, are used in retail trade payments. Up to 2014, direct debit was another payment instrument used in Latvia. Direct debit payments were discontinued with the introduction of the euro and replaced by credit transfers. Due to this reason, direct debit payments are not covered by this review, while the comparative data take into account the number of direct debit payments and their costs in 2009 as they have been included in the respective credit transfer data.

A cash payment is a money transfer in the physical form of a currency, i.e. banknotes and coins.

A card payment (credit and debit cards) is a payment transaction performed by way of a payment card with a debit or credit function.

A card with a debit function enables its holder to make cash withdrawals and pay for purchases using the non-cash funds of the cardholder on his/her current account.

A card with a credit function enables its holder to pay for purchases or make cash withdrawals up to a prearranged ceiling using the non-cash funds of the credit institution, settling the granted credit as a lump sum or in instalments, with the balance considered as an extended credit. For the purposes of this review, a card with the delayed debit function is also considered to be a card with a credit function, enabling its holder to pay for purchases or make cash withdrawals up to a prearranged ceiling using the non-cash funds of the credit institution, with full settlement at the end of the specified period.

Credit transfer is a payment initiated by a payer at the credit institution of the payer for the purpose of placing non-cash funds at the disposal of the payee.

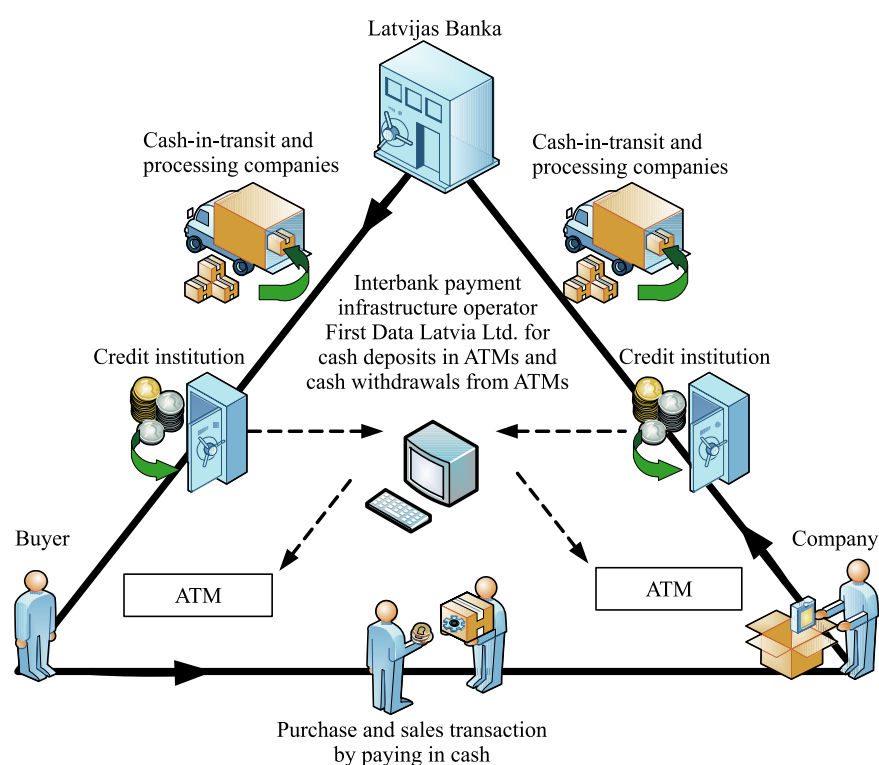
2. CASH PAYMENTS

A cash payment is one of the oldest payment instruments and one of the three payment instruments whose social costs were examined by Latvijas Banka. Nowadays money means both cash (banknotes and coins) and non-cash (deposits with credit institutions) items. A cash payment is an easy transaction exchanging banknotes and coins for goods or services; however, stakeholders are needed to make a cash payment, and each of them plays a significant role in the cash cycle. All the stakeholders involved ensure the continuity of the cash cycle (see Chart 2). Buyers pay companies for goods and services, credit institutions provide cash to their customers (private individuals and companies) by using the interbank payment infrastructure and cash-in-transit and processing companies, and Latvijas Banka issues cash via credit institutions.

To determine the social costs of cash payments, Latvijas Banka assessed the private costs incurred by the stakeholders involved in such payments. To assess the average social costs per cash payment, data on the number and value of retail cash payments made by private individuals were also required. This kind of payment statistics is normally not compiled. Therefore, considering that it is the companies that have the most direct contact with buyers and their payments, company survey data on the number and value of retail payments made by their customers in 2014 were used, applying the share of the retail trade turnover of

the surveyed companies in the retail trade turnover of the respective sector and the share of the turnover of the surveyed service providers in the turnover of the respective services sector as the extrapolation coefficient.

Chart 2
Cash cycle



According to Latvijas Banka estimates, individuals in Latvia made 628.5 million retail cash payments for goods and services in 2014 representing 69.8% of all cash and non-cash payments, with the average value of a cash payment amounting to 7.1 euro in 2014.

2.1 Costs of cash payments incurred by the credit institution system and the interbank payment infrastructure operator

Latvijas Banka, credit institutions, the interbank payment infrastructure operator, cash-in-transit and processing companies are stakeholders ensuring the functioning of the cash cycle and accounting for a part of the social costs of cash payments. Latvijas Banka as an issuer of the European single currency plays the central role in the cash cycle. Credit institutions provide cash to their customers, both private individuals and companies, by using the services of the interbank payment infrastructure operators and cash-in-transit and processing companies. For the purposes of the present review, cash-in-transit and processing costs were estimated by examining the costs of the credit institution system.

Latvijas Banka provided data on the costs associated with the design, security, issuance and handling of cash broken down by main activities. In this review, Latvijas Banka's costs associated with the cash cycle are included in the total costs of the credit institution system which includes credit institutions and Latvijas Banka.

The costs of cash related activities incurred by Latvijas Banka can be divided into several groups characterising the main cash related activities of the central bank:

- 1) design of banknotes and coins, quality control and preparatory work for printing banknotes and minting coins;
- 2) issuing, processing (including the acceptance of cash deposits, cash verifying, sorting, destroying and storage) and transportation of banknotes and coins;
- 3) combating counterfeiting.

Data on the costs associated with ensuring cash payments were reported by five credit institutions (JSC ABLV Bank, JSC NORVIK BANKA, JSC SEB banka, JSC Swedbank and JSC TRASTA KOMERCBANKA) accounting for 76.9% of total cash withdrawals from ATMs and over the counter recorded in the payment statistics reports of Latvian credit institutions and by the interbank payment infrastructure operator First Data Latvia Ltd. engaged in handling cash payments in 2014 by ensuring the processing of cash deposits in ATMs and cash withdrawals from ATMs.

