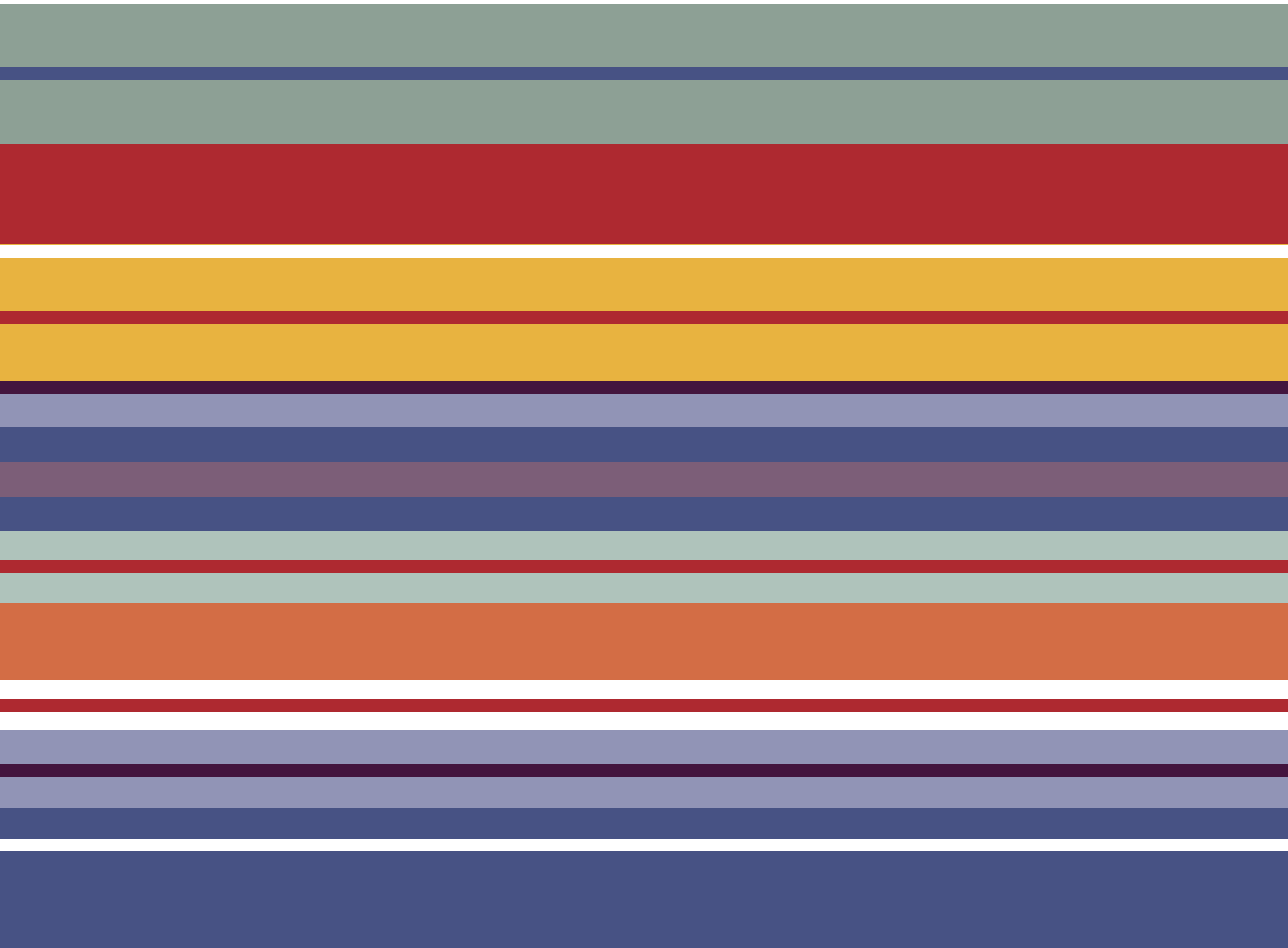


**THE BANK OF LATVIA REVIEW OF SOCIAL COSTS OF RETAIL
PAYMENT INSTRUMENTS IN LATVIA**



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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 review, developed as part of the payment system oversight, provides assessment of the costs incurred by institutions and companies involved in the payment chain, associated with producing the most widely used cash and non-cash retail payment instruments and making them available to the general public. Such costs are also called the social costs of payment instruments.

On the basis of the methodology of the European Central Bank, the Bank of Latvia compiled and analysed data on payments made in Latvia in 2009 and the related costs. In 2009, the total social costs of payment instruments in Latvia amounted to 121.5 million lats or 0.93% of GDP. The largest of them were incurred by the banking system (credit institutions and the Bank of Latvia; 67.1 million lats), while company costs were 45.1 million lats. The costs of cash-in-transit and processing companies and interbank payment infrastructure operators stood at 9.3 million lats. The social costs of cash payments were 65.8 million lats, accounting for the largest share (54.1%) of the total social costs of payment instruments in Latvia. As regards the social costs of credit transfers, card payments and direct debit payments, they were 28.5 million lats, 26.1 million lats and 1.1 million lats respectively. Non-cash payments recorded the highest social costs of producing and making available one payment (47.1 santims per credit transfer, 27.8 santims per card payment, and 25.1 santims per direct debit payment) while the unit social costs of a cash payment were 9.0 santims.

The Bank of Latvia would like to express gratitude to all institutions and companies who supported and contributed to the data compilation: – JSC ABLV Bank, JSC Air Baltic Corporation, ANTARIS Ltd., ARN Ltd., Bodybalt Ltd., EVOR Ltd., Faberlic Baltija Ltd., Fazer Amica Ltd., First Data Latvia Ltd., JSC G4S Cash Services Latvia, HOTEL KOLONNA Ltd., IMPRO CEĻOJUMI Ltd., JSC Itella Information, JRT Ltd., JSC Latvenergo, Latvia Tours Ltd., Latvija Statoil Ltd., Latvijas Mobilais Telefons Ltd., SJSC Latvijas Pasts, NARVESEN BALTIJA Ltd., Latvian Branch of Nordea Bank Finland Plc, OILANDS Ltd., farm OSTROVI, Pie Lietas Ltd., PLUS PUNKTS Ltd., POLAR BEK Daugava Ltd., JSC RAUTAKESKO, JSC SEB banka, RIMI LATVIA Ltd., Riga Municipal Company Rīgas satiksme Ltd., SKAI BALTIJA Ltd., STOCKMANN Ltd., JSC Swedbank, JSC TRASTA KOMERCBANKA, VESELOVO UN KO Ltd., VIASTOR Ltd., JSC VIESNĪCA LATVIJA, Xnet Ltd., as well as the Central Statistical Bureau of Latvia and the European Central Bank.

1. INTRODUCTION

The goal 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 individuals, in order to ensure the possibility to make payments in the retail and services sectors, i.e. of the social costs, 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: merchants and service providers, credit institutions, interbank payment infrastructure operators, cash-in-transit and processing companies, and the Bank of Latvia, in order to produce and make available cash and non-cash payment instruments to the general public, excluding 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 payment instrument social costs do not comprise the resources (time and costs) spent by the individuals themselves on making payments since the resources of individuals are not directly related to the production of payment instruments either.

To identify the social costs of payment instruments in Latvia in 2009, the Bank of Latvia applied the methodology developed by the European Central Bank and also participated in the study of the social costs of retail payment instruments in the European Union, organised by the European Central Bank¹. The Bank of Latvia assessed the social costs of cash payments, debit and credit card payments, credit transfers and direct debit payments, and, in order to identify them, compiled or assessed the private costs of all stakeholders involved in the production and supply of the respective type of payment instruments. The obtained data were compiled using the standardised survey forms developed under the ECB methodology framework.

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

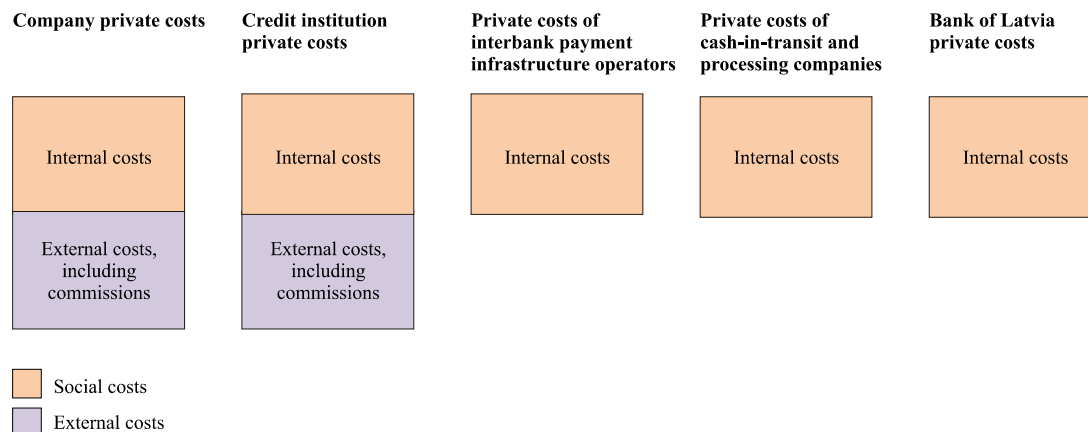
Internal costs are payment for the resources used by the stakeholder itself involved in the payment chain.

