

# Tamás Ilyés, Kristóf Takács and Lóránt Varga: Changes in the fees on payment services and the structure of payments following the introduction of the financial transaction tax\*

*Payment service providers passed the transaction tax on to their clients in several steps and to a significant degree, both in the spring, upon introduction of the tax, and in the autumn, when the rates of tax were raised. For cash withdrawals and bank transfers, the tax was typically passed on by being charged against the transaction directly. The tax was passed on directly at a much lower average rate among card purchases; however, the annual fees of payment cards were increased considerably. Moreover, in contrast to the claims made by banks in their communication, the tax was passed on in full or, for some banks, at an even greater rate in both spring and autumn. In the period between December 2012 and October 2013, total increases in payment fees exceeded the level justified by the transaction tax.*

*Payment statistics for Hungary for the first half of 2013 do not suggest a deviation from the trends of earlier years, as electronic transactions continue to slowly gain ground and the use of cash declines. Accordingly, the introduction of the transaction tax did not affect the development path of the payments structure in Hungary either positively or negatively in this period. There appeared to be no significant adjustment among corporate payments in the first half of 2013 following introduction of the transaction tax: the data reported by Hungarian banks shows no signs of relocation of payments abroad or the merger of transactions in order to reach the tax threshold. Nevertheless, on account of the increase in the transaction tax rate in August 2013, the analysis of adjustment should be repeated once the figures for the second half of 2013 become available.*

## INTRODUCTION

Hungary introduced a financial transaction tax in January 2013. There has been debate ever since regarding how and, most importantly, to what extent payment service providers pass on the tax to their clients. It is all the more difficult to answer the latter question because banks incorporated the tax into their payment fees only gradually (owing partly to the legally stipulated 60-day term for disclosures) and because the rate of the tax has changed in the meantime. As of 1 August 2013, the tax on electronic transactions was raised from 0.2 per cent to 0.3 per cent and the tax on cash withdrawals from 0.3 per cent to 0.6 per cent, with the HUF 6,000 per transaction cap also removed in the latter category.

A similar degree of interest is triggered by the question as to how clients' payment habits will change as a result of the introduction of this tax. Some believe that the tax may curb cash use, as cash withdrawals are more expensive than electronic payment transactions. Others maintain that the overall increase in the cost of payment transactions will push clients towards cash use, as a withdrawal will incur the tax once, after which the money will circulate in the economy free of tax.<sup>1</sup>

In this article, we propose to contribute to the effort of offering precise answers to the above questions. To do so, we looked at the information available at the time of writing this article and analysed the degree to which payment fees changed

\* The views expressed in this article are those of the author(s) and do not necessarily reflect the official view of the Magyar Nemzeti Bank.

<sup>1</sup> In this case, household clients will withdraw their income received on their payment accounts and use the money primarily for purchasing goods and services with cash. Once the cash reaches the corporate sector, businesses will use a larger-than-before chunk of such amounts for payments among themselves and to their employees. As a result, the cash used in retail transactions as a first step will remain in the economy through several rounds of payments, resulting in a reduction in deposits of cash and, at assuming an unchanged rate of cash withdrawal, the potential for increasing cash in circulation and thus a higher weight for cash transactions.

between the end of 2012 and October 2013, as reflected by banks' publicly available lists of terms and conditions, and also looked at the changes in turnover for different methods of payment in the first half of the year in 2013.

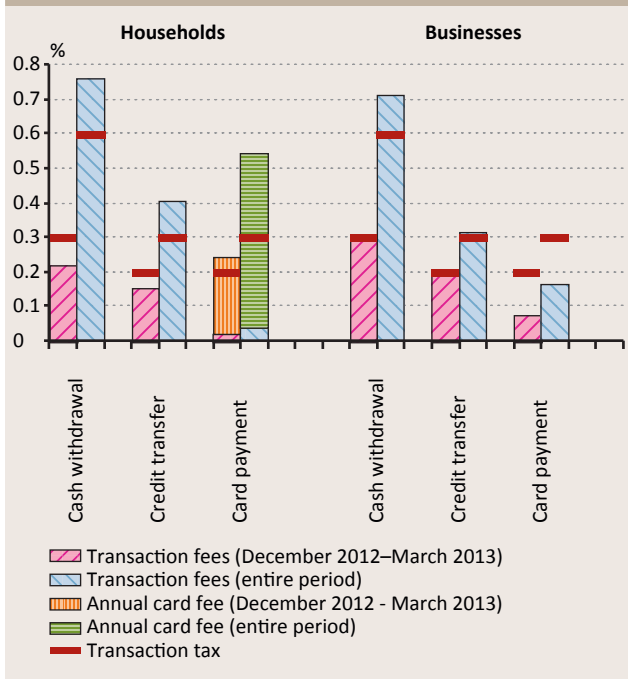
## CHANGES IN FEES ON PAYMENT SERVICES FOLLOWING THE INTRODUCTION OF THE TRANSACTION TAX

