



Payments and Securities Settlements

THE PAYMENT CARD BUSINESS IN HUNGARY

2008

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Payments and Securities Settlements

Overview

The twenty-year lag between the appearance of this means of payment in Western Europe and Hungary is well reflected in the current stage of development of the bank card business in Hungary. Moreover, some Central East European countries – the Czech Republic, Slovakia and Bulgaria – are also ahead of Hungary in terms of the number of cards per person, not to mention Estonia and Slovenia, where this indicator is close to or above the EU average, respectively. The number of ATMs¹ available for cash withdrawal per one million people hardly exceeds half of the EU average. The number of POS² devices, which allow payment by bank card, per one million people is one third of the EU average. A favourable fact is that we more often use cards for payment than for cash withdrawal, although the frequency (transaction/card/year) still lags behind the EU average: in 2007, a European citizen withdrew cash using his card eighteen times on average, while a Hungarian did so fourteen times. An average European paid with his bank card on thirty-seven occasions, while a Hungarian only sixteen times.

Termination of our backwardness requires the expansion of the bank card acceptance network as well as the increasing of the number of bank cards issued. The latter also postulates the strengthening of confidence in this means of payment, which results in an increase in the frequency of card use.

In 2008, in order to expand the acceptance network, MasterCard launched a campaign among retail outlets to make bank card acceptance more popular. The reduction of domestic interchange fees³ by Visa and MasterCard also results in an expansion of the domestic acceptance network. As the interchange fee is part of the merchant service fee, its reduction allows the lowering of the magnitude of commissions, which may result in an increase in the number of merchant outlets accepting bank cards.

Firstly, a precondition of the increase in the number of cards issued is the widening of their usability, i.e. the expansion of the acceptance network, and secondly, improving the security to strengthen the confidence in this means of payment. This latter objective has high importance not only in Hungary; it is also one of the objectives of the Single Euro Payments Area (SEPA). Although Hungary is not a euro area Member State yet, international card companies impose the SEPA objectives on their domestic member banks as well in the form of rules that must compulsorily be obeyed. Within this framework, chip migration is in progress, during which issuing banks equip their cards with a chip meeting the EMV standard in addition to the magnetic strip, and acquiring banks provide for the acceptance of these cards in their ATM and POS equipment. In terms of migration, Hungary is in the middle range in international comparison: 34% of debit cards and 16% of credit cards are equipped with EMV chips. 58% of ATMs and 81% of POS terminals operating at retail check-out counter were able to accept cards with chips at the end of last year.

Also at the end of last year there were 8.9 million bank cards in circulation in Hungary, 97% of them with the MasterCard or Visa brands, which constitute the basis for domestic mutual card acceptance. 80% of the cards are debit cards linked to a bank account; they can be used up to the amount of the account balance. The ratio of credit cards has been stagnating around the level of

¹ ATM (Automated Teller Machine): a terminal that enables customers holding the appropriate card to make withdrawals from or deposits to their bank accounts, or to initiate transfers from their accounts, or to obtain information concerning their account.

² POS (Point of Sale): a terminal that enables customers to make payments (and to withdraw cash where possible) with the appropriate card at merchant outlets. Transaction information is forwarded either by way of electronic means or on paper; known, respectively, as electronic POS (EFTPOS) or imprinter.

³ For the detailed definition of the interchange fee see Section 2.2.

19–20%; their rate of increase has decelerated significantly during the last two years. The 2% increase experienced last year does not even reach half of the average growth of the business. Presumably on account of the economic crisis, both card issuing banks and customers have become more cautious.

The percentage share of the so-called co-branded cards issued in collaboration with merchants or non-profit organisations remains insignificant (10%). The same is true for business cards used to cover business related expenses (their share is 5%).

The percentage share of the product called virtual card, which allows safe payment through the Internet, is a mere 2%.

Cardholders may withdraw cash using their cards from 4 623 ATMs; 81% of them is available 24 hours a day, seven days a week. The remaining 19% and the 10 374 POS terminals at post offices and bank branches, which also allow electronic cash withdrawal, are available during the opening hours of these banks and post offices.

The numbers of merchants that accept Visa and MasterCard cards had shown a co-movement for years. Last year, attributable to technical reasons (the same merchant concludes contracts with two banks for card acceptance) the number of outlets accepting MasterCard cards (37 327) exceeded the number of those accepting Visa cards (34 447). With the gradual termination of parallel contracts the two data are expected to come closer to one another again in the near future. American Express and JCB cards are accepted in 19 481 and 15 471 retail outlets, respectively. Diners cards are accepted again; currently they can be used for shopping at 96 locations. 963 Internet portals accept payments by Visa or MasterCard bank cards in Hungary, while the number of Internet merchants accepting American Express and Diners cards is 302 and 191, respectively.

49 837 electronic POS terminals ensure safe card acceptance; the identity of the card holder and the backing behind the card is checked during each transaction. Because of the low turnover, it is uneconomical to install electronic equipment in 405 shops; therefore, they accept cards on mechanical equipment (imprinters).

During last year, domestic and foreign cardholders made purchases at and withdrew cash from domestic ATM and POS terminals in a value of HUF 7 107 billion, exceeding the turnover of the previous year by 6%. The number of transactions amounted to 298 million, i.e. 10% more than in the year preceding the reporting period. 56 out of 100 transactions were payments for goods or services. 93% of cash withdrawals and 94% of payments was performed in an electronic environment, on ATM or POS terminals.

Holders of bank cards issued in Hungary used their cards for cash withdrawal and shopping in Hungary and abroad on 295 million occasions. This equals to a value of HUF 7 029 billion. The growth in volume is 13%, while in value it amounts to 7%. Each card was used on 2.77 occasions per month on average.

The clearing and settlement of transactions carried out in Hungary with cards issued in Hungary is divided into three parts. The interbank settlement of Visa items is performed by Visa International; its settlement bank is the MKB Bank Zrt. The interbank net positions resulting from the transactions with MasterCard cards are calculated by MasterCard International; starting from 5 March 2009 the settlement bank is the MNB. It is also the MNB that settles the turnover of five domestic banks among one another on the basis of an agreement separated from the above, where Bankkártya Zrt. (GIRO Bankcard cPlc.) calculates the debit and credit positions.