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

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

¹ Data of the Latvian study are incorporated in the overall study of the European Central Bank where the national central banks of Denmark, Greece, Estonia, Ireland, Italy, the Netherlands, Portugal, Romania, Finland, Spain, Hungary and Sweden took part.

Chart 1
Costs of payment instruments



Data on private costs were provided by the Bank of Latvia and all interbank payment infrastructure operators operating in Latvia. Compiling of the private costs of all credit institutions, cash-in-transit and processing companies, merchants and service providers was impossible due to their large number; hence, in order to assess their private costs, the Bank of Latvia chose the credit institutions – the major providers of the respective payment services, two major cash-in-transit and processing companies, as well as companies which were prominent trade representatives or service providers to individuals in a definite sector of the economy. Besides, the Bank of Latvia also identified the private costs of small and medium-sized companies and small credit institutions. The Bank of Latvia attributed the private costs of the credit institutions and companies involved in the data compilation to all credit institutions and companies by way of different extrapolation methods (for further information on the calculation of the private costs of credit institutions and companies, see Sections 2–5). For the identification of the private costs and their mutual comparison, the Bank of Latvia also used financial statements of credit institutions, turnover statistics of the retail and services sectors, employment indicators in particular sectors of the economy, payment and interbank payment system statistics of credit institutions, as well as data of the national central banks of the European Union on the social and private costs of retail payment instruments.

1.1 Payment instruments

The Bank of Latvia assessed the social costs of retail payments (non-critical payments of relatively low values, i.e. of less than 50 000 euro) made by individuals for the purchase of goods and services in the retail 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.

(The Republic of Latvia Law on Payment Services and Electronic Money)

In 2009 most of such payments were made in lats (97.0%) and, to a considerably lesser extent, in euro (3.0%), by way of cash or non-cash payment instruments (credit and debit cards, credit transfers and direct debit payments). 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 intercompany payments and their costs were not compiled as they are not related to providing payment services to the public in the retail and services sectors. No data compilation was performed regarding mutual payments between individuals either, without the intermediation of a merchant or service provider.

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 purchases using the non-cash funds of the cardholder on his/her current account. A card with a credit function enables its holder to make purchases or cash withdrawals up to a prearranged ceiling using the non-cash funds of the credit institution, settling the granted credit in part, with the balance taken 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 make purchases or cash withdrawals up to a prearranged ceiling using the non-cash funds of the credit institution, with full settlement for them 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.

Direct debit is a payment initiated by the payee at the payee's credit institution in order to receive non-cash funds by debiting them from the payer's account on the basis of an authorisation/a mandate given by the payer.

1.2 Stakeholders

Data on the payment handling costs were provided by the following parties:

- 1) Bank of Latvia;
- 2) five credit institutions (JSC ABLV Bank, Latvian Branch of Nordea Bank Finland Plc, JSC SEB banka, JSC Swedbank, and JSC TRASTA KOMERCBANKA);
- 3) all interbank payment infrastructure operators operating in Latvia (JSC Itella Information, First Data Latvia Ltd., and the Bank of Latvia);
- 4) the two major cash-in-transit and processing companies (EVOR Ltd. and JSC G4S Cash Services Latvia);
- 5) 29 retailers and companies representing all the industries of the retail and services sectors providing services to individuals² (JSC Air Baltic Corporation, ANTARIS Ltd., ARN Ltd., Bodybalt Ltd., Faberlic Baltija Ltd., Fazer Amica Ltd., HOTEL KOLONNA Ltd., IMPRO CEĻOJUMI Ltd., JRT Ltd., JSC Latvenergo, Latvia Tours Ltd., Latvija Statoil Ltd., Latvijas Mobilais Telefons Ltd., SJSC Latvijas Pasts, NARVESEN BALTIJA Ltd., Pie Lietas Ltd., OILANDS Ltd., farm OSTROVI, PLUS PUNKTS Ltd., POLAR BEK Daugava Ltd., JSC RAUTAKESKO, RIMI LATVIA Ltd., Riga Municipal Company

² Supermarkets; department stores; food, beverages and tobacco products; accommodation and food services activities; fashion goods; medical and personal care goods; other non-food goods; internet shops; street vendors; travel agencies; transport; petrol stations; telecommunications; utilities; arts, entertainment and recreation; other services providers.

Rīgas satiksme Ltd., SKAI BALTIJA Ltd., STOCKMANN Ltd., VESELOVO UN KO Ltd., VIASTOR Ltd., JSC VIESNĪCA LATVIJA, and Xnet Ltd.).

25 credit institutions operated in Latvia in 2009. In the survey five credit institutions provided data on the payment instruments they offered to their customers. 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, and the group of credit institutions which the payment instrument costs were attributed to was also different.

Upon the Bank of Latvia's 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 and services sectors in 2009, broken down by group of large, medium-sized and small companies, as well as on the number of companies operating in the respective industries. According to the above data, 21 447 companies operated in Latvia in 2009 in the industries of the retail and services sectors offering goods and services to individuals. As it was not possible to survey them all, the Bank of Latvia selected a sample of companies ensuring that each respective industry was represented by a typical representative. According to the sample of economic activity sectors as defined by the European Central Bank, 33 companies were selected for the survey; of them, 29 companies agreed to participate in the survey.

The company survey was simpler than that of other stakeholders. Companies provided general information about issues related to accounting and the process of customer servicing, as well as replied to questions about the funds and time spent on payment handling, with no distinction between the direct and indirect costs. On the basis of the information provided by companies, the Bank of Latvia calculated the data on company costs in line with the European Central Bank's methodology. To obtain overall data about Latvia, the Bank of Latvia extrapolated company data, making use of the share of the retail trade turnover of the surveyed merchants in the retail trade turnover of the respective industry and the share of the turnover of the surveyed services providers in the turnover of the respective services industry.

The Bank of Latvia, credit institutions, interbank payment infrastructure operators and cash-in-transit and processing companies provided detailed information on each stage of the payment instrument processing and handling costs, breaking them down into direct and indirect costs.

Direct costs are payment for resources used directly and exclusively for providing payment products and services. Direct costs apply directly to activities related to the specific payment instrument at each step of the respective payment processing process.

Indirect costs are payment for resources used not only for providing payment products and services. Indirect costs are payment for ensuring those support functions that are necessary to carry out the activities associated with each payment instrument, as well as payment for certain cost elements, e.g. rent, maintenance and depreciation costs, and the personnel and administrative costs related to the support functions.

To provide such detailed information, the Bank of Latvia, credit institutions, interbank payment infrastructure operators and cash-in-transit and processing companies broke down their overall operating costs of the reporting year by cost

item, e.g. staff, specialist services, fees to other stakeholders, depreciation, etc., and by departmental cost centre, e.g. IT department, marketing department, accounting department, cards department, etc., thereby identifying:

1) the relevant shares of the costs linked to the performance of the activities directly associated with each payment instrument – these should be considered the direct costs for each specific payment instrument;

2) the relevant shares of the costs which are linked to the development of the supporting functions necessary for making payment products or services available – these should be considered indirect costs (e.g. costs associated with human resources management, logistics, buildings, and fixed asset management, overall management and training).

Thus the Bank of Latvia, credit institutions, interbank payment infrastructure operators and cash-in-transit and processing companies reported their total direct costs, broken down by payment instrument and by activity, and the total indirect costs.

The Bank of Latvia compiled data on the costs of stakeholders involved in the payment chain amounting to 29%–100% of the total of the respective group of payment stakeholders. As to the remaining amount of non-surveyed data, the Bank of Latvia performed cost extrapolation (see Table 1).

Table 1

Average share of stakeholders involved in the data compilation in all payment instruments

Stakeholder	Share (%)
Bank of Latvia	100
Interbank payment infrastructure operators	100
Credit institutions	74 ¹
Cash-in-transit and processing companies	80 ²
Companies	29 ³

¹ Share of the number of respondent payments in total credit institution payments.

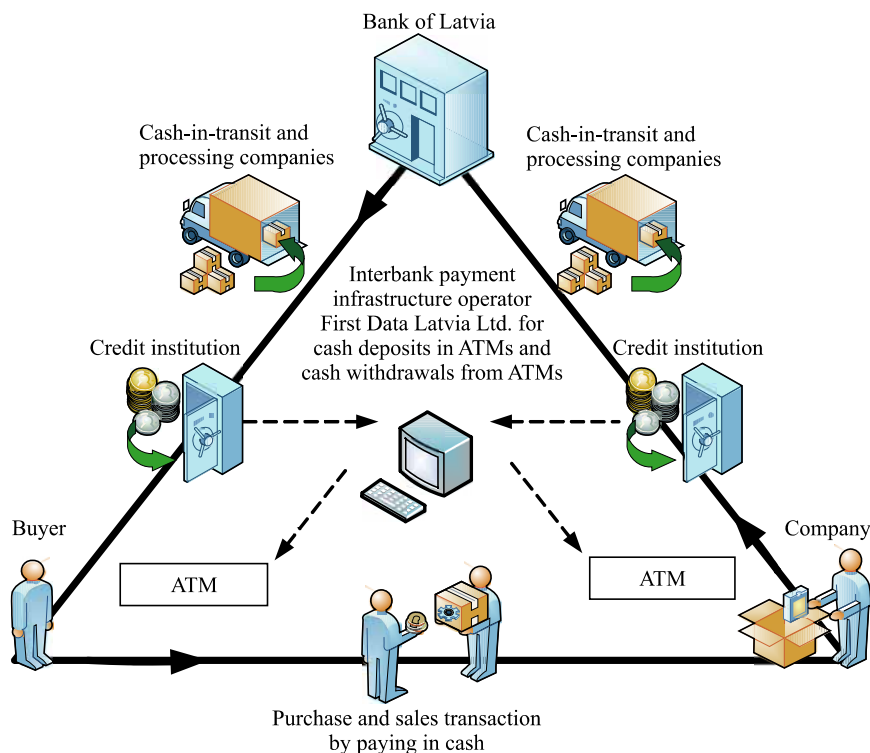
² Share of respondents in the processed cash value.

