

## **Point-of-Sale Payment Transactions in 2009**

Benchmark for the costs of point-of-sale payment traffic within the framework of the elevation as agreed in the so called 'Further Agreement with Payment Transactions Covenant 2005'

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## Management summary

### *Background and assignment*

Representatives of banks and joint point-of-sale establishments agreed to the Payment Transactions Covenant on 17 November 2005.

The Stichting Bevorderen Efficient Betalen (Association to Promote Efficient Payment Systems) (hereafter to be called the Association) was formed within the framework of this Covenant. The collaboration agreements have been supplemented by new agreements in the so-called Further Agreement from May 2009. The agreements relate to making payment transactions safer and more efficient. Parties have agreed to do everything within their power to contribute to this aim. This will be achieved by means of the Four Year Programme (1 January 2009 to 31 December 2012) from the joint Association to Promote Efficient Payment, as well as by their own activities. The results will be evaluated in 2013.

*The Association* has commissioned the analysis of the costs to the entrepreneur of accepting various payment methods in 2009. Another analysis will be carried out (the single measurement) in 2012 in order to find out which developments have been made between 2009 and 2012 in the cost level of the point-of-sale payment transactions for individual enterprises.

### *Strategy of the survey*

The core of the survey is a telephone questionnaire among SME entrepreneurs at business level. Information about their incoming payment transactions and the costs was obtained from a total of 979 small and medium sized companies. In addition a written questionnaire has been distributed among the (very) large retail companies at concern level and 29 large companies in the established retail trade have participated. This has been supplemented with data received from the commercial banks, De Nederlandse Bank (The Dutch Central Bank) and Currence. Finally a time registration was carried out on location to define the front office time (payment time) per transaction per payment method. The payment time was measured for a total of 2,300 transactions in 20 branches.

### *Definition*

The survey was, in its entirety, aimed at the point-of-sale transactions that take place in the retail trade, the hotel and catering sector, street trading and filling stations. Point-of-sale transactions that take place elsewhere are not included in the survey. This also means that payments made elsewhere with cash, debit cards, chipknip (smart cards) and credit cards fall outside the scope of this survey. The survey covers an estimated 85 percent of all point-of-sale spending and also an estimated 85 percent of all payments linked to point-of-sale spending.

### *Results of the survey*

#### **Characteristics of the incoming payment transactions**

- Compared with 2006 the acceptance of the debit card as a payment method has increased both in the established retail trade and in the hotel and catering industry.

- The debit card<sup>1</sup> is now accepted by all the large retail companies, by more than 90 percent of the SME's in the retail trade, by 100 percent of the filling stations and by more than 60 percent of the hotel and catering sector. Acceptance of the debit card by street traders remains low (just above 20 percent).<sup>2</sup>
- The total number of point-of-sale transactions at businesses falling within the scope of this survey amounts to around €5.5 million. 67 percent of these were cash transactions and 27 percent were debit card payments.
- Compared with 2006 the total number of transactions at point-of-sale establishments is 4 percent lower, this is partly due to a drop in the volume of spending.
- Between 2006 and 2009 the proportion of debit card payments grew considerably (from 20 percent to 27 percent) and the importance of cash payments declined (from about 73 percent to 67 percent).
- The differences between the surveyed sectors are large. 3.9 million payments are involved in retail trade, of which 64 percent are cash payments and 32 percent are debit card transactions. In the filling stations, 0.6 million transactions are involved of which - in comparison with the established retail trade- proportionally fewer are cash transactions (54 percent). Electronic transactions at filling stations are usually made with debit cards (27 percent) and with fuel cards (14 percent). The number of payments in the hotel and catering sector amounts to 0.8 million of which at least 84 percent are cash and only 9 percent are made with the debit card. The number of transactions in the street trading sector amounted to 0.2 million in 2009, of which 92 percent were cash and 5 percent using a debit card.
- Spending using debit cards increased in 2009 to € 49 million. Cash spending amounted to € 46 million in 2009 and was, for the first time, less than the level of sale with debit card payments. The average size of debit card payments dropped, partly due to the success of the "Klein bedrag? Pinnen mag!" (Small amount? Pay with debit card!) campaign. (From an average of € 40 in the hotel and catering sector and the retail trade in 2006 to an average of € 33 in 2009).
- There are also large differences between the surveyed sectors in regard to the sales segmentation.  
Cash turnover in the retail trade amounted to € 31.5 million (41 percent of the total retail trade spending) and the profit from debit card payments amounted to € 40.0 million (52 percent). In filling stations this was € 4.7 million and € 5.4 million respectively (respectively 34 percent and 39 percent of spending at filling stations). In the hotel and catering sector this was € 7.9 million and € 3.4 million respectively (respectively 58 percent and 25 percent of spending in the hotel and catering sector).

<sup>1</sup> When a debit card is mentioned the PIN debit card used in the Netherlands is meant. The names debit card and pin card will both be used in this report for the same type of payment (with the debit card).

<sup>2</sup> Be aware: this is based on data from the entrepreneur's questionnaire. Analyses based on the placement of payment terminals show a lower degree of penetration of the debit card with street traders and the hotel and catering industry.

Finally cash turnover in the street trading sector was € 1.6 million and debit card turnover was € 0.3 million (respectively 83 percent and 14 percent of spending in the street trading sector).

### **The costs of payment transactions**

- The total costs of payment transactions at all point-of-sale establishments within the framework of the survey amounted to € 1,242 million in 2009. The largest part (about 65 percent) thereof is done in retail trade. The hotel and catering sector about 22 percent, street trading about 4 percent and the filling stations about 9 percent.
- In regard to the payment method, 64 percent of the payment costs came from cash payments and 25 percent from debit card payments. The credit card is good for 9 percent of the costs and the fuel pass, lastly, is good for 2 percent of the costs.  
The rest is born by other payments (foreign debit card, gift vouchers, transfers, Internet payment, return vouchers and packaging vouchers, giro slips, etc.). These types of payment fall outside the scope of the survey.
- Between 2006 and 2009 the total payment costs decreased by about 3 percent. This drop is mainly the result of the decrease in the number of cash payments (-10 percent) in favour of debit card payments (+22 percent).
- The total costs for debit card payments have risen by about 19 percent, but this is for the large part explained by the increase in debit card payments.
- Various tariffs were increased between 2006 and 2009. The tariffs charged for depositing cash money and for telecommunications have increased. In addition personnel costs and the entrepreneur's hourly wage have increased substantially and an immediate effect on the costs of the payment transactions where many personal actions play a role.
- On the other hand there are cost decreases. The debit costs per payment terminal have been reduced considerably (partly due to the subsidy given to enable the purchase of these products) and efficiency improvements have emerged which result in savings in the necessary front office and back office time. Also the banks charges for settling debit card transactions have decreased per transaction.
- The payment costs amount to about 1.2 percent in terms of the turnover inclusive VAT and duty.
- If we look at individual sectors, we can see that the total payment costs in retail trade amount to € 809 million (1.1 percent of the consumptive spending in the retail trade) in 2009.  
In the filling stations it amounts to € 107 million (0.8 percent of the spending in this sector), the total payment costs in the hotel and catering sector amount to € 271 million (2.0 percent of the spending in the hotel and catering sector) and the comparative figures in the street trading sector are € 56 million and 2.9 percent.
- The costs per transaction of cash payments and/or payments made with debit card in the retail trade and hotel and catering sectors rose slightly (by less than 1 percent) between 2006 and 2009. Compared to the price development of consumer goods during the period 2006-2009 (increase of almost 5 percent), the cost increase per transaction has been very limited.
- The marginal costs of a transaction of average size (2009: 19.33) for cash payments amount to € 0,23 and € 0.16 for debit card payments. A

move from cash to debit card could therefore mean an obvious cost saving for many point-of-sale establishments.

### **Saving opportunities**

- The payment costs are to an important degree determined by the back office and front office costs. This means that the most important savings will have to be found by increasing the efficiency of the internal processing of transactions and the handling of payments at the till.
- Because the proportion of cash payments is still considerable, further reductions in the number of cash payments and the accompanying increase in debit card payments is an opportunity for making further savings in the payment costs.
- The savings on macro level (for all point-of-sale transactions together) will however remain limited taking the limited difference in the total costs per transaction into account, as emerges from the expectations of the payment costs in 2012 (-3 percent with a constant total number of payments, but with a considerably higher proportion of debit card payments).
- Additionally savings are possible with the further changeover from analogue communication links to payments using broadband connections.
- A smarter system of fixing tariffs (an advantage when the number of debit card transactions and package offers as offered by the banks from 2011 increases) will have a favourable effect on the costs of payment transactions- as long as entrepreneurs make enough use of it and the number of debit card transactions continues to increase.



# 1 Introduction

## 1.1 Background, objective and definition

**Evaluation has been agreed in Further Agreement**

*Background: the Further Agreement and the four year plan*

Representatives of banks and joint points-of-sale establishments agreed to the Payment Transactions Covenant on 17 November 2005.

The Stichting Bevorderen Efficient Betalen (Association to Promote Efficient Payment Systems) was formed within the framework of this Covenant. The collaboration agreements have been supplemented by new agreements in the Further Agreement of May 2009. Part of this is the Four-year Plan 2009-2012<sup>1</sup> in which the agreements have been translated into concrete activities.

Article 11 of the Further Agreement states that an Evaluation will take place in 2013 (before 1 September 2013).

This will be both an evaluation of the results of the Four-year Plan and an investigation into the development of the point-of-sale transactions in The Netherlands in the period between 1 January 2009 and 31 December 2012 (hereafter: "the Survey"). The Evaluation is intended to determine whether the agreements made have been observed and where the collaboration and the concrete activities have lead to in the period 2009-2012.

*Objective of the survey*

*The Association* has asked EIM to analyse the costs to the entrepreneur of accepting point-of-sale payment methods in 2009.

**Analyse payment costs the same way as in 2006**

These analyses will continue to build on the cost analysis carried out by EIM at the request of *the Association* and DNB (The Dutch Central Bank) in 2006<sup>2</sup>, particularly by using the same method of measuring and costs arrangement. The analysis must serve as benchmark within the scope of 'the Survey'. During 2012 another analysis will be carried out (the single analysis) in order to find out what the developments were in the cost level of the point-of-sale payment transactions for individual enterprises between 2009 and 2012.

<sup>1</sup> Stichting BEB (2009). *Speed up to safer and more efficient payment transactions. Four-year Plan 2009-2012*. Leidschendam.

<sup>2</sup> See EIM 'Point-of-Sale Payment Transactions in The Netherlands; Charting the costs and profit of point-of-sale establishments', EIM 21 December 2007. See also [www.efficientbetalen.nl](http://www.efficientbetalen.nl).

### *Definition*

**Cash payments, debit card payments, Chipknip (smart card) payments and credit card payments**

The survey must provide insight into the construction and level of the costs linked to transactions within the framework of point-of-sale payment transactions made with various types of payments, namely: cash, debit card<sup>1</sup>, credit card and Chipknip (smart card) payment for entrepreneurs in 2009. The costs linked to other types of payment such as bank transfer afterwards, direct debit etc. fall outside the scope of the survey. These costs will not be measured.

The costs will be shown on three levels:

- macro: the total costs for all point-of-sale establishments
- meso: the costs per sector or payment cluster in the sector
- micro: the costs per method and per transaction.

**Analysis for 2009 with comparison in respect to 2006**

The survey relates to 2009. The survey will result in an overview of the costs for 2009 and a comparison of these costs with 2006 (where possible).

**The survey will only take place among point-of-sale establishments**

The survey relates to the costs made by companies whose core activity is supplying products and services to consumers on the basis of direct customer contact from a fixed or ambulant site (shop, restaurant, market stall). This group of companies is referred to as point-of-sale establishments. The point-of-sale establishments in the scope of the survey will be sub-divided into the following sectors: (1) established retail food and non-food products, (2) street trading, (3) hotel and catering sector and (4) filling stations with and without shop. Other branches where consumer products or services are paid for by point-of-payment methods (such as public transport, tourist attractions and the provision of services) will not be included.

### *Payment clusters*

**Analysis will take place for 4 sectors sub-divided into 12 payment clusters**

Payment clusters that have been derived from the characteristics of payment conduct can be indicated within the defined sectors. The payment clusters that were in line with the survey about the payment costs for 2006 will be indicated in the following overview and will be retained for the 2009 survey. The division of point-of-sale establishments per sector and payment cluster is included in table 1.

**Only filling stations with shop considered**

It was the intention to divide stations into filling stations with shop and without shop. However the number of observations in the last group was so small that it was not possible to use this group as a separate cluster. When this report speaks of filling stations it means filling stations with a shop.

<sup>1</sup> It has been agreed with the survey's supervisory commission that EMV payments will not be included in the measurement of the costs for 2009, because hardly any payments were made then with cards with an EMV chip and payment terminals which could read EMV chips.

Table 1 Cluster arrangement

<i>Sector</i>	<i>Payment cluster</i>
1. Retail trade	1 large-scale non-specialised retail trade with high purchase frequency and large purchase sums, such as supermarkets, departmental stores, builder's merchants
	2 specialised food retail trade with relatively low purchase frequency and low transaction sums, such as delicatessen, butchers, bakers, greengrocers.
	3 non-food specialist businesses with relatively low transaction sums, but with high purchase frequency, such as chemists and tobacco and leisure shops
	4 non-food specialist businesses with high transaction sums but with low purchase frequency, such as fashion shops, shoe shops, sport shops
	5 non-food special businesses (also) with deliveries to order such as kitchen and furniture shops
2. Street trading	6 in food
	7 in non-food
3. Hotel and catering industry	8 licensed premises (cafés, discotheques, clubs)
	9 businesses providing food (cafés, lunch rooms, ice-cream parlours, fast-food service)
	10 businesses providing meals (restaurants)
	11 businesses providing accommodation (hotels, guest houses, conference centres)
Filling stations	12 Filling stations with shop

Source: *EIM, 2011.*

Large companies (the chain store in the established retail trade (GWB)) as well as the SME point-of-sale establishments were investigated. Large companies include all branches of the enterprise which have more than 100 employees at enterprise level.

The individual branch applies as reference unit. Information on the level of a certain branch has been requested from enterprises in the SME with more than one branch and franchise organisations. The larger enterprises (such as the chain stores and oil companies) have been requested to provide information about the payment transactions in The Netherlands for the enterprise as a whole.

**Analysis of large-scale companies and SME on the level of the individual branch**

## 1.2 Strategy of the survey

The survey has been constructed from the following steps:

- 1 Actualisation of the cost model
- 2 Data collection
- 3 Cost analyses
- 4 Set-up descriptions of model entrepreneurs.

**Actualisation of marginals, tariffs and analysis method**

*Actualisation of the cost model*

The cost model used by EIM in 2007 (for the 2006 analysis) has been used for analysing the costs of 2009. The model used then has been actualised in respect to the marginals included in the model, the tariffs against which certain activities are valued and the manner of analysis. The cost analyses are now tuned into the specific characteristics of the street trading and filling station sectors even though the data gathering in 2006 did not cover them.

**Data gathering at SME and large enterprises at branch and concern level and at the level of the individual transaction**

*Data collection by entrepreneurs*

The data, the input needed for the arithmetical model, was gathered by means of:

- A telephone questionnaire among SME entrepreneurs at branch level. Information has been gathered from a total of 979 small and medium-sized companies.
- A written questionnaire among the (very) large chain stores and petrol companies at concern level. A total of 29 large companies in the established retail trade have participated. Large companies in other sectors have not provided information.
- Time registration on location for the purpose of defining the front office time (payment time) per transaction per payment method. The payment time was measured in 20 branches for a total of 2,300 transactions (including 57 observations obtained by analyses made by mystery shoppers).

The random composition for the SME and large enterprises is shown in table 2. Appendix 1 contains an extensive survey justification. Appendix II contains the questionnaire used.

Table 2 Response per sector

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Filling stations</i>	<i>Hotel and catering industry</i>
number of clusters	5	2	1	4
net response from SME	374	146	150	309
response from large enterprises	29			

Source: Eim, 2011.

*Cost analyses*

The cost analyses relate to the following sections:

**Cost analyses for all point-of-sale establishments, per sector and per payment method**

- Cost analysis per payment method for all point-of-sale establishments together, per sector and per payment method. The costs are divided into the cost categories stated in appendix III.
- The development of the payment costs between 2006 and 2009 per payment method for all point-of-sale establishments together and per payment cluster.
- An estimate of the payment costs per payment method for all point-of-sale establishments together in 2012 if the objective is reached in re-

spect to the number of electronic (debit) payment transactions (2.7 billion debit card payments in 2012).

**Model entrepreneurs in the SME used as mirror**

*Set-up descriptions of 'model entrepreneurs'*

12 clusters have been used for setting up the descriptions of the model entrepreneurs. Descriptions have been made of these model entrepreneurs which include what the costs of the payment transactions are and how the entrepreneur can use the payment methods more efficiently. The 'model entrepreneurs' form a reference grid for the SME entrepreneurs to show the costs relating to payment transactions and payment costs in their own situation. These descriptions will be published as practical examples on [www.pinnenzakelijk.nl/rekenmodule](http://www.pinnenzakelijk.nl/rekenmodule) in the summer of 2011. The practical examples that are now published there are based on the latest costs survey.

**Arithmetical model for entrepreneurs to calculate their own costs**

*Arithmetical model of individual costs*

Based on the data obtained by the survey and the 12 cases, an arithmetical instrument will be made with which entrepreneurs can get an idea of their own current payment costs and the savings they could make when the number of debit card payments to them (greatly) increases. This arithmetical module can be found on [www.pinnenzakelijk.nl/rekenmodule](http://www.pinnenzakelijk.nl/rekenmodule) in the summer of 2011. The arithmetical module now online is based on the costs data for 2006.

### 1.3 Construction of report

After this introductory chapter the report is constructed as follows:

- The cost model used will be discussed in chapter 2.
- The incoming payment transactions take centre place in chapter 3.
- The costs and profits of the payment transactions are discussed in chapter 4.
- Chapter 5 offers fact sheets for the payment costs for all point-of-sale establishments, for the various sectors and for the various payment methods.
- Finally chapter 6 gives an estimation of the payment costs for 2012.



## 2 Cost model

### 2.1 Introduction

**The costs of the incoming payment transactions occupy centre stage in the survey**

The survey is directed at the costs of the *incoming payment transactions* for point-of-sale establishments. These are the payment transactions between the customer and the entrepreneur. The outgoing payment transactions - the transactions between the entrepreneurs and their suppliers and business service providers - will be omitted, with the exception of payments needed for facilitating the takings (bank tariffs, telecommunication costs etc.).

