

## TRANSITION BANKING MAY BE HIGHLY PROFITABLE: ESTONIAN CASE

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### Abstract

Our study examines developments in the profitability, profit sources and success strategies of Estonian banks. Despite the unstable economic and legal environment, banking in transition country has been much more profitable than in developed countries. But at the same time effectiveness of banking in a transition economy is volatile and bank failures risk is high. We also prove that new electronic channels provide banks with more cost saving than traditional channels and explain what the difference in the cost structure is.

In the first part we study changes in profit sources and strategies in several periods of transition in Estonian banking industry. In the second part of the article we study the profitability of e-banking services based on the example of Estonian biggest bank, Hansapank. We explore the implementation techniques of activity-based-costing (ABC) in banking sector in order to analyze the cost structure differences for traditional and electronic channel transactions.

In the research we find that electronic channels provide cost saving for banks and for bank clients. In the case of Hansabank, online bank payments are 12,5 times cheaper and offline bank payments are 30 times cheaper than traditional transactions concluded in branch network.

**Key words:** banking sector development, profitability of banks, electronic banking, activity based costing.

### Introduction

While reconstructing their banking systems to adjust them to a market economy, some transition countries like Estonia have preferred commercial banking. The main purpose of commercial banks' shareholders and executive management is to increase the value of the company, which requires both a quick rise in the capacity of financial services and a high level of profitability of the business activities.

In the transition economies, introduction of the market economy takes place simultaneously with structural and legal reforms. Therefore, in the period of reforms, the economy undergoes one or more periods of crisis (economic recession, instability of monetary system) in which development rates and volatility are high. For this reason, bank shareholders' profit expectations are significantly more short-term than in countries with stable market economies.

In spite of the large amount of empirical literature devoted to banking efficiency on all continents (Molyneux *et al.*, 1996; Berger and Humphrey, 1997; Dietsch and Lozano-Vivas, 2000; Goddard *et al.*, 2001), there are only a few studies that measure banking efficiency in transition economies. A likely reason for this deficit may be the relative lack of banking data in these countries, with long periods of data missing.

The most extensively studied developing countries are in Asia, where markets of Thailand (Leightner and Knox Lovell, 1998), Korea (Gilbert and Wilson, 1998), Singapore (Rezvanian and Mehdian, 2002), Pakistan (Hardy and Bonaccorsi di Patti, 2001), India (Bhattacharyya *et al.*, 1997), Turkey (Isik and Hassan, 2002) were analyzed. Some studies investigate a number of countries in Central and Eastern Europe and the Commonwealth of Independent States (Grigorian and Manole, 2002; Tomova *et al.*, 2003; Uiboupin, 2005), Hungary (Hasan and Marton, 2003), Croatia (Kraft and Tirtiroglu, 1998), Poland (Opiela, 2001; Havrylchyk, 2003), and Ukraine (Mertens and Urga, 2001) and Baltics (Hansson and Tombak, 1996) were studied.

One of new profit opportunities can be electronic banking. Electronic banking (e-banking) is the newest delivery channel for banking services. The definition of e-banking varies amongst researchers partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Mols, 1998; Sathye, 1999). Burr (1996), for example, describes it as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Electronic banking can also be defined as a variety of following platforms: (a) Internet banking (or online banking), (b) telephone banking, (c) TV-based banking, (d) mobile phone banking, and (e) PC banking (or offline banking).

For the last few years European banks have spent billions of euros into new electronic channels. But after some years of excitement banks long-awaited sky-rocketing profits from this area didn't occur. Cap Ernst & Young, a consultancy company, reckons that the Internet cut British banks' costs by just 0.1% year 1999 when they were, somewhat heroically, hoping for a 25% cut (Hollow..., 2000).

It is complicated to analyze the reasons for undelivered expectation, as banks face difficulty when calculating the cost for e-channel transaction. According to Forrester Research (June 2003), only 13 out of 25 European banks were able to measure the fully allocated costs per different distribution channel. But based on 13 banks, the research showed that on average online transactions cost 14 times less than branch tellers'. Most of these banks had applied activity-based costing (ABC) to map the evolution of channel costs over time.

The same trends can be seen in Estonia – almost all banks have invested in expanding and improving the IT systems and a number of new e-banking services have been developed. All major banks have declared e-business as one of the core strategies for the future developments. Until recent time, most of the pricing decisions for e-bank services were made based on a gut feeling as current financial management information systems didn't support such analysis.