For the purpose of this analysis, we relied on the lists of terms and conditions valid in the period between December 2012 and October 2013 of the 11 Hungarian credit institutions with the largest payment turnover to assess the degree to which they passed on the transaction tax on three payment services (cash withdrawals, credit transfers, payments by payment card). In addition to the above specified period, a separate analysis was carried out focusing on the first few months following the introduction of the tax. By subdividing the period under review, we were able to examine banks' pricing responses as they unfolded and to separately analyse the impacts of the introduction of the tax and its increase in August. Nevertheless, we did not analyse the consequences of the one-off supplementary transaction tax liability stipulated by the amendment to the Act on Duties effective as of 1 August 2013. Since this will not increase the transaction-related costs for payment service providers permanently in the long run, it is assumed that they passed on this one-off expenditure to a smaller degree through minor adjustments to transaction fees. However, its impact may have been reflected in part in higher transaction charges.

In our calculations, we took the most frequently used payment services and the turnover data available from each bank to obtain the market's average transaction structure. We then converted all the fixed fees incurred on these services into value-proportionate percentages to allow comparison of the different types of fees and commissions among the banks and against the rate of the transaction tax. We differentiated between basic and premium account packages at each bank and between the related payment cards furnished to basic and premium clients. We performed a weighted aggregation of the results for the two types of products, taking into account the assumed distribution of clients between the account packages and then calculated the average of the individual data of the 11 banks, weighted by turnover figures. Two of the credit institutions under review only have a corporate business line, therefore we excluded these banks from our calculations of changes in household fees. As has been their practice in recent years, most payment service providers did not cross-charge their costs to bank card payments at the transaction level on retail services even after the introduction of the tax, which is why we also investigated the changes in annual payment

Chart 1

Changes in payment fees in the period from December 2012 to March 2013 and December 2012 to October 2013



card fees, assuming that the impact of the tax on purchase transactions would primarily translate into annual card fees.

We did not examine potential rises in monthly account management fees in this study. Since the changes in these fees can also stem from related services and government measures, these fees cannot be accurately subdivided among individual services. Consequently, our estimates of the pass-through may be lower than actual figures if a particular bank under review responded to the rise in its costs in the wake of the tax in part by raising its monthly account management fees.

We estimated the degree to which the transaction tax was passed on across the entire period under review, for which we used the December 2012 and the October 2013 rates, and also specifically for the period before the tax was raised, up to and including March 2013 (Chart 1). The change across the entire period under review is significantly higher than justified by the transaction tax and the gap is wider in the household segment than in the corporate segment, where the banks essentially did not raise fees in excess of the transaction tax. Most banks passed the tax on card purchases by raising their fixed annual card fees, with only a few examples of fees charged proportionate to turnover. In the corporate segment, fees proportionate to turnover are even charged for bank card payments, therefore we did not analyse the changes in fixed charges in this segment. This may slightly distort downward the calculated pass-through; however, the fact that companies

with high payment turnover are typically granted lower transaction fees compared to those published in the list of terms and conditions exerts the opposite effect.

It is important to emphasise that from early 2013 onwards, other factors may have also affected the changes in fees over the entire period under review, such as the regular annual inflation-indexed rise in fees and the impacts of other events and government measures. Thus, the accuracy of the estimate decreases over a longer time horizon and the calculations might suggest a somewhat higher pass-through than was actually the case. Nevertheless, the timing and the rates of the fee increases demonstrate that by October 2013 all of the banks had passed on in different ways the increase in costs stemming from the introduction of the transaction tax to their household clients, and moreover, the increase in fees was higher in some instances than the rate of the tax.

By contrast, the transaction tax on cash withdrawals and bank transfers was only partially passed on to household clients in the period up to March 2013, whereas bank card payment fees rose at a rate exceeding the tax (Chart 1). During the same period, the tax was passed on almost fully in the corporate segment. Analysing the changes for each particular bank rather than the average pass-through, we observed significant differences among the rates of the 11 largest banks.