³ Share of the respondent turnover in the total turnover of the retail or services sector in Latvia.

2. CASH PAYMENTS

A cash payment is one of the oldest payment instruments and one of the four payment instruments whose costs were aggregated by the Bank of Latvia. Today one can use money for both cash (banknotes and coins) and non-cash (deposits with credit institutions) payments. The lats (santims) is the currency and the sole legal tender in Latvia that is mainly used for payments by natural persons when settling for goods and services. 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 cash circulation (see Chart 2). All stakeholders involved ensure continuous functioning of the cash cycle: buyers pay for goods and services to companies, credit institutions provide cash to their customers (individuals and companies) by using the interbank payment infrastructure and cash-in-transit and processing companies, and the Bank of Latvia issues cash via credit institutions.

Chart 2
Cash circulation



To aggregate the social costs of cash payments, the Bank of Latvia assessed the private costs incurred by the stakeholders involved in these payments. To assess the average social costs per cash payment, data on the number and value of retail cash payments made for goods and services by individuals in Latvia in 2009 were also required. Such payment statistics had not been compiled before; therefore company survey data on the number and value of retail payments made by company customers in 2009 were used, applying the share of the retail trade turnover of the surveyed merchants 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. According to the Bank of Latvia's estimates, individuals in Latvia made 737.5 million retail cash payments for goods and services (82.3% of all cash and non-cash payments) in 2009, with the average value of a cash payment in the retail trade and services sectors amounting to 4.40 lats. The extrapolation results were also compared with the credit institution payment statistics data on cash deposits and cash withdrawals.

2.1 Costs of the provision of cash payments incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies

The Bank of Latvia, 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. The Bank of Latvia as the issuer of the national currency plays the central role in ensuring cash circulation. Credit institutions provide cash to their customers – individuals and companies – by using the services of the interbank payment infrastructure operator and cash-in-transit and processing companies.

The Bank of Latvia provided data on the costs associated with handling cash, broken down by activity as well as by direct and indirect costs. In this review, the Bank of Latvia's costs of cash circulation are included in the total costs of the banking system (credit institutions and the Bank of Latvia).

The cash payment costs incurred by the Bank of Latvia can be divided into several groups characterising the central bank's main cash activities:

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

Data on the cash payment provision costs were reported by two major cash-in-transit and processing companies in Latvia: EVOR Ltd. and G4S Cash Services Latvia JSC, engaged in cash processing and transportation, and processing 80.0% of all currency in circulation in Latvia in 2009; five credit institutions: JSC ABLV Bank, Latvian Branch of Nordea Bank Finland Plc, JSC SEB banka, JSC Swedbank and JSC TRASTA KOMERCBANKA, accounting for 69.6% of total cash withdrawals from ATMs and over the counter recorded in the Latvian Credit Institution Payment Statistics Report; and the sole interbank payment infrastructure operator First Data Latvia Ltd., engaged in handling cash payments (the processing of cash deposits in ATMs and cash withdrawals from ATMs) in 2009.

Statistical methods were used to estimate the private costs associated with handling cash payments of 25 Latvian credit institutions. All credit institutions operating in 2009 provided cash deposit and cash withdrawal services. They were grouped depending on their share in total cash deposits and cash withdrawals on the basis of the data from the Credit Institution Payment Statistics Reports. The Bank of Latvia attributed the private costs associated with the processing of cash deposits and cash withdrawals incurred by each credit institution involved in the data collection to the whole group of the respective credit institutions, using the share of the above credit institution's total expenditure (reported in the financial statements for 2009) in the total expenditure of credit institutions of the relevant group as an extrapolation coefficient. Five credit institutions involved in the data collection provided data on their private costs, broken down by activity as well as by direct and indirect costs.

In this review, the costs of the interbank payment infrastructure operator First Data Latvia Ltd. and cash-in-transit and processing companies are included in the total costs of the banking system.

The costs associated with handling cash incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies can be divided into groups characterising the main cash activities:

- 1) cash collection, transportation, cash withdrawals from ATMs and over the counter and cash deposits in ATMs and over the counter;
- 2) safe keeping/cash handling;
- 3) procedures for false notes;
- 4) customer services;
- 5) other costs, including the costs related to management and monitoring of activities.

In 2009, the social costs of handling cash payments incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies amounted to 34.3 million lats or 0.26% of GDP; the above amount was divided by the total number of cash payments in the retail trade and services sector, as aggregated in the review, resulting in 4.7 santims per cash payment. The cash payment costs per lats of sales were 1.0 santims (see Table 2).

Table 2

Costs of the provision of cash payments made by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies, broken down by activity (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in the social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Cash collection, transportation, cash withdrawals from ATMs and over the counter, cash deposits in ATMs and over the counter	27.6	5.6	22.0	64.1	3.0	0.7
Safe keeping/cash handling	6.8	–	6.8	19.8	1.0	0.2
Procedures for false notes	0.5	–	0.5	1.4	0.1	0
Customer services	1.0	–	1.0	3.0	0.1	0
Other costs, including the costs related to management and monitoring of activities	4.0	–	4.0	11.7	0.5	0.1
Total	39.9	5.6	34.3	100.0	4.7	1.0

Expenses for cash collection and transportation and cash withdrawals from ATMs and over the counter and cash deposits in ATMs and over the counter accounted for the largest share in the social costs of the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies in 2009. These expenses amounted to 22.0 million lats or 64.1% of the total social costs of cash payments incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies.

The costs associated with safe keeping/cash handling were 6.8 million lats or 19.8%, while other costs, including those related to management and monitoring of activities, amounted to 4.0 million lats or 11.7% of the total social costs of cash payments incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies. At the same time, external costs of the above institutions or the fee for handling cash paid to other stakeholders amounted to 5.6 million lats in 2009.

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 individuals in exchange for payments in cash. In order to perform cash operations, companies require the services provided by credit institutions and other stakeholders involved in cash circulation.

To compile data on the private costs of cash payments by companies and country-level data on the number and value of such payments, the Bank of Latvia attributed the data received from the 29 surveyed companies to all companies that had accepted individuals' retail cash payments for goods and services in 2009, applying extrapolation in line with the turnover of the retail trade and services sectors. According to the survey results, all respective sectors used cash payments. The share of the total turnover of the sample companies in the overall retail trade and services sector turnover stood at 27.9%.

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

- 1) costs associated with the purchase and insurance of cash;
- 2) costs associated with cash payment handling – the time spent by employees and the respective wage for the job;
- 3) costs of the cash registers, cash register systems, terminals and banknote authentication devices, the acquisition or lease and servicing costs of them;
- 4) cash storage – safe acquisition and servicing – costs.

In 2009, the social costs of handling cash payments by Latvian companies amounted to 31.5 million lats or 0.24% of GDP; the above amount was divided by the total number of the identified cash payments in the retail trade and services sectors, as aggregated in the review, resulting in 4.3 santims per cash payment. The cash payment costs per lats of sales were 1.0 santims (see Table 3).

Table 3

Cash payment handling costs incurred by companies (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in the social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Costs related to the purchase and insurance of cash	8.1	0.8	7.3	23.3	1.0	0.2
Cash payment handling costs	14.4	–	14.4	45.7	2.0	0.5
Costs of the cash registers, cash register systems, terminals and banknote authentication devices, acquisition or lease and servicing costs of them	8.9	–	8.9	28.2	1.2	0.3
Cash storage – safe acquisition and servicing – costs	5.5	4.6	0.9	2.9	0.1	0
Total	36.9	5.4	31.5	100.0	4.3	1.0

In 2009, the largest social costs incurred by companies were related to cash payment handling (14.4 million lats or 45.7% of the total social costs of cash operations). This assessment was made up of the information provided by the companies on the length of the time needed for an employee to handle a cash operation and multiplying it by the average hourly remuneration rate in the respective subsector. The costs of terminals – cash registers and banknote authentication devices (8.9 million lats or 28.2% of the total social costs of cash payments incurred by companies) – also accounted for a significant share in the social costs of companies. These costs include the acquisition and maintenance costs of cash registers and those of banknote authentication devices, as well as remuneration of employees for the time devoted to maintaining and solving malfunctions of these devices. The costs associated with the purchase and insurance of cash amounted to 7.3 million lats or 23.3% of the total social costs

of company cash operations, and the social costs of cash storage were 0.9 million lats or 2.9% of the total social costs of company cash operations, mainly comprising the purchase of cash, the acquisition and maintenance of safes, and the commission fee. External costs incurred by companies or the fee for handling cash paid to other stakeholders amounted to 5.4 million lats.