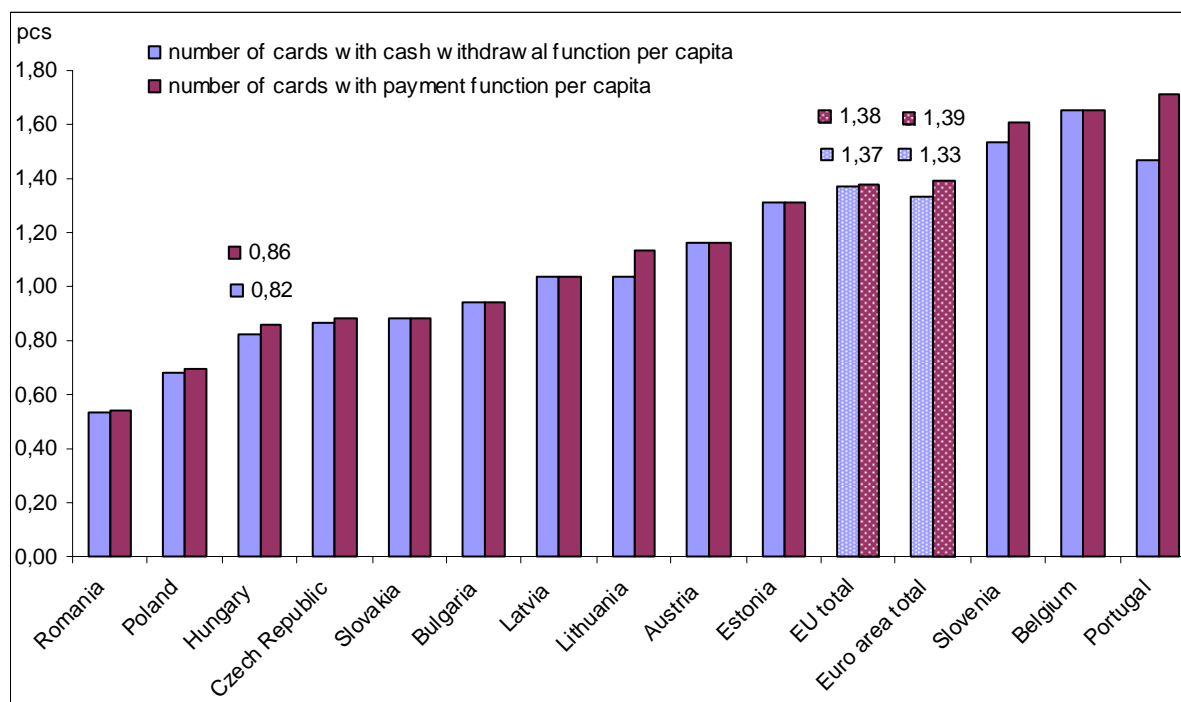
International overview

The development of the domestic bank card business is examined on the basis of the data disclosed in the Blue Book⁴ published by the European Central Bank and is compared with the below given indicators of three Western European countries with a similar population to that of Hungary and of those Member States which joined the European Union simultaneously with or right after Hungary:

- the number of bank cards per capita (in conformity with the Blue Book, in a breakdown according to the two most typical functions),
- the number of ATMs per million inhabitants, i.e. the number of terminals for cash withdrawal,
- the number of POS terminals per million inhabitants, i.e. the number of devices for payment, and
- the number of domestic ATM and POS transactions per bank card.

The charts also include the average indicators for the European Union and the euro area.

Chart 1 Per capita number of bank cards with cash withdrawal and payment functions (2007)



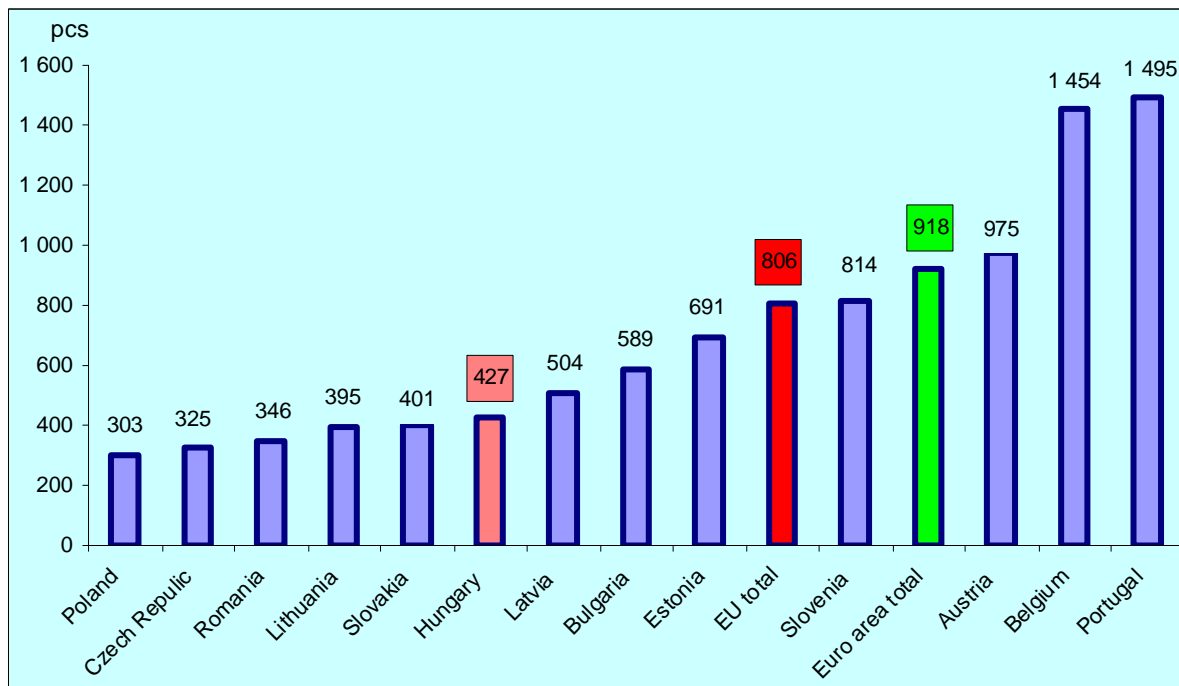
The chart separates the cards with cash withdrawal and payment functions. The data in the two columns cannot be added up as a vast majority of cards is suitable for both cash withdrawal and paying the countervalue of purchases.

The average values for the EU and the euro area are highlighted in the chart. Compared to both averages Hungary reached a value of around 60%, belonging to the middle range as in the previous year. However, Hungary's ranking still moved in the negative direction in a year, as Bulgaria, Slovakia and the Czech Republic, although slightly, but preceded Hungary.

⁴ When the analysis was prepared, the latest data of the Blue Book were for 2007; the tables in the International overview reflect the data of this year.

In terms of the number of ATMs per one million people Hungary has maintained its position a year earlier, both in the ranking and compared to the EU and euro area averages.

Chart 2 Number of ATMs per million inhabitants (2007)

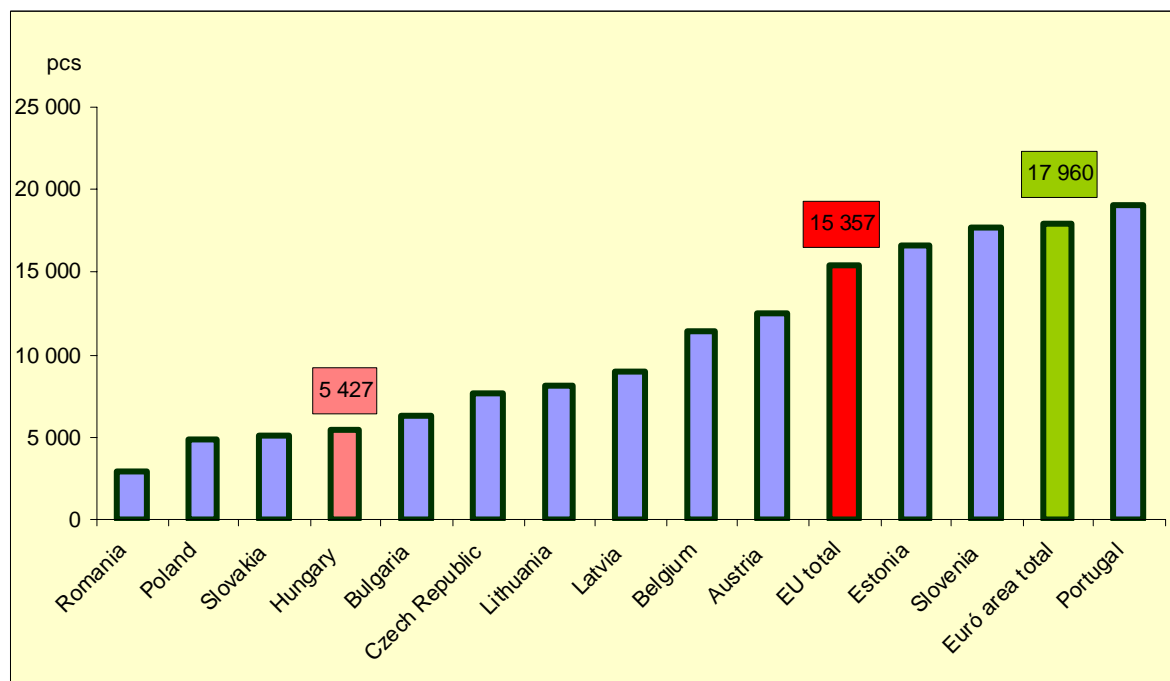


The number of terminals available for cash withdrawal for domestic card holders is slightly more than half of the European average, but does not reach half of the euro area average.