The data for individual banks demonstrate strongly diverging adjustment processes in the first phase of introduction of the tax and in the period following the raising of the tax. An analysis of the individual figures reveals that most of the banks

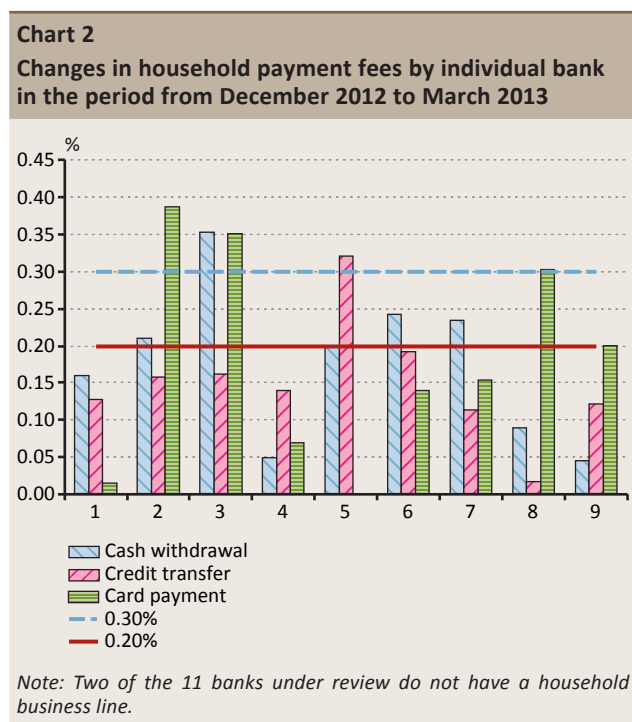
passed on the transaction tax at a below-average rate in early 2013, since the sector average was lifted by the extremely high pricing of a few banks (Chart 2). However, there were considerable differences in the methods and rates of pass-through applied by different banks.

Three banks under review – marked on the chart as numbers 2, 3 and 8 – raised their annual card fees considerably, but did not cross-charge the tax to individual transactions. Four other banks (4, 6, 7, and 9) passed on the tax proportionately to a certain extent, but, with the exception of one, they did so at a rate below the transaction tax. The remaining two banks (1, 5) practically did not change their pricing for card purchases. For credit transfers, the majority of banks raised rates by 0.1–0.15 per cent in the first half of 2013, which covered 50–75 per cent of the transaction tax. One bank (5) raised its bank transfer fees to an extremely high degree, while another (6) passed on the tax almost in full. We found only one bank (8) among the nine under review operating a household business line that essentially did not cross-charge the transaction tax in its credit transfer fees. Similarly, there was a great degree of divergence among the banks in terms of cash withdrawal fees. Most of the banks cross-charged to their clients 40–60 per cent of the tax in early 2013, with one bank (3) introducing a rise exceeding the rate of the tax and two banks (4, 9) practically not passing on the transaction tax in their cash withdrawal fees in the first half of the year.

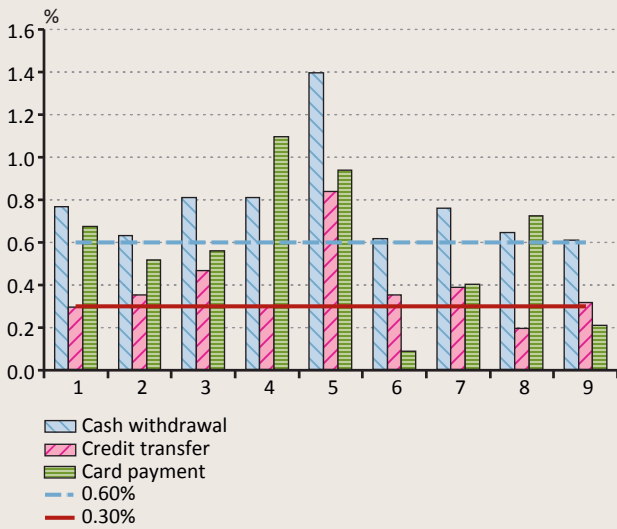
In summary, we found that the banks only partly passed on the transaction tax in their bank transfer pricing, cash withdrawals and card purchases, but that annual card fees contributed to a significant rise in payment fees already in the first half of the year.