According to the survey data, the supermarket sector (57.9% of all cash payments made to companies), department stores (8.6%), other non-food goods sector (7.6%) and accommodation and food services (6.2%) accounted for the largest number of cash payments. Consequently, the largest social costs of cash operations were also incurred by the merchants of the supermarket sector (55.2% of the total social costs of company cash operations (31.5 million lats)), the department stores (9.1%) and the accommodation and food services (8.3%).

2.3 Social costs of cash payments

In 2009, the total social costs of cash payments in Latvia amounted to 65.8 million lats or 54.1% of the total social costs of payment instruments (0.50% of GDP³; see Table 4).

Table 4

Cash payment costs (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Social costs to GDP (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Banking system, interbank payment infrastructure operators and cash-in-transit and processing companies	39.9	5.6	34.3	0.26	4.7	1.0
Companies	36.9	5.4	31.5	0.24	4.3	1.0
Total	76.8	11.0	65.8	0.50	9.0	2.0

The social costs of cash payments incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies totalled 34.3 million lats and those faced by companies were 31.5 million lats.

When estimating the social costs, the social costs per payment and per lats of sales are among the most important indicators. According to the survey data, the social costs per cash payment in Latvia were 9.0 santims⁴ in 2009, and the social costs per lats of sales for such a payment amounted to 2.0 santims. To calculate these indicators, the Bank of Latvia used the estimates of the number and value of cash payments made in the retail trade and services sectors in Latvia (737.5 million retail cash payments in the total amount of 3.2 billion lats).

External costs incurred by all stakeholders (not included in the social costs) or the fee paid to other stakeholders amounted to 11.0 million lats or 14.3% of the total private costs of handling cash payments, i.e. 0.3 santims per lats of sales.

³ In the countries participating in the study carried out by the ECB, the total minimum social costs of cash payments were 0.25% of GDP, the maximum social costs – 0.76% of GDP and the weighted average social costs – 0.49 of GDP.

⁴ In the countries participating in the study carried out by the ECB, the minimum unit social costs per cash payment were 9 santims, the maximum unit social costs – 55 santims and the weighted average unit social costs – 30 santims.

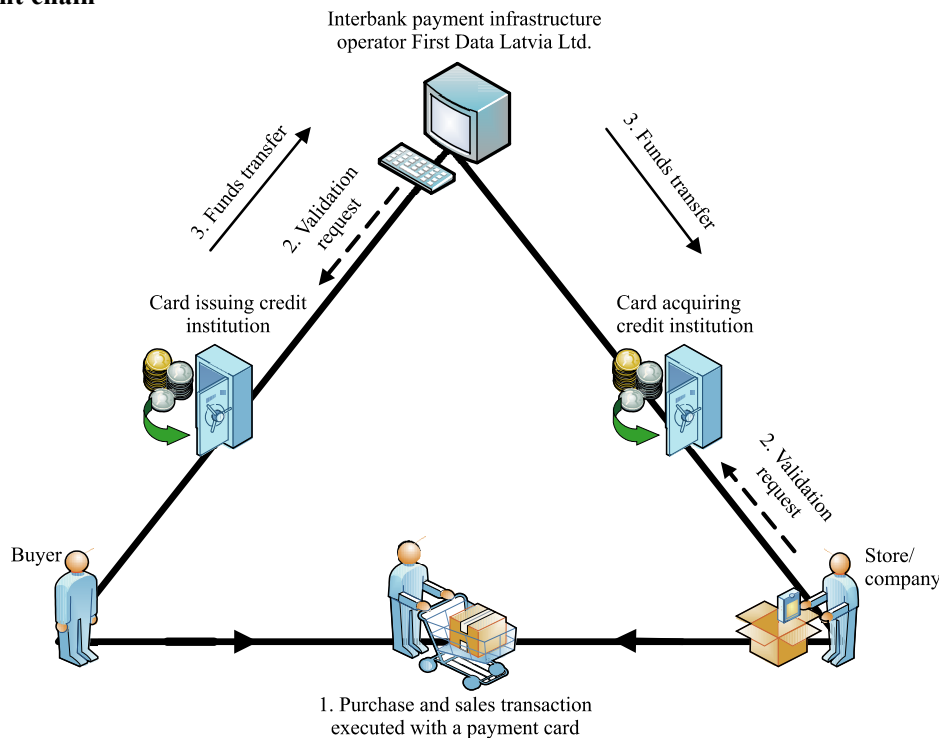
The external costs incurred by companies were 5.4 million lats or 14.6% of the private costs of handling cash payments, i.e. for such payment, 0.2 santims per lats of sales were paid to other stakeholders. The external costs incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies were similar – 5.6 million lats or 14.0% of their private costs and for cash payments in the retail trade or services sectors, the costs per lats of sales were 0.2 santims.

3. CARD PAYMENTS

Debit card and credit card payments were among the most frequently used non-cash payment instruments in 2009. In Latvia, payment cards are used by natural and legal persons to pay for goods and services in the retail trade and services sectors for about 20 years. In order to make payments with a card, a buyer needs the 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 further straight-through processing of card payments is implemented automatically. Each card payment is first authorised at the payment card processing centre of credit institutions and at the interbank card processing centre (in Latvia, at the limited liability company First Data Latvia). Upon authorising a card payment, the relevant card issuing credit institution reserves the purchase amount on the buyer's account and validates the payment. Following the validation, the merchant delivers goods or provides a service. The validated payment is further processed at the interbank card processing centre and at the credit institution, then clearing and interbank settlement of the above payment are made. Upon the receipt of funds from the card issuing credit institution, the card acquiring credit institution transfers the payment amount to the merchant's account. The merchant usually receives money on the next day or later following the delivery of goods or services to the buyer. In 2009, only international card scheme products, such as VISA, Mastercard and American Express, were used in Latvia.

To aggregate the social costs of card payments, the Bank of Latvia 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 had to be estimated. The Bank of Latvia used the credit institution payment statistics on the number and value of card payments executed in lats and euro in 2009, since card payments had mainly been made in the retail trade and services sectors. Pursuant to the Bank of Latvia's estimate, in 2009 individuals made 94.1 million retail card payments for goods and services in the retail trade and services sector in Latvia (10.5% of all cash and non-cash payments), and the average value per card payment in the retail trade and services sector amounted to 12.24 lats.

Chart 3
Card payment chain



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

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

The Bank of Latvia compiled data on the private costs associated with card payment processing collected from the interbank payment infrastructure operator First Data Latvia Ltd. (the sole interbank card payment processing centre in 2009) and from five credit institutions: JSC ABLV Bank, Latvian Branch of Nordea Bank Finland Plc, JSC SEB banka, JSC Swedbank and JSC TRASTA KOMERCBANKA where the share of the number of card payments amounted to 75.8% of the total number of the relevant payments made by Latvian credit institutions. Statistical methods were used to estimate the private costs associated with handling the card payments incurred by all Latvian credit institutions. All Latvian credit institutions were grouped depending on their share in card payments, based on the data from the Credit Institution Payment Statistics Reports. The Bank of Latvia attributed the card payment costs incurred by each credit institution involved in the data compilation to the whole group of the relevant credit institutions, using the share of the above credit institution's total expenditure (reported in the financial statement for 2009) in the total expenditure of credit institutions of the relevant group as an extrapolation coefficient. The credit institutions involved in the data compilation and First Data Latvia Ltd. reported the data on the private costs broken down by activity as well as by direct and indirect costs.

In this review, costs of the provision of card payments incurred by the interbank payment infrastructure operator First Data Latvia Ltd. are aggregated with the private costs faced by credit institutions.

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

The Bank of Latvia 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 2009, the social costs associated with handling the debit card payments incurred by credit institutions and First Data Latvija Ltd. amounted to 15.0 million lats or 0.11% of GDP; the above amount was divided by the total number of the identified debit card payments, resulting in 20.9 santims per debit card payment. The above card payment costs per lats of sales were 1.8 santims (see Table 5).

Table 5

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

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Customer service, also acquiring new customers	2.6	–	2.6	17.2	3.6	0.3
Issuance of cards and licence fees	4.9	–	4.9	32.6	6.8	0.6
Payment authorisation, processing and merchant service	14.6	9.8	4.8	32.1	6.7	0.6
Fraud checking and review of customer complaints	1.4	–	1.4	9.4	2.0	0.2
Other costs, including the costs related to management and monitoring of activities	1.3	–	1.3	8.7	1.8	0.1
Total	24.8	9.8	15.0	100.0	20.9	1.8

The major social costs of the debit card payments incurred by credit institutions and the interbank payment infrastructure operator were related to the issuance of cards and licence fees (4.9 million lats or 32.6% of the total social costs of the debit card payments incurred by credit institutions and the interbank payment infrastructure operator), payment authorisation, processing and merchant service (4.8 million lats or 32.1%) and customer service, also acquiring new customers (2.6 million lats or 17.2%). In 2009, the external costs incurred by credit institutions and the interbank payment infrastructure operator or the fee paid to other stakeholders for providing debit card payments amounted to 9.8 million lats.