The costs relating to the incoming payment transactions made by the entrepreneur have a large range of components which will eventually define the payment cost. Good insight into the composition of the costs is necessary if a balanced policy directed at controlling and/or pushing down the level of the payment costs is to be implemented. The construction of the costs will be presented in this chapter. Firstly the individual expense items will be shown.

Then various classification options for the payment costs will be discussed. This insight is especially important to see how costs react to changes in the transactions (fixed versus variable costs), where savings are possible (labour costs, capital costs) or which player could implement these savings (internal costs, external costs).

### 2.2 The expense items

**A total of 14 different expense items have been distinguished**

In this survey the costs of the payment transactions in point-of-sale establishments are given to mean: the costs made by point-of-sale establishments in connection with the use of the point-of-payment methods they accept. 14 different expense items relating to the incoming payment transactions were distinguished by EIM in the cost model for 2007. This cost outline has been adopted for the current survey. These expense items are shown in table 3 and sub-divided into expenses of a general nature, in other words costs that are made irrespective of the payment method (general costs) and debits that are made for cash payments or electronic payments only.

In 2006 the costs resulting from the loss of interest due to value dating were still included in the general costs. We have placed the loss of interest due to value dating entirely under the costs of electronic payment transactions in this analysis. We have included the loss of interest resulting from continuing to use cash separately under the costs of cash payments. This outline is in accordance with the analysis line implemented in 2006.

Table 3 Outline of payment costs per payment methods (cash versus electronic)

<i>General costs</i>	<i>Costs of cash payments</i>	<i>Costs of electronic payments</i>
back office costs	cost of giving change	payment cost terminals
front office costs	cost of the transport of money	cost of data communication
	cost of depositing cash	bank costs for payment with cash or smart card
	cost of loss of interest when depositing cash	cost of credit card companies
	cost of loss of interest with cash money	loss of interest from value dating
	cost of money insurance	
	cost of peripheral equipment	

Source: EIM, 2011.

### 2.2.1 General expense items

A detailed outline of the various costs concepts is shown in appendix III. The data sources used for analysing the expense items in table 3 are shown below.

**General costs cannot be attributed to a specific payment method beforehand**

General costs are costs which cannot be attributed to a specific payment method beforehand. Mostly they involve administrative affairs and actions which are linked to the settlement of transactions but which can only be attributed afterwards on the basis of a specific cost unit (such as the portion of a specific payment method in all payments or the estimation of the time taken by a specific payment method). Back office and front office costs are included as general costs. A description of what is included in these costs can be found in appendix III.

The results of the questionnaire for entrepreneurs of point-of-sale establishments were used for analysing the *back office costs*. The back office costs could be analysed by finding out how much time the entrepreneurs spent on average per week on back office activities.<sup>1</sup>

EIM held a separate survey at 20 branches of point-of-sale establishments to specify the *front office costs* (see paragraph 2.3). Front office costs include the personnel costs involved in the actual settlement. EIM has registered the average time per payment moment and multiplied it by the average gross hourly wage for cash register operators (€ 14.81)<sup>2</sup>.

<sup>1</sup> An average gross hourly wage for entrepreneurs of point-of-sale establishments of € 32.73 was used here. The entrepreneur's gross hourly wage of € 30.39 was used in 2006.

<sup>2</sup> An average hourly wage of € 13.75 was used in 2006.



**There are nine different expense items relating to cash money**

### 2.2.2 Expense items relating to cash

As well as the two general expense items, table 3 defines another seven different expense items (therefore a total of nine expense items) linked to cash payments. The degree to which entrepreneurs are confronted with these expense items has been analysed on the basis of the results of this questionnaire. These results formed one part of the analysis method. The so-called parameter values - external data by which the results of the questionnaire were multiplied - formed the other part.

For example: entrepreneurs were asked in the questionnaire how much small change they fetched from their bank and how often they did this. The commission charged in 2009 for withdrawing small change can be seen in the data from various banks. The costs of withdrawing small change can be calculated by multiplying the one by the other<sup>1</sup>.

The *loss of interest as a result of using small change* is calculated by starting with the average daily money float and valuing it against the debit interest percentage for business current accounts of 0.5 percent valid for 2009.

### 2.2.3 Expense items relating to electronic money

**There are seven different expense items indicated for electronic money**

As well as the two general expense items, five other expense items have been distinguished in table 3 (a total therefore of seven expense items) linked to electronic money. The information given above (in the first line of paragraph 2.2.2) is also valid for these expense items. For example, the questionnaire asks how many payment terminals there are in the enterprise and whether a maintenance contract is (being) used or not. This number is then multiplied by the parameter value for the purchase of a payment terminal, the depreciation period and the costs of a maintenance contract.

The results of these expense items are added together to calculate the total costs of the incoming payment transactions at the point-of-sale establishments.

The *loss of interest resulting from value dating* is calculated on the basis of external data from banks relating to the number of value dating days they employ<sup>2</sup>. The interest percentage used for the calculations has been determined at 0.5 percent (interest on business current accounts in the year 2009).

<sup>1</sup> The tariffs used to calculate the banking costs (for all forms of banking) are the standard tariffs offered by the banks ("interim tariffs"). In practice customers with large volumes particularly will be able to insist on a lower tariff in negotiations, whereby debit card transactions will be part of the various services purchased by this customer. Therefore in practice the costs of debit card transactions will be lower and the difference with cash payments consequently higher than reported in this report.

<sup>2</sup> The value dating has been reduced by the banks, with the implementation of the guidelines for paid services (PSD) per 1 November 2009, as this value dating guideline is no longer allowed.

## 2.3 Internal and external payment costs

### 2.3.1 Internal costs

Internal costs are defined in the cost model as the costs arising in the enterprise as a result of the acceptance of payment methods.

**Internal costs arising inside the enterprise**

These are the costs made by the entrepreneur when for instance he accepts debit card payments from the customer. Eight internal cost components have been distinguished in the cost model. These are shown in table 4 per the various payment methods.

Table 4 Outline of internal costs per payment method

Costs	Cash	Debit card	Chipknip (smart card)	Credit card/ Fuel pass
Front office costs	X	X	X	X
Back office costs	X	X	X	X
Costs of own money transport	X			
Loss of money (theft, fraud)	X			
Costs of loss of interest with cash money	X			
Costs of loss of interest when depositing money	X			
Fixed costs for payment equipment	X	X	X	X
Fixed costs for peripheral equipment (cash register etc.)	X	X	X	X

Source: EIM, 2011.

Table 4 shows that only four internal cost components apply for cash. The other four apply to all payment methods. The depreciation and maintenance of the payments and peripheral equipment are also included in the internal costs. It must be mentioned that not all internal cost components need to be perceived as expense items by the entrepreneur. Many entrepreneurs will for example interpret the front office costs, back office costs and the costs of money transport as activities relating to a wider packet of tasks that are connected to the enterprise.

### 2.3.2 External costs

**External costs relate to services to the enterprises and are charged by third parties to the enterprise**

External costs are defined in the cost model as costs invoiced to the entrepreneur by external parties, such as financial establishments, insurance companies, money transporting companies and telecommunication suppliers, in respect to payment transactions. A specific example: the invoices the entrepreneur receives from KPN for the ADSL connection for his payment terminals.

Nine external cost components have been distinguished in the cost model. These are arranged in table 5 by the various payment methods.

Table 5 shows a more varied view than table 4. Only the loss of interest resulting from value dating applies to all payment methods.

It must be mentioned that all these cost components (perhaps with the exception of the loss of interest resulting from value dating) will be perceived

by the entrepreneur as expense items because he has received invoices for them.

Table 5 Outline of external costs per payment method

<i>Costs</i>	<i>Cash</i>	<i>Debit card</i>	<i>Chipknip (smart card)</i>	<i>Credit card / Fuel pass</i>
Loss of interest resulting from value dating	X	X	X	X
Deposit costs for cash	X			
Costs of change at bank	X			
Professional money transport	X			
Debit card bank costs		X		
Chipknip (smart card) bank costs			X	
Credit card costs				X
Telecommunication costs		X	X	X
Insurance costs	X			

Source: EIM, 2011.

The individual entrepreneur can keep his internal costs down with more efficient business operations. The entrepreneur can keep his external costs down by making the correct choices, for instance the sort of data connection or an all-in-payment package suitable for his situation and by negotiating the tariffs as much as possible.

## 2.4 Fixed and variable costs

Many point-of-sale establishments offer the customer various payment methods. An important question is then whether customers using their debit card as much as possible is attractive. This relates to what the costs of an extra debit card transaction are in relation to that of a cash payment. These marginal costs can be calculated by splitting the total costs into fixed and variable costs. (see table 6).

Table 6 Outline of payment costs per fixed and variable

Cost components	Variable			Cash	Electronic
	Fixed	transaction	Variable sale		
Back office cash	15	13	72	X	
Back office electronic		100			X
Front office		100		X	X
Loss of interest			100	X	X
Value dating			100	X	X
Own money transport	100			X	
Depreciation costs of cash register	100			X	
Depreciation costs of counterfeit money detector	100			X	
Depreciation costs of safe	100			X	
Change		100		X	
Loss of money			100	X	
Professional money transport			100	X	
Deposit costs for cash			100	X	
Insurance costs			100	X	
Payment equipment for debit cards	93	7			X
Debit card subscription costs	93	7			X
Telecommunication subscription for debit cards	100				X
Debit card tariffs		100			X
Telecommunication tariff for debit cards		100			X
Chipknip (smart card) payment equipment	92	8			X
Chipknip (smart card) subscription costs	92	8			X
Telecommunication subscription for smart cards	100				X
Chipknip (smart card) tariffs		100			X
Telecommunication tariff for Chipknip (smart card)		100			X
Batch processing of Chipknip (smart card) transactions	100				X
Credit card payment equipment	93	7			X
Credit card telecommunication subscription	100				X
Telecommunication tariff for credit cards		100			X
Credit card companies' commission			100		X

\* The division of some expense items into fixed and variable is the result of the allocation of the components in fixed and variable costs, and the outcome of the cost analyses based on this allocation.

Source: EIM, 2011.

Variable costs change as a result of the number of transactions or the amount of the transaction

Fixed costs by definition do not depend on the number of transactions and sales. This does not apply to variable costs. Variable costs can be linked to whether or not the transaction is implemented and in that case we talk of transaction-related variable costs. They could also depend on the transaction sum and then we talk of sales-related variable costs. The presumption of the time horizon is of importance when differentiating between fixed and variable. After all in the long term all costs have a variable character. In this study the choice has been made for a medium-length time horizon of 7 years for all investments in payment equipment such as cash register, payment terminals and fuel pumps with built-in payment terminals. With a shorter horizon a larger part of the costs would have a fixed character, a smaller part with a longer one.

Table 6 shows the division used between fixed and variable costs for all the distinguished cost components. The last two columns show whether the cost components are applicable to cash or electronic payments. The variable costs of a debit card payment are mainly transaction-related. It shows that the costs of an extra debit card payment of € 25 will not differ much from the costs of a debit card payment of € 50. The sales-related variable costs with cash payments are relatively important, after all more bank notes are generally involved in larger transactions so that the variable costs increase with the transaction sum.

Some expense items have a fixed and a variable component

Table 6 shows that the various cost components do not have a complete fixed or variable character. The costs of a payment terminal are for instance 93 percent fixed and 7 percent transaction-related variable. Extra debit card transactions could after all be processed partly via the already present payment equipment, but extra investments such as payment terminals will be imperative if the number of transactions increases.

Back office costs are not 100 percent claimed in the cost model as fixed expense items. A number of activities, such as preparing cash registers for operation, occur every day regardless of the size of the turnover or the number of transactions, but an important part of the necessary activities, such as keeping enough change, is directly related to the number of transactions. The questionnaire carried out in this survey shows that 15 percent of the back office costs for cash payments have a fixed character. The majority of variable costs are sales-related.



## 3 Characteristics of incoming payment traffic

### 3.1 Introduction

This chapter looks into the acceptance of the payment methods by point-of-sale establishments and the use of the five types by consumers for purchases from point-of-sale establishments (incoming payment transactions). The characteristics of the incoming payment transactions at the point-of-sale establishments in the year 2009 are described in this chapter. For more information about developments in the retail trade and hotel and catering sector since 2006 see the fact sheets included in chapter 5.<sup>1</sup>

The definition of the point-of-sale establishments in the framework of this survey will be discussed first in this chapter. Followed by the acceptance of the five payment methods for point-of-sale payment transactions; namely cash, debit card, Chipknip (smart card), credit card and fuel pass. We will then examine the number of point-of-sale transactions within the point-of-sale establishment in the defined sectors. The chapter further addresses the importance of the various payment methods, both for the number of sales transactions and for the consumptive spending. The chapter finishes with some reflections on opportunities for savings. All the figures mentioned in the text and the tables in this chapter concern the year of 2009, unless explicitly stated otherwise.

### 3.2 Definition of the point-of-sale establishments

**The focus lies on point-of-sale transactions at point-of-sales establishments**

The survey concerns the costs of paying for point-of-sale transactions at point-of-sale establishments. Point-of-sale establishments include all the companies in retail trade, the hotel and catering industry, street trading and the filling stations that sell 'over the counter' products to the consumer. Transactions made at point-of-sale establishments that were not made over the counter (such as sales via their own website or sales via a mail-order company) fall outside the scope of this survey.

**Institutional domain: point-of-sale transactions are the main activity**

Companies that do have point-of-sale transactions but are not part of their own main activity (the institutional domain), such as recreation parks, museums, transport companies, caravan company shops, associations, pharmacies etc. also fall outside the survey. These companies are not regarded as point-of-sale establishments.

<sup>1</sup> A comparison with 2006 is only offered for a few points in this chapter, partly because comparable information was not provided for all points in the report about the 2006 survey. In as far as a comparison at sector level is possible (retail trade and hotel and catering sector) we refer you to the fact sheets per sector in chapter 5.

Product domain:  
consumptive spending on retail trade products, hotel and catering services and filling station products

The survey is directed towards payments made by consumers for goods and services at point-of-sale establishments. However not all categories of consumptive spending fall within the scope of the survey (the product/service domain). Spendings on energy, rent, transport, travel vouchers, the repair of goods etc. fall outside the scope. They are not part of the retail trade assortment, the provision of services from hotel and catering companies and/or the sales terrain of filling stations. Spending on products and services outside the so-called retail trade assortment at point-of-sale establishments are regarded as point-of-sale spending within the scope of the survey, such as the sales of travel vouchers from the newsagents. Transactions between companies using one of the defined payment methods fall entirely outside the survey.

**The research field covers € 106 billion of spending**

Taking these definitions into consideration, it can be determined on the basis of data from the CBS that 41 percent of all consumptive spending (€ 106 billion falls within the survey domain. This equals 85 percent of the total point-of-sale spending. Table 7 shows how spending within the survey domain is derived from the total consumptive spending.

Table 7 From consumptive spending to spending at point of sale establishments, 2009 (rounded off values)

	<i>value in</i>		
	<i>billions €</i>	<i>percents</i>	<i>percents</i>
Total consumptive spending	261	100	
-/- spending outside product domain of point-of-sale establishments	138	53	
= spending at point-of-sale establishments within product domain	123	47	
+ spending at point-of-sale establishments within product domain	2	1	
= total spending at point-of-sale establishments	125	48	100
-/- spending at non-institutional retail trade	12	5	
-/- spending at mail-order companies, web shops etc.	7	3	
= spending at point-of-sale establishments within institutional domain	106	41	85

Source: EIM, 2011.

**3.3 Degree of acceptance of payment methods**

The degree of acceptance of the various payment methods at the point-of-sale establishments is shown per sector in figure 1, except for cash. The degree of acceptance of cash is 100 percent in every sector. The fuel pass category is sub-divided into the types of pass that are usually presented at filling stations (passes from lease companies and from oil companies, trucker cards and local service cards).

**a debit card is now public property**

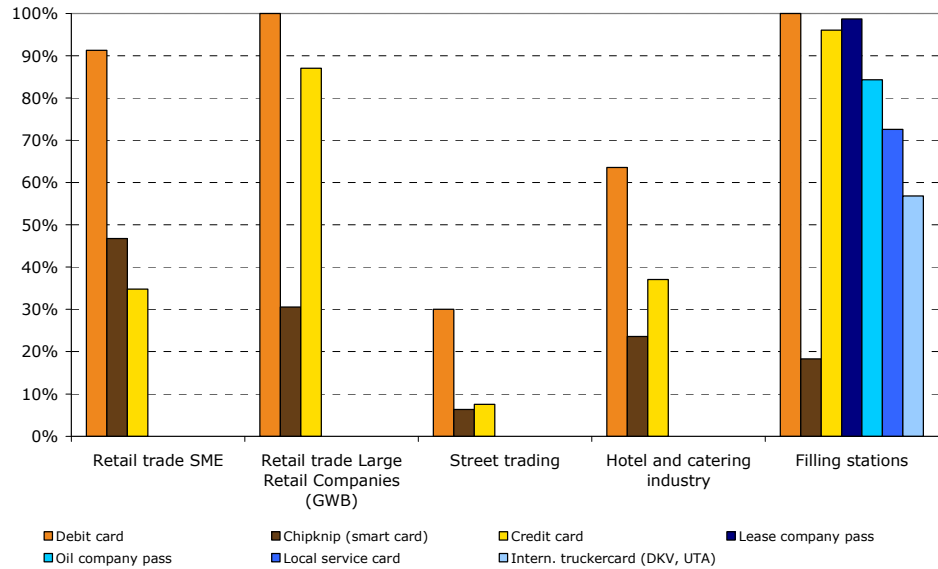
It emerges from figure 1 that the debit card is accepted by a clear majority of shopkeepers in retail trade. Every chain within the GWB (large retail



companies) accepts the debit card. The debit card is accepted by more than 60 percent of all hotel and catering companies.

Compared to 2006, there is a clear increase in the degree of acceptance of debit cards both in the (SME) retail trade and in the hotel and catering industry.<sup>1</sup>

Figure 1 Degree of acceptance of payment methods per sector, 2009



Source: EIM, 2011.

The smart card is less popular than the debit card. This payment method is accepted by a minimum number point-of-sale establishments. In practice the smart card is only incidentally presented as a payment method.

Most large companies in the retail trade and most filling stations accept credit cards but the degree of acceptance in other sectors is much lower. The total number of payments that are in fact made with a credit card at point-of-sale establishments is however relatively small (see paragraph 3.4).