In the article authors show the results of implementation of Activity Based Costing (ABC) in banking sector on example of an Estonian bank. As a result analysis of cost structure for traditional and electronic channel transactions is presented.

In the first part of our article we study changes in profit sources and strategies in several periods of transition in Estonian banking industry.

In the second part we examine the profitability of e-banking services based on the example of Estonian biggest commercial bank – Hansapank.

## **Development of the banking and its profitability in Estonia**

In addition to the transition to market economy, Estonia had one more aim in reconstructing its banking system — to restore financial independence, and the result was that Estonia became a pioneer in the reformation of banking system in the USSR. In September 1988, the first commercial bank license in the Soviet Union, got Tartu Kommertspank. Shareholders of the bank were mostly state-owned enterprises all over Estonia.

The hyperinflation in 1991 had reduced the real value of the obligatory initial capital of the commercial banks by several times. Now businessmen who had made money with intermediation of government property had an opportunity to establish their own banks to pump supplementary resources into their business through their banks. In Estonia, a boom in establishing banks was observed in the first half of 1992 when 21 new commercial banks were issued a license. Before the currency reform, the number of banks was the biggest, but the total number of commercial banks at the end of 1992 was 41. However, the banks were relatively small. The banks were also small with respect to the number of shareholders: at the end of 1992 11 banks had less than 10 shareholders and among them there were two banks that had only one shareholder.

During the central-planning system, the banking sector was doing little more than allocating funds to the various sectors and companies according to the authorities' decisions. Conse-

quently, at the time the transformation process began, the banking sector was characterized by parameters such as:

- ◆ Competition practically zero;
- ◆ Lack of customer orientation;
- ◆ Low degree of management know-how and insufficient technical equipment;
- ◆ And last, but by no means least: a very poorly developed loan-culture and risk-awareness (Stepic, 2002).

Most of the transition countries have preferred commercial banking while reconstructing their banking systems to adjust them to a market economy. The main purpose of commercial banks shareholders and executive management is to increase the value of the company, which requires both a quick rise in the capacity of financial services and a high level of efficiency of the business activities. But in transition economies the macroeconomic risks level are significantly higher than in countries with advanced market economies.

Banking is one of the most profitable business activities also in euro area. The average sector profit margin levels for the period of 1991-2001 for eight euro area countries demonstrate that financial intermediation is one of the most profitable sectors. Among 21 sectors financial intermediation is on the fourth position with its over 20% level. Only three non-manufacturing sectors (real estate, post and telecommunication, and electricity, gas and water supply) have higher profit margins (Measuring ..., 2004).

The aim of maximizing profits forces the banks to look for profit opportunities also in the conditions of economic crisis and instability of currencies. As giving loans is an especially risky activity in times of economic crisis, given the privatisation process and large bankruptcy risks, the banks found in 1992, before the currency reform, that even more profitable than lending is speculation with currency. In the first half-year of 1992, income from currency exchange (exchange rate margins and exchange fees) accounted for 91% of total income of Estonian commercial banks. Already for the second half of the year 1992 banks had corrected their strategy for earning profits. The share of currency exchange fees increased significantly in comparison with exchange rate margins. The reason for this was the currency reform that started on June 20, 1992, which established as the legal tender the Estonian kroon with a fixed exchange rate the Deutschmark (8:1). Also, thanks to the fixed exchange rate, inflation quickly started to decline.

However, income and turnover from currency exchange declined significantly after the currency reform. This had to be compensated and the solution was found in activating the credit activities. The share of interest income formed already 47,5% of total income in the second half of the year 1992. As the economic crisis had reached its worst point in 1992, this was a very risky activity. Therefore, the interest rate was high. For some banks, the turn from currency exchange business to granting loans was too abrupt; they become illiquid and left the market.

Also the cause of the 1998 Russian economic and financial crisis is considered by some researchers to be the negative attitude of banks toward lending to industrial corporations and their continuing focus on foreign currency dealings and securities investment (Satoshi, 2001). The interest rate on loans has continued to decline also in the following years (except the setback in 1998), because the inflation rate has also decreased and the competition among banks has forced them to concentrate more on the growth of their loan portfolios rather than maximizing the interest rates.

Whereas in 1992, interest income accounted for 30.4% of commercial banks' operating income, then from that time onwards their share in income has increased, being as a rule above 60%.