In 2009, the social costs associated with handling the credit card payments incurred by credit institutions and First Data Latvija Ltd. amounted to 6.3 million lats or 0.05% of GDP; the above amount was divided by the total number of the identified credit card payments, resulting in 28.4 santims per credit card payment. The above card payment costs per lats of sales were 1.9 santims (see Table 6).

Table 6

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

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Customer service, also acquiring new customers	1.0	–	1.0	15.4	4.4	0.3
Issuance of cards and licence fees	1.1	–	1.1	17.4	4.9	0.3
Payment authorisation, processing and merchant service	8.2	5.6	2.6	41.3	11.7	0.8
Fraud checking and review of customer complaints	1.3	–	1.3	20.4	5.8	0.4
Other costs, including the costs related to management and monitoring of activities	0.3	–	0.3	5.5	1.6	0.1
Total	11.9	5.6	6.3	100.0	28.4	1.9

In 2009, the major social costs of the credit card payments incurred by credit institutions and the interbank payment infrastructure operator were associated with payment authorisation, processing and merchant service (2.6 million lats or 41.3% of the total social costs of the credit card payments incurred by credit institutions and the interbank payment infrastructure operator) and fraud checking and review of customer complaints (1.3 million lats or 20.4% of such costs). The issuance of cards and licence fees amounted to 1.1 million lats or 17.4% of the total social costs of the credit card payments incurred by credit institutions and the interbank payment infrastructure operator. The external costs incurred by credit institutions and the interbank payment infrastructure operator or the fee paid to other stakeholders for providing credit card payments amounted to 5.6 million lats in 2009.

Consequently, in 2009 the total social costs associated with handling the debit card and credit card payments incurred by credit institutions and the interbank payment infrastructure operator stood at 21.3 million lats or 0.16% of GDP; the above amount was divided by the total number of the identified card payments, resulting in 22.7 santims per payment with a card. The card payment costs per lats of sales were 1.9 santims. The social costs of debit card payments amounted to 70.4% and those of credit card payments were 29.6% of the total social costs of card payments incurred by credit institutions and the interbank payment infrastructure operator in 2009. The social costs of debit card payments exceeded those of credit card payments, since in 2009 the payments executed with debit cards in Latvia exceeded approximately three times those made with credit cards. The costs per credit card payment were 7.5 santims higher.

3.2 Card payment costs incurred by companies

Companies are involved in providing card payments, and their costs account for 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 the acceptance of card payments, companies require the services provided by credit institutions and other stakeholders involved in the payment chain. The review provides aggregated company data on payments made with debit and credit cards, since the surveyed companies could not break down the relevant costs by payment card type.

To compile data on the private costs of card payments incurred by companies, the Bank of Latvia attributed the data collected from the 27 surveyed companies accepting card payments to all companies which had accepted retail card payments from individuals in 2009, applying extrapolation in line with the turnover of the industries of the retail trade and services sectors. The share of the total turnover of the sample companies accepting card payments in the total turnover of the relevant industries of the retail trade and services sectors was 29.1%. According to the survey data, of the covered 17 industries, card payments were not accepted 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, for instance, keeping the cash register slips;
- 2) payment handling costs – the time spent by employees and the respective wage for the job;
- 3) card terminal costs – acquisition or hiring/leasing and service costs;
- 4) costs for telecommunication subscription and other electronic data transmission-related costs.

In 2009, the social costs of card payments incurred by Latvian companies amounted to 4.8 million lats or 0.04% of GDP; the above amount was divided by the total number of the identified card payments, resulting in 5.1 santims per payment. The card payment costs per lats of sales were 0.4 santims (see Table 7).

In 2009, 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 job (2.8 million lats or 58.7% of the total social costs of card payments incurred by companies). The costs of printing the daily overviews and keeping the accounts associated with electronic payments, for instance, keeping the cash register slips, amounted to 0.9 million lats or 18.9%, and card terminal costs were 0.6 million lats or 12.6% of the total social costs of card payments incurred by companies. The external costs or the fee paid to other stakeholders for handling card payments was 10.4 million lats in 2009.

Table 7

Costs associated with handling card payments incurred by companies (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Costs of printing daily overviews and keeping the accounts associated with electronic payments, for instance, keeping the cash register slips	0.9	–	0.9	18.9	1.0	0.1
Payment handling costs – the time spent by employees and the respective wage for the job	13.2	10.4	2.8	58.7	3.0	0.2
Card terminal costs – acquisition or hiring/leasing and service costs	0.6	–	0.6	12.6	0.6	0.1
Costs of telecommunication subscription and other electronic data transmission-related costs	0.5	–	0.5	9.8	0.5	0
Total	15.2	10.4	4.8	100.0	5.1	0.4

According to the survey data, among companies the largest number of card payments made in 2009 was reported in the supermarket sector (53.2% of the total number of card payments), home furnishing and construction companies (9.1%) and other non-food commodities companies (8.9%). Consequently, supermarkets incurred the largest social costs associated with card payments (36.2% of the total social costs of card payments incurred by companies).

3.3 Social costs of card payments

In 2009, the total social costs of card payments in Latvia amounted to 26.1 million lats or 21.5% of the total social costs of payment instruments (0.20% of GDP⁵; see Table 8).

Table 8

Card payment costs (data for 2009)

Stakeholder	Private costs (in millions of lats)		Social costs (in millions of lats)	Social costs to GDP (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Credit institutions and the interbank payment infrastructure operator	36.7	15.4	21.3	0.16	22.7	1.9
Debit cards	24.8	9.8	15.0	0.11	20.9	1.8
Credit cards	11.9	5.6	6.3	0.05	28.4	1.9
Companies (debit and credit cards)	15.2	10.4	4.8	0.04	5.1	0.4
Total	51.9	25.8	26.1	0.20	27.8	2.3

Of the total social costs of card payments, the largest social costs were incurred by credit institutions and the interbank payment infrastructure operator (21.3 million lats), while those of companies amounted to 4.8 million lats. In 2009, the

⁵ In the countries participating in the study carried out by the ECB, the total minimum social costs of card payments amounted to 0.11% of GDP, the maximum social costs of the above payments were 0.41% of GDP and the weighted average social costs – 0.21% of GDP.

unit social costs of a card payment and social costs per lats of sales amounted to 27.8 santims⁶ and 2.3 santims respectively in Latvia.

External costs incurred by all stakeholders or the fee paid to other stakeholders was 25.8 million lats or 49.7% of the total private costs associated with handling card payments (2.2 santims from each lats received). The external costs incurred by companies amounted to 10.4 million lats or 68.4% of their private costs associated with handling card payments or 0.9 santims from each lats received. In the cost structure of card payments, the company external costs accounted for 50% of the social costs incurred by credit institutions and the interbank payment infrastructure operator. The external costs incurred by credit institutions amounted to 15.4 million lats or 42.0% of the private costs associated with handling card payments or 1.3 santims from each lats received.

4. CREDIT TRANSFERS

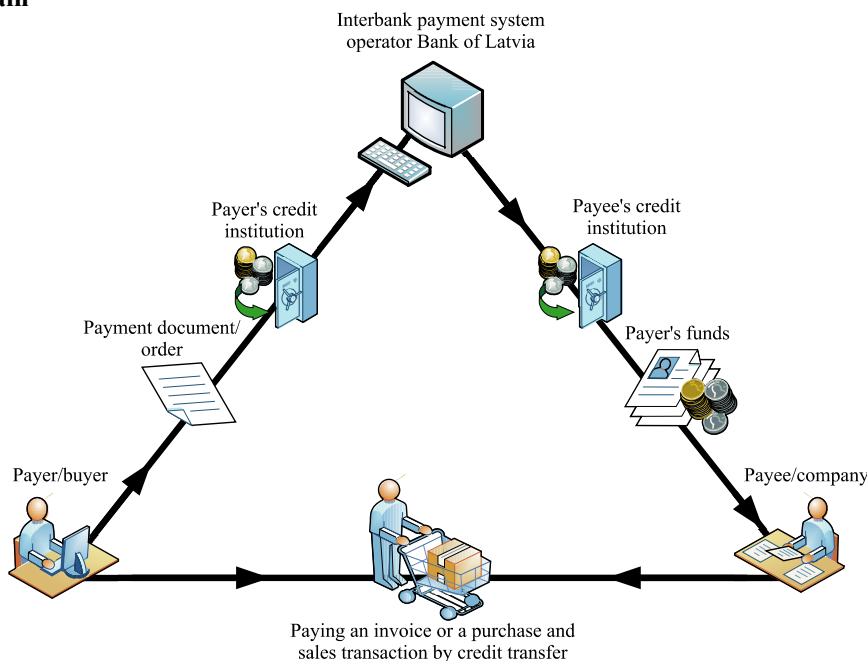
Credit transfers accounted for the second most frequently used non-cash payment instrument in 2009. Credit transfers in Latvia were used by both natural and legal persons when paying invoices for services in the services sector and in retail trade. To ensure that a credit transfer takes place, stakeholders are necessary, and each of them plays a role in ensuring it (see Chart 4). When making a payment, a purchaser initiates a credit transfer by issuing a credit transfer order to the payer's credit institution for the purpose of placing the funds 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 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. The Bank of Latvia is the lats payment interbank operator providing the operation of the interbank retail payment system – the Bank of Latvia's electronic clearing system (EKS). This is the sole operating clearing (net settlement) system in Latvia for bulk customer credit transfers in lats and euro enabling credit institutions to transfer payments to the payee on the same or (at the latest) next day.