The data provided were assessed to identify the total private costs of Latvia's credit institutions associated with cash payments. All credit institutions operating in 2014 in Latvia provided cash deposit and cash withdrawal services. They were grouped depending on their share in the total number of cash deposits and cash withdrawals based on the payment statistics reports of credit institutions. Latvijas Banka then attributed the private costs incurred by each credit institution participating in the data collection to the whole group, using the share of the above credit institution's total expenditure, as reported in its financial statements for 2014, in the total expenditure of credit institutions of the relevant group as an extrapolation coefficient.

The cash handling costs incurred by the credit institution system and the interbank payment infrastructure operator can be divided into groups representing the main cash related activities:

- 1) cash transportation, cash withdrawals from ATMs and over the counter and cash deposits in ATMs and over the counter;
- 2) safekeeping/cash handling;
- 3) procedures for counterfeit banknotes and coins;
- 4) customer services;
- 5) other costs, including the costs of management and monitoring.

In 2014, the social costs of handling cash payments incurred by the credit institution system and interbank payment infrastructure operator totalled 40.6 million euro or 0.17% of GDP. Divided by the total number of the identified cash payments in the retail trade and services sectors, this amounted to 6.5 cents per cash payment. The social costs of a notional payment in the amount of 1 euro were 0.9 cents (see Table 1).

Table 1

Costs of ensuring cash payments incurred by the credit institution system and the interbank payment infrastructure operator by activity (data for 2014)

Type of costs	Private costs (millions of euro)	Social costs (millions of euro)	Structure of social costs (%)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
Cash transportation, cash withdrawals from ATMs and over the counter, cash deposits in ATMs and over the counter	23.9	23.9	58.9	3.8	0.5
Safekeeping/cash handling	7.9	7.9	19.5	1.3	0.2
Procedures for counterfeit banknotes and coins	0.5	0.5	1.2	0.1	0.0
Customer services	7.3	7.3	18.0	1.2	0.2
Other costs, including the costs of management and monitoring	1.0	1.0	2.5	0.2	0.0
Total	40.6	40.6	100.0	6.5	0.9

Expenses on cash transportation, withdrawals from ATMs and over the counter and cash deposits in ATMs and over the counter accounted for the largest share of the social costs of the credit institution system and the interbank payment infrastructure operator in 2014. The second largest share was comprised of expenditure related to safekeeping and handling of cash.

2.2 Cash payment handling costs incurred by companies

Companies are stakeholders participating in the cash cycle and their costs form a part of the social costs of cash payments. In the cash cycle, companies offer goods and services to private individuals in exchange for payments in cash. In order to handle cash operations, companies require the services provided by credit institutions and other stakeholders participating in the cash cycle.

To compile data on the costs incurred by retail trade and services companies when accepting and handling cash payments, Latvijas Banka attributed the data provided by the surveyed companies to all companies of the respective sectors. Latvijas Banka used the share of their turnover in the total turnover of the sector as presented in the financial statements of the companies for 2014 as the extrapolation coefficient. The turnover of the sample companies amounted to 19.1% of the total turnover of the retail trade and respective services sectors. All the surveyed sectors used cash payments.

The company costs of cash payments can be divided into several groups characterising the main cash related activities of the companies:

- 1) costs associated with the purchase and insurance of cash;
- 2) costs associated with the handling of a cash payment: part of the wage due for the time spent on handling the payment;
- 3) costs of the cash registers, cash register systems, terminals and banknote authentication devices (their purchase or lease) and servicing costs;
- 4) cash safekeeping (safe purchasing and maintenance) costs.

In 2014, the social costs of handling cash payments faced by Latvian companies amounted to 62.4 million euro or 0.26% of GDP. Dividing the above amount by the total number of cash payments identified in the retail trade and services sectors, it results in 9.9 cents per cash payment. The social costs of a notional payment in the amount of 1 euro were 1.4 cents (see Table 2).

Table 2

Cash payment handling costs incurred by companies (data for 2014)

Type of costs	Private costs (millions of euro)		Social costs (millions of euro)	Structure of social costs (%)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
		incl. external costs				
Costs related to the purchase and insurance of cash	2.3	–	2.3	3.7	0.4	0.1
Cash payment handling costs	21.8	–	21.8	34.9	3.5	0.5
Costs of the cash registers, cash register systems, terminals and banknote authentication devices (their purchase or lease)	37.0	–	37.0	59.3	5.9	0.8
Cash safekeeping costs	7.5	6.2	1.3	2.1	0.2	0.0
Total	68.6	6.2	62.4	100.0	9.9	1.4

The most significant social costs of cash payments incurred by companies in 2014 were related to the costs of the cash registers, cash register systems, terminals and banknote authentication devices (their purchase or lease). These costs include the purchase and maintenance costs of cash registers and of banknote authentication devices as well as employee compensation for the time devoted to maintaining and solving malfunctions of these devices. The second most significant part of the social costs of companies was the cash payment handling costs. This assessment was based on the information provided by the companies on the duration of time needed for an employee to handle a cash operation, multiplying it by the average hourly remuneration rate in the respective sub-sector. External costs incurred by companies or the fee for handling cash paid to cash-in-transit companies and credit institutions amounted to 6.2 million euro. These costs include items like commissions on cash deposits made with credit institutions and cash transportation costs.

According to the survey data, the biggest number of cash payments in 2014 was made in the sector of other retail sale in non-specialised stores (34.3% of the total number of cash payments), in the supermarket sector (30.3% of the total number of cash payments) and catering sector (11.3% of the total number of cash payments). The largest social costs associated with cash operations (42.4% of the total social costs of cash payments faced by companies) were incurred to the catering services sector. Overall, cash was used mostly to pay for purchases of goods (85.0% of the total number of cash payments), while 15.0% of the cash payments were made for services.

2.3 Total social costs of cash payments

In 2014, the total social costs of cash payments in Latvia amounted to 103.0 million euro or 49.9% of the total social costs of payment instruments (0.43% of GDP; see Table 3).

Most of the social costs of cash payments were borne by the companies. The total costs of the credit institution system and the interbank payment infrastructure operator were 21.8 million euro or 34.9% smaller. The most significant costs incurred by companies were related to purchase or lease of cash registers, cash register systems, terminals and banknote authentication devices and their servicing.