For the entire time horizon under review, there is less variation in individual banks' figures than observed in our analysis of the rate of pass-through in the initial phase (Chart 3). In the second half of the year, the banks typically adjusted pass-through which was lower than the tax in the first phase and their total fee increases were much closer to the exact rate of the tax. This means that the banks which fully passed on the tax in the first half of the year raised their fees further to reflect the new rate of the tax, whereas the providers that had only partially cross-charged the transaction tax to their clients also passed on almost the entire tax, raising their rates steeply as the tax was increased.

Each bank under review incorporated in full the increased transaction tax in their pricing for cash withdrawals, and most banks' overall fee increases were even slightly higher than the tax. One of the banks under review (5) raised its fees substantially. Whereas the transaction tax was reflected in credit transfer pricing only in part in the first half of the year, the increase in the rate of the tax in August prompted the banks to pass on the tax in full. The high sectoral average

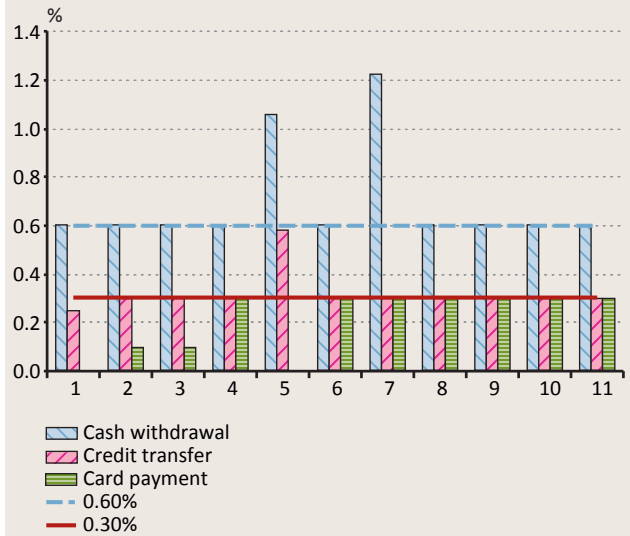


**Chart 3**  
Changes in household payment fees per bank in the period December 2012 to October 2013

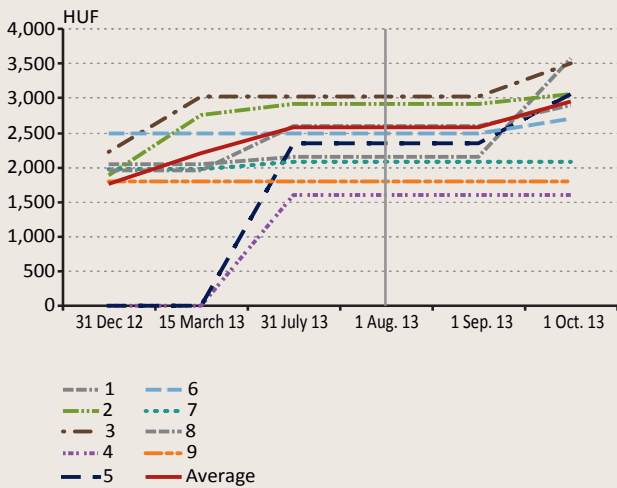


Note: Two of the 11 banks under review do not operate a household business line.

**Chart 5**  
Changes in the corporate payment fees of individual banks in the period from December 2012 to October 2013



**Chart 4**  
Changes in annual basic household debit payment card fees at individual banks in the period from 31 December 2012 to 1 October 2013



Note: The horizontal axis on the chart is not the same as a chronological axis; the chart shows fees as of the particular points in time under review. The vertical line denotes the date the increased rates of tax were introduced. Two of the 11 banks under review do not operate a household business line.

is mainly explained by increases considerably in excess of the tax by two banks (3, 5). Fundamentally, there were no shifts in pricing for card purchases, and the extreme increase in fees was caused by the dramatic rise in annual card fees. The methods of passing on fees remained unchanged across these two periods: banks that had previously cross-charged the tax to purchase transactions raised their proportionate fees higher, whereas banks that had passed on the tax via their annual card fees continued to opt for this solution.