Most of Estonian banks had quite ambitious growth strategies. Growth was achieved by introducing new ideas, by cheaper service or by cheaply acquiring competitors during banking crises. Already the researchers analysing the Finnish banking crisis at the beginning of 1990's discovered the fact that a banking sector that grows faster than the overall economy will in the long run end up in a banking crisis. The economists analysing the Japanese banking crisis came up with two reasons for this: deregulation and excess power of the banking sector. These were the reasons why they did not pay very much attention on risk management and regulative measures (Kanaya

and Woo, 2001). Apparently, this was also the case in Estonia: rapid growth in several years led to excess capacity of banking and also to underestimation of risk management in 1997. The banking crisis in 1998 brought the banking back to the ground from the clouds (Table 1).

Table 1

## Development of banking in Estonia

Year	Number of operating banks*	Totally by the end of the year, bill EEK			Banks assets, % of GDP	Loan portfolio, % of the assets
		assets	loan portfolio	profit		
1992	41	5,2	2,1	0,09	36,4	40,4
1993	22	6,4	2,7	0,25	29,4	42,9
1994	24	10,4	4,5	0,04	33,8	43,6
...						
1997	11	40,6	21,3	0,96	60,5	52,5
1998	6	41,0	23,9	-0,50	55,8	58,3
...						
2002	7	81,7	50,0	1,15	76,9	61,2
2003	7	98,8	69,2	1,32	84,9	70,0
2004	9	133,6	92,6	2,46	94,4	69,3

\* incl. branches of foreign banks

Source: Eesti Pank.

In the beginning of 1997 the index of Tallinn Stock Exchange (TALSE) was equal to 160 points and it rose rapidly, reaching 493 points by the end of August 1997. The share prices of banking sector reached already 200-300 kroons (nominal price was 10 kroons). It is clear that the banks were pushing the market as the five banks that were listed in the main list gave 60% of the market capitalization. The inflated securities portfolios guaranteed the banks high growth rates in balance sheet totals as well as profits.

The affiliated undertakings of banks were to a quite large extent securities and real estate intermediation-oriented. The stock market crash influenced significantly the revenues of above-mentioned institutions, due to which the revenue of financial investments in 1998 was negative. The banks had holdings in many other fields as well: trading, hotels, transport, and production. But these also faced problems following the Russian economic and monetary crisis. The developments described above suggest that the banks rushed into securities market and entrepreneurial activities with high hopes for the future positive developments. However, the year 1998 was groundbreaking: the banks merged or were merged and got strategic investors who paid already sufficient attention to risk management and guaranteed adequate speed and level for the development of banking systems.

The number of banks in Estonia started to change in last year after joining Estonia to the European Union. Before it there was only Estonian Branch of Nordea Bank from Scandinavia. Now branches opened also Parex Banka from Latvia and Bayerische Hypo- und Vereinsbank from Germany. At the end of 2004, near 90% of the share capital of banks belonged to foreign owners. However the banking market in Estonia is very concentrated. The biggest bank in Estonia, Hansapank share by assets was at the end of 2004 48%. The second biggest was Eesti Ühispank – 31%.

After 1998, the profits in Estonian banking sector have stabilized (Table 2). However the profitability ratios are high, the volatility is still big. And other tendency. Banks try to compensate decrease of the spread and net interest margin through higher profitability of undertakings. It gives for banks in 2004 rise in ROE. Higher profitability ratios in Estonia are the main reason why European Union banks have the trust to open branch offices in Estonia.

Table 2

## Key efficiency ratios in Estonian banking (%)

	Solo banks					Consolidated banking groups 2004	Euro area banks 2004	
	2000	2001	2002	2003	2004		domestic banks	foreign banks
Cost to income ratio	72,5	52,4	61,6	53,0	45,8	49,7	63,7	61,1
Return on assets	1,18	2,66	1,55	1,70	2,14	2,2	0,42	0,49
Return on equity	8,0	20,7	14,7	14,1	20,0	22,8	10,54	10,46
Net interest margin	4,3	3,9	3,6	2,9	2,4	3,4	...	...
Spread	4,1	3,7	3,4	2,8	2,3	3,3	...	...

Source: Eesti Pank. Financial Stability Review, 2005: 40-41; ECB. Financial Stability Review, 2005: 524.