Table 3

Total cash payment costs (data for 2014)

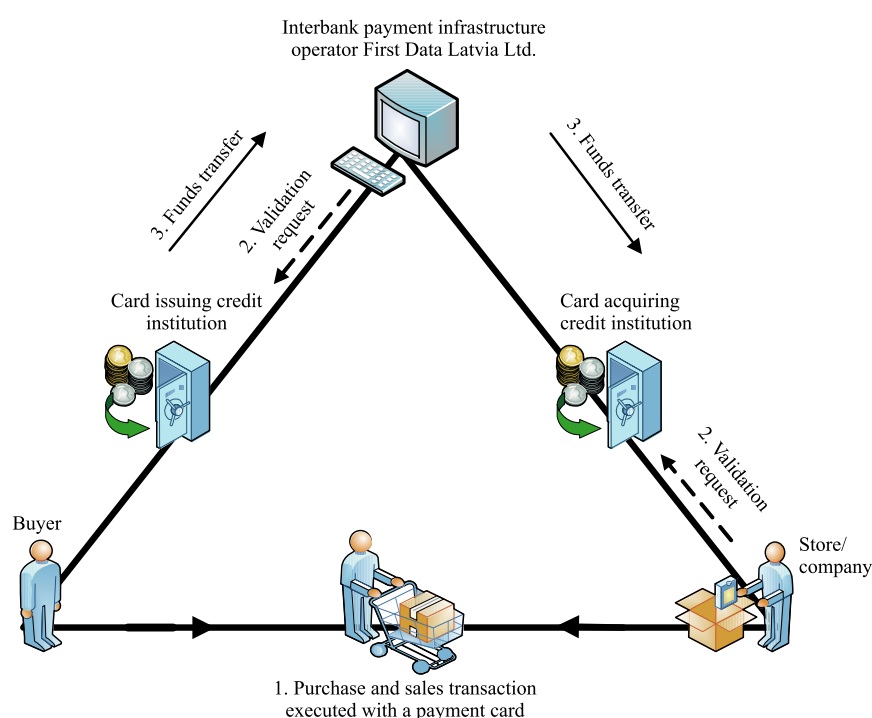
Stakeholder	Private costs (millions of euro)		Social costs (millions of euro)	Social costs (% of GDP)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
		incl. external costs				
Credit institution system and interbank payment infrastructure operators	40.6	–	40.6	0.17	6.5	0.9
Companies	68.6	6.2	62.4	0.26	9.9	1.4
Total	109.2	6.2	103.0	0.43	16.4	2.3

The social costs per cash payment in Latvia were 16.4 cents in 2014, whereas the social costs of such notional payment in the amount of one euro amounted to 2.3 cents. To calculate these indicators, Latvijas Banka used the estimates of the number and value of cash payments made in the retail trade and services sectors, i.e. 628.5 million retail cash payments in the total amount of 4.5 billion euro.

3. CARD PAYMENTS

Card payments was the most frequently used non-cash payment instrument in 2014. In Latvia, payment cards are used by both natural and legal persons to pay for goods and services in the retail trade and services sectors. In order to make a payment with a card, a buyer needs stakeholders and each of them plays a definite role in the payment chain (see Chart 3). Buyers initiate card payments at POS terminals serviced by a card acquiring credit institution and straight-through processing of card payments follows. Each card payment is first authorised at the payment card processing centre of credit institutions and at the interbank card processing centre. When authorising a card payment, the relevant card

Chart 3

Card payment chain

issuing credit institution reserves the purchase amount on the buyer's account and validates the payment. Following the validation, the company delivers goods or provides a service. The validated payment is further processed at the interbank card processing centre and at the credit institution, followed by clearing and interbank settlement of the above payment. After receiving the funds from the card issuing credit institution, the card acquiring credit institution credits the payment amount to the company's account. The company usually receives the money on the next day or later following the delivery of goods or services to the buyer. In 2014, only international card scheme products, such as VISA, Mastercard and American Express, were used in Latvia.

To aggregate the social costs of card payments, Latvijas Banka estimated the private costs incurred by the stakeholders involved in the above payments. To assess the average social costs per card payment, the number and value of the relevant payments in Latvia had to be estimated. Latvijas Banka used the credit institution payment statistics on the number and value of domestic card payments made in euro in 2014, since card payments are mainly used in the retail trade and services sectors.

According to Latvijas Banka estimate, in 2014 private individuals made 171.7 million retail card payments for goods and services in the retail trade and services sectors in Latvia, representing 19.1% of all cash and non-cash payments, whereas the average value per card payment was 17.30 euro.

3.1 Costs of cash payments incurred by credit institutions and the interbank payment infrastructure operator

Credit institutions and the interbank payment infrastructure operator are the stakeholders providing for the execution of card payments and handling of payment cards, thus accounting for a part of the social costs of card payments.

Latvijas Banka compiled data on the private costs associated with card payment processing collected from the interbank payment infrastructure operator First Data Latvia Ltd. which was the sole interbank card payment processing centre in Latvia in 2014 and from five credit institutions (JSC ABLV Bank, JSC NORVIK BANKA, JSC SEB banka, JSC Swedbank and JSC TRASTA KOMERCBANKA) together accounting for 77.8% of the total number of card payments made by Latvian credit institutions.

The provided data were assessed to estimate the total private costs associated with handling the card payments incurred by all Latvian credit institutions. All credit institutions operating in Latvia in 2014 were grouped depending on their share in card payments, based on the payment statistics reports of credit institutions. Latvijas Banka then attributed the private costs incurred by each credit institution involved in the data collection to the whole group of credit institutions, using the share of the above credit institution's expenditure, as reported in its financial statements for 2014, in the expenditure reported in the financial statements for 2014 by the credit institutions of the relevant group as the extrapolation coefficient. The five credit institutions involved in the data compilation and First Data Latvia Ltd. reported the data on the private costs broken down by main activities. In this review, the costs associated with ensuring card payments incurred by the interbank payment infrastructure operator First Data Latvia Ltd. are aggregated with the private costs faced by credit institutions.

The costs of the debit and credit card payments incurred by credit institutions and the interbank payment infrastructure operator can be decomposed subject to their main activities with payment cards:

- 1) customer service, including acquiring new customers;
- 2) issuance of cards and licence fees;
- 3) payment authorisation, processing and company service;
- 4) fraud prevention and review of customer complaints;
- 5) other costs, including the costs related to management and monitoring.

Latvijas Banka calculated the costs associated with the card payment processing, as incurred by credit institutions and First Data Latvija Ltd., separately for the payments made with debit cards and for those with credit cards.

In 2014, the social costs associated with handling the debit card payments incurred by credit institutions and First Data Latvija Ltd. amounted to 28.7 million euro or 0.12% of GDP. Dividing the above amount with the total number of the identified debit card payments, it results in 17.7 cents per debit card payment. The social costs of a notional payment in the amount of 1 euro were 1.0 cents (see Table 4).