An analysis of annual card fees reveals that the lion's share of banks raised their fees immediately after the tax was introduced (Chart 4). Not a single one of the nine banks reviewed maintained their offer for free bank cards after July 2013.<sup>2</sup> As a result, the weighted average of annual card fees grew considerably over the past year, jumping from HUF 1,700 to HUF 3,000. Banks implemented the fee increase in two steps: gradually after the introduction of the tax in the first half of the year and then in September and October, following the raising of the tax. Projected onto the average annual total of card purchase transactions, the average rate of increase of fees was 0.54 per cent, far higher than the transaction tax. This sharp hike in fees is not explicable by other factors either.<sup>3</sup>

<sup>2</sup> To analyse the annual card fees, we took into account the card fees for the years following the first one for household debit payment cards offered in the basic account packages analysed. The annual fees for payment cards in premium client account packages changed in a similar way in the period under review.

<sup>3</sup> For instance, the expected annual rate of inflation represents only a marginal proportion of the excess of the fee increase over and above the rate of the transaction tax. Similarly, the extreme increase in annual card fees cannot be attributed to the reduction in interchange fees announced in September, because (i) the relevant regulation was published in September whereas the changes in the lists of terms and conditions we analysed related to the period ending in August and (ii) the reduction of interchange fees took effect only as of 1 January 2014, therefore the banks cannot have cited this as a reason for raising their fees in the autumn of 2013.

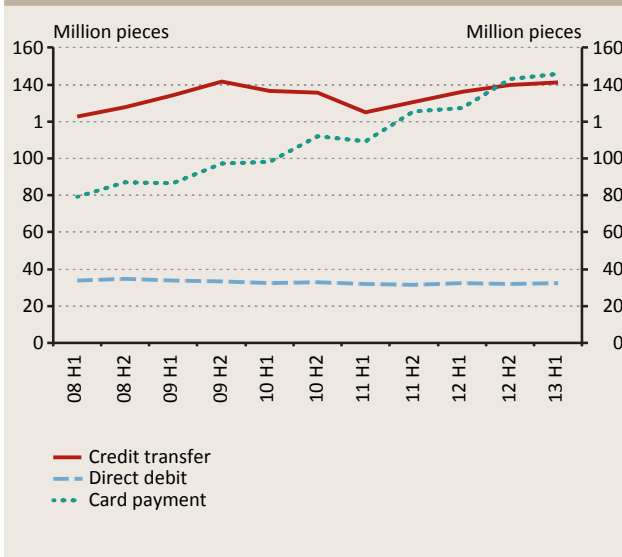
The publicly available terms and conditions reveal that fees were raised at a higher rate than the tax in the corporate segment (similarly to the household segment) in the period between December 2012 and October 2013, but only a few banks applied sharp increases (Chart 5). Six of the 11 banks under review (4, 6, 8, 9, 10, 11) passed the tax directly on in full to the affected transactions. The remaining five banks (1, 2, 3, 5, 7) changed their fees to varying degrees. Two banks (2, 3) passed the tax only partly on to bank card purchases. One bank (7) raised the fees on every item by the rate of the tax and introduced also a fee on card purchases that changed in proportion to value, but increased its ATM cash withdrawal charges by three times the rate of the tax. Two banks (1, 5) did not pass the tax on to card purchases, but did so with all other items. Moreover, the latter bank raised every other item at a rate well above the tax. Our finding overall is that, with a few exceptions, banks passed on the full cost of the tax in the corporate segment as well, and in some instances they increased their fees at an even greater rate.

When examining corporate terms and conditions, it should be noted that corporate clients with high turnover are usually eligible for discounted payment service charges compared to the rates specified in publicly available terms and conditions, and this segment is also assumed to feature a greater degree of cross-pricing.

## CHANGES IN PAYMENT TRANSACTIONS IN THE FIRST HALF OF 2013<sup>4</sup>

Prior to the introduction of the transaction tax, payment market participants had discussed in the press and different fora the assumed impact of the tax on Hungarian payment transactions and on the payment habits of economic agents. Regarding the projected change in household client payment habits, both a fall and a rise in the use of electronic payments were likely scenarios, depending on which factor – the overall increase in payment charges or the higher tax on cash withdrawals – was deemed more significant. A decrease in electronic transactions was generally predicted in the corporate segment, stemming in part from the relocation of certain transactions abroad (primarily foreign currency transactions) and from a trend of merging transactions to reach the tax threshold. In the next part of our article, we look at the changes in the key attributes of payments in Hungary in the first half of 2013 in the light of the above assumptions. In general, the figures from the first half of the year suggest neither adjustment by either household or corporate clientele

**Chart 6**  
Changes in turnover in the main electronic payment methods



to the higher payment charges nor any resulting changes to the structure of payments (Chart 6).<sup>5</sup> It is important to emphasise, however, that the gradual passing on of costs and the increase in tax rates in August may have triggered a greater degree of adjustment in the second half of 2013, or may do so in the future, therefore it may be worthwhile to analyse the figures for the next six-monthly periods once they are available.