Hungary's position is improved by the fact that cash withdrawal with bank cards using electronic identification (PIN code) during operating hours is also ensured at POS terminals installed in banks and post offices.

In terms of POS terminals per one million inhabitants Hungary outperformed Poland, and its position compared to the averages also improved somewhat. Nevertheless, the number of POS devices allowing payment by bank cards in Hungary is 35% of the average of the EU and a mere 30% of the euro area average.

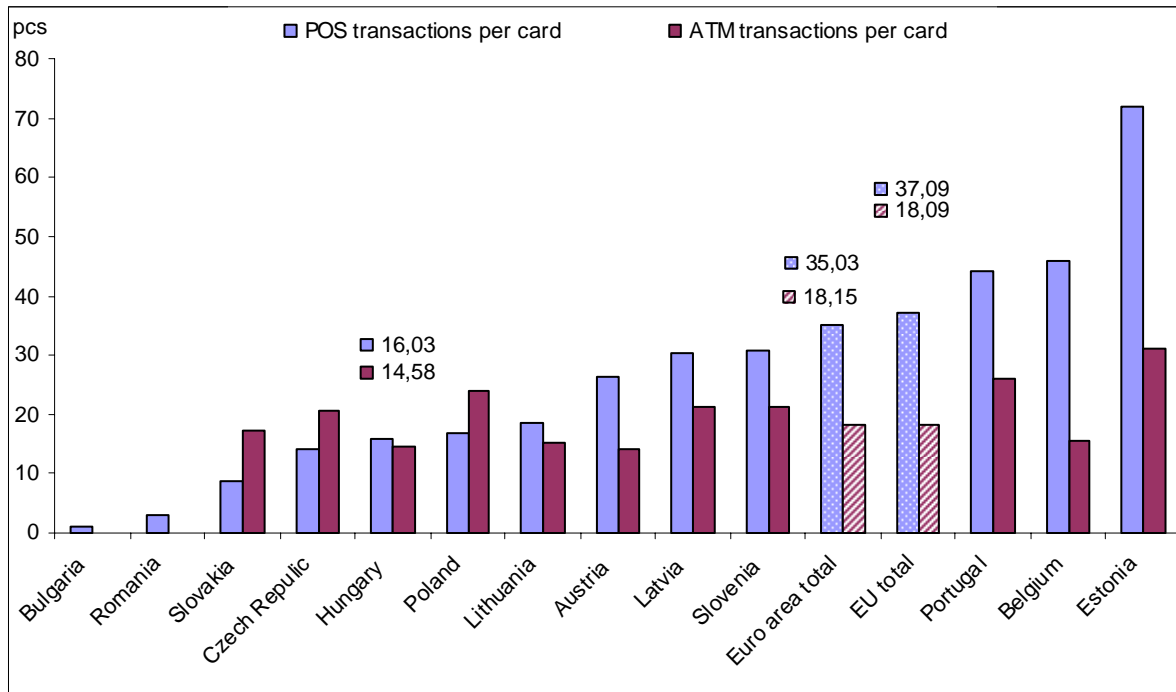
Chart 3 Number of POS terminals per million inhabitants (2007)



This is despite the fact that in the case of Hungary the number of POS terminals installed at bank branches and post offices mentioned in connection with the cash withdrawal opportunities is also included in this category, although for the time being the ones at post offices are only suitable for cash withdrawal. The figures for each country also include the number of mechanical card readers (imprinters).

Herein above we were given a picture of the developments in bank card supply in the countries under review and the number of units of equipment where payment or cash withdrawal by card is possible. Considering this, it is worth examining how often cardholders in a given country use their cards, i.e. how frequently they pay or withdraw cash using their cards.

Chart 4 Number of domestic ATM and POS transactions performed with cards issued in Hungary per card (2007)



Note: In the case of Bulgaria and Romania data for ATM transactions are not available.

The chart shows the average number of ATM and POS transactions per card per year, in growing order by the latter. In general, ATM transactions are cash withdrawals, while POS transactions are payment transactions, although

- ATM transactions include purchasing as well, e.g. mobile phone top ups, and
- POS transactions also include cash withdrawals; e.g. cash withdrawal at POS terminals is possible in some countries, while in Hungary cash withdrawals from POS terminals at bank branches and post offices belong here.

Although within card use in Hungary there has been a shift towards purchases (as opposed to Slovakia, the Czech Republic and Poland), Hungary is still behind the EU average, where a cardholder pays with his card twice as often as using it for cash withdrawal.

The frequency of card use in Hungary, especially for payments, is still far below the European average: while a European citizen withdraws cash from an ATM eighteen times a year on average, a Hungarian does so on fourteen occasions; while a Hungarian cardholder pays by bank card in various shops sixteen times a year, an average European does so thirty-seven times.

Overall analysis of the bank card business

1 Characteristics and number of bank cards

In Hungary, the number of payment cards has been growing steadily year by year, although at a varying pace. At the end of 2008, there was a total number of 8.9 million cards⁵ issued by 26 financial institutions (and the savings cooperatives sponsored by banks). The table below indicates the figures for the past five years:

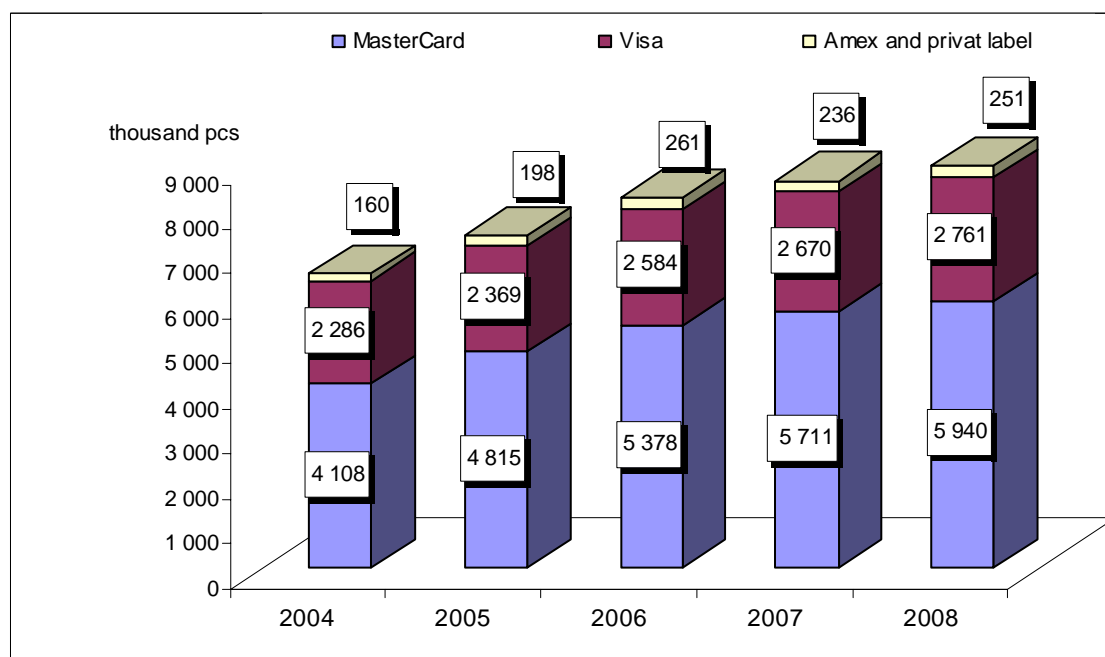
Table 1 Number of cards in circulation (2004–2008)

year	2004	2005	2006	2007	2008
number of cards (thousand pcs)	6 554	7 382	8 223	8 617	8 891
rate of growth	4%	13%	11%	4%	5%
number of cards per capita	0,65	0,73	0,82	0,86	0,89

The bank card issuing business continues to be highly concentrated: three quarters of the cards are owned by five banks.