Table 4

Costs of ensuring debit card payments incurred by credit institutions and the interbank payment infrastructure operator

Type of costs	Private costs (millions of euro)	Social costs (millions of euro)	Structure of social costs (%)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
Customer service, including acquiring new customers	7.5	7.5	26.1	4.6	0.3
Issuance of cards and licence fees	3.2	3.2	11.1	2.0	0.1
Payment authorisation, processing and company service	14.1	14.1	49.1	8.7	0.5
Fraud prevention and review of customer complaints	0.2	0.2	0.7	0.1	0.0
Other costs, including the costs related to management and monitoring	3.7	3.7	12.9	2.3	0.1
Total	28.7	28.7	100.0	17.7	1.0

The major social costs of the debit card payments incurred by credit institutions and the interbank payment infrastructure operator were related to payment authorisation, processing and company service as well as customer service and acquiring new customers (49.1% and 26.1% respectively).

In 2014, the social costs associated with handling the credit card payments incurred by credit institutions and First Data Latvija Ltd. amounted to 11.2 million euro or 0.05% of GDP. Dividing the above amount by the total number of the identified credit card payments, it results in 1.21 cents per credit card payment. The social costs of a notional payment in the amount of 1 euro were 6.1 cents (see Table 5).

The largest social costs of the credit card payments incurred by credit institutions and the interbank payment infrastructure operator in 2014 were related to customer service, including acquiring new customers (38.4%), and other costs, including management and monitoring costs, which incorporate the staff costs as well as the rental costs for the premises of branch offices and information technology and communications costs (22.3%).

Table 5

Costs of credit card payments incurred by credit institutions and the interbank payment infrastructure operator

Type of costs	Private costs (millions of euro)	Social costs (millions of euro)	Structure of social costs (%)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
Customer service, also acquiring new customers	4.3	4.3	38.4	46.4	2.3
Issuance of cards and licence fees	1.9	1.9	17.0	20.5	1.0
Payment authorisation, processing and company service	1.9	1.9	17.0	20.5	1.0
Fraud prevention and review of customer complaints	0.6	0.6	5.4	6.5	0.3
Other costs, including the costs related to management and monitoring	2.5	2.5	22.3	27.0	1.4
Total	11.2	11.2	100.0	120.8	6.1

Total social costs of card payments amounted to 39.9 million euro or 0.17% of GDP in 2014. The social costs of debit card payments amounted to 71.9% and those of credit card payments were 28.1% of the total social costs of card payments incurred by credit institutions and the interbank payment infrastructure operator in 2014. In 2014, the number of payments made by debit cards in Latvia was about 18 times higher than the number of credit card payments.

3.2 Costs of handling card payments incurred by companies

Companies are involved in ensuring card payments, and their costs account for a part of the social costs of the above payments. Companies offer goods and services, with buyers making debit card and credit card payments at the points-of-sale of the companies. In order to ensure that card payments are accepted, companies require the services provided by credit institutions and other stakeholders involved in the payment chain. The present review provides aggregated company data on debit card and credit card payments, since the companies were unable to break down the relevant costs by the type of payment card.

To compile data on the private costs of card payments incurred by retail trade and services sector companies, Latvijas Banka attributed the data collected from the surveyed companies to all companies which accepted retail card payments for goods and services from individuals in 2014. Latvijas Banka used the share of their turnover in the total turnover of the relevant sector as presented in the financial statements of the companies for 2014 as the extrapolation coefficient. The turnover of the sample companies totalled 25.6% of the total turnover of the respective sectors. Of the covered 17 industries, card payments were not accepted only in street vending.

The company costs of card payments can be decomposed subject to the main payment activities of the companies:

- 1) costs of printing the daily overviews and keeping the accounts associated with electronic payments, including cash register costs, card terminal costs (purchase or lease and servicing costs);
- 2) costs of handling payments: part of the wage due for the time spent on handling payments;
- 3) costs of telecommunication subscription and other electronic data transmission-related costs.

In 2014, the social costs of card payments incurred by Latvian companies amounted to 14.2 million euro or 0.06% of GDP. Dividing the above amount by the total number of the identified card payments, this results in 8.3 cents per payment. The social costs of a notional payment in the amount of 1 euro were 0.5 cents (see Table 6).

Table 6

Costs associated with handling card payments incurred by companies (data for 2014)

Type of costs	Private costs (millions of euro)		Social costs (millions of euro)	Structure of social costs (%)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
		incl. external costs				
Costs of printing the daily overviews and keeping the accounts associated with electronic payments, including the costs of cash registers Card terminal costs: purchase or leasing and servicing costs	5.0	–	5.0	35.2	2.9	0.2
Costs of handling payments: part of the wage due for the time spent on handling payments	30.4	21.7	8.7	61.3	5.1	0.3
Costs of telecommunication subscription and other electronic data transmission-related costs	0.5	–	0.5	3.5	0.3	0.0
Total	35.9	21.7	14.2	100.0	8.3	0.5

In 2014, the major social costs of card payments incurred by companies were associated with handling payments: the time spent by the employees and the respective wage for the work (61.3%). The second most significant part consisted of the costs of printing the daily overviews and keeping the accounts associated with electronic payments, including cash register costs, card terminal costs (purchase or lease and servicing costs; 35.2%); External costs or the fee paid to other stakeholders for handling card payments totalled 21.7 million euro in 2014 and these costs include the commissions paid to credit institutions or card acquirers for card payments made, as well as the fee paid to credit institutions or card schemes for the received card payments (transaction fee).

According to the survey data, the largest number of card payments in 2014 was made in the supermarket sector (29.4% of the total number of card payments), other retail sale in non-specialised stores (26.6%) and catering services (9.4%). The largest social costs associated with card payments, representing 37.5% of the total social costs of card payments incurred by companies, were incurred in the catering services sector. Overall, cards were used more to pay for purchases of goods (78.8% of the total number of card payments), while 21.2% of the total card payments were made for received services.

3.3 Total social costs of card payments

In 2014, the total social costs of card payments in Latvia amounted to 54.1 million euro or 26.2% of the total social costs of payment instruments (0.22% of GDP; see Table 7).

Table 7

Total card payment costs (data for 2014)

Stakeholder	Private costs (millions of euro)		Social costs (millions of euro)	Social costs (% of GDP)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
		incl. external costs				
Credit institutions and the interbank payment infrastructure operator	39.9	–	39.9	0.17	23.2	1.3
Debit cards	28.7	–	28.7	0.12	17.7	1.0
Credit cards	11.2	–	11.2	0.05	120.8	6.1
Companies (debit and credit cards)	35.9	21.7	14.2	0.06	8.3	0.5
Total	75.8	21.7	54.1	0.22	31.5	1.8

The largest social costs associated with the card payments were incurred by credit institutions and the interbank payment infrastructure operator (39.9 million euro), whereas for companies the respective costs were 25.7 million euro or about 2.8 times lower.