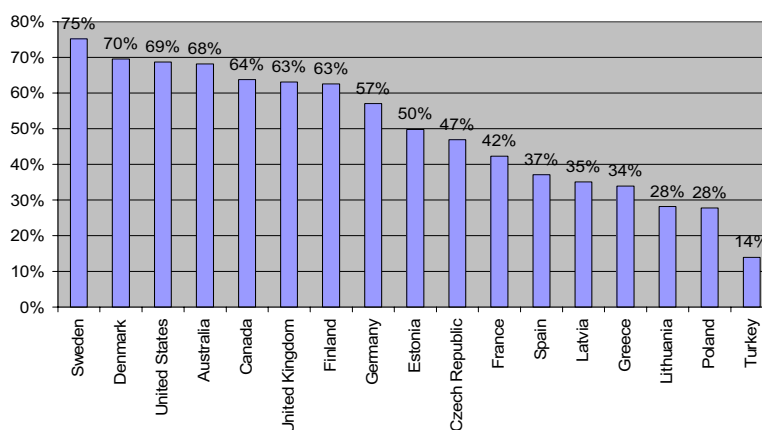
For the last decade the new wave in Estonian banking profitability became cost effectiveness. Banks began to bring to the market new innovations in order to make distribution channels more cost efficient as well as to create innovator image amongst existing and potential clients.

## Development of the electronic banking and its profitability in Estonia

### *The role of e-channels in Estonian banking sector*

The history of Estonian electronic banking is only some years younger than the history of Estonian commercial banking in general. The pioneers of electronic banking in Estonia were small banks that have since ceased to exist. The first automated teller machine (ATM) was brought to Estonia in 1994. By 1996 ten commercial banks active at that time had issued a total of 200,000 bank cards. The current bigger players went along with innovations in 1995 when Hansabank and Ühispank set up their first ATM-s. After that, the number of Internet bank users has increased at a 10% monthly growth rate. Hansabank started its first offline electronic banking solution Telehansa in 1993. The first Internet banking services in Estonia were introduced in 1996.

Estonia in general is very suitable for electronic banking applications due to the relatively high penetration of personal computers and Internet access. The percentage of Internet uses was 55% of Estonian population aged 15-74 in Q3 2005 (Emor, 2006). Compared with other countries, Internet penetration among Estonians is higher than in other East-European countries (Figure 1).



Source: Internet World stats, 2006.

Fig. 1. Internet penetration 3Q 2005<sup>1</sup> (% of population, selection of countries)

<sup>1</sup> Internet Users are defined as anyone currently in capacity to use the Internet.

Internet bank services are used actively and most of the payment transactions are concluded via e-channels. On average, 95% of total volume of all payments are concluded via e-bank facilities – via online and offline Internet banks and other electronic channels. Figure 2 shows that in Hansabank the percentage of transactions done in the Internet has been continuously growing and in the last years e-channels became the main transaction channels. The part of branch network in payments area decreased from 27% in 1999 to 5% in 2002.

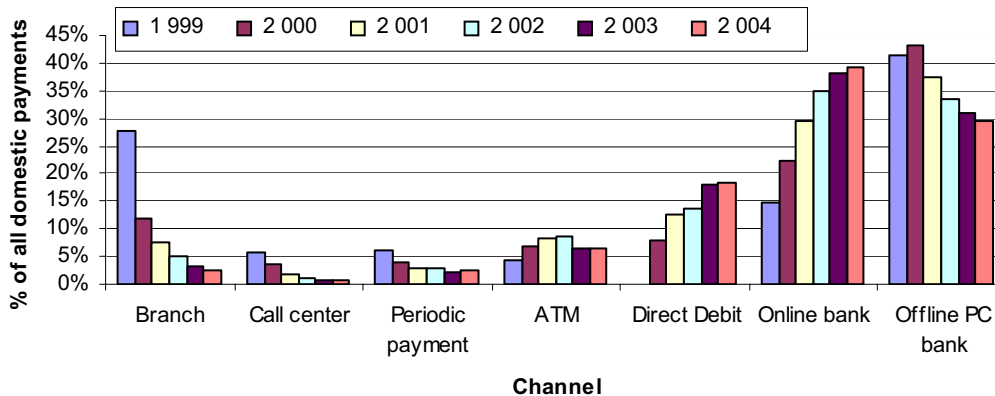


Fig. 2. Usage dynamics of different transaction channels in Hansabank from 1999 to 2004 ( % of total transactions number)<sup>1</sup>

Most of the consumers who start banking online do it because they need to pay bills frequently and they would like to do it with minimum effort. Besides that people use Internet bank to keep eye on their money matters, view account balance and check receiving payments from other parties.