Brand composition remained broadly unchanged. Mutual card acceptance is based on the brands of two international card companies: MasterCard and Visa.

Chart 5 Number of payment cards by card schemes (2004–2008)



Note: On 31 December 2007 the issuance of Diners cards was terminated in Hungary; in the previous years it was included in the category of Amex and private label cards.

Debit cards⁶ continue to dominate the Hungarian payment card market with a share of 80% (7 127 million cards), with their share remaining broadly unchanged compared with the previous

⁵ The number of cards is independent of the number of functions linked to the card. Some cards work as debit cards when cash is withdrawn and as credit cards when they are used for payment; later on – complying with the system formulated by the European Central Bank – they are indicated among the debit and credit cards as well.

⁶ Debit card: a payment card linked to a bank account, suitable (usually) for both cash withdrawal and purchases. The holder of the card may only withdraw cash or spend money up to the amount of his account balance, and the bank account is automatically debited with the amount of each transaction.

year. The number of debit cards which are linked to a credit line⁷ fell to one half (58 000 cards); their share does not even reach 1%. There are 24 banks involved in issuing debit cards and 11 banks are involved in issuing **debit cards linked to a credit line**.

The number of **credit cards**⁸ remained practically unchanged last year (increasing by a mere 2%). However, in the previous four years the credit card business underwent so strong changes that it deserves special examination.

Table 2 Number and percentage share of credit cards (2004–2008)

	2004	2005	2006	2007	2008
number of credit cards (pcs)	506 817	1 027 824	1 560 008	1 702 702	1 737 768
rate of growth		103%	52%	9%	2%
share to the total number of cards	8%	14%	19%	20%	19%

Note: The change in the number of credit cards from 2003 to 2004 cannot be measured. The underlying reason is that the debit products linked to a credit line had still been recorded among the credit cards. However, in 2004 they became reclassified as debit cards. Since 2005, debit products linked to a credit line have been included in a distinct category, separated from both product groups.

A remarkable change in 2005 was that banks strongly concentrated on developing their credit card business. Consequently, the number of cards in circulation doubled by the end of the year.

Although it slowed down in the following year, the growth reached in this business was still one and a half times greater, apparently resulting in the saturation of the domestic credit card market, remaining around a share of 20% compared to the total number of cards. The growth rate in 2008 was already lower than the increase in the total number of cards in circulation. Presumably, this also reflects the effect of the economic crisis. Customers themselves have become more cautious in connection with their money matters, and banks also have become more prudent when examining the applications for credit cards.

There are 15 banks involved in issuing credit cards, i.e. as many as in 2007.

There are less than 19 000 **charge cards**⁹ (also known as delayed debit cards) in circulation, offered by five banks and one financial enterprise to their customers.

The number of **prepaid** products fell to two thirds (10 000 cards) in a year. Because the prepaid value is stored by an underlying bank account rather than by the card itself, these cards do not qualify as electronic money.

In the above figures the cards which may work as debit and credit products at the same time were taken into account separately (i.e. these cards are included in both the debit and the credit categories); their number was 61 000 at the end of last year.

925 000 cards (10% of the total number) are issued in collaboration with commercial or non-profit organisations; these products are known as **co-branded and affinity cards**, respectively.

⁷ Debit card linked to a credit line: it works as a debit card, as the customer's account is automatically debited with the amount of each transaction, but for the customer a credit line of a pre-determined amount is kept on record on the account. Therefore, no interest-free period can be linked to it.

⁸ Credit card: a card linked to a credit line fixed earlier in a contract between the cardholder and the bank, which allows the holder to withdraw cash or make purchases up to the amount of the credit line. At the end of the month the cardholder can decide whether to pay his debt by the deadline specified in the statement that contains each transaction in full or only in part, to the extent determined in the contract. If the cardholder opts to pay his debt in full before the specified date, no interest is charged for his spending. However, if he pays only a part of his debt, depending on the bank, interest is usually charged for his entire debt. Cash withdrawals are not interest free; they are interest bearing from the date of the transaction.

⁹ Charge card/delayed debit card: a card that is distinguished from a credit card in that there is no credit line fixed necessarily (but may be), and the total debt must be settled by the cardholder by the end of the month.

Their number declined by 12% during last year. 15 banks continue to be involved in their issuance; five of them experienced significant declines.

Compared to the previous year, the number of **business cards** used to cover business related expenses increased by 8% (to 463 000). However, their percentage share remained unchanged at 5%. The number of issuers is relatively high – 22 banks and one financial enterprise.

Although the number of the so-called **virtual cards**, which increase the security of e-purchases, was up by 14% (amounting to 186 000 at the end of 2008), they still continue to amount to a mere 2% of the total number of cards. These cards can exclusively be used at Internet merchants to pay for goods and services. They are not suitable for cash withdrawal.

2 Cash withdrawal facilities and merchant outlets

2.1 Cash withdrawal facilities with bank issued payment cards

Electronic cash withdrawal using bank cards continues to be partly provided by ATMs and POS terminals installed at post offices and branches of banks participating in the acquiring business.

As in the issuance business, concentration is high on the acceptance side as well; three quarters of the 4 623 ATMs are operated by four banks.

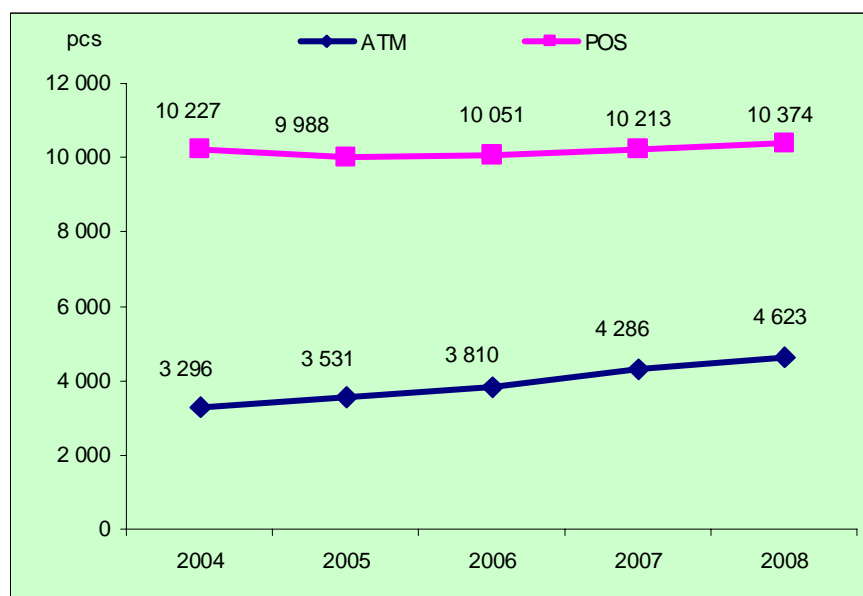
One quarter of the units are located in Budapest, another 22% in county seats and the rest in other towns around the country. The share of through the wall ATMs is 55%, the rest being stand-alone.