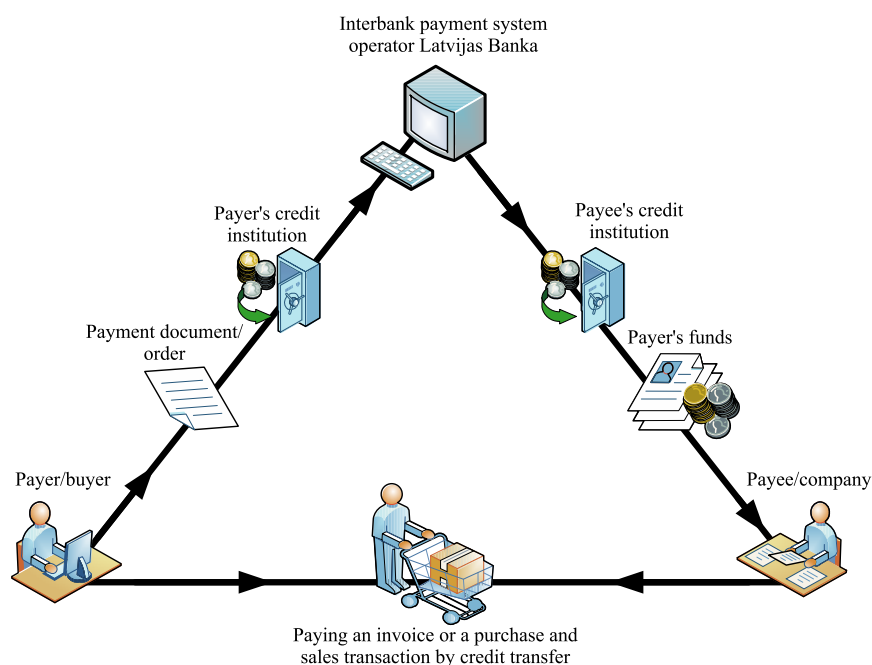
The social costs per card payment in Latvia amounted to 31.5 cents in 2014, whereas the social costs of such notional payment in the amount of 1 euro were 1.8 cents. To calculate these indicators, Latvijas Banka used an estimate of the number and value of card payments made in the retail trade and services sectors: 171.7 million retail card payments in the total amount of 3.0 billion euro.

4. CREDIT TRANSFERS

Credit transfers were the second most frequently used non-cash payment instrument in 2014. Both natural and legal persons used credit transfers in Latvia when paying invoices for services in the services sectors and, to a small extent, also in retail trade. Each credit transfer involves stakeholders and each of them plays a role in ensuring a credit transfer (see Chart 4). When making a payment, a buyer initiates a credit transfer by submitting a credit transfer order to the payer's credit institution for the purpose of placing the amount at the payee's disposal at the payee's credit institution. The payer's credit institution debits the amount of non-cash funds from the payer's account, executes the customer's payment order and transfers the funds to the payee's credit institution via the interbank payment system operator, while the payee's credit institution ensures that the funds are credited to the payee's account. Latvijas Banka is the interbank payment system operator. In 2014, Latvijas Banka ensured the operation of the electronic clearing system of Latvijas Banka (the EKS system, hereinafter, the EKS system). The EKS is a net settlement system ensuring convenient, rapid and cheap interbank customer payments in euro, enabling a straight-through processing of SEPA credit transfers. Settlements in the EKS system are processed seven times a day, enabling the payee to receive the transfer within a few hours.

To aggregate the social costs of credit transfers, Latvijas Banka assessed the private costs of the stakeholders involved in executing credit transfers. To assess the average social costs per credit transfer, data on the number and value of retail credit transfers executed by private individuals in Latvia in 2014 were also necessary. Credit transfers are mainly used in inter-company payments and private individuals account for only a small percentage of credit transfers made in retail trade or when paying for services. Considering that, Latvijas Banka used the credit institution payment statistics on the domestic credit transfers made in euro in 2014, using a ratio of the credit transfers reported by the respondent credit institution in the survey to those reported in the payment statistics as the extrapolation coefficient for the respective group of credit institutions.

Chart 4

Credit transfer chain

According to Latvijas Banka estimates, private individuals made 100.5 million retail credit transfers in the services sectors and retail trade in 2014 in Latvia, representing 11.2% of all cash and non-cash payments. The average value of a credit transfer was 28.40 euro in 2014.

4.1 Costs of ensuring credit transfers incurred by credit institutions and the interbank payment infrastructure operator

Credit institutions and the interbank payment infrastructure operator are the stakeholders providing for the execution and handling of credit transfers, thus generating the social costs of credit transfers. Latvijas Banka compiled data on the private costs of credit transfers received from the Latvijas Banka, the operator of the interbank payment system, and five credit institutions (JSC ABLV Bank, JSC NORVIK BANKA, JSC Swedbank and JSC TRASTA KOMERCBANKA). The number of customer credit transfers handled in 2014 by the above amounted to 79.9% of the total number of credit transfers made by the customers of Latvian credit institutions.

The obtained data were assessed to estimate the private costs associated with handling the credit transfers incurred by all Latvian credit institutions. All credit institutions operating in Latvia in 2014 were grouped depending on their share in credit transfers, based on the payment statistics reports of credit institutions. Latvijas Banka then attributed the private costs incurred by each credit institution involved in the data collection to the whole group of credit institutions, using the share of the above credit institution's expenditure, as reported in its financial statements for 2014, in the expenditure reported in the financial statements for 2014 by the credit institutions of the relevant group as the extrapolation coefficient.

The credit institutions involved in the data compilation and Latvijas Banka reported the data on their private costs broken down by main activity. The private costs for Latvijas Banka as the operator of the EKS system are associated with the acceptance of payment orders and processing of payments and returned

payments, and these costs have been aggregated with the private costs faced by credit institutions in this review.

The costs of payments made by credit transfers incurred by credit institutions and the interbank payment infrastructure operator can be divided into groups representing their main activities associated with credit transfers:

- 1) customer service and acquiring new customers;
- 2) accepting of payment orders, processing of payments and returned payments;
- 3) anti-money laundering and fraud prevention, and handling of customer complaints;
- 4) other costs, including the costs associated with filing procedures, archiving, management and monitoring.

In 2014, the social costs of credit transfers incurred by credit institutions and Latvijas Banka, the interbank payment infrastructure operator, amounted to 30.5 million euro or 0.13% of GDP. Dividing the above amount by the total number of credit transfers, as presented in the present review, this results in 30.3 cents per credit transfer. The social costs of a notional payment in the amount of 1 euro were 1.1 cents (see Table 8).