#### *Cost components of e-banking transactions based on ABC methodology in banking sector*

As defined in a banking area, Activity Based Costing (ABC) is a system for the calculation of the cost of products and services, while the cost components arise from activities related to the product development, administration, and sale (Luštsík, 2003). ABC is a new dimension of cost analysis that was first presented in a formal way by professor Robert Kaplan, Robin Cooper and Thomas Johnson in Harvard in 1987 (Agbejule, 2000). It has since been developed in many organizations, mainly in manufacturing industries.

As bank services are much more complex than products of a manufacturing company, a different approach was needed for definition of cost objects. Cost of a bank product, for example payment, varies mainly according to the channel where it is concluded: we can assume major differences in branch and online bank channel cost structure for a single payment. Also it is important, what kind of client uses a product: for example, all transactions of students are more expensive for a bank, as a lot of marketing campaigns are made (and money spent) to attract this segment to the bank. In order to solve this complex problem, three-dimensional ABC model was introduced. These three dimensions are:

1. Bank **product** (service, transaction),
2. Product sales (transaction performance) **channel**,
3. Client **segment**.

<sup>1</sup> Based on Hansabank data, author's calculations.

In order to understand the cost structure of e-banking transactions the detailed analysis of unit cost components has to be conducted. The following transactions in e-banking and traditional channels are analyzed in this article:

1. Domestic payment in channels Branch, ATM, Online bank Hanza.net, Offline bank Telehansa, Automatic channel (direct debit).
2. Cash withdrawal in channels Branch and ATM.

#### *Cost components for Domestic payment*

Under “domestic payment” we mean bank transfer in home currency within the country. The biggest distribution channels for domestic payments are online (34%) and offline banks (33%) (Figure 3).

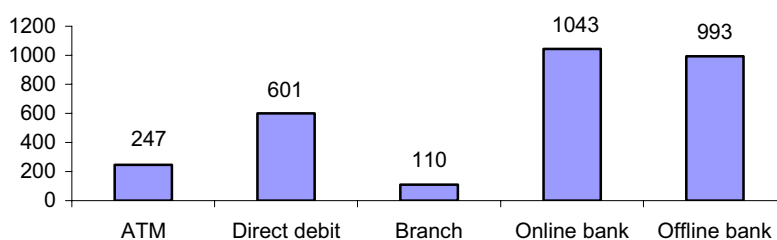


Fig. 3. No of domestic payments in different bank channels in 2005 (per month, thousands) (Hansabank data, author's calculations)

If ABC methodology applied, the expenses for the domestic payment unit cost (comparable to 100% for branch payment) can be split to the following unit cost components (see Table 3).

Under “Development” business and IT development is meant. In case of simple bank product, as domestic payment is, mostly development is performed for channels, and not for products. The highest IT development expenses are done in Online bank.

Under “Marketing” expenses we mean costs for managing client relation, as well as channels’ marketing expenses (for example online bank marketing expenses). This expense does not vary amongst different payment channels, as it is mostly connected with client segment.

Table 3

Unit cost components for domestic payment (comparable to 100% for branch payment) (Hansabank data, author's calculations)

Type of expense / Channel	ATM	Direct debit	Branch	Online bank	Offline bank
Development	0.5%	0.4%	1.1%	1.7%	0.7%
HR related	0.9%	0.1%	96.0%	1.1%	0.1%
IT operational	1.8%	0.3%	1.8%	3.5%	0.8%
Marketing	1.2%	1.2%	1.2%	1.4%	1.2%
Total	4.3%	1.8%	100.0%	7.7%	2.7%

Under “Human Resource related” expenses we mean costs that are connected with man-channels management and overall human involvement. In ATM channel this expenses are connected with ATM administration such as daily monitoring for paper and money supply. In branch there are costs for payments processing by tellers, tellers time for transaction making, branch management and personnel training. In online banking – it is expense for client support (back-office personnel and client managers, responsible for online bank clients’ support and problem solving).