All these terminals are suitable for cash withdrawal, and 758 units allow payment of cash in an envelope to a bank account. There are no terminals in Hungary which allow transfers between bank accounts yet.

81% of ATMs are available 24 hours a day; the rest and the 10 374 POS terminals installed at post offices and bank branches provide access to cash for cardholders during opening hours.

The chart below illustrates the change in the number of ATMs and cash withdrawal POS terminals over the past five years:

Chart 6 The number of electronic cash withdrawal facilities (2004–2008)



Year by year, the number of ATMs has been growing steadily and at an even pace of around 10%. Slower growth is observed in cash withdrawal facilities at bank branches and post offices.

The table below illustrates the number of cash withdrawal facilities per million inhabitants available in the past five years:

Table 3 Number of ATMs and cash withdrawal POS terminals per million inhabitants (2004–2008)

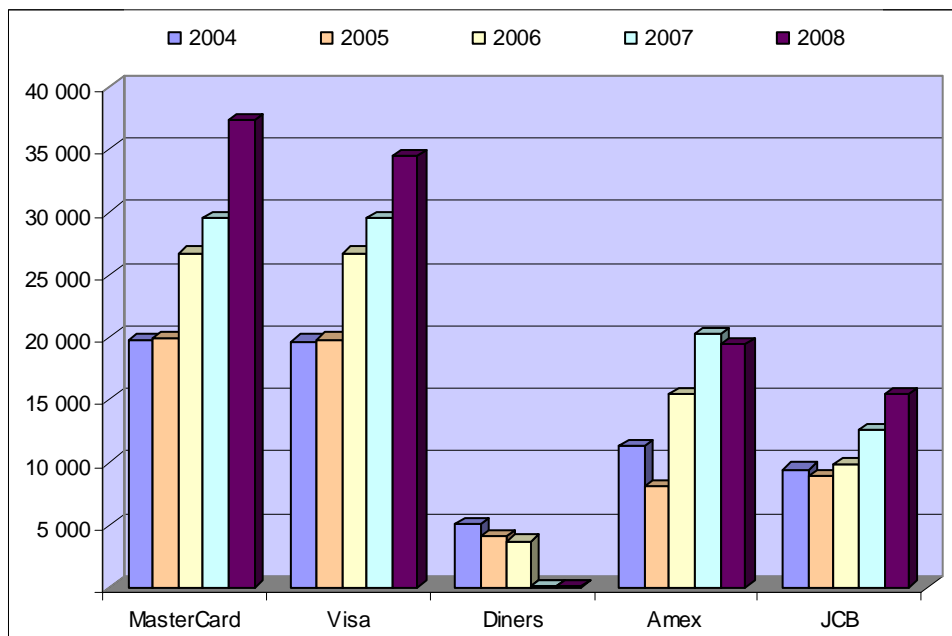
	2004	2005	2006	2007	2008
number of ATMs per million inhabitants	326	350	378	427	461
number of POS per million inhabitants	1011	989	997	1 017	1034

2.2 Payment facilities with bank issued cards

Nine credit institutions conclude contracts with domestic merchants to accept MasterCard cards and eight to accept Visa cards. Two banks are committed to accepting JCB and one bank to accepting Diners cards. As for American Express cards, one bank and one financial enterprise have contracted to accept them.

The chart below shows the number of merchant outlets (shops) where payments for goods and services with a card have been possible in the past five years:

Chart 7 Number of merchant outlets accepting cards by types of cards (2004–2008)



The number of shops accepting **Visa** and **MasterCard** cards had moved together for years, but last year the number of outlets accepting MasterCards (37 327) significantly exceeded the number of outlets accepting Visa cards (34 447). The growth rate for MasterCard and Visa was 27% and 17%, respectively. The underlying reasons are presumed to be merely technical¹⁰ and attributable

¹⁰ The total number of merchant outlets accepting payment cards is based on data provided by banks: each bank involved in the bank card acceptance business sends the MNB the number of shops where bank cards with various brands are accepted on the basis of the contract concluded with the given bank. If a merchant has valid acceptance contracts with two banks for the same card brand, the data appears in the total number twice. This remains the

to the activity of one bank only: after it placed the logo of the MasterCard card company as well on its cards, which had been without an international brand earlier, but had been bearing only its own brand, its contracts with the merchant outlets were also amended, and both the cards with its own brand and the ones with the MasterCard brand became accepted. Presumably, these shops had accepted MasterCards earlier as well, based on agreement with another bank. This assumption is supported by the fact that the acceptance of bank cards at this bank's merchants has been performed at POS terminals installed by another bank. With the gradual termination of parallel contracts, the numbers of merchant outlets accepting MasterCard and Visa cards will again come closer to one another.

Payment by **American Express** cards is accepted in 19 481 shops, which is 4% less than in the previous year. **JCB** cards are accepted in 15 471 shops, representing a nearly 24% increase.

The break in the issuance of **Diners Club** cards is attributable to the fact that at the end of 2006 Citibank terminated its contract for both the issuance and acceptance of these cards. This was followed by Erste Bank's becoming engaged in the Diners Club acceptance business; at the end of 2008, 96 merchants – i.e. exactly twice as many as in the previous year – accepted payments by Diners Club cards issued abroad.

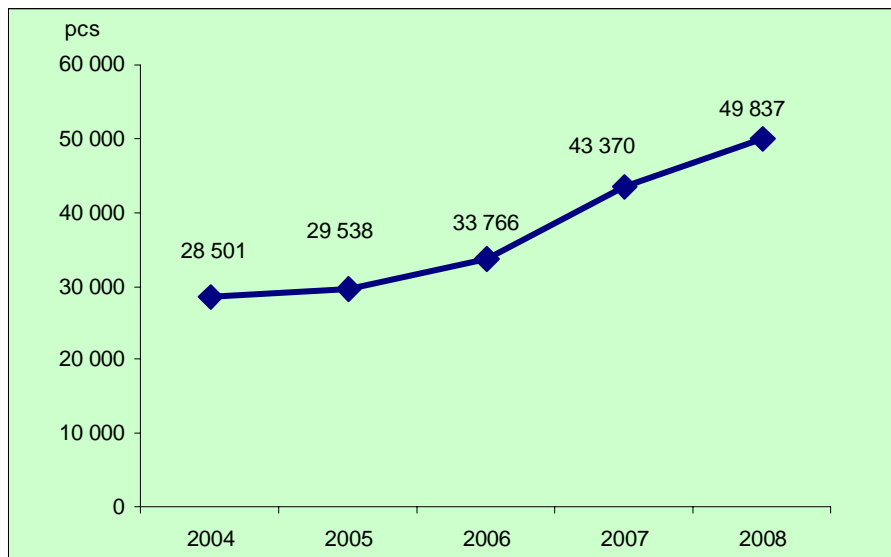
Last year another bank joined those three credit institutions which also have arrangements with **Internet merchants**. In Hungary, the total number of Internet merchants where MasterCard and Visa bank cards are accepted for payments is 963. 302 and 191 Internet merchants accept Amex cards and JCB, respectively.

Similarly, four banks are committed to offer arrangements for merchants who accept orders by **mail or by phone**; payments are accepted at 1 203 locations if made by Visa or MasterCard cards, at 523 locations if made by Amex cards, at 768 locations if made by JCB, and at 65 locations if made by Diners.