To aggregate the social costs of credit transfers, the Bank of Latvia 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 persons in Latvia in 2009 were also necessary. As credit transfers are mainly used by companies for mutual payments and only a small percentage of credit transfers executed in the country are performed by private persons in retail trade or when paying for services, the Bank of Latvia used as an extrapolation coefficient the company survey data on the number and value of retail credit transfers executed by their customers in 2009 – the share of the turnover of the surveyed service providers in the turnover of the respective services industry and the share of the retail trade turnover of the surveyed merchants in the turnover of the respective industry – for the estimation of the number and value of credit transfers. According to the Bank of Latvia's estimates, in Latvia individuals made 60.5 million retail credit transfers in the services sector and retail trade (6.7% of all cash and non-cash payments)

⁶ In the countries participating in the study carried out by the ECB, the minimum unit social costs of a card payment were 15 santims, the maximum unit social costs amounted to 5.67 lats and the weighted average unit social costs – 70 santims.

in 2009. The average value per credit transfer in the services and retail trade sectors amounted to 44.50 lats in 2009.

Chart 4
Credit transfer chain



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

Credit institutions and the interbank payment infrastructure operator are stakeholders providing the execution and handling of credit transfers, thus generating the social costs of credit transfers. The Bank of Latvia compiled data on the private costs of credit transfers from the Bank of Latvia, the operator of the interbank payment system (its electronic clearing system EKS), and five credit institutions: JSC ABLV Bank, Latvian Branch of Nordea Bank Finland Plc, JSC SEB banka, JSC Swedbank and JSC TRASTA KOMERCBANKA, with their share of the number of the serviced customer credit transfers in 2009 amounting to 75.3% of the total number of credit transfers of the Latvian credit institutions' customers.

Statistical methods were used to estimate the private costs associated with credit transfer handling incurred by all Latvian credit institutions. All Latvian credit institutions were grouped depending on their share in credit transfers on the basis of the data from the Credit Institution Payment Statistics Reports on the number and value of the credit institution customers' payments made by credit transfer. The Bank of Latvia attributed the private costs of credit transfers incurred by each credit institution involved in the data collection to the whole group of the relevant credit institutions, using the share of the above credit institution's total expenditure (reported in its financial statements for 2009) in the total expenditure of credit institutions of the relevant group as an extrapolation coefficient.

The credit institutions involved in the data compilation and the Bank of Latvia provided data on their private costs, broken down by activity as well as by direct

and indirect costs. The private costs for the Bank of Latvia as the operator of the electronic clearing 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 transfer, incurred by credit institutions and the interbank payment infrastructure operator, can be divided into groups representing the main activities with credit transfers:

- 1) customer service and acquiring new customers;
- 2) requests for transfers, transfer processing, cancellation and return;
- 3) fraud prevention, money laundering control and handling of customer complaints;
- 4) other costs, including the costs associated with filing procedures, archiving, management and monitoring of activities.

In 2009, the social costs of credit transfer handling, incurred by credit institutions and the Bank of Latvia, the interbank payment infrastructure operator, amounted to 19.8 million lats or 0.15% of GDP; the above amount was divided by the total number of credit transfers, as aggregated in the review, resulting in 32.7 santims per credit transfer. The credit transfer social costs per lats of sales were 0.7 santims (see Table 9).

Table 9

Costs of credit transfers incurred by credit institutions and the interbank payment infrastructure operator (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in the social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Customer service and acquiring new customers	2.4	–	2.4	12.1	4.0	0.1
Requests for transfers, transfer processing, cancellation and return	9.9	0.1	9.8	49.7	16.3	0.3
Fraud prevention, money laundering control and handling of customer complaints	2.0	–	2.0	9.9	3.2	0.1
Other costs, including the costs associated with filing procedures, archiving, management and monitoring of activities	5.6	–	5.6	28.3	9.2	0.2
Total	19.9	0.1	19.8	100.0	32.7	0.7

In 2009, the major social costs of credit transfers incurred by credit institutions and the interbank payment infrastructure operator were associated with requests for transfers, transfer processing, cancellation and return (9.8 million lats or 49.7%) and other costs, including the costs associated with filing procedures, archiving, management and monitoring of activities (5.6 million lats or 28.3% of the total social costs of credit transfers incurred by credit institutions and the interbank payment infrastructure operator). The costs associated with the customer service and acquiring new customers accounted for 2.4 million lats or 12.1% of the social costs of credit transfers incurred by credit institutions and the interbank payment infrastructure operator. The fee paid to other stakeholders by credit institutions for the provision of credit transfers amounted to 0.1 million lats in 2009.

4.2 Costs of credit transfers incurred by companies

Companies are involved in providing credit transfers and 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 account for part of the social costs of credit transfers. In order to receive payments by credit transfer, companies need the services provided by credit institutions and other stakeholders.

To compile data on the private costs of credit transfers incurred by companies and country-level data on the number and value of such payments, the Bank of Latvia attributed the data collected from the 18 surveyed companies receiving payments by credit transfer to all companies which had received payments for services and goods by using credit transfers in 2009, applying extrapolation in line with the turnover of the retail trade and services sectors. The extrapolation results were also compared with the credit institution payment statistics data, compiled by banks on a regular basis. The data of the sample companies using credit transfers accounted for 32.7% of the data of the relevant stakeholder's group. According to the survey results, only 10 industries⁷ of the surveyed 17 industries used credit transfers in 2009.

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

In 2009, the social costs of credit transfer handling incurred by Latvian companies amounted to 8.7 million lats or 0.07% of GDP; the above amount was divided by the total number of the identified credit transfers, resulting in 14.4 santims per credit transfer. The credit transfer costs per lats of sales were 0.3 santims (see Table 10).

Table 10

Costs of credit transfer handling incurred by companies (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in the social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Preparing and sending invoices, the costs associated with payment failures or returned payments	9.0	0.3	8.7	100.0	14.4	0.3
Total	9.0	0.3	8.7	100.0	14.4	0.3

In 2009, the social costs associated with preparing and sending invoices, payment failures or returned payments were 8.7 million lats, and the external costs or the fee for credit transfer handling paid to other stakeholders – 0.3 million lats. According to the survey data, the largest number of credit transfers was reported in utilities (44.9% of all company credit transfers), petrol stations (26.8%) and telecommunications (24.5%). Petrol stations (55.2%), utilities

⁷ Accommodation and food services activities; other non-food goods; other service providers; petrol stations; utilities; home construction; telecommunications; vending machines; transport; travel agencies.

(32.4%) and home furnishing and construction companies (4.6%) accounted for the largest social costs of total company credit transfers.

4.3 Social costs of credit transfers

In 2009, the total social costs of credit transfers in Latvia amounted to 28.5 million lats or 23.5% of the total social costs of payment instruments (0.22% of GDP⁸; see Table 11).

Table 11

Costs of credit transfers (data for 2009)

Stakeholder	Private costs (in millions of lats)		Social costs (in millions of lats)	Social costs to GDP (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Credit institutions and the interbank payment infrastructure operator	19.9	0.1	19.8	0.15	32.7	0.7
Companies	9.0	0.3	8.7	0.07	14.4	0.3
Total	28.9	0.4	28.5	0.22	47.1	1.0

The largest social costs of the total social costs of credit transfers were incurred by credit institutions and the Bank of Latvia, the interbank payment infrastructure operator (19.8 million lats), but 8.7 million lats were faced by companies. In 2009, the social costs per credit transfer in Latvia were 47.1 santims⁹, while the social costs per lats of sales – 1.0 santims.

External costs incurred by all stakeholders or the fee to other stakeholders amounted to 0.4 million lats or 1.4% of the total private costs of credit transfer handling. The external costs incurred by companies were 0.3 million lats or 3.3% of their private costs of credit transfer handling. The external costs incurred by credit institutions and the interbank payment infrastructure operator amounted to 0.1 million lats or 0.5% of their private costs of credit transfers.