### Household payments

Prior to the introduction of the transaction tax and in early 2013, two contradictory forecasts emerged regarding the impact of the tax on the payment habits of household clients. One assumption was that the higher tax rate on cash withdrawals and the resulting elevated cost of these transactions would boost electronic payments compared to the previous trend, along with a fall in total cash withdrawals. By contrast, the other assumption predicted that the overall increase in payment transaction costs would spur cash holding as economic agents' preference shifted to cash for the payments made to them. As a result, less cash would be channelled back into the banking system than before, i.e. net cash withdrawal would grow. In such a scenario, the increase in currency in circulation and cash transaction totals reduces electronic payment totals. However, payment figures from the first half of the year demonstrate that neither household client payment habits nor the totals in the various payment methods changed compared to earlier trends.

<sup>4</sup> We used figures available as of 30 September 2013 to analyse the changes in payment transactions.

<sup>5</sup> This analysis focuses primarily on the changes in the turnover figures in the main payment methods. The detailed turnover and infrastructural figures are available in the Payment Table Sets regularly published on the MNB website.

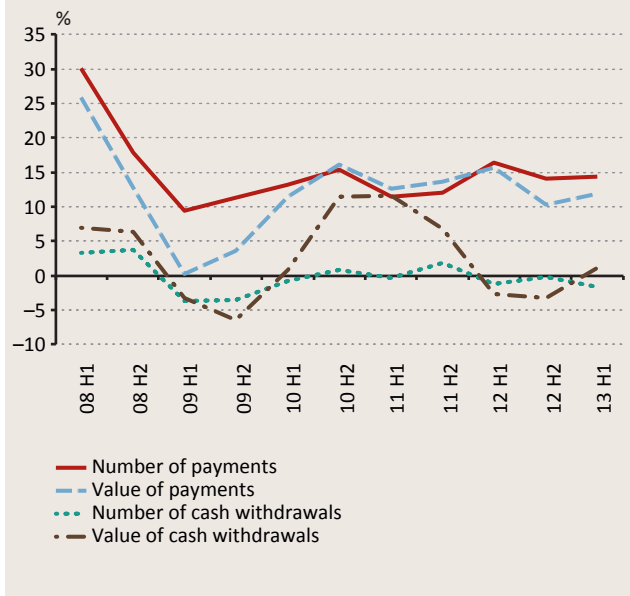
As cash withdrawals are subject to cyclicity, similarly to card purchases, with turnover rising in the second half of the year, a year-on-year comparison of payment totals is justified. The number of cash withdrawal transactions declined by 1.7 per cent from H1 2012 to H1 2013, but their total value increased by 1.2 per cent. In the first half of 2012, the number of transactions also decreased slowly, but at that point in time their total value was also lower in year-on-year terms. The average value of cash withdrawals with payment cards issued in Hungary was in excess of HUF 49,000 in the first half of 2013, HUF 1,400 more than in the same period in 2012. The number of cash withdrawals from ATMs in Hungary, which represent the bulk of transactions, decreased by 1.3 per cent in the first half of 2013, while their value grew by 6.1 per cent compared to the first half of 2012. A comparison of the figures to the changes in turnover observed in the first half of 2012 reveals that the number of transactions fell at the same rate in the first half of 2013, while the value of transactions grew to a greater degree. A greater fall can be observed in cash withdrawals at domestic branches using payment cards for identification. This category tends to comprise higher-value cash withdrawals and the number of these transactions decreased by 8.1 per cent and their value fell by 20.9 per cent in the first half of 2013 compared to the first half of 2012. This does not represent a major deviation from the relevant trends in the first half of 2012, when transaction numbers contracted by half this rate, but values fell by a similar degree.

Figures on cash withdrawals with cards tend to yield highly volatile, seasonally fluctuating time series. As for ATM cash withdrawals, there is an increasing trend of using domestic cards in Hungary as well as abroad. The value of cash withdrawals abroad is increasing above the linear trend, whereas the domestic trend is roughly linear. The value of cash withdrawals using cards in bank branches is similarly volatile, but the time series are difficult to explain with seasonal fluctuations, and the trend is typically decreasing both domestically and abroad.