Fuel passes come in many types. Cards from lease companies are accepted by almost all filling stations. International trucker cards are accepted by about half the filling stations.

Of course this is linked to trucker cards being especially interesting to filling stations on through roads that are passable by truckers.

<sup>1</sup> The degree of acceptance of the various payment methods and their development is based on answers from the entrepreneurs who participated in the questionnaire about payment costs for the years 2009 or 2006. However when the payment terminals are used as the starting point, it emerges that the degree of acceptance is possibly even lower than can be derived from the questionnaire. A degree of acceptance in the hotel and catering industry of about 50 percent could be determined in 2009 and about 10 percent in street trading.

### 3.4 Number of point-of-sale transactions per point-of-sale establishment

The number of payments per payment method will be shown below along with the total and average amount of these transactions.

The data is based on information gained in a random survey among SME point-of-sale companies in the sectors concerned, as well as information received in a random survey among large companies in the established retail trade (see also Appendix I). The information in the random survey has been scaled up to national level and the scaling up is based on or emulates information from external sources across the total spending per sector and cluster within (CBS, HBD [National Board of Retail], EIM), the registered payments with debit cards and smart cards per sector and cluster (Currence) and the estimations of cash payments per total and per sector within (from De Nederlandsche Bank and Currence).

### 5.5 billion transactions

#### *Total number of point-of-sale transactions*

Based on an analysis of the data obtained, the total number of point-of-sale transactions is estimated at 5.5 billion (of which 3.9 billion in the retail trade). These 5.5 billion transactions amounted to a spending sum of € 106 billion in 2009 which corresponds to an average transaction sum of € 19.33. The ratio of the number and value of the transactions is shown per sector in table 8.

Table 8 Transactions and consumptive spending per sector

<i>Sector</i>	<i>Number of point-of-sale transactions (x 1 million)</i>	<i>Consumptive spending (x 1 billion)</i>	<i>Average transaction sum</i>
Established retail trade (GWB [Large Retail Companies])	1,919	€ 40.1	€ 20.90
Established retail trade (SME)	1,960	€ 36.7	€ 18.73
Street trading	190	€ 1.9	€ 10.23
Hotel and catering industry	829	€ 13.5	€ 16.34
Filling stations	592	€ 13.8	€ 23.34
All point-of-sale establishments	5,492	€ 106.2	€ 19.33

Source: EIM, 2011.

### 3.5 Relative importance of payment method

Table 9 shows how the composition of the point-of-sale payment transactions for all point-of-sale establishments looked in 2009. A distinction has been made between the number of transactions and the sales realised with the various forms of payment. Table 9 shows that ordinary smaller payments are realised with cash. The average values of cash payments and debit card payments are drawing one another, particularly because the payment of small sums with a debit card has been greatly stimulated since 2008.

Table 9 Division of all point-of-sale transactions in payment methods

	<i>Transactions (%)</i>	<i>Value of the transactions (%)</i>	<i>Average value per transaction</i>
Cash	67.0	43.1	€ 12.43
Debit card	27.1	46.5	€ 33.21
Smart card	0.2	0.0	€ 3.38
Credit card	1.1	3.4	€ 61.71
Fuel pass	1.5	2.4	€ 30.07
Other	3.1	4.6	€ 20.17
Total	100.0	100.0	€ 19.33

Source: EIM, 2011.

#### *Cash payments*

**Cash payments are clearly becoming fewer and fewer**

Table 9 shows that the largest proportion of payments at point-of-sale establishments in The Netherlands are still made with cash (67 percent). When a brief comparison is made with 2006, it is noticeable that there has been a considerable drop in the number of cash payments and a sharp rise in the number of debit card payments in both the retail trade and the hotel and catering industry (these are the sectors where a comparison can be implemented on the basis of a previous survey into the payment costs). The drop in cash payments is mainly the consequence of the changeover from cash payments to debit card payments, the drop in the volume of purchasing from the retail trade and the hotel and catering industry and the rise in the average value of the cash payments. The debit card payment proportion in retail trade rose from 26 to 32 percent and in the hotel and catering industry from 4 to 9 percent. The number of cash payments dropped by 10 percent from 4.1 billion in 2006 to 3.7 billion in 2009 for all point-of-sale establishments within the sector where the survey was done.

#### *Debit card payments*

**Debit card payments in the hotel and catering industry and retail trade are increasing spectacularly**

Debit cards are becoming more and more important every year. The growth of the number of debit card payments in the established retail trade is particularly remarkable. In 2009 almost 1.5 billion transactions with a debit card were made in point-of-sale establishments, of which 1.24 billion in the established retail trade.<sup>1</sup> In comparison: the 1 billion debit card payments milestone was passed in 2006.<sup>2</sup>

<sup>1</sup> Currence's records shows that between 2006 and 2009 the total number of debit card payments grew from 1.45 billion in 2006 to almost 1.95 billion in 2009. Currence also sees an increase in the relative importance of debit card payments at all point-of-sale establishments: from 30 percent in 2006 to 38 percent in 2009. This increase was wholly at the cost of the cash payment share. According to Currence the cash payment share at all point-of-sale establishments dropped from 65 percent in 2006 to 57 percent in 2009.

<sup>2</sup> Source for 2009: EIM, 2011 and for 2006 'Point-of-Sale Payment Transactions in The Netherlands' EIM, 2007.

**The smart card has as good as disappeared from the picture**

#### *Smart card payments*

Nowadays the smart card is almost only used in canteens, for parking and for purchases from vending machines. Hardly any payments are made at point-of-sale establishments with the smart card.

The brand owner of Chipknip (the smart card), Currence, decided in 2007 to no longer promote the smart card for use at manned point-of-sale establishments.

**Credit cards particularly for large purchases**

#### *Credit card payments*

The total number of credit card payments amounts to a little over 58 million.

The average payment per credit card is, value-wise, around three times as high as the average transaction value of all other payment methods.

The credit card is therefore mainly used in the established retail trade for more expensive and/or luxurious purchases such as jewellery, furnishings and clothing. In the hotel and catering industry we see that the credit card is mainly used by the providers of accommodation (hotels), which also explains the higher transaction sums for credit cards.

**Use of fuel pass normal at filling stations**

#### *Fuel passes*

Payment with a fuel pass is possible at almost all filling stations. This applies especially for cards from lease companies. In the meantime almost 84 million payments have been made with a fuel pass at point-of-sale establishments.<sup>1</sup>

The average sum was € 30. Calculated over all transactions at filling stations this is clearly higher than the average sum per transaction, which is of course the consequence of larger payments for fuel each time.

#### *Other payment methods*

Other payment methods include transfers, payment on account, payment in instalments on the basis of credit, internet payments, payment with returnable packaging vouchers (at supermarkets etc.), credit notes, payment with gift tokens, Air Miles and other saving schemes.

<sup>1</sup> Transactions at unmanned filling stations were not included. Not enough information can be acquired from these sales points for a responsible estimation of the payment transactions there.

## 4 Costs and profits of payment transactions

The costs and profits of the payment transactions in retail trade, street trading, the hotel and catering industry and filling stations will be presented in this chapter.

The various cost components used for calculating the costs will be examined. A distinction will be made between internal and external costs and between fixed and variable costs.

The survey focuses on the incoming payment transactions: the payment transactions between the customer and the entrepreneur. The outgoing payment transactions - the transactions between the entrepreneurs and their suppliers and business service providers - will be omitted from consideration, with the exception of payments needed for the facilitation of the takings (bank tariffs, telecommunication costs etc.).

All the numbers mentioned in the text and the tables in this chapter relate to 2009, unless explicitly stated otherwise.

### 4.1 Total costs of payment transactions

**Costs of incoming payment transactions amounted to around € 1.2 billion in 2009**

Table 10 shows the total costs of the incoming payment transactions in 2009. The total costs amount to about € 1.2 billion. Considering the level of consumptive spending the costs of the incoming payment transactions are relatively high in street trading and the hotel and catering industry.

Among other things, this is because, proportionally many cash payments are made in these sectors. In addition the credit card is used relatively often in the hotel and catering industry and the payment costs are relatively low at the filling stations. This is partly because there are many transactions per branch. This creates returns to scale.

For instance the costs of a payment terminal and the back office costs are spread over relatively many transactions.

Table 10 Total costs of incoming payment transactions in proportion to the total spending per sector

	<i>Total costs of incoming payment transactions (x 1 million)</i>	<i>Consumptive spending (x 1 billion)</i>	<i>Total costs in % consumptive spending</i>
Established retail trade	€ 809	€ 76.8	1.05
Street trading	€ 56	€ 1.9	2.87
Hotel and catering industry	€ 271	€ 13.5	2.00
Filling stations	€ 107	€ 13.8	0.77
Total point-of-sale establishments	€ 1,242	€ 106.2	1.17

Source: EIM, 2011.

**Costs per transaction are the highest in the hotel and catering industry**

The total costs per transaction are shown in table 11. The costs per transaction for all point-of-sale establishments together amount to € 0.23.

The costs per transaction are below average in the retail trade and filling stations. The hotel and catering industry has the highest costs per transaction, mainly as a consequence of the relatively strong degree of acceptance of hotel and catering credit cards.

Table 11 Total costs of incoming payment transactions in proportion to all transactions per sector

	<i>Total costs of incoming payment transactions (x 1 million)</i>	<i>Total number of transactions (x 1 million)</i>	<i>Average costs per transaction</i>
Established retail trade	€ 809	3,880	€ 0.21
Street trading	€ 56	190	€ 0.29
Hotel and catering industry	€ 271	829	€ 0.33
Filling stations	€ 107	592	€ 0.18
Total point-of-sale establishments	€ 1,242	5,492	€ 0.23

Source: EIM, 2011.

**Average cost of debit card payments is € 0.01 lower than for cash payments**

The total costs per transaction are shown in table 12 per payment method. Cash transactions cost € 0.22 on average. A debit card transaction is slightly cheaper at an average of € 0.21. Payments made with a credit card are on average the most expensive at € 1.88 per transaction.

Paragraph 4.4 will further explore the average costs per transaction.

Table 12 Total costs of incoming payment transactions per payment method

	<i>Total costs of incoming payment transactions (x 1 million)</i>	<i>Total number of transactions (x 1 million)</i>	<i>Total costs per transaction</i>
Cash	€ 792	3,680	€ 0.22
Debit card	€ 308	1,486	€ 0.21
Chipknip (smart card)	€ 3	11	€ 0.24
Credit card	€ 109	58	€ 1.88
Fuel passes	€ 20	84	€ 0.24

Source: EIM, 2011.

## 4.2 Internal and external payment costs

The concepts of internal and external costs were introduced in paragraph 2.3.

The two concepts will be briefly explained again as a reminder.

Internal costs are defined in the cost model as the costs arising from the acceptance of payment methods in the enterprise.

These are the costs made by the entrepreneur when he accepts a specific type of payment from the customer.

External costs are defined in the cost model as costs invoiced to the entrepreneur by external parties in respect to payment transactions, such as financial establishments<sup>1</sup>, insurance companies, money transporting companies and telecommunication suppliers.

In table 13 the total costs for the four sectors are divided into internal and external costs. A distinction has been made in the internal costs between the three largest expense items: back office costs, front office costs and own money transport. A distinction has been made in the external costs between banking costs (depositing cash, bank costs for change, value dating, bank costs for debit cards & smart cards) and non-banking costs.

The non-banking costs include the costs charged by the fuel companies for payments made to the filling station owner with a fuel pass, as well as the costs charged by the credit card company. Explicitly this could be a levy per litre of fuel purchased, or implicitly discounted in the pumping costs paid to the filling station owners for every litre paid for with a fuel pass.

Table 13 Division of internal and external costs per sector

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Hotels and catering</i>	<i>Filling stations</i>	<i>Total</i>
Total costs (x 1 million)	€ 809	€ 56	€ 271	€ 107	€ 1,242
- internal costs	€ 544	€ 45	€ 199	€ 64	€ 852
- external costs	€ 265	€ 11	€ 73	€ 42	€ 391
Division of internal costs (%)					
- back office	30	27	47	19	33
- front office	47	31	26	68	43
- own money transport	9	28	17	3	11
- other internal costs	14	15	11	11	13
Division of external costs (%)					
- banking costs	52	83	47	27	49
- other external costs	48	17	53	73	51

Source: EIM, 2011.

**Internal costs are responsible for around 2/3 of the total costs**

The internal costs have proved to be higher than the external costs in all sectors.

The proportion of internal costs for all the point-of-sale establishments together is 69 percent. Relatively speaking, the internal costs are the highest in street trading and the lowest in the filling stations. Differences between the sectors are mainly caused by the division between cash payments and electronic payments. The more cash is used as a payment means, the higher the proportion of internal costs in total.

<sup>1</sup> The tariffs used to calculate the banking costs are the standard tariffs offered by the banks (interim tariffs). In practice customers with large volumes will be able to insist on a lower tariff in negotiations, whereby debit card transactions will be part of the various services purchased by this customer. In practice therefore the costs of debit card transactions will be lower and the difference with cash consequently higher than reported in this report.

**Large differences  
in cost structure  
between the sectors**

Considering the division of internal costs, it is noticeable that the back and front office costs make up the largest part of the internal costs. Clear differences can be seen between the sectors.

The proportion of back office costs is relatively high in the hotel and catering industry but relatively low at filling stations. The opposite applies to the front office costs. This is directly linked with the number of transactions made per enterprise. There are a large number of transactions at branch level at filling stations so the back offices have to be very efficiently organised to be able to process the many transactions (the returns to scale of the many transactions). The reverse is true for the hotel and catering industry.

The division of the external costs also differs considerably per sector. The external costs in street trading are determined by the banking costs. The proportion of banking costs lies much lower in other sectors because these sectors are confronted with many more external costs than the street traders, including the costs of professional money transport, data communication costs and the costs linked to credit card payments. Differences per sector can also occur in these items, for instance those costs relating to the way the connections for the processing of electronic payments are made (analogue, ADSL); analogue is more expensive because a tariff per transaction (= dial-in moment) is calculated.

**Cash payments  
mean many internal  
back office  
costs**

Table 14 shows the division of internal and external costs per payment method.

Great differences can be seen here just like in the breakdown in sectors. The proportion of internal costs is for instance very high for cash payments, while the total costs for credit card payments are mainly determined by external costs.

Table 14 Division of internal and external costs per payment method

	<i>Cash</i>	<i>Debit card</i>	<i>Chipknip (smart card)</i>	<i>Credit card</i>	<i>Fuel pass</i>
Total costs (x 1 million)	€ 792	€ 308	€ 3	€ 109	€ 20
- internal costs	€ 640	€ 182	€ 1	€ 19	€ 9
- external costs	€ 152	€ 125	€ 2	€ 90	€ 2
Division of internal costs (%)					
- back office	39	12	12	43	3
- front office	36	64	58	48	86
- own money transport	15	0	0	0	0
- other internal costs	10	24	30	10	11
Division of external costs (%)					
- banking costs	66	64	76	0	5
- other external costs	34	36	24	100	95

Source: EIM, 2011.



**The costs of electronic payments are less determined by back office activities**

The internal costs for payment with debit card, smart card, credit card and particularly with fuel passes are caused by the front office costs much more than for cash payments<sup>1</sup>. The proportion of back office costs in the internal costs is relatively high for cash and credit card payments.

This is mainly due to the administration and logistic settlement of cash payments, which involves much labour. Moreover, the administrative processing burden of credit cards is high.

### 4.3 Fixed and variable payment costs

A distinction was made in the previous paragraph between internal and external costs. The payment costs can also be divided into fixed and variable costs. Extensive information is given in paragraph 2.4 about these concepts.

**Fixed costs are relatively low at filling stations**

Table 15 and table 16 show the fixed and variable costs division in the four sectors and for all the point-of-sale establishments together. The fixed costs are responsible for an average of about a fifth of the total costs, but this proportion differs per sector. The proportion of fixed costs in street trading and the hotel and catering industry is relatively high at respectively 28 and 23 percent. This proportion is relatively low at filling stations at 8 percent. The proportion of fixed costs in the retail trade is 17 percent. Many transactions have relatively low fixed costs and this can for example be seen at filling stations where there are comparatively many transactions per branch.

The variable costs are distinguished into transaction-related and sale-related costs. The proportion of transaction-related costs is higher than the proportion of sales-related costs in the retail trade and at filling stations. The opposite is true in street trading and the hotel and catering industry. This is because relatively many cash payments are made in these sectors and a lot of credit card payments are made in the hotel and catering industry.

The costs linked to these payment forms depend to a large degree on the level of the total money turnover or on the amount of the transaction sum (credit cards).

Table 15 Fixed and variable costs in sectors (x 1 million)

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Hotels and catering</i>	<i>Filling stations</i>	<i>Total</i>
Fixed costs	€ 139	€ 16	€ 63	€ 9	€ 227
Variable transaction-related	€ 391	€ 19	€ 86	€ 56	€ 553
Variable sales-related	€ 278	€ 21	€ 122	€ 41	€ 462
Total	€ 809	€ 56	€ 271	€ 107	€ 1,242

Source: EIM, 2011.

<sup>1</sup> You are referred to appendix 1 for the front office time per sector and per payment method.

Table 16 Division of fixed and variable costs per sector

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Hotels and catering</i>	<i>Filling stations</i>	<i>Total</i>
Fixed costs	17%	28%	23%	9%	18%
Variable transaction-related	48%	33%	32%	53%	45%
Variable sales-related	34%	38%	45%	38%	37%
Total	100%	100%	100%	100%	100%

Source: EIM, 2011.

**The costs of debit card, smart card and fuel passes are strongly transaction-related**

Differences between sectors are mainly due to the way the consumer pays. Payment by credit card occurs for example comparatively more in the hotel and catering industry. The costs of credit card payments are mainly sales-related (see table 17 and table 18), resulting in the sales-related costs in the hotel and catering industry being relatively high. The same sort of reasoning holds true for the share of transaction-related costs at filling stations in view of the high proportion of transaction-related costs of fuel passes.

The costs of debit card and smart card payments are for the greatest part variable transaction-related (consider front office costs, but also the tariff costs related to data communication and tariffs used by the bank for debit card and smart card payments). There are no turnover-related costs. On the other hand cash payments have a strong turnover-related expense item which is mainly due to the costs of professional money transport, depositing cash and the back office costs related to emptying and filling cash registers and making the daily or weekly takings ready for sending.