5. DIRECT DEBIT PAYMENTS

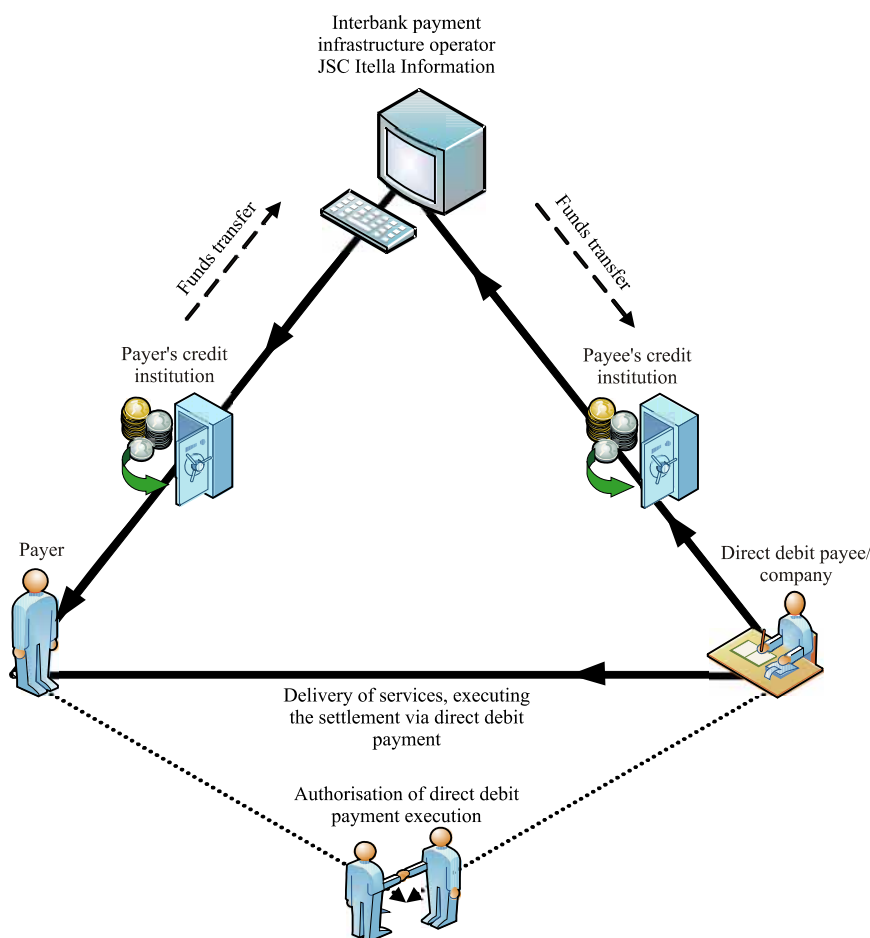
Direct debit payments were the fourth payment instrument on which the stakeholders involved in the payment process (credit institutions, the interbank payment infrastructure operator and companies) provided data to the Bank of Latvia. In Latvia, direct debit payments or automatic payments are mainly used for paying invoices in the services sector. Stakeholders are vital for the recipient of the services to settle for such services with the relevant company by means of direct debit payments, and each stakeholder plays a significant role in providing a direct debit payment (see Chart 5). The payer issues a written authorisation to the company in advance to draw non-cash funds via a direct debit payment, and to the payer's credit institution – to debit funds from his/her account subject to

⁸ In the countries participating in the study carried out by the ECB, the total minimum social costs of credit transfers were 0.04% of GDP, the maximum social costs – 0.35% of GDP and the weighted average social costs – 0.13% of GDP.

⁹ In the countries participating in the study carried out by the ECB, the minimum unit social costs per credit transfer were 21 santims, the maximum unit social costs – 8.48 lats and the weighted average unit social costs – 1.35 lats.

the direct debit order submitted by the company. The company sends an invoice for the provided services to the payer. On the due date of paying the invoice the company shall initiate a direct debit payment through the interbank payment infrastructure operator, giving a direct debit order either to its credit institution or the interbank payment infrastructure operator JSC Itella Information. Upon receipt of the above order, the payer's credit institution debits the payer's account for the amount stated in the direct debit order and transfers the above amount to the payee's credit institution for the latter to pay the relevant amount into the payee's account.

Chart 5
Direct debit payment chain



To aggregate the social costs of direct debit payments, the Bank of Latvia estimated the private costs incurred by the stakeholders involved in the execution of direct debit payments. To estimate the average social costs per direct debit payment, the data on the total value and number of direct debits were also required. The Bank of Latvia used the credit institution payment statistics on the number and value of direct debit payments made in lats and euro in 2009, since direct debit payments have mainly been executed in the services sector. In 2009, only eight banks offered direct debit payments and three of them took part in the data compilation.

According to the Bank of Latvia's estimates, in 2009 individuals made 4.4 million retail direct debit payments for goods and services or 0.5% of the total

cash and non-cash payments executed in retail trade and services sectors, and the average value per direct debit payment amounted to 46.49 lats.

5.1 Costs of direct debit payments incurred by credit institutions and the interbank payment infrastructure operator

Credit institutions and the interbank payment infrastructure operator are stakeholders providing the execution of direct debit payments and accounting for part of the social costs of direct debit payments.

The Bank of Latvia compiled data on the private costs associated with the processing of direct debit payments collected from the interbank payment infrastructure operator JSC Itella Information (the sole interbank direct debit payment processing centre in 2009) and from three credit institutions: Latvian Branch of Nordea Bank Finland Plc, JSC SEB banka and JSC Swedbank, with their share of the number of payments amounting to 84.0% of the total number of direct debits made by Latvian credit institutions in 2009.

Statistical methods were used to estimate the private costs associated with handling direct debit payments incurred by all Latvian credit institutions. All Latvian credit institutions were grouped depending on their share in direct debit payments on the basis of the data on direct debit payment number and value from the Credit Institution Payment Statistics Reports. The Bank of Latvia attributed the costs of direct debit payments incurred by each credit institution involved in the data compilation to the whole group of the relevant credit institutions, using the share of the credit institution's total expenditure (reported in the financial statements for 2009) in the total expenditure of credit institutions of the relevant group as an extrapolation coefficient. The credit institutions involved in the data compilation and JSC Itella Information provided data on their private costs by particular activity as well as by direct and indirect costs.

In this review, the costs associated with handling direct debit payments incurred by the interbank payment infrastructure operator JSC Itella Information have been aggregated with the private costs faced by credit institutions.

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

- 1) acquiring new customers;
- 2) handling and management of direct debit mandates (information);
- 3) payment processing;
- 4) fraud checking and review of customer complaints;
- 5) other costs, including the costs related to management and monitoring of activities.

In 2009, the social costs associated with handling direct debit payments incurred by credit institutions and the interbank payment infrastructure operator amounted to 1.0 million lats or 0.01% of GDP; the above amount was divided by the total number of direct debit payments, as aggregated in the Review, resulting in 22.9 santims per direct debit payment. The direct debit costs per lats of sales were 0.5 santims (see Table 12).

Table 12

Costs of direct debit payments incurred by credit institutions and the interbank payment infrastructure operator (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Acquiring new customers	0.4	–	0.4	41.5	9.5	0.2
Handling and management of direct debit mandates (information)	0.2	–	0.2	16.6	3.8	0.1
Payment processing	0.3	0.3	0	4.6	1.1	0
Fraud checking and review of customer complaints	0.2	–	0.2	21.9	5.0	0.1
Other costs, including the costs related to management and monitoring of activities	0.2	–	0.2	15.4	3.5	0.1
Total	1.3	0.3	1.0	100.0	22.9	0.5

The major social costs of direct debit payments incurred by credit institutions and the interbank payment infrastructure operator were associated with acquiring new customers (0.4 million lats or 41.5%), fraud checking and review of customer complaints (0.2 million lats or 21.9%) and handling and management of direct debit mandates (information; 0.2 million lats or 16.6% of the total social costs of direct debit payments incurred by credit institutions and the interbank payment infrastructure operator). The external costs incurred by the above institutions or the fee paid to other stakeholders for handling direct debit payments amounted to 0.3 million lats in 2009.

5.2 Costs of direct debit payments incurred by companies

Companies are involved in providing direct debit payments, and the relevant expenditures account for part of the social costs of direct debit payments. In order to receive a service fee by means of direct debit payments, companies require the services provided by credit institutions and other stakeholders.

To compile country-level data on the private costs of direct debit payments incurred by companies, the Bank of Latvia attributed the data collected from the seven surveyed companies accepting direct debit payments to all companies which had accepted retail direct debit payments from individuals for goods and services in 2009, applying extrapolation in line with the turnover of the industries of retail trade and services sectors. The sample company data accounted for 41.1% of the data of the relevant stakeholder's group. According to the survey, only four industries¹⁰ of the surveyed 17 industries used direct debit payments for settlement.

The costs of direct debit payments incurred by companies represent their main activities with direct debit payments: costs of preparing and sending invoices, costs incurred due to payment failures or returned payments.

In 2009, the social costs associated with handling direct debit payments incurred by Latvian companies amounted to 94 thousand lats or 0.001% of GDP; the

¹⁰ Transport; petrol stations; telecommunications; utilities.

above amount was divided by the total number of the identified direct debit payments, resulting in 2.2 santims per direct debit payment transaction. The direct debit payment costs per lats of sales were 0.05 santims (see Table 13).

Table 13

Company costs associated with handling direct debit payments (data for 2009)

Type of costs	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in social costs (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Costs of preparing and sending invoices, costs incurred due to payment failures or returned payments	0.1	0	0.1	100.0	2.2	0.05
Total	0.1	0	0.1	100.0	2.2	0.05

The social costs incurred by companies in 2009 due to preparing and sending invoices, payment failures or returned payments amounted to 94 thousand lats, while external costs or the fee paid to other stakeholders for handling direct debit payments was 116.0 lats.

According to the survey data, 80.1% of the number of company direct debit payments were made in the telecommunications sector (6.9% of the total payments made in telecommunications) and 10% on average were executed both in the utilities sector and petrol stations. Of the total social costs of direct debit payments incurred by companies, petrol stations (51.6%), the utilities sector (33.7%) and the telecommunications sector (11.5%) accounted for the largest ones.