Table 8

Costs of ensuring credit transfers incurred by credit institutions and the interbank payment infrastructure operator (data for 2014)

Type of costs	Private costs (millions of euro)	Social costs (millions of euro)	Structure of social costs (%)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
Customer service and acquiring new customers	3.3	3.3	10.8	3.3	0.1
Accepting of payment orders, processing of payments and returned payments	22.1	22.1	72.5	22.0	0.8
Anti-money laundering and fraud prevention, and handling of customer complaints	1.3	1.3	4.3	1.3	0.0
Other costs, including the costs associated with filing, archiving, management and monitoring	3.8	3.8	12.5	3.8	0.1
Total	30.5	30.5	100.0	30.3	1.1

The largest share of the social costs associated with credit transfers incurred by credit institutions and the interbank payment infrastructure operator consisted of the costs related to accepting of payment orders, processing of payments and returned payments, representing 72.5% of the total social costs.

4.2 Credit transfer handling costs incurred by companies

Companies are involved in ensuring credit transfers as they receive the amount indicated in the credit transfer in their accounts at the payee's credit institution. The costs of credit transfers incurred by companies constitute a part of the social costs of credit transfers. In order to receive payments by credit transfers, companies need the services provided by credit institutions and other stakeholders.

To compile data on the private costs of credit transfers incurred by retail trade and services sector companies, Latvijas Banka attributed the data collected from the surveyed companies to all companies which had received payments for goods and services by means of credit transfers in 2014. Latvijas Banka used the share of the company turnover in the total turnover of the sector as presented in the financial statements of the companies for 2014 as the extrapolation coefficient. The turnover of the sample companies totalled 24.5% of the aggregate turnover

of the respective sectors. Of the covered 17 industries, credit transfers were not used by four sectors.

The costs of payments made by credit transfer that are incurred by companies characterise their main activities with credit transfers: the costs associated with preparing and sending invoices, as well as payment failures or returned payments.

The social costs of credit transfers incurred by Latvian companies, including the costs associated with preparing and sending invoices as well as payment failures or returned payments, amounted to 18.7 million euro or 0.08% of GDP. Dividing the above amount by the total number of the identified credit transfers, this results in 18.6 cents per credit transfer. The social costs of a notional payment in the amount of 1 euro were 0.7 cents.

According to the survey data, the largest number of credit transfers in 2014 was made in retail sale of fuel at petrol stations (37.0% of the total number of credit transfers made by companies), in transport – urban and suburban passenger transportation (32%) and telecommunications services (14.6%). The highest social costs of credit transfers were incurred in the electricity, gas, steam and air conditioning supply sector, accounting for 52.0% of the companies' total social costs of credit transfers. Overall, credit transfers were used more to pay for services (68.0% of the total number of credit transfer payments), while 32.0% of the credit transfers were made to pay for purchases of goods.

4.3 Total social costs of credit transfers

In 2014, the total social costs of credit transfers in Latvia amounted to 49.2 million euro or 23.8% of the total social costs of payment instruments (0.20% of GDP; see Table 9).

Table 9

Total costs of credit transfers (data for 2014)

Stakeholder	Private costs (millions of euro)	Social costs (millions of euro)	Social costs (% of GDP)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
Credit institutions and the interbank payment infrastructure operator	30.5	30.5	0.13	30.3	1.1
Companies	18.7	18.7	0.08	18.6	0.7
Total	49.2	49.2	0.20	48.9	1.7

The largest social costs associated with credit transfers were incurred by credit institutions and Latvijas Banka as the interbank payment infrastructure operator, whereas for companies the respective costs were 11.8 million euro or about 1.6 times lower. The social costs per credit transfer in Latvia amounted to 48.9 cents in 2014, whereas the social costs of such notional payment in the amount of 1 euro were 1.7 cents. To calculate these indicators, Latvijas Banka used an estimate of the credit transfers made in the retail trade and services sectors: 100.5 million retail credit transfers in the total amount of 2.8 billion euro.

5. TOTAL SOCIAL COSTS OF PAYMENT INSTRUMENTS

The social costs of payment instruments are the costs directly associated with the creation of payment instruments for the general public, mostly individuals, in order to ensure the possibility to make payments in the retail trade and services sectors; therefore, in order to assess the social costs of payment instruments, it

is essential to identify the set of payments that these costs relate to: payments by individuals in the retail trade and services sectors.

According to this estimate, 900.7 million payments with the total value of 10.3 billion euro were made in the retail trade and services sectors in 2014 (see Table 10). Cash payments at 69.8% of the total number dominated in terms of number (43.5% in terms value). When paying for purchase of goods, cash was used in 76.1% of all payments, while 52.6% of all payments made for services used non-cash payment instruments.

Table 10

Number and value of payment instruments (data for 2014)

Payment instrument	Number of payments (millions)	Overall composition of number of payments (%)	Average number of payments per capita	Volume (millions of euro)	Overall composition of volume of payments (%)	Average payment value (euro)
Cash	628.5	69.8	317.0	4 492.8	43.5	7.1
Card payments	171.7	19.1	87.0	2 968.1	28.8	17.3
with debit cards	162.4	94.6	82.0	2 784.1	93.8	17.1
with credit cards	9.3	5.4	5.0	184.0	6.2	19.8
Credit transfers	100.5	11.2	51.0	2 858.3	27.7	28.4
Total	900.7	100.0	455.0	10 319.2	100.0	11.5

At the end of 2014, the number of population in Latvia was 1 986 096. According to the survey data, each individual made 317 cash payments, 87 card payments and 51 credit transfers (455 payments in total) in 2014. The largest average value per payment transaction amounting to 28.40 euro was recorded for credit transfers, followed by card payments at 17.3 euro per transaction and cash payments at 7.1 euro per transaction.

In 2014, the total social costs of such payment instruments in Latvia totalled 206.3 million euro or 0.86% of GDP. Those included the costs incurred by the credit institution system and the interbank payment infrastructure operator amounting to 111.0 million euro and the costs of companies totalling 95.3 million euro (see Table 11).

Table 11

Total stakeholder costs by payment instrument (data for 2014)

Stakeholder and payment instruments	Private costs (millions of euro)	Social costs (millions of euro)	Composition of total social costs (%)	Social costs (% of GDP)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
Credit institution system and interbank payment infrastructure operators	111.0	111.0	53.8	0.46	60.0	3.3
Cash	40.6	40.6	36.6	0.17	6.5	0.9
Card payments	39.9	39.9	35.9	0.17	23.2	1.3
Credit transfers	30.5	30.5	27.5	0.13	30.3	1.1
Companies	123.2	95.3	46.2	0.40	36.8	2.5
Cash	68.6	62.4	65.5	0.26	9.9	1.4
Card payments	35.9	14.2	14.9	0.06	8.3	0.5
Credit transfers	18.7	18.7	19.6	0.08	18.6	0.7
Total	234.2	206.3	100.0	0.86		

The largest social costs were associated with cash payments (103.0 million euro; see Table 12). The number of cash payments was considerably higher than that of non-cash payments in 2014; consequently, the total social costs associated

with cash payments were also higher, whereas the social costs per payment were considerably smaller than in the case of card payments and credit transfers.