There are 49 837 **electronic POS terminals** (15% more than in the previous year) available at retail check-out counters; all operating with zero floor limit, i.e. transactions are subject to authorisation irrespective of any limit. This greatly contributes to the safe use of cards. For back-up purposes, in addition to the EFTPOS devices, 166 imprinters (mechanical POS) are also installed (their number has been declining steadily year by year). All of them operate with a zero floor limit. Payment with bank cards using imprinters is ensured in 405 retail outlets with small turnover volume.

The number of electronic POS devices operated at retail check-out counters continued to grow; the increase is 15% compared to the previous year.

situation until the merchant terminates his contract with one of the banks. They usually keep the contract in which they can agree on a more favourable commission.

Chart 8 Number of EFTPOS terminals operating at retail check-out counters (2004–2008)

The table below shows the growth in the number of EFTPOS terminals per one million inhabitants, installed at retail check-out counters, during the past five years:

Table 4 Number of EFTPOS terminals per million inhabitants (2004–2008)

	2004	2005	2006	2 007	2008
number of EFTPOS installed at merchant outlets per million inhabitants	2 817	2 925	3 351	4 318	4 967

Although Hungary lags substantially behind by international standards (see Chart 3 in the International overview section at the beginning of this analysis, which, contrary to the table above, also includes POS terminals installed at bank branches and post offices as well as non-electronic POS terminals), the number of devices ensuring electronic card acceptance per one million inhabitants increased to one and three quarters in five years.

In order to accelerate the increase in the number of merchant acceptance points, the MasterCard international card company launched a nationwide campaign (in 2008/2009) among domestic retailers. The main focus is on the segment of small and medium-sized shops, as all large chain stores already accept payment by card in Hungary.

In terms of their outcome, the proceedings launched by the Hungarian Competition Authority in January 2008, and not yet closed when this analysis was prepared, point to the same direction. Within the framework of the proceedings the Hungarian Competition Authority is examining the interchange fees applied in domestic transactions.

Interchange fees are applied in both payment and cash withdrawal transactions when the card holder uses his card at an ATM operated by a bank other than his own or at a merchant which has a contract with another bank:

- In the case of a cash withdrawal transaction, the bank which issued the card (the cardholder's bank) pays the fee to the bank which operates the ATM (acquiring bank). The issuer passes the fee on to its own cardholder customer, i.e. it is included in the ATM cash withdrawal fee.

- In payment transactions at merchants, the fee is paid by the acquiring bank (merchant's bank) to the bank which issued the card. The fee is included in the commission paid by the merchant to its own bank (merchant service fee).

Although the proceedings conducted by the Hungarian Competition Authority have not been closed yet, the fees of both MasterCard and Visa charged in domestic transactions have been modified:

- firstly, they have become more differentiated by card companies and types of cards,
- secondly, their structure has also changed: besides percentage values, fixed tariffs have also appeared.

In general, the magnitude of the fees charged for merchant payments has declined, which is expected to entail a decline in the merchant service fee as well. The latter will encourage those merchants to become acquirers that have not introduced payment by bank card in their shops because of the high fee.

3 The effect of the SEPA on the card business in Hungary

The SEPA, i.e. the Single Euro Payments Area, set the following target in the area of bank cards: cardholder customers within the SEPA¹¹ should be able to use their cards for payment and cash withdrawal as easily and comfortably and under the same conditions and security terms as in their own country.

The SEPA Cards Framework adopted on 8 March 2006 (available on the website of the Hungarian Banking Association – www.bankszovetseg.hu – among the SEPA documents) contains the rules and directives developed in order to attain the above target. Accordingly, starting from 1 January 2011 only interoperable, SEPA-conform card products will be allowed to be in circulation. In order to achieve the target, banks in individual countries may choose from four alternatives:

- that scheme becomes SEPA-conform in which the card issuing bank is a member;
- the issuer itself develops a new SEPA-conform card scheme;
- the issuer selects a SEPA-conform card scheme, and joins it, or
- it displays the brands of both the domestic and international card schemes on its cards, provided that both of them are SEPA-conform (co-branded product).

As no national card system evolved in Hungary, and mutual card acceptance is based on the MasterCard and Visa brands of the two international card schemes, which consider themselves SEPA-conform, it was obvious to choose the first alternative.

In order to achieve the objective of the 'same security terms', starting from 1 January 2011 the aforementioned framework also requires that

- in addition to the magnetic strip each card should have the EMV¹² chip, and
- all ATMs and electronic POS terminals should be able to accept chip cards as well.

¹¹ Countries in the SEPA when this analysis was prepared: Belgium, Germany, Ireland, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland.

¹² EMV: a standard developed for electronic payment transactions by EMVCo, an international consortium, containing technical specifications for the inter-operability of chip cards.

Although Hungary is not yet a member of the euro area, for which the regulations of the SEPA Card Framework are mandatory, following from their own SEPA-conformity, the two international card companies 'enforce' the completion of the chip migration within the deadline at their member banks. One of the relevant methods is the liability shift rule, which has been applied in international payment transactions for years: losses from fraud – irrespective of the circumstances of the fraud – must be borne by the party which has not equipped its card with an EMV chip and has not provided for the acceptance of chip cards at its ATMs and POS terminals.

At the end of 2008, 34% of debit cards and 16% of credit cards had an EMV chip inbedded in Hungary. 58% of ATMs and 81% of POS terminals at retail check-out counters were able to accept chip cards. A mere 3% of POS terminals installed at bank branches and post offices were EMV-compatible. With this level of migration, Hungary is in the middle range among EU countries.

In order to develop the SEPA payment methods and promote their introduction in Hungary as well as to monitor the above objectives, the Hungarian SEPA Association was established in April 2008. The Association's website contains detailed information on its activities, organisational structure, members and the conditions of joining: www.sepahungary.hu

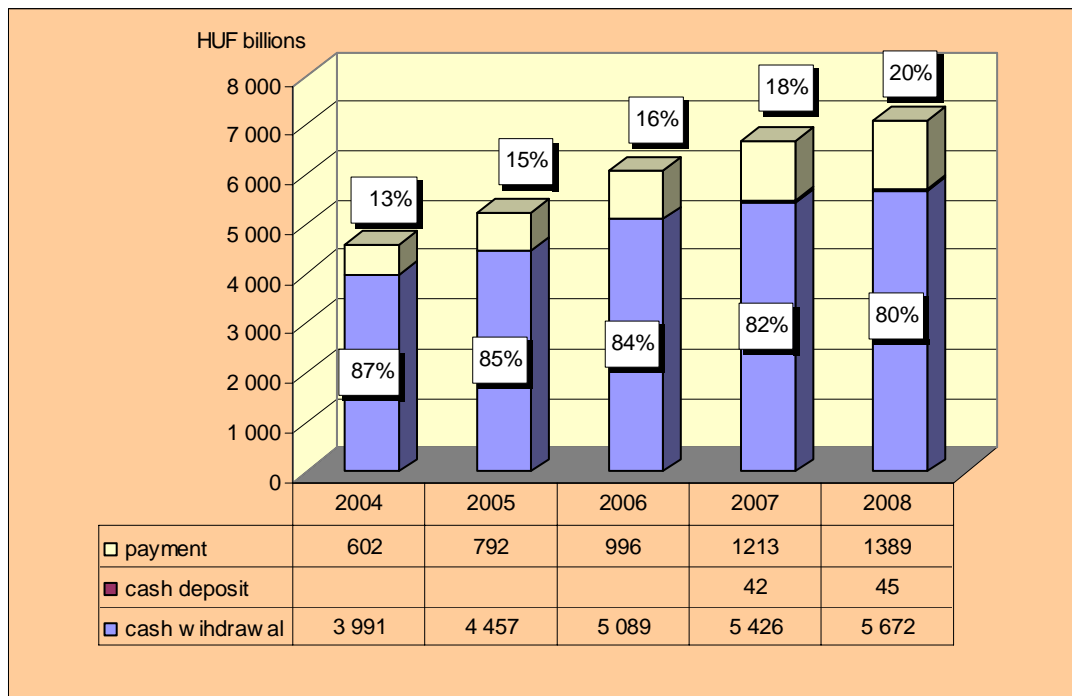
4 Transactions conducted with bank issued payment cards

4.1 Acquiring turnover

The number of domestic transactions conducted with cards comprises the aggregate of purchases made at merchants in a contractual relationship with Hungarian credit institutions and financial enterprises involved in the acquiring business, plus cash withdrawal and cash deposit transactions conducted through domestic ATMs and POS terminals at bank branches and post offices. Domestic and foreign issued cards were used for 298 million transactions in 2008, in the value of HUF 7 107 billion. The rate of growth compared to the previous year was 10% in volume and 6% in value terms.