5.3 Social costs of direct debit payments

In 2009, the total social costs of direct debit payments in Latvia amounted to 1.1 million lats or 0.9% of the total social costs of payment instruments (0.01% of GDP¹¹; see Table 14).

Table 14

Costs of direct debit payments (data for 2009)

Stakeholder	Private costs (in millions of lats)		Social costs (in millions of lats)	Social costs to GDP (%)	Social costs per payment (in santims)	Social costs per lats of sales (in santims)
		including external costs				
Credit institutions and the interbank payment infrastructure operator	1.3	0.3	1.0	0.01	22.9	0.5
Companies	0.1	0	0.1	0	2.2	0.05
Total	1.4	0.3	1.1	0.01	25.1	0.5

As regards the total social costs of direct debit payments, the largest social costs were incurred by credit institutions and the interbank payment infrastructure operator (1.0 million lats), while those of companies amounted to 0.1 million

¹¹ In the countries participating in the study, the total minimum social costs of direct debit payments amounted to 0.01% of GDP, the maximum social costs of the above payments were 0.28% of GDP and the weighted average social costs – 0.09% of GDP.

lats. In 2009, the social costs of one direct debit payment were 25.1 santims in Latvia¹². The direct debit costs per lats of sales were 0.5 santims.

External costs incurred by all stakeholders or the fee paid to other stakeholders was 0.3 million lats or 21.4% of the total private costs associated with handling direct debit payments (0.1 santims from each lats received). The external costs incurred by companies amounted to 116.0 lats or 0.1% of their private costs associated with handling direct debit payments. The external costs incurred by credit institutions and the interbank payment infrastructure operator amounted to 0.3 million lats or 23.1% of their private costs of direct debit payments.

6. SUMMARY ON THE SOCIAL COSTS OF PAYMENT INSTRUMENTS

The social costs of payment instruments are the costs directly associated with the production of payment instruments for the general public, mostly individuals, in order to ensure the possibility to make payments in the retail and services sectors; therefore, in order to assess the payment instrument social costs, it is essential to identify the set of payments that these costs relate to: payments by individuals in the retail and services sectors. Applying the appropriate method for each payment instrument described in this review, the Bank of Latvia estimated the number and value of payments (see Chart 15). According to the above estimates, **896.5 million payments with the total value of 7.3 billion lats were made in the retail trade and services sectors in 2009**. Of them, cash payments accounted for the largest share both in terms of number (82.3%) and value (44.5%).

Table 15

Number and value of payment instruments (data for 2009)

Payment instrument	Number of payments (in millions)	Share in total number of payments (%)	Number of payments per capita	Value (in millions of lats)	Share in total payment value (%)	Average payment value (in lats)
Cash payments	737.5	82.3	327	3 242.7	44.5	4.40
Card payments, of which	94.1	10.5	42	1 152.1	15.8	12.24
with debit cards	71.8	8.0	32	826.7	11.3	11.51
with credit cards	22.3	2.5	10	325.4	4.5	14.60
Credit transfers	60.5	6.7	27	2 690.9	36.9	44.50
Direct debits	4.4	0.5	2	202.5	2.8	46.49
Total	896.5	100.0	398	7 288.2	100.0	

In 2009 the number of population in Latvia was 2 261 294. According to the study data, in 2009 each person had made 327 cash payments, 42 card payments, 27 credit transfers and two direct debit payments (398 payments in total)¹³. The largest average value per payment transaction amounting to 46.49 lats was recorded for direct debit payments, with that for credit transfers standing only slightly lower at 44.50 lats. Both the above payment instruments were mostly used for paying bills for services. The average value per card payment was 12.24 lats, and the lowest average value per payment transaction was recorded for cash

¹² In the countries participating in the study, the minimum unit social costs of a direct debit payment were 10 santims, the maximum unit social costs amounted to 1.75 lats and the weighted average unit social costs amounted to 89 santims.

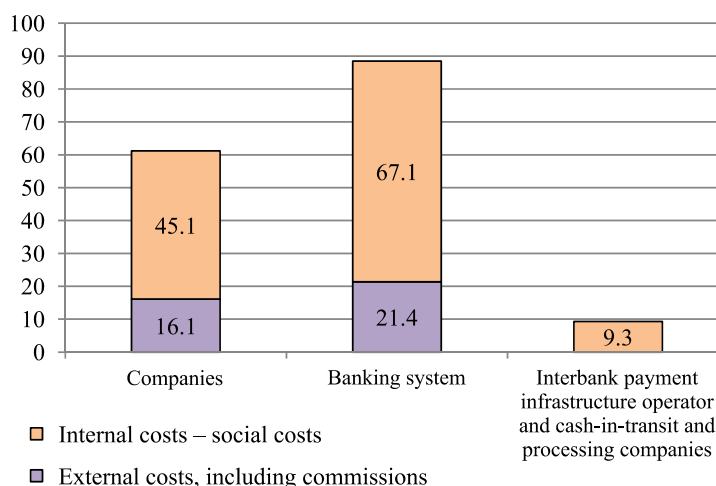
¹³ 416 payments in the countries participating in the ECB study.

payments (4.40 lats). **Cash payments were mostly used when paying small amounts for goods and services.**

In 2009, the total social costs of such payment instruments in Latvia amounted to 121.5 million lats or 0.93% of GDP¹⁴. The largest of them were incurred by the banking system (credit institutions and the Bank of Latvia; 67.1 million lats), while company social costs were 45.1 million lats. 9.3 million lats of the payment instrument social costs were associated with the costs of cash-in-transit and processing companies and interbank payment infrastructure operator (see Chart 6).

Chart 6

Payment instrument costs in Latvia in 2009 (in million lats)



The **total private costs** of the stakeholders directly and indirectly involved in the payment chain were **159.0 million lats; of them, 37.5 million lats or 23.6% were external costs** or fees paid to other stakeholders for the provided services necessary for payment execution.

Of all payment instrument social costs, **those of cash payments were the largest ones, amounting to 65.8 million lats or 0.50% of GDP**. Credit transfers and card payments recorded similar social costs (28.5 million lats or 0.22% of GDP and 26.1 million lats or 0.20% of GDP respectively); however, it should be noted that the private costs of card payments were considerably higher than those of credit transfers due to significant differences in their external costs. As to direct debit payments, their social costs were the lowest, standing at 1.1 million lats. **Credit transfers incurred the largest unit social costs (47.1 santims)**, with cash payments having the smallest ones (9.0 santims). **As regards the social costs per lats of sales, card payments and cash payments posted the highest ones at 2.3 santims and 2.0 santims respectively; see Table 16).**

¹⁴ In the countries participating in the study, the total minimum social costs amounted to 0.42% of GDP, the maximum social costs were 1.35% of GDP and the weighted average social costs – 0.96% of GDP.

Table 16

Costs by payment instrument (data for 2009)

Payment instrument	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in total social costs (%)	Social costs to GDP (%)	Social costs per payment (unit social costs; in santims)	Social costs per lats of sales (in santims)
		including external costs					
Cash	76.8	11.0	65.8	54.1	0.50	9.0	2.0
Card payments	51.9	25.8	26.1	21.5	0.20	27.8	2.3
Credit transfers	28.9	0.4	28.5	23.5	0.22	47.1	1.0
Direct debits	1.4	0.3	1.1	0.9	0.01	25.1	0.5
Total	159.0	37.5	121.5	100.0	0.93		

Looking at the payment instrument social costs of different stakeholders, the largest social costs incurred by the banking system, the interbank payment infrastructure operator and cash-in-transit and processing companies were associated with cash payments (34.3 million lats) and card payments (21.3 million lats). The social costs of credit transfers were slightly lower (19.8 million lats), but those of direct debit payments were the smallest (1.0 million lats). The largest social costs of companies (retailers and service providers) were also related to cash payments (31.5 million lats) while those associated with card payments and credit transfers were considerably smaller (4.8 million lats and 8.7 million lats respectively). As to company direct debit payments, their social costs also were the lowest at 0.1 million lats (see Table 17).

Table 17

Costs by stakeholder (data for 2009)

Stakeholder	Private costs (in millions of lats)		Social costs (in millions of lats)	Share in social costs (%)	Social costs to GDP (%)	Social costs per payment (unit social costs; in santims)	Social costs per lats of sales (in santims)
		including external costs					
Banking system, interbank payment infrastructure operators and cash-in-transit and processing companies	97.8	21.4	76.4	62.8	0.58	83.0	4.1
Cash	39.9	5.6	34.3	28.2	0.26	4.7	1.0
Card payments	36.7	15.4	21.3	17.5	0.16	22.7	1.9
Credit transfers	19.9	0.1	19.8	16.3	0.15	32.7	0.7
Direct debits	1.3	0.3	1.0	0.8	0.01	22.9	0.5
Companies	61.2	16.1	45.1	37.2	0.35	26.0	1.8
Cash	36.9	5.4	31.5	25.9	0.24	4.3	1.0
Card payments	15.2	10.4	4.8	4.0	0.04	5.1	0.4
Credit transfers	9.0	0.3	8.7	7.2	0.07	14.4	0.3
Direct debits	0.1	0	0.1	0.1	0	2.2	0.05
Total	159.0	37.5	121.5	100.0	0.93		