Table 17 Fixed and variable costs per payment method (x 1 million)

	<i>Cash</i>	<i>Debit card</i>	<i>Chipknip (smart card)</i>	<i>Credit card</i>	<i>Fuel pass</i>
Fixed costs	€ 159	€ 63	€ 1	€ 3	€ 1
Variable transaction-related	€ 269	€ 245	€ 2	€ 18	€ 9
Variable turnover-related	€ 364	€ 0	€ 0	€ 88	€ 10
Total	€ 792	€ 308	€ 3	€ 109	€ 20

Source: EIM, 2011.

Table 18 Proportion of fixed and variable costs per payment method

	Cash	Debit card	Chipknip (smart card)	Credit card	Fuel pass
Fixed costs	20%	20%	39%	2%	6%
Variable transaction-related	34%	80%	61%	17%	46%
Variable turnover-related	46%	0%	0%	81%	48%
Total	100%	100%	100%	100%	100%

Source: EIM, 2011.

#### 4.4 Costs per transaction and cost pressure

Paragraph 4.1 has already briefly explored the costs per transaction. More extensive attention will be paid in this paragraph. The marginal costs per transaction and the relative cost pressure will also be discussed.

**Credit cards are the most expensive by far**

Payments with credit card are clearly more expensive per transaction in all sectors than with the other payment methods. This is mainly due to the commission (a percentage of the transaction sum) that has to be paid to the credit card company. The costs of credit cards differs per sector because a lower percentage is paid on average in certain sectors. For instance the average commission percentage is relatively high in street trading. The average value of the transaction is comparatively low, resulting in the total costs per transaction being less (see also table 19).

Table 19 Average costs per transaction in payment methods and sector

	Established retail trade	Street trading	Hotels and catering	Filling stations	Total
Cash	€ 0.20	€ 0.29	€ 0.30	€ 0.14	€ 0.22
Debit card	€ 0.20	€ 0.42	€ 0.33	€ 0.15	€ 0.21
Chipknip (smart card)	€ 0.24	€ 0.45	€ 0.29	€ 0.17	€ 0.24
Credit card	€ 2.36	€ 1.14	€ 2.32	€ 0.85	€ 1.88
Fuel passes	-	-	-	€ 0.24	€ 0.24
Total	€ 0.21	€ 0.29	€ 0.33	€ 0.18	€ 0.23

Source: EIM, 2011.

The costs of a debit card transaction are on average € 0.01 lower than the costs of a cash transaction in all the point-of-sale establishments together. However this does not apply in the sectors. The total costs of debit card transactions are defined by the costs of a debit card transaction in the retail trade and at filling stations.<sup>1</sup> The total costs of cash transactions are on the other hand strongly influenced by the costs of cash transactions in the hotel

<sup>1</sup> The proportion of retail trade and filling station debit card transactions in the total is 94 percent.

and catering industry and in street trading.<sup>1</sup> The *weighted* average of the costs per debit card transaction (calculated over all sectors) are, because of this, lower than the weighted average of the costs per cash transaction.

As previously mentioned the current costs per transaction depend, among other things, on the number of transactions, i.e. on the use of the relevant payment method. Because of this the average costs of a cash transaction in the hotel and catering industry are for instance lower than the average costs of a debit card transaction. It is therefore also worth looking at the marginal costs of a payment. These marginal costs can be calculated from the previously mentioned variable costs.

**The marginal costs are the costs of an extra transaction**

**Marginal costs of debit card payments are clearly lower than for cash payments**

Table 20 shows the marginal costs per payment method and per sector. The marginal costs per the various payment methods in a sector are calculated using the average transaction sum in the sector. It is clear from table 20 that extra debit card payments are in most cases cheaper for the entrepreneur than cash payments and this is different than when based on the average costs per transaction. Street trading is the only exception to this. This is partly due to the fact that the front and back office costs for debit card transactions in street trading are relatively high. This points to inefficient handling of the debit card transactions in street trading. An average debit card transaction takes longer compared to the other sectors and the time spent on back office costs in respect to debit card payments is relatively high in relation to the number of debit card transactions.

The data below shows that savings can be made by changing from cash to debit card payments.

Table 20 Marginal costs per transaction in payment methods and sector\*

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Hotels and catering</i>	<i>Filling stations</i>	<i>Total</i>
Cash	€ 0.21	€ 0.22	€ 0.28	€ 0.16	€ 0.23
Debit card	€ 0.16	€ 0.26	€ 0.22	€ 0.14	€ 0.16
Chipknip (smart card)	€ 0.15	€ 0.25	€ 0.15	€ 0.13	€ 0.15
Credit card	€ 0.99	€ 0.59	€ 0.76	€ 0.49	€ 0.79
Fuel passes	-	-	-	€ 0.20	€ 0.20
Average amount	€ 19.80	€ 10.23	€ 16.34	€ 23.34	€ 19.33

\* *Be aware: the marginal costs per payment method in one sector are calculated by means of the average transaction sum across all payment methods in the sector involved.*

*Source: EIM, 2011.*

The relative cost pressure can also be calculated on the basis of the calculated costs per payment method. This is understood to mean: the total costs of a payment method, expressed as a percentage of the turnover realised by that payment method. For example: the total costs of cash pay-

<sup>1</sup> The proportion of hotel and catering industry and street trading cash transactions in the total is 24 per cent.

ments for the established retail trade amounted to € 487 million in 2009. Sales amassed with cash payments in the established detail trade amounted to € 31.5 billion. A division sum gives a relative cost pressure of 1.54 per cent (see table 21).

**Relative cost pressure for cash is 2 to 3 times higher than for debit card**

Table 21 shows the relative cost pressures for the various payment methods per sector. It appears from the table that in most cases the relative cost pressure for debit card payments is clearly lower than for the other payment methods. The costs of debit card payments in proportion to the turnover achieved are considerably lower than the costs of, for example, cash payments in proportion to the turnover achieved. That is because of the fact that on average much higher sums are paid with a debit card and there are (almost) no turnover-related costs for debit card payments.

Table 21 Relative cost pressure per payment method in percentage of the turnover (incl. VAT) divided into sectors and payment methods

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Hotels and catering</i>	<i>Filling stations</i>	<i>Total</i>
Cash	1.54%	3.16%	2.64%	0.97%	1.73%
Debit card	0.63%	1.37%	0.74%	0.46%	0.62%
Chipknip (smart card)	7.35%	6.74%	6.78%	2.67%	7.23%
Credit card	3.75%	5.10%	2.94%	1.80%	3.04%
Fuel passes	-	-	-	0.80%	0.80%
Total	1.05%	2.87%	2.00%	0.77%	1.17%

Source: EIM, 2011.

**About one in three entrepreneurs want more debit card payments**

Finally the entrepreneurs' satisfaction with the current construction of their own payment transactions will be discussed. It emerges from table 22 that about one in three entrepreneurs of point-of-sale establishments are not satisfied with the present structure. The degree of satisfaction is relatively low at filling stations and in the hotel and catering industry as opposed to street trading, where relatively many entrepreneurs are satisfied with the current construction. Those that were not satisfied were asked what else they would like to see in respect to the structure of payment transactions in their enterprise. The largest group by far indicated that they would like a shift to more debit card payments because they are cheaper and safer. The category 'other' mainly includes entrepreneurs who indicate that fewer payments should be made with credit cards. The reason given was the high costs of credit card payments.

Table 22 Satisfaction with the construction of own payment transactions in small and medium-sized point-of-sale establishments per sector

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Hotels and catering</i>	<i>Filling stations</i>	<i>Total</i>
Satisfied	65%	79%	60%	51%	65%
Not satisfied	35%	21%	40%	49%	35%
Opinion of those who are not satisfied					
Required: more debit card payments	94%	77%	79%	71%	85%
Required: more cash payments	1%	15%	12%	8%	5%
Required: other	5%	8%	9%	21%	10%

Source: EIM, 2011.

#### 4.5 Payment transaction profits

Along with the costs of payment transactions at point-of-sale establishments, there are profits for the entrepreneurs.

In the framework of this survey profits for point-of-sale establishments from point-of-sale transactions are understood to mean: the explicit costs of the point-of-sale transactions charged to their customers by point-of-sale establishments. In practice this mainly relates to the costs charged by the point-of-sale establishments for debit card payments less than a certain amount and for credit card payments. A clear reduction of these surcharges can be seen in the market, partly due to the "Klein bedrag? Pinnen mag!" (Small amount? Pay with debit card!) campaign.

##### 4.5.1 Profits from debit card payments

Based on the telephone questionnaire among SME entrepreneurs, the behaviour of the SME entrepreneurs has been mapped out in regard to charging an extra surcharge for debit card payment less than a certain amount (see table 23). It emerges that 4 percent of the SME entrepreneurs who accept payment by debit card indicate that they calculate a surcharge on the amount owed for small transaction sums. The surcharge is applied the most in the hotel and catering industry and at filling stations. Most entrepreneurs who employ a surcharge do this for payments of less than € 10. Some entrepreneurs employ a lower (€ 5) or higher limit (€ 15 or € 20). Consumers have to pay an extra 25 cents in most cases. A small group of entrepreneurs employs a slightly lower tariff (10, 15 or 20 cents) and some entrepreneurs require a surcharge higher than the € 0.25 (usually € 50).

Table 23 Behaviour of entrepreneurs in regard to debit card payments less than a certain amount

	<i>Proportion of accepting entrepreneurs that require a surcharge</i>	<i>Under which amount (average)</i>	<i>Required average surcharge per transaction</i>	<i>Estimated profit (x 1 million)</i>
Established retail trade	3%	€ 8.54	€ 0.20	€ 1.62
Street trading	4%	€ 5.00	€ 0.25	€ 0.02
Hotels and catering	7%	€ 8.44	€ 0.26	€ 0.36
Filling stations	11%	€ 8.91	€ 0.25	€ 0.52
Total point-of-sale establishments	4%	€ 8.55	€ 0.21	€ 2.51

Source: EIM, 2011.

**Maximum profits from debit card payments estimated at € 2.5 million**

The proportion of payments under the payment limit is estimated on the basis of data retrieved from Currence. The profits from the debit card payments are determined in the various sectors with this data. The total profits for the point-of-sale establishments are estimated at €2.5 million.

It should be mentioned that this relates to the maximum profits. Often an entrepreneur has a sign next to the cash register but does not charge the customer. The entrepreneurs probably use the signs to encourage customers with really small payments towards paying with cash.

#### 4.5.2 Profits from debit card payments

Profits are also generated by entrepreneurs who accept credit card payments. In fact some of them charge a surcharge for payments with credit cards. In most cases this is a fixed percentage. Table 24 shows the proportion of credit card-accepting entrepreneurs who charge a surcharge. This is about 6 percent of entrepreneurs where payment can be made with a credit card in the point-of-sale establishments. Sector-wise this percentage is relatively high in street trading. A surcharge is calculated at filling stations proportionately the most infrequently.

**Maximum profits from credit card payments estimated at € 5 million**

The total profit from credit card payments is estimated at about € 5 million (this is about 0.1 percent of the total transaction value of credit card payments). Just as in the estimation of the profits from debit card payments, the maximum profits are concerned here because some entrepreneurs say they employ a surcharge but do not always act accordingly in practice.

Table 24 Behaviour of entrepreneurs in regard to credit card payments

	<i>Proportion of accepting entrepreneurs that request a contribution</i>	<i>Estimated profit (x 1 million)</i>
Established retail trade	6%	€ 2.56
Street trading	16%	€ 0.05
Hotels and catering	7%	€ 1.79
Filling stations	4%	€ 0.75
Total point-of-sale establishments	6%	€ 5.15

Source: EIM, 2011.

#### 4.6 2006-2009 comparison for all point-of-sale establishments

The analysis of the payment costs for the year 2009 was done on the same basis as the analysis for 2006. This makes a comparison of the costs for the year 2009 with 2006 per sector and per payment method possible. The difference between the analyses for 2009 and 2006 is that the payment costs for street trading and the filling stations was measured in 2009 by means of a telephone questionnaire among entrepreneurs, while in 2006, a technical update based on data from 2004 was provided. In the tables below the development of the payment costs between 2006 and 2009 are shown for some main points in all sectors together and separately for the retail trade and hotel and catering industry<sup>1</sup>.

##### 4.6.1 Development of the incoming payment transactions

Table 25 Incoming payment transactions per sector (millions of transactions)

<i>All point-of-sale establishments</i>	<i>2009</i>	<i>2006*</i>	<i>Mutation (%)</i>
Established retail trade	3,880	4,071	-5%
Hotels and catering	829	1,012	-18%
Total number of payments (inclusive other payment methods)	5,492	5,708	-4%

\* It must be mentioned that the fuel pass was not used as a separate payment method in the analysis for 2006 but was included in the other payment methods group. Research in 2009 showed that these other payment methods equate for the main part with payments using the fuel pass. It was assumed that this was actually the case for 2006 in the comparison between 2006 and 2009.

Source: EIM, 2011.

<sup>1</sup> A comparison of the cost developments between 2009 and 2006 is not included for the street trading and filling station sectors in view of the differences in measuring methods over the years for these sectors. As far as announcements are made for all sectors together, this one should be taken more lightly than for the separate retail trade and hotel and catering industry sectors.



Table 26 Construction of payment transactions per payment method (in millions of transactions and in %)

Type of payment method	construction 2009		construction 2006	
	(x 1 million)	in %	(x 1 million)	in %
Cash	3,680	70	4,104	76
Debit card	1,486	28	1,221	22
Chipknip (smart card)	11	0	20	0
Credit card	58	1	38	1
Fuel passes <sup>21</sup>	84	2	46	1
Total payments (exclusive other payment methods)	5,236	100	5,429	100

Source: EIM, 2011.

*Information about development of payment per method*

**Clear drop in cash payments versus strong rise in debit card payments**

- Number and division of payments  
Table 25 shows that the total number of payments has dropped by about 4 percent. Table 26 shows the developments per payment method. In particular there has been a reduction in the number of cash payments (by 10 percent) and a rise in the number of debit card payments (by 22 percent). The drop in cash payments is mainly due to switching from cash to debit card payment, to reducing the sales volumes in the retail trade and the hotel and catering industry and the on average higher value of cash payments (mainly because more and more small amounts may be paid by debit card). The use of fuel passes has also increased. This appears to be particularly the consequence of increased spending at filling stations and the increase in the use of the fuel pass to pay for filling up.

*Information about development of payments per sector*

**Slight volume decrease in transactions in retail trade**

- Retail trade  
Table 25 shows a drop in the number of transactions in the retail trade (by 5percent). Causes of this development:
  - the drop in the volume of spending in the retail trade (-/- 1.5 percent). The consumer is buying fewer products; in particular because of the increase in the cost of living (an average of more than 5 percent), the consumer is compelled to buy fewer products.
  - In addition the consumer pays for slightly more products each time, which can be deduced from the average value of each transaction. This increase amounts to almost 9 percent and is clearly higher than the price increase for all consumer goods and services in the same period (almost 5 percent).

**Clear volume decrease in transactions in hotel and catering industry**

- Hotel and catering industry  
Table 25 further shows that there is an obvious drop in the number of transactions in the hotel and catering industry (by 18 percent).

- The most important reason is that the consumer is clearly spending less in the hotel and catering industry - partly due to the economic crisis. In comparison with 2006 the volume of spending in the hotel and catering industry was around 11% less than the level in 2009 (calculated after the depreciation of spending in the hotel and catering industry was corrected for price increases in the hotel and catering services for the period 2006-2009).
- The information also shows that the average amount per payment has increased by 21 percent, which is clearly more than the price increases in the hotel and catering services between 2006 and 2009 (+ 12 percent). This could indicate that consumers have made fewer small purchases from the hotel and catering industry.

#### 4.6.2 *The development of the payment costs: the parameters*

Various factors are important in the development of the payment costs:

- the number of transactions  
When the costs per transaction remain the same, the total payment costs increase/decrease to the same degree as the number of payment changes.
- the efficiency in processing the payments  
As certain processes become faster or slower, there will be an increase or decrease in the costs per transaction and consequently of the constant transaction volumes.
- the employment costs against which the activities of the entrepreneur and his personnel will be calculated.  
This is of special importance to the development of the back office and front office costs. If the time taken for these activities per transaction remains the same, the costs will increase as a result of the increase in the entrepreneur and his personnel's labour costs per hour.
- the tariffs charged to the entrepreneur  
An increase or decrease in the payment costs is also the result of changes in tariffs charged by third parties for services (telephone companies, banks).

The most important expense items which changed between 2006 and 2009 are included in table 27.

Table 27 Indications of the most important tariff and quantity changes for 2009 in respect to 2006 per cost component

<i>Description</i>	<i>Indicative changes</i>
Total number of payment transactions	-/- 4%
Total value of the payment transactions	+ 5%
Hourly rate for entrepreneur/employer	+ 7%
Interest percentage for calculating loss of interest	from 0.6 to 0.5 percent
Tariffs for depositing cash	+ 25 percent per deposit
Tariffs for small change	+ 10 percent per roll
Bank costs for debit card payment per transaction	-/- 10%
Data communication tariffs fixed (ADSL subscription)	+ 40%
Data communication tariffs variable (analogue connection)	+ 6%
Commission for credit card per € profit	as good as unchanged
Price of payment equipment after discount	-/- 7%
Front office time per transaction average	- 10%
Hours spent in back office (cash)	- 13%
Hours spent in back office (debit card)	+ 15%

Source: EIM, 2011.

In table 27 the chief points which emerge are:

- reduction in number of payment transactions;
- efficiency improvements in regard to the necessary front and back office times, particularly for debit cards;
- drop in the costs of payment terminals;
- increase in hourly rate for appreciation of the front and back office times in €;
- increase of the various tariffs employed by banks for calculating the handling of cash payments.
- decrease in the tariffs employed by banks for handling card payments;
- a decrease in the costs of payment equipment.

#### *The development of the costs per sector*

Table 28 shows the development of the payment costs per sector and table 29 per payment method.

Table 28 Payment costs in 2006-2009 per sector

<i>Sector</i>	<i>2009 (x 1 million)</i>	<i>2006 (x 1 million)</i>	<i>Mutation (%)</i>
Retail trade	€ 809	€ 788	3
Hotels and catering	€ 271	€ 317	-14
Total of both sectors	€ 1,080	€ 1,105	-2
All sectors	€ 1,242	€ 1,282	-3

Source: EIM, 2011.

**Total payment costs decreased slightly between 2006 and 2009**

*Explanation*

In general there is a decrease in the payment costs (total) of 3 percent. The decrease differs per sector. The sharp decrease in street trading and the hotel and catering industry is the direct result of the number of transactions in both sectors. The increase of the payment costs at the filling stations can for the main part be explained by the sharp increase in the number of transactions. The slight increase in the payment costs in the retail trade can for a large part be explained by the fact that the drop in the number of cash transactions goes hand in hand with a drop in the variable costs involved, but not with the drop in the fixed costs involved.