Table 12

Costs by payment instrument (data for 2014)

Payment instrument	Private costs (millions of euro)	Social costs (millions of euro)	Composition of total social costs (%)	Social costs (% of GDP)	Unit social costs (cents)	Social costs of a notional payment in the amount of 1 euro (cents)
Cash	109.2	103.0	49.9	0.43	16.4	2.3
Card payments	75.8	54.1	26.2	0.22	31.5	1.8
Credit transfers	49.2	49.2	23.8	0.20	48.9	1.7
Total	234.2	206.3	100.0	0.86		

The social costs incurred by the credit institution system and the interbank payment infrastructure operator in association with cash payments and card payments were similar, while the social costs of credit transfers were only slightly lower. The largest social costs of companies were also related to cash payments, while those associated with card payments and credit transfers were considerably smaller.

Credit transfers involved the largest unit social costs (48.9 cents), whereas the unit social costs of cash payments were the smallest (16.4 cents). The largest social costs per a notional payment in the amount of 1 euro were associated with cash payments (2.3 cents), whereas the smallest were incurred in the case of credit transfers (1.7 cents). The average value of cash payments was lower than that of card payments and credit transfers.

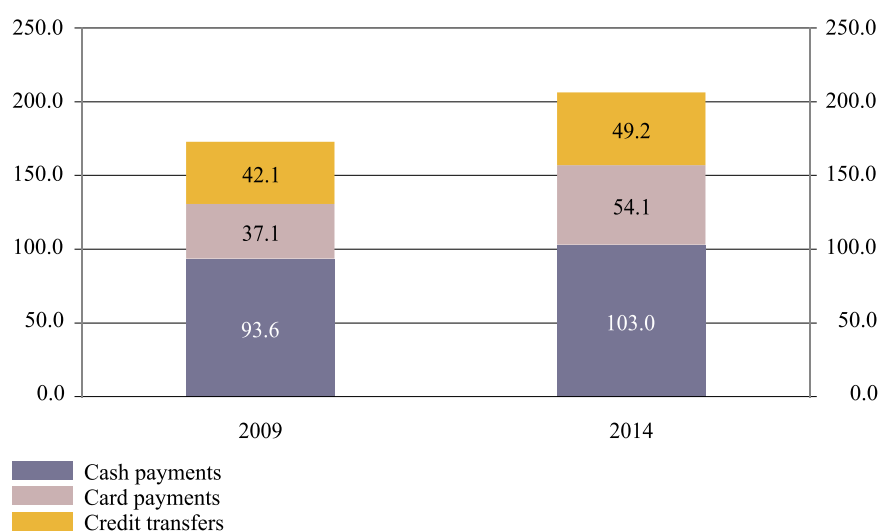
The total social costs per all payments made by one individual in 2014 amounted to 104.40 euro: 52.00 euro for cash payments, 27.50 euro for card payments and 25.00 euro for credit transfers.

6. COMPARISON WITH 2009 INFORMATION

In comparison with 2009, the social costs of all payment instruments have increased by 33.4 million euro or 19.3% (see Chart 5).

Chart 5

Social costs by payment instrument
(millions of euro)



The social costs of cash payments amounted to 49.9% of the total social costs of payment instruments in 2014. They had increased by 9.4 million euro or 10.0% in comparison with 2009.

The increase of the social costs associated with cash payments was primarily determined by a rise of 17.6 million euro or 39.2% in the social costs of cash payments incurred by companies. The most significant rise in the costs incurred by companies (from 12.7 million euro to 37.0 million euro) was related to the costs of cash registers, cash register systems, terminals and banknote authentication devices, their purchase or lease. This is mainly attributable to the spending that the companies had at the beginning of 2014 in association with the euro changeover investment as well as to the costs incurred due to expansion or general technological and economic development (according to the data presented on the website of the Central Statistical Bureau of Latvia, the overall turnover indices of retail trade have grown in comparison with 2009).

Another important expenditure item was the cash payment handling costs that increased by 6.4% and constituted a significant part (34.9%) of the social costs incurred by companies in association with cash payments in 2014. This expenditure item has been estimated based on the time spent on handling the payments and the respective share of the wage. According to the data by the Central Statistical Bureau of Latvia, the average monthly wage in euro increased by 16% in 2009, thereby contributing to the rise in the handling costs.

In most instances, the credit institutions' costs on handling cash payments were lower than in 2009. The social costs of the credit institution system and the interbank payment infrastructure operators associated with cash payments declined by 8.2 million euro or 16.8% in comparison with 2009. The most significant decrease of 7.4 million euro or 23.6% was experienced in the case of expenses for cash transportation, withdrawals from ATMs and over the counter and cash deposits in ATMs and over the counter. This suggests that this function was optimised. Other costs also shrank, including the costs of management and monitoring which decreased by 4.7 million euro or 82.4%. Customer service costs, on the contrary, increased by 5.9 million euro or 5.1 times in 2014 as compared to 2009.

Card payments remained the most frequently used non-cash payment instrument in 2014. In comparison with 2009, the total social costs of card payments grew by 45.7% or by 17.0 million euro, including a 9.6 million euro and 7.4 million rise in the case of the credit institution system and companies respectively.

The social costs of companies increased primarily on account of a higher rise (134.3% or 3.7 million euro) in the costs of printing the daily overviews and keeping the accounts associated with electronic payments, including cash register costs and card terminal costs. The above costs were related to the spending of companies in the context of the euro changeover as well as due to expansion and introduction of new technologies. Another important aspect determining higher social costs of card payments for companies was the rising expenditure on payment handling, i.e. for the time spent by the employees and the respective part of the wage (118% or 4.7 million euro). This rise in the costs was associated to the fact that the card payments of the population increased by 77.6 million or almost twice in 2014 as compared to 2009, with the resources spent on handling the payments growing accordingly (for instance, the time spent by the employees and the respective wage for the work). As already mentioned before, according to the data by the Central Statistical Bureau of Latvia the average monthly wage in euro increased by 16% as compared to 2009.

The social costs of the credit institution system associated with card payments

grew by 31.7%, from 30.3 million euro to 39.9 million euro. In terms of volume, the highest rise of 6.7 million or 130% was observed for the customer service costs, including those on acquiring new customers.

As compared to 2009, the total social costs of credit transfers grew by 16.8% or by 7.1 million euro, including a 6.2 million euro and 0.9 million rise in the case of companies and the credit institution system respectively.