The chart below shows the developments in the value and percentage share of card-based transactions in Hungary, including cash withdrawals and purchases, in the past five years. Since 2007 cash deposits using bank cards at ATMs and POS terminals at post offices and bank branches have also been included in the turnover. However, their value is so low – around 0.6% – that it is not displayed in the chart. Nevertheless, it is included in the table at the bottom of the chart.

Chart 9 Value of card-based transactions in Hungary (2004–2008)



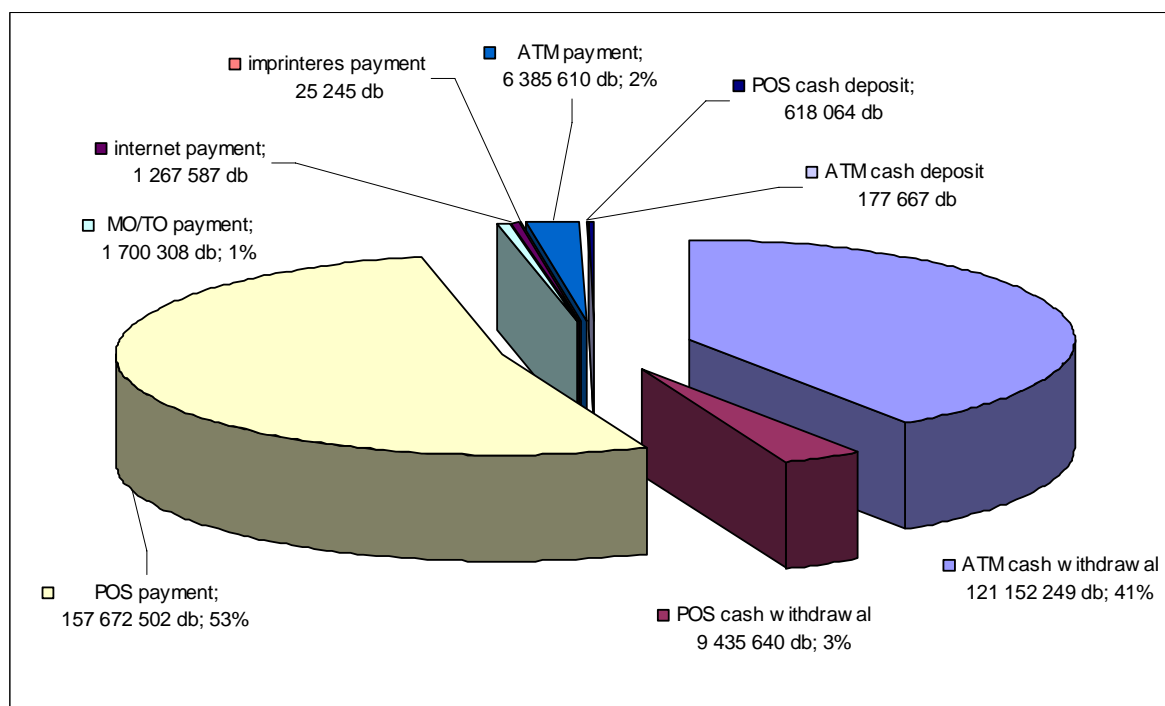
The percentage share of purchases within total turnover has been increasing during recent years, albeit at a modest pace (2%). The growth rate is much more spectacular in terms of the absolute value of purchases, although as the value of the base of comparison grows, the growth rate declines.

Table 5 Growth rate of the value of purchases

	2005	2006	2007	2008
rate of growth	32%	26%	22%	15%

The chart below shows the 298.5 million purchases, cash withdrawals and deposits made with cards of Hungarian and foreign issue, in a breakdown according to the type of acquiring equipment:

Chart 10 Distribution of the number of ATM and POS transactions in the domestic acquiring turnover (2008)



The number of purchases exceeded that of cash withdrawals for the first time in 2007, and its share continued to increase last year: 56 out of 100 transactions were payments of the countervalue of goods or services.

Narrowing down the scope of the analysis to the rate of card use by foreigners in Hungary we find that in the same acceptance environment foreigners use their cards for purchases more frequently than domestic cardholders: 66% of transactions are payments for goods and services. This is explained in large part by needs when travelling, as opposed to everyday life. The reverse is also true: Hungarian cardholders pay with their cards on 86 occasions out of 100 transactions during travels abroad. This significant difference from the domestic ratio is presumably also influenced by the fact that the card use habits of Hungarians travelling abroad are dominated by purchases in Hungary as well. On the other hand, the undeniably wider merchant acceptance network may be another explanation (see Chart 3 showing the number of POS terminals in international comparison at the beginning of the analysis).

The shift within domestic card use habits towards cash saving in a narrow sense, i.e. purchases, has been the function of a number of factors:

- the widening of the merchant acceptance network; this objective is served by the merchant campaign mentioned in Section 2.2 and the decline in interchange fees, which constitute a part of the merchant service fees;
- and the strengthening in Hungarian cardholders' confidence in this means of payment and a resulting change in payment habits. The latter is served by the increasingly stringent domestic consumer protection rules, harmonising with European Union directives, which the MNB's publication entitled 'Bankkártyák' helps to better understand (www.mnb.hu/Kiadvanyok/Penzforgalomrol_mindenkinek/Bankkartyak).

93% of cash withdrawals (131 million transactions) were conducted through 4 623 ATMs, with the rest of them performed at POS terminals at post offices and bank branches. The number of cash deposits is insignificant.

94% of purchases (167 million transactions) were payments done through 49 837 electronic POS terminals installed at retail check-out counters. The rest of the payments were through Internet POS terminals, imprinters and ATMs. Examples for the latter are: mobile phone top ups and settlements of telephone and utility bills.

The average rate of use of an ATM, including cash withdrawals, deposits and purchases, was 75 transactions a day. The same figure for EFTPOS terminals, suitable for cash withdrawals and deposits, in banks and post offices was 2.6 transactions per day. The daily average rate of use of POS terminals installed in merchant acceptance points was 9 transactions.

4.2 Domestic and foreign transactions conducted with cards issued in Hungary (issuing turnover)

Last year, Hungarian cardholders used their cards on 295 occasions in Hungary and abroad, in a value of HUF 7 029 billion.

The table below shows the increase in the value and volume of cash withdrawal and purchasing transactions conducted in Hungary and abroad with cards issued by Hungarian banks (in comparison with the preceding year), as well as the frequency of card use in the past five years.