There is no linear relationship between value and volume data for cash withdrawals, because the average transaction value continued to rise steadily during the period under review. If we assume linearly increasing and seasonally fluctuating average values, there is no significant relationship between the two variables. There was no breakpoint in recent years in either of the variables observed, and the decreases and increases are most likely attributable to accidental changes and the high degree of volatility.

Purchases with Hungarian-issued payment cards have been characterised by seasonality in recent years: stronger increases in turnover in the second half of the year were followed by stagnation or only a moderate increase in the first half of the

**Chart 7**  
Year-on-year changes in payment card transactions



subsequent year, therefore it is advisable to compare the six-monthly figures to the same period in the preceding year. Accordingly, the number of transactions grew by 14.4 per cent and their value by 12 per cent compared to the first half of 2012. This is in line with, and does not deviate considerably from, developments observed in recent years. While the number of domestic purchases in retail stores increased by 12.5 per cent, the number of such transactions abroad grew by 34.3 per cent. Developments in online and other remote card purchases are worth noting: their number grew by 30.7 per cent and their value by 29.5 per cent. Notably, the growth figures in 2012 were very similar for purchases abroad and online.

The time series of card purchases fall into two categories. The value of conventional, in-store transactions shows an upward trend domestically as well as abroad, subject to high seasonal fluctuations. Online purchases also show an upward trend, but with no significant seasonal fluctuation.

The data observed demonstrates that domestic in-store purchases follow a linear trend, whereas purchases abroad are rising dynamically, following an exponential trend. There is an opposing trend among online purchases: growth in domestic purchases is steadily high and an exponential trend is a good approximation for it, whereas foreign purchases only show a linear trend. Both of these trends were uninterrupted in the first half of 2013.

Average transaction values for merchants and online purchases abroad continued to fall in recent years, meaning

that customers are now using their bank cards for smaller purchases as well; domestic online purchases are an exception to this trend.

No major change compared to previous periods has emerged among direct debits, the electronic payment method used for utility and other bill payments. Transaction numbers were only 0.3 per cent higher than in the first half of 2012, but the transaction value grew by 2.7 per cent. This means that payments changed in terms of both quantity and value at a rate similar to the preceding periods.

In summary, the changes in these figures reveal that the number and the value of electronic transactions has continued to rise and the number of cash withdrawals has fallen (Chart 7). Accordingly, there has been a continuation of the favourable trends of increasing efficiency in payments in Hungary, as the dynamics of these developments did not deviate in the first half of 2013 from the trends observed in recent years and there is no break in the trend, i.e. the introduction of the transaction tax did not have an observable impact on the payment habits of households in this period.

### Corporate payments

The expectations voiced in the past regarding the consequences of the transaction tax on corporate payments presumed that the increase in payment charges would result in the relocation abroad of some of the transactions, primarily foreign currency transactions, as well as the merging of transactions in order to reach the HUF 6,000 transaction tax threshold. However, the analysis of the payment methods typically used by corporate clients does not reveal major deviations from earlier trends in this segment either, and thus the earlier expectations regarding changing payment habits have not materialised for the time being.

In the first half of 2013, the number of foreign currency credit transfers was 3.8 per cent higher than in the first half of 2012, but their value decreased by 5.7 per cent. Had foreign currency transactions been relocated abroad to a significant degree, the transaction value would have fallen more sharply and the number of transactions would have also contracted. The average value of transactions decreased by close to HUF 2 million compared to the first half of 2012, which means that the data available also do not suggest mergers of transactions.

The number of HUF credit transfers increased by 3.3 per cent and their value by 0.9 per cent compared to the first half of the previous year. The average value of credit transfers decreased year-on-year by nearly HUF 54,000 to HUF 2.3 million in the first half of 2013. Had a significant proportion of transactions been merged, the number of transactions would