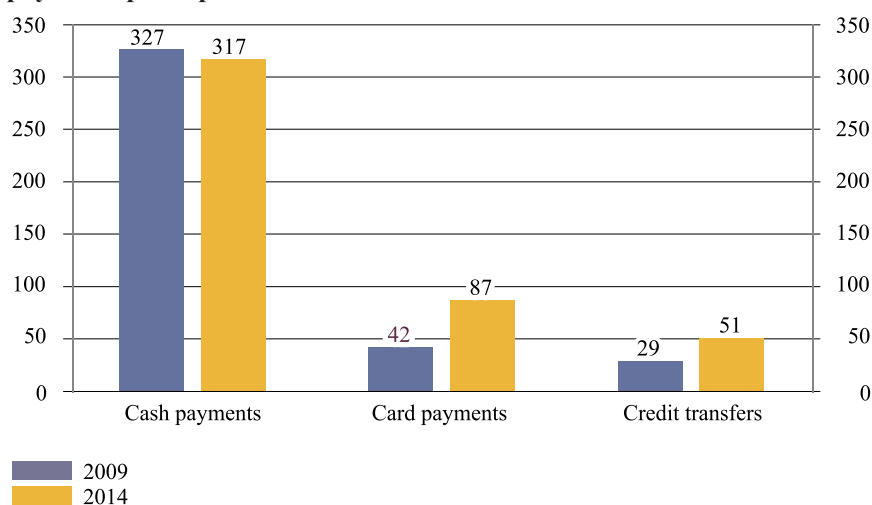
The increase in the social costs of credit transfers incurred to companies was supported by a rise of 49.3% in the costs associated with preparing and sending invoices as well as payment failures or returned payments which, in turn, was supported by an increase in the number of credit transfers by 54.9%. As a result, the unit social costs decreased by 3.6%.

The social costs of credit transfers incurred by credit institutions and the interbank payment infrastructure operator remained broadly unchanged, with the unit social costs declined by 33.5% (this was affected by the increase in the number of payments by 54.9%; see Chart 6).

According to the collected data, each individual made an average number of 455 payments in 2014 which is 57 payments or 14.3% more than in 2009. Each individual made 10 cash payments (or 3%) less, 45 card payments (or 107.1%) more and 22 credit transfers (or 75.9%) more than in 2009 (see Chart 6).

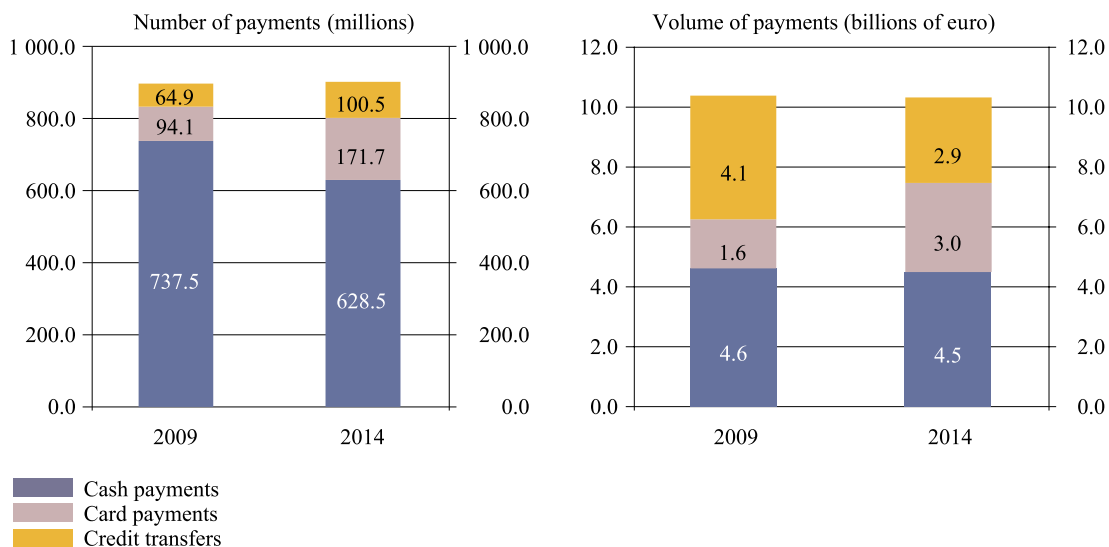
Chart 6

Average number of payments per capita



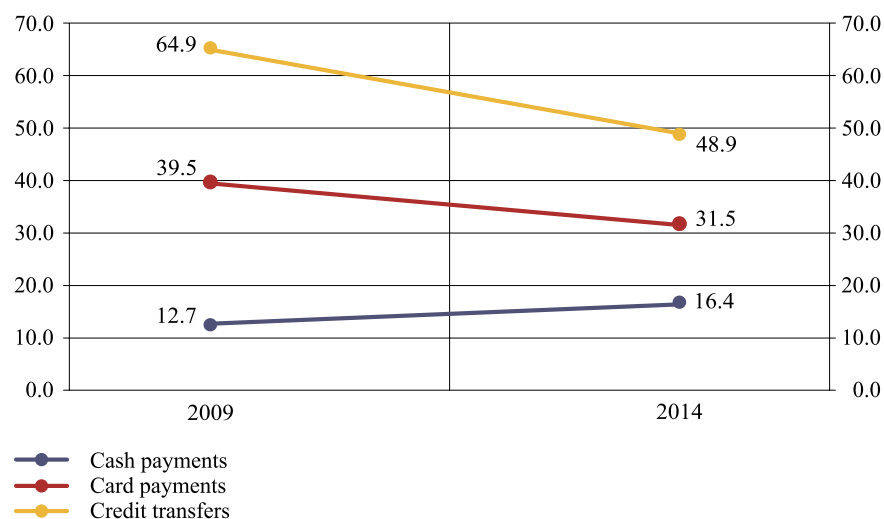
In comparison with the data for 2009, the number of cash payments decreased by 14.8% and the volume shrank by 2.6% in 2014, whereas the number and volume of non-cash payments grew by 71.2% and 1.2% respectively (see Chart 7).

Chart 7

Number of payments and volume of payments

In comparison with 2009, the social costs per cash-less payment decreased for both credit transfers and card payments: by 24.6% or 15.9 cents and 20.2% or 8.0 cents respectively. This decline in the social costs of non-cash payments was related to the fact that although the total social costs of credit transfers and card payments grew by 16.8% and 45.7% respectively, the increase in the number of payments at 54.9% and 82.5% was more substantial (see Chart 8).

Chart 8

**Unit social costs
(cents)**

In 2014, the social costs per cash payment grew by 29.1% or 3.7 cents as compared to 2009, because the number of cash payments decreased, whereas the social costs of cash payments increased by 10.0%.