*The development of the costs per payment method*

Table 29 Payment costs in 2006-2009 per sector

<i>Type of payment methods</i>	<i>2009 (x 1 million)</i>	<i>2006 (x 1 million)</i>	<i>Mutation (%)</i>
Cash	€ 792	€ 1,010	-22
Debit card	€ 308	€ 257	20
Credit card	€ 109	€ 120	-9
Total for these types	€ 1,209	€ 1,387	-13

Source: EIM, 2011.

**The much smaller increase in the costs of debit card payments opposed to the sharp drop in the costs of cash**

*Explanation*

Looking at the type of payment it is only possible to compare the costs for cash, debit card and credit card<sup>1</sup>, because the survey in 2006 offers no opportunities for comparing the payment costs with fuel passes in these years:

- Cash payments  
The development in the costs of cash payments are largely explained by the drop in the number of cash transaction and, additionally, in the quicker settlement of cash transactions at the cash register and the administrative/logistic processing of the transactions.
- Debit card payments  
The development in the costs of debit card payments are largely explained by the rise in the number of debit card transactions. The fact that this rise is relatively less than the increase in the number of transactions is partly explained by the fixed costs either growing less strongly or not at all and partly by the improvement in the handling of debit card transactions at the cash register (the front office time needed for settling debit card transactions in 2009 is slightly less than the level in 2006).

<sup>1</sup> The small number of payments using Chipknip (smart card) in the observation makes it impossible to implement a comparison of the total costs for the smart card between 2006 and 2009

- Credit card  
The costs of the credit card have dropped mainly because the average spending sum of the credit card has dropped resulting in fewer costs being made per credit card payment. These costs are after all dependent for the largest part on the percentage of the transaction sum used for calculating the costs of using the credit card.

*The development of the costs per transaction*

Finally table 30 shows the development of the costs of debit card payments and cash payments per transaction in the retail trade and the hotel and catering industry.

Table 30 The development of the costs per transaction 2006-2009

	<i>Cash 2009</i>	<i>Cash 2006</i>	<i>Debit card 2009</i>	<i>Debit card 2006</i>
Retail trade	€ 0.20	€ 0.18	€ 0.20	€ 0.20
Hotels and catering	€ 0.30	€ 0.29	€ 0.33	€ 0.34

Source: EIM, 2011.

*Explanation*

- The numbers make it clear that the costs per transaction for cash payments have risen and has dropped for debit cards.
- The rise in the costs of cash payments is mainly due to the drop in the number of cash payments so that the fixed costs put more pressure on the rest of the payments.
- The costs of debit card payments on the other hand are decreasing because the fixed costs now put pressure on a larger number of payments. Moreover there is talk of some compensation for this decrease by means of an increase in the many tariffs with which these activities are calculated.
- In general the costs per transaction in 2009 are almost the same as in 2006. The increase amounts to less than 1 percent. This increased percentage is importantly lower than the increase in the prices of consumer goods during the same period (with almost 5 percent).

## Development of the cost pressure

Table 31 Relative cost pressure: costs in percentages of the profit (incl. VAT) per payment method and sector development 2006-2009

	<i>Established retail trade</i>		<i>Hotels and catering</i>	
	<i>2009</i>	<i>2006</i>	<i>2009</i>	<i>2006</i>
Cash	1.5%	1.9%	2.6%	3.1%
Debit card	0.6%	0.5%	0.7%	0.6%
Chipknip (smart card)	7.4%	2.2%	6.8%	5.8%
Credit card	3.8%	3.4%	2.9%	2.9%

Source: EIM, 2011.

### The relative cost pressure of all payment methods together has dropped

In total the relative cost pressure of all four payment methods together in the retail trade and the hotel and catering industry (added together) decreased from 1.3 percent in 2006 to 1.2 percent in 2009. The development of the relative cost pressure shows that the costs of paying with debit cards now weigh heavier in the total profit than when payment is made using a debit card. This is especially because many more small amounts are paid for with debit cards now than previously resulting in the transaction-related variable costs pressing more heavily. This increase has been improved by the drop in the relative cost pressure of cash payments as a result of the changes in payment conduct, moreover the quicker settlement of cash payments has naturally lead to less payment costs for cash and therefore to a lower cost pressure for cash payments.

## 4.7 Opportunities for making savings

The payment costs have been shown above and explanations have been given for the difference in the level of the costs between the sectors and the payment methods. The views provide a starting point for making future savings in the payment costs possible.

- The payment costs are determined to an important degree by the back and front office costs. This means that the most important savings will have to be found by increasing the efficiency of the internal processing of the transactions and the handling of payments at the till. This applies particularly to street trading and the hotel and catering industry where the handling of transactions is relatively less efficient.
- Further reductions in the number of cash payments and the accompanying increase in debit card payments is an option for making further savings to the payment costs where the proportion of cash payments is still considerable. The obviously lower marginal costs for debit card payments shows that there is a profit for the entrepreneur with this.
- In addition savings are possible with a continuing changeover from analogue communication links to payments using broadband connections.
- A cleverer system of fixing tariffs (an advantage when the number of debit card transactions and package offers offered by the banks increases in 2011) will have a favourable effect on the payment transaction costs- as long as entrepreneurs make sufficient use of it and the number of debit card transactions continues to increase.

## 5 Factsheets

### 5.1 Introduction

Fact sheets which include the most important results of the payment costs analysis for all point-of-sale establishments, for each sector and for the most important payment methods are presented in this chapter. In addition a fact sheet itemising the costs per transaction per payment method has been included. A total of 11 fact sheets have been included. The information in the fact sheets is presented without further comment.

You are referred to the previous chapters in this report and the appendices for an explanation of how the costs were calculated and measured.

### 5.2 The 11 fact sheets

The following fact sheets have been included:

- 1 Payment costs 2009 for all point-of-sale establishments
- 2 Payment costs 2009 for the whole retail trade, with comparison to 2006
- 3 Payment costs for street trading
- 4 Payment costs for the whole hotel and catering industry, with comparison to 2006
- 5 Payment costs for filling stations with shop
- 6 Payment costs for cash payments
- 7 Payment costs for debit card payments
- 8 Payment costs for smart card payments
- 9 Payment costs for credit card payments
- 10 Payment costs for fuel pass payments
- 11 Breakdown of costs per transaction per payment method

#### *Marginal costs*

The marginal costs for each sector are included in the tables per payment method. It must be mentioned that the level of these marginal payments has been calculated for a payment equal to the average payment in the sector irrespective of the payment method. When the level of the costs per transaction, especially for cash, credit cards and for fuel passes, depends strongly on the value of the individual transaction (the costs are profit-related variable'), it can lead to the average costs of a transaction (for instance for cash payments) being lower than the marginal cost. This is because the transaction value of the sum over which the average costs were calculated is much lower than the sum over which the marginal costs were calculated (see also the calculation of the marginal costs in paragraph 4.4)

## Factsheet 1 Total for point-of-sale establishments

### Summary of incoming payment transactions

		<b>2009</b>
<b>Number of transactions per payment method</b>	<b>x 1 million</b>	<b>%</b>
Cash	3.707	67%
Debit card	1.486	27%
Chipknip (smart card)	22	0%
Credit card	73	1%
Fuel pass	84	2%
Other	172	3%
<b>Total</b>	<b>5.544</b>	<b>100%</b>
<b>Value of transactions per payment method</b>	<b>€ x 1 million</b>	<b>%</b>
Cash	€ 45.773	43%
Debit card	€ 48.893	46%
Chipknip (smart card)	€ 506	0%
Credit card	€ 3.587	3%
Fuel pass	€ 2.523	2%
Other	€ 4.879	5%
<b>Total</b>	<b>€ 106.161</b>	<b>100%</b>

### Total costs of payment transaction

		<b>2009</b>
		<b>%</b>
		<b>€ x 1 million</b>
<b>Total payment costs</b>	€ 1.244	100%
- of which fixed costs	€ 226	18%
- of which variable profit-related	€ 457	37%
- of which variable transaction-related	€ 561	45%
- of which internal costs	€ 859	69%
- of which external costs	€ 385	31%
		<b>%</b>
		<b>€ x 1 million</b>
<b>Total internal costs</b>	€ 859	100%
- of which front office costs	€ 368	43%
- of which back office costs	€ 283	33%
- of which own money transport	€ 95	11%
- of which other	€ 113	13%
		<b>%</b>
		<b>€ x 1 million</b>
<b>Total external costs</b>	€ 385	100%
- of which banking costs	€ 197	51%
- of which professional money transport	€ 52	13%
- of which other	€ 137	36%

### Total and marginal costs per transaction

		<b>2009</b>	
<b>In payment methods</b>		<b>total</b>	<b>marginal*</b>
Cash	€	0,22	€ 0,23
Debit card	€	0,21	€ 0,16
Chipknip (smart card)	€	0,23	€ 0,15
Credit card	€	1,53	€ 0,75
Fuel pass	€	0,16	€ 0,15
Total (incl. other payment methods)	€	0,22	

\* Be aware: this relates to the marginal costs of an average transaction of € 19,15



**Fact sheet 2 Total for established Retail Trade 2009 and 2006**

**Summary of incoming payment transactions**

<b>Number of transactions per payment method</b>	<b>2009</b>		<b>2006</b>	
	<b>x 1 million</b>	<b>%</b>	<b>x 1 million</b>	<b>%</b>
Cash	2.512	64%	2.952	72%
Debit card	1.241	32%	1.066	26%
Chipknip (smart card)	18	0%	16	0%
Credit card	26	1%	21	1%
Other	117	3%	45	1%
<b>Total</b>	<b>3.913</b>	<b>100%</b>	<b>4.100</b>	<b>100%</b>

<b>Value of transactions per payment method</b>	<b>2009</b>		<b>2006</b>	
	<b>€ x 1 million</b>	<b>%</b>	<b>€ x 1 million</b>	<b>%</b>
Cash	€ 31.540	41%	€ 28.424	38%
Debit card	€ 39.897	52%	€ 41.888	56%
Chipknip (smart card)	€ 447	1%	€ 150	0%
Credit card	€ 1.609	2%	€ 1.496	2%
Other	€ 3.336	4%	€ 2.842	4%
<b>Total</b>	<b>€ 76.830</b>	<b>100%</b>	<b>€ 74.800</b>	<b>100%</b>

**Total costs of payment transaction**

	<b>2009</b>		<b>2006</b>	
	<b>€ x 1 million</b>	<b>%</b>	<b>€ x 1 million</b>	<b>%</b>
<b>Total payment costs</b>	€ 814	100%	€ 788	100%
- of which fixed costs	€ 139	17%	€ 150	19%
- of which variable profit-related	€ 281	35%	€ 307	39%
- of which variable transaction-related	€ 394	48%	€ 331	42%
- of which internal costs	€ 549	67%	€ 568	72%
- of which external costs	€ 266	33%	€ 220	28%
<b>Total internal costs</b>	€ 549	100%	€ 568	100%
- of which front office costs	€ 257	47%	€ 272	48%
- of which back office costs	€ 166	30%	€ 174	31%
- of which own money transport	€ 48	9%	€ 65	11%
- of which other	€ 78	14%	€ 57	10%
<b>Total external costs</b>	€ 266	100%	€ 220	100%
- of which banking costs	€ 139	52%	€ 103	47%
- of which professional money transport	€ 40	15%	€ 117	53%
- of which other	€ 86	33%		

**Total and marginal costs per transaction**

<b>In payment methods</b>	<b>2009</b>		<b>2006</b>	
	<b>total</b>	<b>marginal*</b>	<b>total</b>	<b>marginal**</b>
Cash	€ 0,20	€ 0,21	€ 0,18	€ 0,21
Debit card	€ 0,20	€ 0,16	€ 0,20	€ 0,16
Chipknip (smart card)	€ 0,22	€ 0,15	€ 0,14	-
Credit card	€ 2,36	€ 0,99	€ 2,70	-
<b>Total (cash, debit card, smart card and credit card)</b>	<b>€ 0,21</b>			

\* Be aware: this relates to the marginal costs of an average transaction of € 19,63

\*\* Be aware: this relates to the marginal costs of an average transaction of € 18,40

**Total costs per payment method**

<b>In payment methods</b>	<b>2009</b>		<b>2006</b>	
	<b>€ x 1 million</b>		<b>€ x 1 million</b>	
Cash	€ 492		€ 525	
Debit card	€ 254		€ 206	
Chipknip (smart card)	€ 4		€ 3	
Credit card	€ 60		€ 53	
<b>Total (cash, debit card, smart card and credit card)</b>	<b>€ 809</b>		<b>€ 787</b>	

### Fact sheet 3 Total for Street Trading 2009

#### Summary of incoming payment transactions

		<b>2009</b>	
<b>Number of transactions per payment method</b>	<b>x 1 million</b>		<b>%</b>
Cash	176		92%
Debit card	9		5%
Chipknip (smart card)	0,1		0%
Credit card	0,4		0%
Other	5		3%
<b>Total</b>	<b>190</b>		<b>100%</b>
<b>Value of transactions per payment method</b>	<b>€ x 1 million</b>		<b>%</b>
Cash	€ 1.612		83%
Debit card	€ 266		14%
Chipknip (smart card)	€ 1		0%
Credit card	€ 10		1%
Other	€ 58		3%
<b>Total</b>	<b>€ 1.947</b>		<b>100%</b>

#### Total costs of payment transaction

		<b>2009</b>	
	<b>€ x 1 million</b>		<b>%</b>
<b>Total payment costs</b>	€ 56		100%
- of which fixed costs	€ 16		28%
- of which variable profit-related	€ 22		38%
- of which variable transaction-related	€ 19		33%
- of which internal costs	€ 45		81%
- of which external costs	€ 11		19%
	<b>€ x 1 million</b>		<b>%</b>
<b>Total internal costs</b>	€ 45		100%
- of which front office costs	€ 14		30%
- of which back office costs	€ 12		27%
- of which own money transport	€ 13		28%
- of which other	€ 7		15%
	<b>€ x 1 million</b>		<b>%</b>
<b>Total external costs</b>	€ 11		100%
- of which banking costs	€ 9		83%
- of which professional money transport	€ 0,5		4%
- of which other	€ 1		12%

#### Total and marginal costs per transaction

		<b>2009</b>	
<b>In payment methods</b>		<b>total</b>	<b>marginal*</b>
Cash	€	0,29	€ 0,22
Debit card	€	0,42	€ 0,26
Chipknip (smart card)	€	0,46	€ 0,25
Credit card	€	1,14	€ 0,59
<b>Total (incl. other payment methods)</b>	<b>€</b>	<b>0,29</b>	

\* Be aware: this relates to the marginal costs of an average transaction of € 10,23

**Fact sheet 4 Total for Hotel and Catering Industry 2009 and 2006**

**Summary of incoming payment transactions**

<b>Number of transactions per payment method</b>	<b>x 1 million</b>	<b>2009</b>		<b>2006</b>	
		<b>%</b>	<b>x 1 million</b>	<b>%</b>	<b>x 1 million</b>
Cash	700	84%	900	90%	
Debit card	77	9%	40	4%	
Chipknip (smart card)	4	0%	0	0%	
Credit card	19	2%	10	1%	
Other	37	4%	50	5%	
<b>Total</b>	<b>837</b>	<b>100%</b>	<b>1.000</b>	<b>100%</b>	

<b>Value of transactions per payment method</b>	<b>€ x 1 million</b>		<b>€ x 1 million</b>	
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
Cash	€ 7.893	58%	€ 8.568	63%
Debit card	€ 3.360	25%	€ 2.448	18%
Chipknip (smart card)	€ 47	0%	€ -	0%
Credit card	€ 1.130	8%	€ 1.360	10%
Other	€ 1.118	8%	€ 1.224	9%
<b>Total</b>	<b>€ 13.547</b>	<b>100%</b>	<b>€ 13.600</b>	<b>100%</b>

**Total costs of payment transaction**

	<b>€ x 1 million</b>		<b>€ x 1 million</b>	
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
<b>Total payment costs</b>	€ 274	100%	€ 317,00	100%
- of which fixed costs	€ 63	23%	€ 72,91	23%
- of which variable profit-related	€ 123	45%	€ 148,99	47%
- of which variable transaction-related	€ 88	32%	€ 95,10	30%
- of which internal costs	€ 200	73%	€ 248,00	78%
- of which external costs	€ 73	27%	€ 69,00	22%
<b>Total internal costs</b>	€ 200	100%	€ 248,00	100%
- of which front office costs	€ 52	26%	€ 64,00	26%
- of which back office costs	€ 93	46%	€ 133,00	54%
- of which own money transport	€ 33	16%	€ 38,00	15%
- of which other	€ 22	11%	€ 13,00	5%
<b>Total external costs</b>	€ 73	100%	€ 69,00	100%
- of which banking costs	€ 34	47%	€ 24,00	35%
- of which professional money transport	€ 6	8%	€ 45,00	65%
- of which other	€ 33	45%		

**Total and marginal costs per transaction**

<b>In payment methods</b>	<b>2009</b>		<b>2006</b>	
	<b>total</b>	<b>marginal*</b>	<b>total</b>	<b>marginal**</b>
Cash	€ 0,30	€ 0,28	€ 0,29	€ 0,27
Debit card	€ 0,32	€ 0,22	€ 0,34	€ 0,20
Chipknip (smart card)	€ 0,26	€ 0,15	€ 0,28	-
Credit card	€ 1,79	€ 0,72	€ 3,72	-
Total (incl. other payment methods)	€ 0,33			

\* Be aware: this relates to the marginal costs of an average transaction of € 16,19

\*\* Be aware: this relates to the marginal costs of an average transaction of € 13,50

**Total costs per payment method**

<b>In payment methods</b>	<b>2009</b>		<b>2006</b>	
	<b>€ x 1 million</b>	<b>€ x 1 million</b>	<b>€ x 1 million</b>	<b>€ x 1 million</b>
Cash	€ 209		€ 261	
Debit card	€ 25		€ 14	
Chipknip (smart card)	€ 1		€ -	
Credit card	€ 35		€ 37	
<b>Total (cash, debit card, smart card and credit card)</b>	<b>€ 270</b>		<b>€ 312</b>	