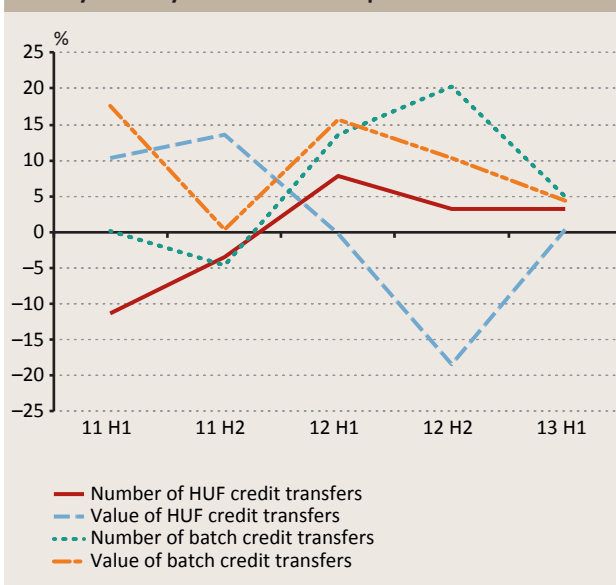
have presumably fallen given the nearly unchanged transfer total and the average transaction values would have risen. But turnover figures from the first half of the year do not suggest that corporate clients merged a significant volume of their credit transfers.

The number of credit transfers initiated in batch increased by 5 per cent over the same period in the previous year, and total value grew by 4.4 per cent. This meant that batch credit transfer turnover increased at a rate lower than previously, but the turnover figures today do not suggest a major rechanneling of salaries or other regular incomes to cash from the electronic payment methods. The average value of batch credit transfer transactions was nearly HUF 152,000, which is not significantly different from the relevant figure in the first half of 2012. We can infer trends from the aggregated domestic and intrabank batch credit transfer and direct debit figures only to a limited extent. The value of direct debits and credit transfers initiated in batch has grown constantly over recent years, whereas this value stagnated and was highly volatile in intrabank turnover. No breakpoint can be observed in these trends.

The number of cash withdrawals from bank branches without a bank card, which are mostly corporate clients transactions, decreased by 12.4 per cent year-on-year in the first half of 2013, while their value fell by 20.5 per cent. The average value of transactions was nearly HUF 570,000 in the first half of 2013, nearly HUF 58,000 less than in the second half of 2012. The number of transactions fell at a higher rate than before, but their value contracted year-on-year in 2013 at the same rate as in 2012. These figures indicate that there were no mass mergers of corporate cash withdrawals in the first half of 2013

Chart 8

HUF credit transfers and credit transfers initiated in batch year-on-year turnover comparison



in order to minimise the amount of tax. The analysis of the payment methods most frequently used by corporate clients reveals that, similarly to households, corporate clients did not change their payment habits to any significant extent in the first half of 2013, i.e. no adaptation to higher payment costs can be observed among corporate clients (Chart 8). The figures from the first half of the year do not allow us to infer the merger of transactions or their relocation abroad.

In the above analysis, we formulated our conclusions based on the payment figures for the first half of 2013 directly available. It should be noted, however, that the MNB's data on changes in the currency in circulation suggest that currency in circulation has increased in the second half of 2013 at a greater rate than in previous years.<sup>6</sup> This trend may have been influenced by the composite effects of a number of factors, and further analysis will be required to identify the exact underlying causes. Nevertheless, the contribution of a greater degree of adaptation in the second half of the year to the higher payment costs in the wake of the introduction of the transaction tax should not be excluded as a possible driver. The analysis of payment statistics for the second half of the year, expected in spring of 2014, may provide an accurate response to this question.

## CONCLUSIONS

The analysis of the terms and conditions of Hungarian banks reveals that by 2013 they had passed the transaction tax on to clients in a number of increments and practically in full. Payment service providers hiked annual bank card fees substantially, by almost double the size of the transaction tax. According to advance forecasts, the rising payment costs may have had a major impact on payments in Hungary even over the short term. Given the structure of the tax and the nature of its pass-through, there were contradictory expectations regarding household payment habits either for a decline in cash use or, on the contrary, an increase in currency in circulation and cash holding. In corporate payments, the

possibility was suggested of merging some transactions to reach the tax threshold and the relocation abroad of mainly foreign currency transactions.

Nevertheless, our analysis of Hungarian payment figures in the first half of the year reveals that, for the time being, neither of the client segments under review has changed its payment habits, i.e. there are no signs of rapid adjustment by economic agents to the increased payment charges. Earlier trends in payment method usage continued and the impact of the introduction of the tax on these trends cannot be identified. The absence of quick adjustment to higher payment charges may stem from the fact that clients first encountered the new terms and conditions for payment services presumably only in the spring of 2013. Once tax rates were raised in August, payment terms and conditions were amended again and other regulatory changes suggest that further price modifications can be expected for payment services in the first half of 2014, which is why we will continue to monitor the changes in pricing and the impacts of the same on payments.

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<sup>6</sup> Monetary Statistics (Table 1/b):

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