Table 6 Turnover of cards issued in Hungary and the frequency of their use (2004–2008)

year	2004	2005	2006	2007	2008
value of transactions/HUF billion	4 769	5 220	5 984	6 555	7 029
rate of growth	13%	9%	15%	10%	7%
volume of transactions/thousand pcs	182 214	202 951	230 139	259 338	295 263
rate of growth	11%	11%	13%	13%	13%
frequency of card use/month	2,32	2,29	2,33	2,51	2,77

A comparison of the above table with the increase in the number of bank cards reveals that, while the number of cards rose by 38% in five years, the value of transactions conducted with them increased to one and a half, and the increase in the number of transaction was even higher. Following a temporary drop in 2005, the monthly rate of use of bank cards is increasing again, albeit slightly.

Looking only at the transactions conducted in Hungary with domestically issued cards within the total issuing turnover, and focusing only on cash saving in a narrow sense, i.e. purchases, the following picture is revealed:

Table 7 Value and volume of payment transactions with cards issued in Hungary and the frequency of their use (2008)

year	2004	2005	2006	2007	2008
value of transactions/HUF billion	539 439	658 281	853 413	1 029 236	1 223 165
rate of growth	25%	22%	30%	21%	19%
volume of transactions/thousand pcs	66 760	81 696	105 659	128 516	158 289
rate of growth	26%	22%	30%	22%	22%
average value of transactions	8 080	8 058	8 077	8 009	7 727
rate of growth	0%	0%	0%	-1%	-3,5%
frequency of card use/month	0,85	0,92	1,07	1,24	1,48

Over a period of five years, the number and value of purchases rose at a much faster rate than the rate of growth in the overall sector (for the latter, see Table 6), with the increase in the rate of growth being even sharper. The value and volume of purchases increased by 127% and 137%, respectively, during the past five years.

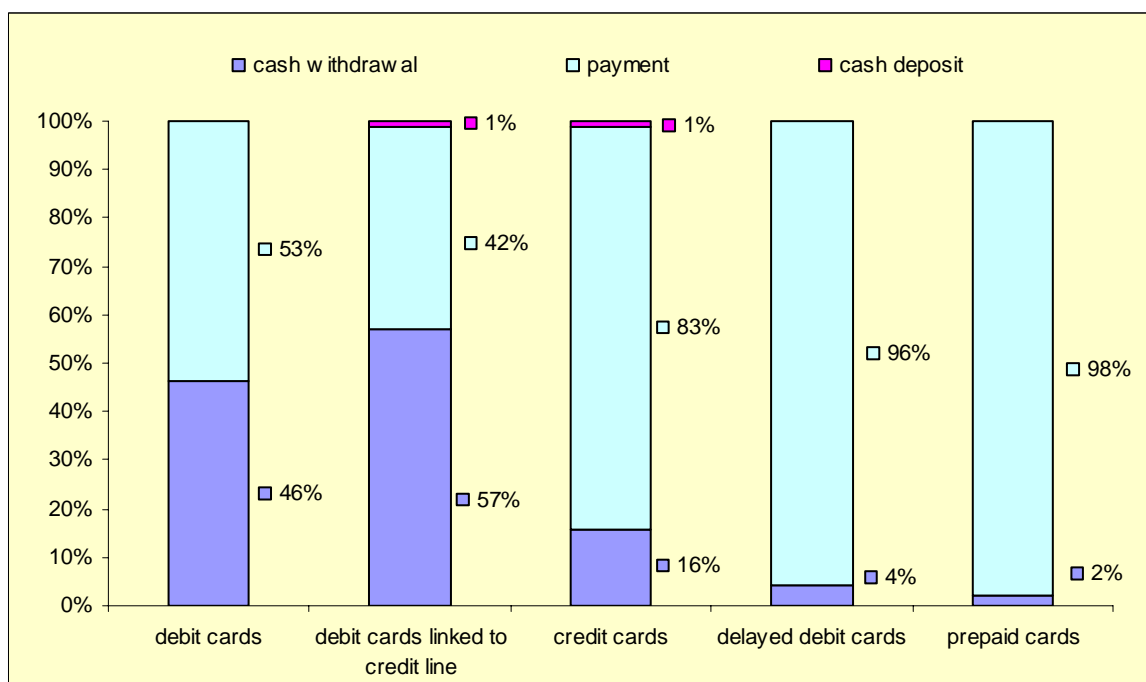
In five years, the frequency of payments increased by three quarters. In 2008, each domestically issued bank card was used for purchases on 1.48 occasions a month on average, corresponding to 18 payment transactions a year (three more than in the previous year).

The average transaction value continued to decline in 2008, showing that an increasing number of lower-value purchases is paid in a cash-saving manner, i.e. by card.

In Section 4.1 we examined the distribution of transactions conducted at domestic acceptance points (ATMs and POS terminals) with cards issued in Hungary and abroad, and we found that 56 out of 100 transactions were payments.

Now let us take a look at this ratio in the domestic and foreign turnover of domestically issued cards, according to a breakdown by types of cards:

Chart 11 Ratio of cash withdrawals, cash deposits and purchasing turnover by the number of transactions and types of cards (2008)



In the case of the two debit products the share of purchasing transactions is much lower than in the case of credit and delayed debit products. In the latter two cases the cardholder may exploit the advantages offered by the interest-free period. In the case of prepaid products, the high numbers of low-value transactions with meal cards replacing the luncheon vouchers made of paper contribute to the increase in the share of purchases.

4.3 Clearing and settlement of transactions with bank cards

The clearing and settlement of the international card turnover, i.e. of the transactions conducted abroad with cards issued in Hungary and in Hungary with cards issued abroad is performed in the systems of the international card companies (MasterCard, Visa, American Express, Diners Club, JCB).

In the case of the MasterCard and Visa brands, which constitute the basis of the domestic mutual card acceptance, the clearing and settlement of the domestic card turnover, i.e. of the transactions conducted in Hungary with cards issued in Hungary are performed in three separate schemes.

- Every day the domestic MasterCard member banks forward the turnover conducted in their own ATM and POS systems with bank cards of other domestic banks to MasterCard International. MasterCard prepares the matrix containing individual banks' net debit or credit position, and sends it to the settlement bank. Since 5 March 2009 the Magyar Nemzeti Bank has been the MasterCard settlement bank, which means that the settlement is performed in the Central Bank's Real Time Gross Settlement System (VIBER) within two hours from the receipt of the positions.
- It is also the Central Bank that performs the settlement of the bank card turnover among one another of the five banks belonging to the GBC.¹³ The matrix containing the net positions is calculated and forwarded to the MNB by Bankkártya Zrt.
- The settlement of domestic transactions conducted with Visa cards is performed by Visa International. The matrix containing individual banks' net positions is received by MKB Bank as the settlement bank. Following the receipt of the positions, based on the information received directly from Visa, all banks in a debit position launch their respective debts by transfer to the MKB through the ICS.¹⁴ In parallel with this, the MKB launches the credit to the banks in a credit position through the same route; settlement is done on the day following the launch. The MNB is negotiating with Visa International in order to include the settlement of the Visa items as well in the Central Bank's Real Time Gross Settlement System. As a result, the total domestic bank card turnover would be settled at one location, the MNB, which would, inter alia, entail the benefit that the settlement procedure would be one day shorter for the Visa cards as well.

In all the three settlement schemes, settlement is secured by a collateral system calculated on the basis of the turnover; in the event that a bank in a debit position does not have sufficient cover to pay its debt, the settlement bank extends credit for one day. Should the cover be still missing when the credit expires, the settlement bank sells the bail of the bank which cannot pay in order to ensure the smooth operation of the bank card payment system.

¹³ Citibank, UniCredit, KDB, Volksbank and Takarékbank settle their turnover among one another in the GBC framework, irrespective of whether the card bears the Visa or MasterCard brand. The Visa and MasterCard turnover conducted with banks outside the GBC framework is sent to the two international card companies.

¹⁴ ICS: Interbank Clearing System