**Fact sheet 5 Total for Filling Stations 2009**

**Summary of incoming payment transactions**

		<b>2009</b>
<b>Number of transactions per payment method</b>	<b>x 1 million</b>	<b>%</b>
Cash	319	53%
Debit card	160	26%
Chipknip (smart card)	0,3	0%
Credit card	28	5%
Fuel pass	84	14%
Other	13	2%
<b>Total</b>	<b>603</b>	<b>100%</b>
<b>Value of transactions per payment method</b>	<b>€ x 1 million</b>	<b>%</b>
Cash	€ 4.728	34%
Debit card	€ 5.370	39%
Chipknip (smart card)	€ 11	0%
Credit card	€ 838	6%
Fuel pass	€ 2.523	18%
Other	€ 367	3%
<b>Total</b>	<b>€ 13.836</b>	<b>100%</b>

**Total costs of payment transaction**

		<b>2009</b>
	<b>€ x 1 million</b>	<b>%</b>
<b>Total payment costs</b>	€ 100	100%
- of which fixed costs	€ 8	8%
- of which variable profit-related	€ 32	31%
- of which variable transaction-related	€ 61	61%
- of which internal costs	€ 64	64%
- of which external costs	€ 36	36%
	<b>€ x 1 million</b>	<b>%</b>
<b>Total internal costs</b>	€ 64	100%
- of which front office costs	€ 45	69%
- of which back office costs	€ 12	19%
- of which own money transport	€ 2	3%
- of which other	€ 6	9%
	<b>€ x 1 million</b>	<b>%</b>
<b>Total external costs</b>	€ 36	100%
- of which banking costs	€ 14	40%
- of which professional money transport	€ 5	13%
- of which other	€ 17	46%

**Total and marginal costs per transaction**

		<b>2009</b>
<b>In payment method</b>		<b>total marginal*</b>
Cash	€ 0,14	€ 0,16
Debit card	€ 0,15	€ 0,14
Chipknip (smart card)	€ 0,15	€ 0,14
Credit card	€ 0,59	€ 0,48
Fuel pass	€ 0,16	€ 0,15
<b>Total (incl. other payment methods)</b>	<b>€ 0,17</b>	

\* Be aware: this relates to the marginal costs of an average transaction of € 22,93

## Fact sheet 6 Cash 2009

### Summary of incoming payment transactions

		<b>2009</b>	
<b>Number of transactions per sector</b>	<b>x 1 million</b>	<b>%</b>	
Retail trade	2.512	68%	
Street trading	176	5%	
Hotels and catering	700	19%	
Filling stations	319	9%	
Total	3.707	100%	
<b>Value of transactions per sector</b>	<b>€ x 1 million</b>	<b>%</b>	
Retail trade	€ 31.540	69%	
Street trading	€ 1.612	4%	
Hotels and catering	€ 7.893	17%	
Filling stations	€ 4.728	10%	
Total	€ 45.773	100%	

### Total costs of cash payments

		<b>2009</b>	
		<b>€ x 1 million</b>	<b>%</b>
<b>Total payment costs</b>	€	798	100%
- of which fixed costs	€	159	20%
- of which variable profit-related	€	369	46%
- of which variable transaction-related	€	270	34%
- of which internal costs	€	646	81%
- of which external costs	€	152	19%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total internal costs</b>	€	646	100%
- of which front office costs	€	231	36%
- of which back office costs	€	252	39%
- of which own money transport	€	95	15%
- of which other	€	68	10%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total external costs</b>	€	152	100%
- of which banking costs	€	101	66%
- of which professional money transport	€	52	34%
- of which other	€	-	0%
		<b>€ x 1 million</b>	<b>%</b>
<b>Per sector</b>			
Retail trade	€	492	62%
Street trading	€	51	6%
Hotels and catering	€	209	26%
Filling stations	€	46	6%
Total	€	798	100%

### Total costs of cash transactions

		<b>2009</b>	
<b>Per sector</b>		<b>costs in €</b>	
Retail trade	€	0,20	
Street trading	€	0,29	
Hotels and catering	€	0,30	
Filling stations	€	0,14	
Total	€	0,22	

## Fact sheet 7 Debit card payments 2009

### Summary of incoming payment transactions

		<b>2009</b>	
<b>Number of transactions per sector</b>	<b>x 1 million</b>	<b>%</b>	
Retail trade	1.241	84%	
Street trading	9	1%	
Hotels and catering	77	5%	
Filling stations	160	11%	
Total	1.486	100%	
<b>Value of transactions per sector</b>	<b>€ x 1 million</b>	<b>%</b>	
Retail trade	€ 39.897	82%	
Street trading	€ 266	1%	
Hotels and catering	€ 3.360	7%	
Filling stations	€ 5.370	11%	
Total	€ 48.893	100%	

### Total costs of debit card payments

		<b>2009</b>	
		<b>€ x 1 million</b>	<b>%</b>
<b>Total payment costs</b>	€	306	100%
- of which fixed costs	€	61	20%
- of which variable profit-related	€	-	0%
- of which variable transaction-related	€	244	80%
- of which internal costs	€	181	59%
- of which external costs	€	125	41%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total internal costs</b>	€	181	100%
- of which front office costs	€	117	65%
- of which back office costs	€	22	12%
- of which own money transport	€	-	0%
- of which other	€	42	23%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total external costs</b>	€	125	100%
- of which banking costs	€	80	64%
- of which professional money transport	€	-	-
- of which other	€	44	36%
		<b>€ x 1 million</b>	<b>%</b>
<b>Per sector</b>			
Retail trade	€	254	83%
Street trading	€	4	1%
Hotels and catering	€	25	8%
Filling stations	€	24	8%
Total	€	306	100%

### Total costs per debit card transaction

		<b>2009</b>	
<b>Per sector</b>		<b>costs in €</b>	
Retail trade	€	0,20	
Street trading	€	0,42	
Hotels and catering	€	0,32	
Filling stations	€	0,15	
Total	€	0,21	

## Fact sheet 8 Chipknip (Smart card) 2009

### Summary of incoming payment transactions

		<b>2009</b>	
<b>Number of transactions per sector</b>		<b>x 1 million</b>	<b>%</b>
Retail trade		17,7	81%
Street trading		0,1	0%
Hotels and catering		3,7	17%
Filling stations		0,3	1%
Total		21,7	100%
<b>Value of transactions per sector</b>		<b>€ x 1 million</b>	<b>%</b>
Retail trade	€	447	88%
Street trading	€	1	0%
Hotels and catering	€	47	9%
Filling stations	€	11	2%
Total	€	506	100%

### Total costs of Chipknip payments

		<b>2009</b>	
		<b>€ x 1 million</b>	<b>%</b>
<b>Total payment costs</b>	€	4,9	100%
- of which fixed costs	€	1,6	33%
- of which variable profit-related	€	0,1	2%
- of which variable transaction-related	€	3,2	65%
- of which internal costs	€	2,4	49%
- of which external costs	€	2,5	51%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total internal costs</b>	€	2,4	100%
- of which front office costs	€	1,3	56%
- of which back office costs	€	0,3	11%
- of which own money transport	€	-	0%
- of which other	€	0,8	33%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total external costs</b>	€	2,5	100%
- of which banking costs	€	1,8	70%
- of which professional money transport	€	-	-
- of which other	€	0,8	30%
<b>Per sector</b>		<b>€ x 1 million</b>	<b>%</b>
Retail trade	€	3,9	79%
Street trading	€	0,0	1%
Hotels and catering	€	1,0	20%
Filling stations	€	0,0	1%
Total	€	4,9	100%

### Total costs per smart card transaction

		<b>2009</b>	
<b>Per sector</b>		<b>costs in €</b>	
Retail trade	€	0,22	
Street trading	€	0,46	
Hotels and catering	€	0,26	
Filling stations	€	0,15	
Total	€	0,23	

## Fact sheet 9 Credit card 2009

### Summary of incoming payment transactions

		<b>2009</b>	
<b>Number of transactions per sector</b>	<b>x 1 million</b>	<b>%</b>	
Retail trade	26	35%	
Street trading	0	1%	
Hotels and catering	19	26%	
Filling stations	28	38%	
Total	73	100%	
<b>Value of transactions per sector</b>	<b>€ x 1 million</b>	<b>%</b>	
Retail trade	€ 1.609	45%	
Street trading	€ 10	0%	
Hotels and catering	€ 1.130	31%	
Filling stations	€ 838	23%	
Total	€ 3.587	100%	

### Total costs of Credit card payments

		<b>2009</b>	
		<b>€ x 1 million</b>	<b>%</b>
<b>Total payment costs</b>	€	112	100%
- of which fixed costs	€	3	3%
- of which variable profit-related	€	88	79%
- of which variable transaction-related	€	21	18%
- of which internal costs	€	21	19%
- of which external costs	€	91	81%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total internal costs</b>	€	21	100%
- of which front office costs	€	11	53%
- of which back office costs	€	8	38%
- of which own money transport	€	-	0%
- of which other	€	2	9%
		<b>€ x 1 million</b>	<b>%</b>
<b>Total external costs</b>	€	91	100%
- of which banking costs	€	-	0%
- of which professional money transport	€	-	
- of which other	€	91	100%
		<b>€ x 1 million</b>	<b>%</b>
<b>Per sector</b>			
Retail trade	€	60	54%
Street trading	€	1	0%
Hotels and catering	€	35	31%
Filling stations	€	16	15%
Total	€	112	100%

### Total costs per Credit card transaction

		<b>2009</b>	
<b>Per sector</b>	<b>costs in €</b>		
Retail trade	€	2,36	
Street trading	€	1,14	
Hotels and catering	€	1,79	
Filling stations	€	0,59	
Total	€	1,53	



## Fact sheet 10 Fuel passes 2009

### Summary of incoming payment transactions

		<b>2009</b>
<b>Number of transactions per sector</b>	<b>x 1 million</b>	<b>%</b>
Retail trade		0%
Street trading		0%
Hotels and catering		0%
Filling stations	84	100%
Total	84	100%
<b>Value of transactions per sector</b>	<b>€ x 1 million</b>	<b>%</b>
Retail trade		0%
Street trading		0%
Hotels and catering		0%
Filling stations	€ 2.523	100%
Total	€ 2.523	100%

### Total payment costs with fuel passes

		<b>2009</b>
	<b>€ x 1 million</b>	<b>%</b>
<b>Total payment costs</b>	€ 13,1	100%
- of which fixed costs	€ 0,9	7%
- of which variable profit-related	€ -	0%
- of which variable transaction-related	€ 12,2	93%
- of which internal costs	€ 8,6	66%
- of which external costs	€ 4,4	34%
	<b>€ x 1 million</b>	<b>%</b>
<b>Total internal costs</b>	€ 8,6	100%
- of which front office costs	€ 7,8	90%
- of which back office costs	€ 0,3	3%
- of which own money transport	€ -	0%
- of which other	€ 0,6	7%
	<b>€ x 1 million</b>	<b>%</b>
<b>Total external costs</b>	€ 4,4	100%
- of which banking costs	€ 3,0	68%
- of which professional money transport	€ -	0%
- of which other	€ 1,4	32%
	<b>€ x 1 million</b>	<b>%</b>
<b>Per sector</b>		
Retail trade		0%
Street trading		0%
Hotels and catering		0%
Filling stations	€ 13,1	100%
Total	€ 13,1	100%

### Total costs per Fuel pass transaction

		<b>2009</b>
<b>Per sector</b>		<b>costs in €</b>
Retail trade		
Street trading		
Hotels and catering		
Filling stations	€	0,16
Total	€	0,16

**Fact sheet 11 Breakdown of costs per transaction per payment method**

	<b>Cash</b> €-cent	<b>Debit card</b> €-cent	<b>Chipknip (smart card)</b> €-cent	<b>Credit card</b> €-cent	<b>Fuel pass</b> €-cent
<b>Total costs per transaction</b>	<b>21,5</b>	<b>20,7</b>	<b>24,4</b>	<b>187,8</b>	<b>24,2</b>
money theft & counterfeit money	0,7	-	-	-	-
professional money transport	1,4	-	-	-	-
own money transport	2,6	-	-	-	-
depositing cash	2,5	-	-	-	-
small change	0,2	-	-	-	-
back office	6,8	1,5	1,3	13,8	0,3
front office	6,2	7,9	6,2	15,4	9,3
payment equipment	-	2,9	3,2	3,1	1,2
data communication	-	3,0	3,3	3,6	1,7
bank costs for debit & smart cards	-	5,4	10,4	-	0,1
value dating	0,0	-	-	-	-
surcharge fuel passes	-	-	-	-	11,6
loss of interest	0,0	-	0,0	-	-
extra equipment	1,0	-	-	-	-
credit card costs	-	-	-	151,9	-

	<b>Cash</b> %	<b>Debit card</b> %	<b>Chipknip (smart card)</b> %	<b>Credit card</b> %	<b>Fuel pass</b> %
<b>Total costs per transaction</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
money theft & counterfeit money	3%	-	-	-	-
professional money transport	7%	-	-	-	-
own money transport	12%	-	-	-	-
depositing cash	12%	-	-	-	-
small change	1%	-	-	-	-
back office	32%	7%	5%	7%	1%
front office	29%	38%	25%	8%	38%
payment equipment	-	14%	13%	2%	5%
data communication	-	15%	14%	2%	7%
bank costs for debit & smart cards	-	26%	43%	-	0%
value dating	0%	-	-	-	-
surcharge fuel passes	-	-	-	-	48%
loss of interest	0%	-	0%	-	-
extra equipment	5%	-	-	-	-
credit card costs	-	-	-	81%	-

## 6 Costs of payment in 2012

### *Starting points in analysis*

**Towards 2.1 billion debit card payments at point-of-sale establishment in 2012**

The Four-year Plan from the Stichting Bevorderen Efficiënt Betalen states that one of the objectives of the Association concerns the total number of debit card transactions in 2012, namely: 2.7 billion electronic payments. This means an increase of 39 percent in respect to 2009. Assuming that the electronic debit payments at the point-of-sale establishments in the survey field will also increase, the number of debit card transactions will amount to almost 2.1 billion at these establishments in 2012. The payment costs at a point-of-sale establishment when 2.1 billion payments are achieved in 2012 (an increase of 41 percent) are shown below. The starting points for this analysis are included in table 32.

Table 32 Starting points for analysis

<i>Component</i>	<i>Starting point</i>
Number of transactions	<ul style="list-style-type: none"> <li>- A total of 2.7 billion debit card transactions in 2012.</li> <li>- The proportion of point-of-sale establishments in debit card transactions remains the same: 2.1 billion debit card transactions at point-of-sale establishments in 2012.</li> <li>- There will be no chipknip transactions (smart card) from 2012. They will be completely replaced by debit card payments.</li> <li>- The further growth of debit card transactions in figures (other than the rise caused by dropping smart card transactions) goes hand in hand with a reduction in the number of cash transactions.</li> <li>- Other payment methods are not considered in this analysis.</li> </ul>
Payment costs	<ul style="list-style-type: none"> <li>- The tariffs are not changed any further.</li> <li>- The fixed costs per payment method do not change with the rise or fall of the number of transactions with the individual payment method (with the exception of the smart card transactions). We are therefore assuming that the rise in the number of debit card transactions (by about 41) and the corresponding fall in the number of cash transactions (by 15 percent) in the given period of 3 years does not give cause to a rise or fall in the investment in payment equipment.</li> <li>- Although the smart card transactions will equal 'zero' in 2012, there will also not be any costs that can be allocated to smart card transactions in 2012.</li> <li>- The profit from all transactions in 2012 will be the same as for 2009.</li> <li>- The greater turnover with debit card payments will be entirely at the expense of cash payments and smart card payments.</li> <li>- The average value of the new debit card payments is the same as the average value of all the transactions now. This value lies between the current average value for debit card payments and the current average value for cash payments.</li> <li>- The turnover-related variable costs change along with the turnover changes for debit card and cash payments.</li> <li>- The transaction-related variable costs change along with the number of transactions with debit card and cash payments.</li> </ul>

Source: EIM, 2011.

#### *Results of the analysis*

The results of the analysis of the level of the payment costs as 2.1 billion is reached by the point-of-sale establishments in 2012 are shown in table 33 and table 34. A total saving can be defined of € 38 million or 3.4 percent of the payment costs for cash, debit card and smart card payments made in 2009. This analysis has been made on the assumption that the level of fixed

**Savings of € 38 billion in 2012**

costs does not change except the fixed costs for smart card transactions that now equal zero)<sup>1</sup>.

**3 percent less  
payment costs in  
2012**

When account is taken of all the payment costs (for other payment methods as well), the savings amount to 3.0 percent of the total payment costs (1,242 billion in 2009).

Table 33 Payments in 2009 and 2012, quantitative results

	<i>Transactions 2009 (x 1 million)</i>	<i>Mutation 2009-2012 (%)</i>	<i>Transactions 2012 (x 1 million)</i>	<i>Construction 2012 (%)</i>
Cash	3,707	-15	3,139	58
Debit card	1,486	+41	2,100	39
Chipknip (smart card)	22	-100	0	0

Source: EIM, 2011.

Table 34 Payment costs in 2012 and savings

<i>Payment costs 2012</i>	<i>Costs (1x 1 million)</i>	<i>Proportion (%)</i>	<i>Costs per transaction</i>
Cash	€ 638	57.71	€ 0.22
Debit card	€ 427	33.51	€ 0.19
Chipknip (smart card)	€ 0	0.00	
Total (excluding other methods)	€ 1,065	100.00	€ 0.23
Costs 2009	€ 1,102		
Saving	€ 38		

Source: EIM, 2011.

<sup>1</sup> The fixed costs could also change when there is talk of large volume mutations. Therefore we have also analysed the cost changes assuming that the fixed costs for debit card transactions and cash transactions will also change in proportion to the rise resp. fall in the number of transactions made with this payment method. The saving also proves to be € 38 million.



## ANNEX I Survey methodology and justification

### DATA COLLECTION

A telephone questionnaire among entrepreneurs in the established retail trade, street trading, the hotel and catering industry and filling stations was held for the benefit of this survey. Taking into account the required reliability and accuracy, a survey of 979 entrepreneurs was decided on: 374 from the retail trade (5 clusters), 146 from street trading (2 clusters), 309 from the hotel and catering industry (4 clusters) and 150 from the filling stations (2 clusters).

The fieldwork was done in November 2010. A total of 6,450 entrepreneurs were first approached with an introductory letter about the survey, including an appendix containing the most important questions from the questionnaire.

The addresses of hotel and catering entrepreneurs were provided by the Industrial Board for Hotels and Catering.

The addresses of entrepreneurs from the retail trade (established and ambulant) and the filling stations were obtained from the MCD companies file from DataSelect. The complete discussion was carried out with 979 entrepreneurs<sup>1</sup>.

As well as this telephone questionnaire, a written questionnaire was sent out via the Raad Nederlandse Detailhandel (Dutch Retail Council) and the VNPI (Netherlands Petroleum Industry Association) among the large retail companies and the members of the VNPI. A total of 29 large retail companies completed the questionnaire and returned it<sup>2</sup>.

### Random survey plan and result

The starting point for the data collection was 75 complete discussions per cluster. A total of 13 clusters have been distinguished. Since it proved to be impossible to make a substantial number of observations in 'unmanned filling station', this cluster has not been considered in the analysis. 150 observations were made in the manned filling station cluster (instead of the target value of 75 per cluster).

Complete discussions have been carried out with a total of 979 entrepreneurs. Unfortunately not all the entrepreneurs could (or would) provide their turnover details and/or the division of the average number of transac-

<sup>1</sup> In addition written information, outside the questionnaire, has been received from two large members of the Beta. The data from these members has been processed in the analysis by the SME in the filling station sectors.

<sup>2</sup> Ultimately the full data from 29 members of the RND was used in the analysis. Together they represent about 4,400 branches and have a turnover of about €15 billion (14% of the total consumptive spending in 2006). Only a few usable details from the other members have been used in parts of this report.

tions across the various payment methods. There were also entrepreneurs who ultimately did not fit in the distinguished clusters.

After the clean-up round, 932 entrepreneurs were left who had provided both their turnover details and the division of the number of transactions in the various payment methods.

The results of the RND questionnaire were also added to the final data file for the retail trade. 29 of the completed questionnaires could eventually be added to the data file.

## Representativity and reliability

A large part of the data presented in the report is based on the outcome of the questionnaire among 979 SME entrepreneurs and on the written questionnaire among the 29 large retail companies.

The results in this report are subject to the laws of statistics because a random survey of the entrepreneurs was used (and not a questionnaire of the entire population). The concept of reliability is of great importance within this framework. Before going into this, we will spare a thought to the concept of representativity.

### *Representativity*

The quality of the analyses depends for a large part of the representativeness of the random survey. In other words: the random survey must be a good reflection of the intended target group. The choice was made to randomly select entrepreneurs in the retail trade from the DMCD telephone file (which includes all the retail traders), the hotel and catering industry addresses were randomly selected from the Industrial Board for Hotels and Catering address file and the DMCD from DataSelect 2010 was used for the street traders and the filling stations.

Representativity was also involved in the manner of posing questions.

Choosing a telephone questionnaire instead of a written or internet questionnaire generally leads to better representativity.

After all, in a written or internet questionnaire respondents have to be persuaded to participate via a letter or possibly by email. This could lead to selectivity. This is different with telephone approach. The interviewer was quite capable of finding entrepreneurs ready to participate without explicit mention of the content of the survey.

The chance of a selective response with a written or internet questionnaire is per definition higher because the response is significantly lower compared to a telephone questionnaire.

Although the exact degree of representativity cannot be indicated - there are after all no 'comparative' data - choosing a telephone questionnaire with a random selection makes this an adequate condition in our opinion.



### *Reliability and accuracy*

The statistic concept of reliability is closely linked to the term representativity. The degree of reliability is generally determined by the researcher or the customer. Usually 95% reliability is used as the departure point.

The reliability and accuracy of the answers from a random survey increases as the size of the random survey increases. Depending on the obliqueness of the response patterns, the accuracy (error margin) in a random survey of 375 entrepreneurs (at a selected reliability level of 95 percent) lies between 1 percent and 5.1 percent, between 1.1 percent and 5.7 percent in a random survey of 300 entrepreneurs and between 1.5 percent and 8.0 percent in a random survey of 150 entrepreneurs<sup>1</sup>.

### *Reliability interval*

Judgements are made about the whole population based on the findings in the random survey. The reliability interval is of importance here. This interval shows an area within which the actual value in the population lies. Usually a probability of 95 percent is used. The reliability interval says something about the accuracy of the values found in the random survey. It is dependent on the size of the random survey and the homogeneity of the responses. For example: the total number of minutes that entrepreneurs use for back office costs is calculated from the questionnaire.

This was 150 minutes in the hotel and catering industry<sup>27</sup>. The reliability interval for this outcome is 12 percent.<sup>2</sup> In other words: the value found in the hotel and catering industry is between 132 and 164 minutes with 95 percent reliability.

### *Interpretation*

It would be impossible to show the error margin in every cost analysis. This is partly due to the fact that various additional analyses have been applied to the original results of the questionnaire. To reinforce the above example: the recorded back office minutes are multiplied in the cost model by the entrepreneur's gross salary determined beforehand.

Broadly speaking it can be said that given the random survey, the error margin in the retail trade and the hotel and catering industry lies in the order of size at 5 percent and at 7 percent in street trading and for the filling stations.

<sup>1</sup> The error margin shows how a certain response pattern in the random survey at a selected level of reliability (generally 95 percent) applies to the total population. The error margin is calculated using the formula:  $\sigma \times \sqrt{p \cdot (100-p)/n}$ . Example: imagine that 60 percent of the 350 entrepreneurs in a random survey answer 'yes' to a question. We apply a level of reliability of 95 percent. In this case  $n=375$ ,  $\sigma=1.96$ ,  $p=60$  and  $q=50$  ( $100-50$ ). Filling in the formula then gives an error margin of 5.1 percent.

<sup>2</sup> This high percentage is because the variation in responses was too high.

## Structure of the questionnaires

The telephone questionnaire consisted of several blocks of coherent questions. The questionnaire started with an inventory of the various payment methods that were accepted in the enterprise in 2009.

Questions were also asked about the bank that handled the company payment transactions in 2009.

The second block concerns the weekly and annual turnover in 2009, the average number of customers per week in 2009, the average purchasing sum in 2009 and the division of paying customers per the accepted payment methods. In other words, how many percent used cash to pay and how many used a debit card. The responses to this block of questions are the input for the re-weighting (see below) and the basis for the calculation of the number of transactions in The Netherlands (see chapter 2).

The way the company handles cash money will be highlighted after this second block of questions. This includes: the number of cash registers, safes, counterfeit money detectors, frequency of depositing money, how cash is deposited, handling small change, loss of money and money insurance.

The number of fixed and mobile payment terminals, the type of connection used and whether customers are allowed to pay with a debit card or the use of a credit card were asked in respect to the management of electronic payment methods.

The questionnaire ends with an extensive inventory of the back office costs. Participants were asked how many minutes were spent per week on seven different activities. To determine the variability of this expense item, they were asked whether it was thought that the two most time-consuming back office items would change if the turnover changed.

The telephone questionnaire used is shown in appendix II.

### *Re-weighting*

The results of the telephone questionnaire and the written questionnaire among the GWB (large retail companies) have been re-weighted on the basis of the annual turnovers provided (inclusive VAT) for 2009. The turnover details from the CBS for 2009 are the benchmark here.

### Front office costs

A direct measurement of the time that was needed to implement and round off a payment took place on location in January 2011 at 20 or 21 shops in order to determine the front office costs. Staff from the Student XL agency, under the auspices of EIM, have registered how much time lays between the moment the total sum to be paid was made known and the moment the receipt, change, debit card, savings schemes and other documents were accepted (end of the cash register activity).

The results of the time measurements are shown per sector and per payment method in the table below. A total of 2,300 transactions were meas-

ured, of which 1,422 were cash payments, 780 debit card payments, 48 credit card payments and 50 payments with fuel passes.

Average payment time in seconds (median) per transaction per sector and payment method January 2011.

	<i>Established retail trade</i>	<i>Street trading</i>	<i>Hotels and catering</i>	<i>Filling stations</i>	<i>All point-of-sale establishments</i>
Cash	15	18	15	15	15.1
Debit card	19	20	17	21	19.1
Chipknip (smart card)	15	15	15	15	15.0
Credit	37.5	35	46.5	30	37.0
Fuel passes	0	0	0	22.5	22.5



## ANNEX II The questionnaire

### Introduction

This appendix includes the questionnaire used for the small and medium companies (SME) and the large companies. The versions for the filling stations are also included in the appendix because they offer the most extensive summary of the measured/requested payment options. The versions used for the retail trade, the hotel and catering industry and street trading are identical to this questionnaire with the exception of several editorial matters and the division of payment options and the investment in electronic payment equipment. The questionnaire for the large companies was only sent to the (very) large enterprises in the retail trade affiliated to the Raad Nederlandse Detailhandel (Dutch Retail Council) and to the filling stations that are members of the VNPN (Netherlands Petroleum Industry Association). The questions in the SME questionnaire were asked at the level of the individual branch approached. The questions for the large companies were set for the organisation as a whole.

### SME Questionnaire

#### **Version for filling stations<sup>1</sup>**

##### **Question 01**

How many branches or stores does your enterprise comprise?

Number:

##### **Question 02**

Is this the headquarters or a branch?

- 1 Headquarters
- 2 Branch
- 3 Other, namely
- 4 Do not know / will not say

##### **Question 03**

How many people work 15 hours or more per week at the moment at your company/branch?

Number:

<sup>1</sup> The introduction to the discussion is not included in this version of the questionnaire so that one can quickly see which matters come under discussion by means of questions. Special intro's (as used for some themes) are not included either and the hints for the poll-taker and the coding indications (for 'don't know/will not say/not applicable') have been omitted. In addition special control questions have been omitted.

**Question 04**

Is this a filling station with or without a shop?

- 1 With shop
- 2 Without shop
- 3 Do not know / will not say

**Question 05**

Is your company/branch part of a joint venture, a chain or neither?

- 1 Yes, joint venture/ purchasing consortium
- 2 Yes, chain (of shops)
- 3 No, neither
- 4 Other, namely
- 5 Do not know / will not say

**Question 06**

I will now name several payment methods. Which of them could customers use to pay you in 2009? Was that with ...

*More than one answer is possible*

- 1 Cash (Euros)
- 2 Foreign cash (Eng. pounds, dollars etc.)
- 3 Debit card
- 4 Foreign card that is suitable for debit card payment (Maestro)
- 5 Chipknip (smart card)
- 6 Credit card
- 7 On account/transfer via account
- 8 Cards from lease companies (Travelcard, Multi Tank Card)
- 9 International trucker cards (DKV, UTA)
- 10 Cards from petrol companies
- 11 Local service cards
- 12 Other payment methods, namely ...
- 13 Do not know / will not say

**Question 07** If *question 06 = 6*

Which TYPES of credit cards do you accept? Is that.....

*More than one answer is possible*

- 1 Mastercard
- 2 VISA Card
- 3 American Express (AMEX)
- 4 Diners Club Card
- 5 Other types of credit cards, namely..
- 6 Do not know / will not say

**Question 08**

Which TYPES of foreign passes do you accept as debit cards? Is that.....

*More than one answer is possible*

- 1 Maestro
- 2 V-Pay
- 3 Other types of foreign passes for debit payment, namely ...
- 4 Do not know / will not say

**Question 09**

Which bank did you (or your headquarters) use the most to handle your business payment transactions last year, in 2009? Was that the ...

- 1 ABN-AMRO
- 2 Fortis Bank
- 3 ING Bank
- 4 Royal Bank of Scotland
- 5 Rabobank
- 6 SNS Bank
- 7 Other bank, namely ...
- 8 Don't know
- 9 Will not say

**Question 10**

Could you provide an estimate of the average total weekly turnover, inclusive VAT, in 2009?

Average weekly turnover in Euros:

**Question 11**

Could you provide an estimate of the average total weekly turnover for fuel (petrol, diesel and LPG), inclusive VAT, in 2009?

Average weekly turnover in Euros:

**Question 12**

Could you provide an estimate of the average total weekly turnover for shop sales, inclusive VAT, in 2009?

Average weekly turnover in Euros:

**Question 13**

Could you provide an estimate of the average number of transactions per week in 2009?

Average number of transactions per week:

**Question 14**

Could you provide an estimate of the composition of your customers in fuel and shop sales?

% pay only for fuel	..... %
% pay only for shop sales	..... %
% pay for fuel and shop sales (they could be customers who make two separate payments)	..... %
----- +	
% total	..... %

**Question 15**

Could you provide an estimate of the average purchase sum per transaction in 2009?

**Question 16**

Could you provide an estimate of the average purchase sum per transaction for fuel (petrol, diesel and LPG) in 2009?

**Question 17**

And could you provide an estimate of the average purchase sum per transaction for shop sales in 2009?

**Question 18**

How much was the total annual turnover, inclusive VAT, of your branch in 2009?

Turnover 2009:

**Question 19**

And how much was the total annual turnover for fuel, inclusive VAT, in 2009?

Fuel turnover 2009:

**Question 20**

And how much was the total annual turnover for shop sales, inclusive VAT, in 2009?

Shop turnover 2009:

**Question 21**

How many percent of the paying customers used the following to pay in 2009 ... ?

% Cash (Euros and foreign)	..... %
% Debit card, including Maestro	..... %
% Foreign pass to use as debit card (Maestro, V-pay)	..... %
% Chipknip (smart card)	..... %
% Credit card	..... %
% A transfer via account	..... %
% Cards from lease companies (Travelcard, Multi Tank Card)	..... %
% International trucker cards (DKV, UTA)	..... %



% Cards from petrol companies	..... %
% Local service cards	..... %
% Paid by other means	..... %
-----	
- + % total	..... %

**Question 22**

How many percent of the turnover in 2009 came from customers who paid with .....

% Cash (Euros and foreign)	..... %
% Debit card, including Maestro	..... %
% Foreign pass to pay as debit card (Maestro, V-pay)	..... %
% Chipknip (smart card)	..... %
% Credit card	..... %
% A transfer via account	..... %
% Cards from lease companies (Travelcard, Multi Tank Card)	..... %
% International trucker cards (DKV, UTA)	..... %
% Cards from petrol companies	..... %
% Local service cards	..... %
% Paid by other means	..... %
-----	
- + % total	..... %

**Question 23**

How many cash registers did you have last year - in 2009 - in your company/branch?

Number of cash registers:

**Question 24**

Have you bought, rented or been given these cash registers?

- 1 Bought
- 2 Rented
- 3 Been given
- 4 Other, namely....
- 5 Do not know / will not say

**Question 25**

Do you have one or more safes in your company/branch in which to temporarily keep the daily or weekly returns?

- 1 Yes
- 2 No
- 3 Do not know / will not say

**Question 26** *If question 25 = 1*

How many safes do you have at your company/branch or at home?

Number of safes:

**Question 27** *If question 25 = 1*

Have you bought, rented or been given these safes?

- 1 Bought
- 2 Rented
- 3 Been given
- 4 Other, namely....
- 5 Do not know / will not say

**Question 28**

Do you have one or more devices in your company/branch or at home for checking the authenticity of Euro bank notes?

- 1 Yes
- 2 No
- 3 Do not know / will not say

**Question 29** *If question 28 = 1*

How many of these devices do you have at your company/branch or at home?

Number of devices:

**Question 30** *If question 28 = 1*

Have you bought, rented or been given these devices?

- 1 Bought
- 2 Rented
- 3 Been given
- 4 Other, namely....
- 5 Do not know / will not say

**Question 31**

How many safes do you have near the cash register in your company/branch in which to store large denomination Euro bank notes?

Number of safes:

**Question 32**

Are the weekly returns picked up by a professional security company or do you do it yourself?

- 1 Via a professional security company (i.e. Brinks, G4S)
- 2 Myself
- 3 Do not know / will not say

**Question 33** *If question 32 = 1*

Do you use a cash management system (such as CASH 360 from G4S), inclusive the lease of a special safe?

- 1 Yes, for all cash registers
- 2 Yes, but not for all cash registers
- 3 No
- 4 Do not know / will not say

**Question 34**

How do you usually give your bank the bank notes? Is that.....

- 1 In a seal bag/deposit bag
- 2 Loose notes
- 3 Other, namely....
- 4 Do not know / will not say

**Question 35** *If question 34 = 2*

Do you generally take the money to the bank counter, to the bank's money or deposit machine, to the night safe or to the bank's seal bag machine?

- 1 Bank counter (cash desk)
- 2 Bank's money or deposit machine
- 3 Night safe
- 4 Bank's seal bag machine
- 5 Do not know/ will not say

**Question 36**

*If question 32 = 2*

How many times per week do you deposit the cash from you company/branch?

*If question 32 = 1*

How many times per week is the cash picked up by the security company?

Number of deposits per week:

**Question 37** *If question 32 = 2*

Who usually deposits the cash?

- 1 Entrepreneur/owner
- 2 Company/branch manager
- 3 Another member of staff
- 4 Other, namely....
- 5 Do not know / will not say

**Question 38** *If question 32 = 2*

How do you usually give your bank the bank notes? Is that.....

- 1 Ordered, sorted and bundled (= "clean deposit")
- 2 Unsorted and mixed up (= "dirty deposit")
- 3 Do not know / will not say

**Question 39** *If question 32 = 2*

How much time, in minutes, do you or your member of staff spend depositing cash at your bank? This is the ONE-WAY travel time with the transport usually used for this purpose.

Number of minutes:

**Question 40** *If question 32 = 2*

How much money is deposited on average each time?

Sum in Euros:

**Question 41** *If question 32 = 1*

How much money is picked up on average by the security company?

Sum in Euros:

**Question 42**

How many percent of the cash turnover from your company/branch is NOT deposited but used for paying suppliers, personnel, private spending, etc. in cash?

Percentage: ... %

**Question 43** *If question 32 = 1*

What did you pay the professional security company, such as Brinks and G4S, in 2009?

Sum in Euros:

**Question 44** *If question 24 = 1*

How many seal bags did you use on average per month?

Number:

**Question 45** *Only ask if debit card and cash can be used to pay*

Generally the average debit card sum is more than the average cash payment. Is that also the case in your company/branch?

1 Yes

2 No

3 Do not know/ will not say

**Question 46** *If payment with cash is possible (see question 06)*

Could you give an estimate of the average purchase sum of the transactions paid by cash?

Sum in Euros:

**Question 47** *If payment with debit card is possible (see question 06)*

Could you give an estimate of the average purchase sum of the transactions paid with a debit card?

Sum in Euros:

**Question 48** *If payment with credit card is possible (see question 06)*

Could you give an estimate of the average purchase sum of the transactions paid with a credit card?

Sum in Euros:

**Question 49** *If payment with credit card is possible (see question 06)*

How many percent of the credit card turnover in 2009 came from customers who paid with a.....

% Mastercard	.....	%
% VISA Card	.....	%
% American Express	.....	%
% Diners Club Card	.....	%
% via other credit cards	.....	%
-----		+
% total	.....	%

**Question 50**

How much commission did you pay to credit card companies in 2009 for the payments made with credit cards?

Commission paid in Euros:

**Question 51**

How much commission did you pay to credit card companies in 2009 for the payments made with credit cards?

Commission in %:

**Question 52**

How does your company come by its small change? Is that.....

*More than one answer is possible*

- 1 From the bank or post office over the counter
- 2 From the bank, via the coin roll dispenser
- 3 From the bank, via the professional security company
- 4 Not via the bank, but via my customers
- 5 Not via the bank, but via other entrepreneurs
- 6 Not via the bank, but ...
- 7 Not applicable, we don't use small change
- 8 Do not know / will not say

**Question 53**

Do you have to pay commission on the small change your company/branch needs?

- 1 Yes
- 2 No
- 3 Do not know / will not say

**Question 54** *If question 53 = 1*

How many times per month do you fetch small change or have it delivered?

Number of times per month:

**Question 55** *If question 53 = 1*

And how much small change do you fetch or have delivered each time?

Sum in Euros:

**Question 56**

Is the money insured?

- 1 Yes
- 2 No
- 3 Do not know / will not say

**Question 57**

Have you had anything to do with counterfeit money and/or the theft of money by third parties or your own personnel in 2009?

- 1 Yes
- 2 No
- 3 Do not know / will not say

**Question 58** *If question 57 = 1*

How many Euros have you lost in 2009 due to counterfeit money and the theft of money?

We mean the money that has not been got back via the insurance.

Sum in Euros:

*Questions 59 to 82 if debit card, smart card of credit card can be used*

**Question 59**

How many permanent payment terminals did you have in your company/branch in 2009?

Number of permanent payment terminals:

**Question 60** *If question 59 > 0*

And how many of these payment terminals were integrated in a fuel pump outside?

Number:

**Question 61**

How many of these permanent payment terminals do you own, how many are rented and how many are leased?

Owned	...
Rented	...
Leased	...
-----	+
total	...

**Question 62**

What type of connection did your company/branch use in 2009 for permanent payment terminals? Was that ...

- 1 Via a normal, analogue telephone line (including PSTN)
- 2 Via an ISDN connection
- 3 Via an internet connection (ADSL, VPN)
- 4 Via a cable connection
- 5 Via a glass fibre connection
- 6 Another type of connection, namely ...
- 7 Do not know / will not say

**Question 63**

How many MOBILE payment terminals did you have in your company/branch in 2009?

Number of mobile payment terminals:

**Question 64**

How many of these mobile payment terminals do you own, how many are rented and how many are leased?

Owned	...
Rented	...
Leased	...
-----	+
total	...

**Question 65**

Do you have a maintenance contract for these payment terminals?

- 1: Yes
- 2: No
- 3: Do not know / will not say

**Question 66** *If question 62 = 3, 4 or 5*

Is the ADSL/cable/glass fibre connection only used for debit card payments or also for other things such as internet and the alarm?

- 1: Only for debit card payments
- 2: For other things as well
- 3: Do not know / will not say

**Question 67**

Could customers withdraw extra money when they paid with a debit card in 2009?

- 1: Yes
- 2: No
- 3: Do not know / will not say

**Question 68** *If question 67 = 1*  
How much extra money was withdrawn per week in 2009?

Sum in Euros:

**Question 69**

Do you make the customers pay when they want to pay a sum less than a certain amount with their debit card?

- 1: Yes
- 2: No
- 3: Do not know / will not say

**Question 70** *If question 69 = 1*  
Less than what amount is that?

Sum in Euros:

**Question 71** *If question 69 = 1*  
And how much has to be paid?

Sum in Euros:

**Question 72** *If question 69 = 1*

What is the total sum you charged your customers in 2009 for paying with debit cards?

Sum in Euros:

**Question 73** *If credit card payments are possible*

Do you charge the customers when they want to pay with a credit card?

- 1: Yes, always
- 2: Yes, only under a certain amount
- 3: Yes, only above a certain amount
- 4: No
- 5: Do not know / will not say

**Question 74** *If question 73 = 2, 4 or 3*

More/less than what amount is that?

Sum in Euros:

**Question 75** *If question 73 = 1, 2 or 3*

What do they have to pay if they want to pay by credit card? Is that.....

- 1: A fixed sum per transaction
- 2: A fixed percentage per transaction
- 3: Do not know / will not say



**Question 76** *If question 75 = 1*

And what sum has to be paid?

Sum in Euros:

**Question 77** *If question 75 = 2*

How high is that percentage?

Percentage:

**Question 78** *If question 73 = 1.2, 4 or 3*

What is the total sum you charged your customers in 2009 for paying by credit card?

Sum in Euros:

**Question 79** *If debit card payments are possible*

Have you been troubled by fraud with electronic payments using debit cards in 2009?

- 1: Yes
- 2: No
- 3: Don't know
- 4: Will not say

**Question 80** *If question 79 = 1*

Could you make an estimate of the financial damage resulting from fraud via the debit card in 2009?

Sum in Euros:

**Question 81** *If credit card payments are possible*

Have you been troubled by fraud with electronic payments using credit cards in 2009?

- 1: Yes
- 2: No
- 3: Don't know
- 4: Will not say

**Question 82** *If question 81 = 1*

Could you make an estimate of the financial damage resulting from fraud via the credit card in 2009?

Sum in Euros:

*Questions 83 to 87 if cash payment is possible*

**Question 83**

How many minutes do you spend on average on making the cash register ready for operation each morning?

Time in minutes

**Question 84**

How many minutes do you spend on average emptying and balancing the cash register each evening?

Time in minutes

**Question 85**

How many minutes do you spend on average per week preparing the daily and weekly takings for depositing?

Time in minutes

**Question 86**

How many minutes do you spend on average per week keeping the small change at the usual level?

Time in minutes

**Question 87**

How many minutes do you spend on average per week replacing the till roll?

Time in minutes

**Question 88** *If electronic payment is possible*

How many minutes do you spend on average per week replacing the print rolls in the payment terminals?

Time in minutes

**Question 89** *If credit card payments are possible*

How many minutes do you spend on average per week on the administration around credit card payments, such as saving the receipts?

Time in minutes

**Question 90** *If debit card payments are possible*

How many minutes do you spend on average per week on the administration around debit card payments, such as saving the receipts?

Time in minutes

**Question 91**

Do you spend any more time on other back office activities to do with the payment transactions that I have not yet mentioned?

- 1: Yes, namely ...
- 2: No
- 3: Do not know/ will not say

**Question 92** *If question 91 = 1*

How many minutes do you spend on average per week on these other activities?

Time in minutes

**Question 93**

Do you have any other equipment in your company/branch that you have purchased especially to keep your money safe? For example...

*More than one answer is possible*

- 1: Camera systems/security equipment
- 2: Counter safe
- 3: Tube systems to channel money away
- 4: Special counting areas
- 5: Other, namely....
- 6: No
- 7: Do not know / will not say

**Question 94** *If payment by various means are possible*

You indicated earlier in the questionnaire how your customers made use of the various payment methods in 2009. Are you satisfied with the current division or would you rather have a different division of the payment methods?

- 1: Satisfied
- 2: Rather have a different division
- 3: Do not know / will not say

**Question 95** *If question 94 = 2*

What division would you rather have?

**Question 96**

What is your function in the company/branch?

- 1: Owner
- 2: Director
- 3: Owner/director's partner
- 4: Subsidiary or company/branch manager
- 5: Other, namely....
- 6: Will not say

**Conclusion**

## Questionnaire for large company

1 How many sales transactions (= paying customers) do you have *per month*?

.....
-------

2 How much is the average sum per sales transaction?

€.....
--------

3 Which of the following payment methods do you accept?  
(*you may tick more than 1 answer*)

	2009
cash (incl. foreign cash)	<input type="checkbox"/>
credit card (Eurocard, VISA, etc.)	<input type="checkbox"/>
permanent loyalty card	<input type="checkbox"/>
debit card payments	<input type="checkbox"/>
Maestro payments/V-pay payments	<input type="checkbox"/>
chipknip (smart card) payments	<input type="checkbox"/>
transfer via account	<input type="checkbox"/>
cards from lease companies (Travelcard, Multi Tank Card)	<input type="checkbox"/>
international trucker cards	<input type="checkbox"/>
cards from petrol companies	<input type="checkbox"/>
local service cards	<input type="checkbox"/>
internet payments	<input type="checkbox"/>
Other, namely .....	<input type="checkbox"/>

4 What proportion of the total number of sales transactions are paid for by the payment methods mentioned?

	2009
cash (incl. foreign cash)	.....%
credit card (Eurocard, VISA, etc.)	.....%
permanent loyalty card	.....%
debit card payments	.....%
Maestro payments/V-pay payments	.....%
chipknip (smart card) payments	.....%
transfer via account	.....%
cards from lease companies (Travelcard, Multi Tank Card)	.....%
international trucker cards	.....%
cards from petrol companies	.....%
local service cards	.....%
internet payments	.....%
other, namely .....	.....%

5 What proportion of the total turnover (incl. VAT) do the following payment methods account for?

	2009
cash (incl. foreign cash)	.....%
credit card (Eurocard, VISA, etc.)	.....%
permanent loyalty card	.....%
debit card payments	.....%
Maestro payments/V-pay payments	.....%
chipknip (smart card) payments	.....%
transfer via account	.....%
cards from lease companies (Travelcard, Multi Tank Card)	.....%
international trucker cards	.....%
cards from petrol companies	.....%
local service cards	.....%
internet payments	.....%
other, namely .....	.....%

6 Could you indicate how the payments are divided per size class in % for the enterprise as a whole?

	2009
sum up to € 10	.....%
sums from € 10 to € 50	.....%
sums from € 50 to € 200	.....%
sums of € 200 or more	.....%
total 100 %	

7 What was the total retail trade turnover (in Euros and inclusive VAT) of your enterprise/ subsidiary company in 2009, divided in shop and fuel?

2009 shop turnover	€.....
2009 fuel turnover	€.....

8 Do you use a cash management system (such as CASH 360 from G4S), with the lease of a special safe?

yes, for all branches	
yes, but for some of the branches, namely.....%	
none of the branches	
don't know	

9 What are the total costs of professional money transport (without a cash management system) at your enterprise/subsidiary (sum of all the invoices from 2009)?

2009	
€.....	

10 What are the total costs of the cash management system at your enterprise/subsidiary (sum of all the invoices from 2009)?

2009  
€.....

11 How much money was provided as cashback in 2009? (Cashback means that customers can withdraw extra cash when using the debit card for payment). If you cannot provide a total sum, could you indicate what percentage of the turnover paid for by debit can be attributed to cashback?

2009  
€..... or.....%

12 What interest rate do you receive on your current account?

%.....

13 How long is the period (measured in days) between the moment the professional security company picks up the cash at the branch and the moment this sum is credited to your account?

days: .....

14 Do the branches have a room that is intended only for counting cash?

yes, all branches  
yes, some of the branches, namely.....%  
none of the branches  
don't know

## ANNEX III Cost concepts

### *The costs of payment transactions*

The costs of payment transactions at point-of-sale establishments are understood as: the costs for point-of-sale establishments relating to the use of the payment methods they accept.

The costs of the payment transactions are divided between internal and external costs in the cost model.

### *Internal costs*

Internal costs are defined in the cost model as the costs arising in the enterprise as a result of the acceptance of point-of-payment methods. Seven internal cost components have been distinguished in the cost model: front office costs, back office costs, the costs of own money transport, the costs of loss of money, the costs resulting from depositing cash, the fixed costs of payment equipment and the fixed costs of peripheral equipment.

### *External costs*

External costs are defined in the cost model as costs invoiced to the entrepreneur in respect to payment transactions by external parties, such as financial establishments, insurance companies, money transporting companies, suppliers of payment terminals and telecommunication suppliers. Eight external cost components have been distinguished in the cost model: bank costs, costs of professional security company for transporting money, loss of interest resulting from value dating, debit card costs to bank, Chipknip (smart card) costs to bank, credit card costs, telecommunication costs and insurance costs.

The costs of payment traffic are also divided up per fixed cost, per variable, transaction-related costs and per variable, turnover-related costs in the cost model.

### *Fixed costs*

In the cost model, *fixed costs* are the costs that do not change in size when the number of transactions or the turnover changes. These include: the own money transport, telecommunication subscription for debit card payment, telecommunication subscription for smart card, batch processing of smart card transactions and telecommunication subscription for credit card. They also include part of the depreciation of the cash register, the counterfeit money detector, the safe, the debit card payment equipment and the subscription costs for debit card payment equipment, the payment equipment for smart card, the payment equipment for credit cards and the back office costs.

#### *Variable, transaction-related costs*

*Variable, transaction-related costs* are also distinguished in the cost model as well as the fixed costs.

These are costs that are fixed per transaction but that will change in size when the number of transactions paid for by a certain payment method increases or decreases. These costs are by contrast not dependent on the amount that is being paid. These include: front office costs, costs for small change, tariffs for debit card payments, telecommunication tariff for debit card payments, tariffs for smart card payments, telecommunication tariffs for chip and telecommunication tariffs for credit card payments. They also include part of the depreciation of the cash register, the counterfeit money detector, the safe, the debit card payment equipment and the subscription costs for debit card payment equipment, the payment equipment for smart card, the payment equipment for credit card and back office costs.

#### *Variable, turnover-related costs*

*Variable, turnover-related costs* are also distinguished in the cost model. These are the costs that depend on the amount of the sum paid. When the sum to be paid changes, these costs will change as well. They include: loss of interest resulting from value dating, costs resulting from loss of interest by depositing cash, loss of money, professional money transport by security company, depositing cash, insurance costs and credit card company commission.

Furthermore they relate to part of the back office costs.

All the expense items relating to both cash and electronic money are mentioned below.

#### *Back office costs*

Personnel costs associated with making up the cash registers in the morning, with emptying and balancing the cash registers in the evening, preparing the daily and/or weekly turnovers, keeping the small change at its usual level, replacing till rolls, replacing print rolls in the payment equipment, with the administration around credit card payments, such as keeping receipts, and with other payment transaction-related back office activities.

#### *Front office costs*

The time expressed in money (personnel costs) associated with the actual settlement, in other words the time between the moment when the consumer is told what the total amount to be paid is and the moment that the consumer receives the receipt, change, debit card, Air Miles, stamps and any other documents (at the end of the cash register activities).

#### *Loss of interest*

Lost income from interest on the money received that is not directly deposited at the bank.



*Value dating*

Lost interest income resulting from the bank not taking the period between the transaction date and the date of the sum being entered in the account into consideration when calculating the credit interest.

All the expense items relating to cash payments are shown below.

*Own money transport*

The time expressed in money (minutes x personnel costs) spent in bringing the cash received by the company to the bank.

*Depreciation payment costs equipment for cash*

Depreciation costs for cash registers, counterfeit money detectors and safes.

*Commissions on small change*

The costs charged by the banks for the change of cash payments.

*Loss of money (including errors made when giving change)*

Theft and/or robbery of money by customers, personnel, suppliers and/or other visitors to the shop. Also negative cash differences as a consequence of giving too much change.

*Professional money transport*

The costs of contracting the transport of money to professional security companies (Brinks, Geldnet).

*Costs of depositing cash*

Costs that are made when depositing cash at the bank.

*Insurance costs*

Premiums charged by insurance companies for insuring money.

All the expense items relating to debit card payments are shown below.

*Depreciation and maintenance costs of payment terminals*

Fixed amount per year per payment terminal.

*Subscription costs for payment terminals*

Fixed monthly tariff to the bank for the use of payment terminals.

*Subscription costs for data communication*

Fixed monthly tariff for data communication via the analogue network, IDSN and ADSL to KPN.

*Tariff costs for debit payments*

The costs charged by the bank for the authorisation and processing of debit card payments (tariff per transaction) including the run-up discounts.

*Tariff costs for data communication for debit payments*

The costs charged by KPN for data communication (per transaction) in relation to debit card payments via the analogue network, IDSN and ADSL.

All the expense items relating to Chipknip (smart card) payments are shown below.
---

*Depreciation and maintenance costs of payment terminals*

Fixed amount per year per payment terminal.

*Subscription costs for payment terminals (debit card payments, smart card payments, credit card)*

Fixed monthly tariff to the bank for the use of payment terminals.

*Subscription costs for data communication*

Fixed monthly tariff for data communication via the analogue network, IDSN and ADSL to KPN.

*Tariff costs for chipknip (smart card) payments*

The costs charged by the bank for the authorisation and processing of smart card payments (tariff per transaction) including the stepped discounts.

*Tariff costs for data communication for smart card payments*

The costs charged by KPN for data communication (per transaction) in relation to smart card payments via the analogue network, IDSN and ADSL.

*Costs of batch processing of smart card transactions*

Costs charged by KPN for the data communication for the smart card transactions presented as batches to the banks.

All the expense items relating to credit card payments are shown below.
---

*Depreciation and maintenance costs of payment terminals (debit card, smart card, credit card)*

Fixed amount per year per payment terminal.

*Subscription costs for data communication (debit card, smart card, credit card)*

Fixed monthly tariff for data communication via the analogue network, IDSN and ADSL to KPN.

*Tariff costs for data communication for credit card payments*

The costs charged by KPN for data communication (per transaction) in relation to credit card payments via the analogue network, IDSN and ADSL.

*Credit card companies' commission*

The costs paid by entrepreneurs to credit card companies for the value transaction sums paid for using credit cards.



## ANNEX IV Number of companies and points-of-sale

The table below shows how many enterprises and branches were active in the established retail trade, in street trading, the hotel and catering industry and in filling stations on 1 January 2009.

The data about the established retail trade, street trading, the hotel and catering industry and the filling stations comes from the CBS and the Trades Council for the Retail Trade.

The number of enterprises and branches is dependent on the definition employed. The CBS assumes the numbers on the basis of the main activity (retail trade, street trading). The data about the hotel and catering industry was provided by the Industrial Board for Hotels and Catering. The data about the filling stations with shop are estimated on the basis of data from the BOVAG.

These details 2009 have been used as the 'core values' in this survey.

Number of active enterprises and branches per 1 January 2009

<i>Sector</i>	<i>Number of enterprises</i>	<i>Number of branches</i>
Established retail trade	58,130	84,030
Street trading	18,373	19,062
Hotels and catering		41,477
Filling stations with shop		2,860

*Source: CBS and Industrial Board for Hotels and Catering.*