Under “IT operational expenses” we mean IT related expenses for maintenance of the channel, client and product. In ATM channel these expenses are mostly ATM terminal’s fixed assets depreciation costs (67%) and communication lines maintenance (14%). In branch channel the major IT expense is “Light teller” application, which is the application for teller’s transactions. Online bank channel IT expenses consist of the following items: servers and communication lines (50%), software (14%) and storage (22%). Offline bank – Telehansa – IT operational expenses are mostly connected with internal maintenance (31%) and communications line costs (16%).

The weight of every particular cost element for domestic payment in different channels is presented in Table 4.

Table 4

The unit cost structure for domestic payment made in different channels (as % of total unit cost)  
(Hansabank data, author’s calculations)

Type of expense / Channel	ATM	Direct debit	Branch	Online bank	Offline bank
Development	11%	21%	1%	23%	25%
HR related	20%	3%	96%	14%	2%
IT operational	42%	14%	2%	46%	30%
Marketing	27%	62%	1%	18%	43%
Total	100%	100%	100%	100%	100%

For ATM payment the most important part of expenses is associated with fixed assets – automatic teller machine rent or depreciation, ATM installation costs, maintenance of machine software and hardware.

For direct debit it was not actually possible to calculate IT operational expenses in sufficient quality. Direct debit payments are concluded in so called “automatic channel” in bank’s core system, so we were not able to split IT servers and other resources usage by this channel.

For branch payments most of the costs are connected with Human resource activities expenses. “Branch activities” represent branch network personnel expenses (remuneration, management, work-place expenses, and branch network fixed assets depreciation) and also payment processing activity performed by branch personnel in order to submit and re-check outgoing payments submitted in branch.

Online bank channel has two major cost elements: (1) servers depreciation and communication lines for online bank application and (2) storage cost (at present history of 3 years transactions is available online for clients). Offline bank solution was developed internally and therefore there are not any external license or maintenance fees for this channel, so most of the unit cost for domestic payment in offline bank arise from other-than IT areas (for example marketing and business development).

As it appears in Tables 3 and 4, in traditional or man-guided channels the biggest expenses come from personnel activities; major cost component for electronic channels payments lays in IT operational expenses. IT operational expenses can be explained as follows:

- ◆ “Servers & communication” cost includes servers depreciation and communication lines, where particular bank application is running.
- ◆ “Software” cost includes bought from outside software (different modules or partial development from third parties) and license and maintenance fees of software platform on which particular channel works.
- ◆ “Storage” cost includes cost of information volumes available online for clients.
- ◆ “Internal IT maintenance” cost includes personnel expenses of different IT departments.

Some steps for reducing IT operational expenses in online channels can be done:

(1) Decreasing the storage expenses by shortening information query history available online. For example, if 95% of all information of account queries are made for the up to 1 year history period, then holding 3-year period information in online-achieve can be extremely inefficient and expensive. Information storage can be then moved to offline-achieves, thus querying for older info can be made on the offline basis.

(2) Decreasing the “first-page” information can decrease required server volumes. In Hansabank with the first log-in to online bank client see not only his account statement, but also loan balances, credit card balances, pension account balances and so on. For the online bank application, opening this first page requires a lot of servers’ power to retrieve this information to client’s screen. The solution can be to show the first log-in page with as less information as can be, and further queries for clients can be based on client’s request.

#### *Cost components for cash withdrawal*

Under the “cash withdrawal” we mean taking cash out of customer own account in home currency. The biggest distribution channel for cash withdrawal is ATM, where 97% of all cash withdrawals are concluded.

The expenses for cash withdrawal unit cost (comparable to 100% for cash withdrawal in branch) can be split into the following unit cost components (Table 5):

Table 5

Unit cost components for cash withdrawal (comparable to 100% for cash withdrawal in branch)  
(Hansabank data, author’s calculations)

Type of expense / Channel	ATM	Branch
Development	0.5%	1.3%
Fee	1.6%	
HR related	3.6%	96.9%
IT operational	2.2%	0.3%
Marketing	1.5%	1.5%
Grand Total	9.3%	100.0%

Under “development” cost component there is business development of work-process of cash withdrawal in different channels. “Fee” is a fee paid by the bank for ATM joint usage service: in case Hansabank client uses ATM of another bank, Hansabank has to pay fee for joint usage service. Cash withdrawal in ATM has also fee for joint cash withdrawal with credit card, which have to be paid to credit card issuer.

“Human Resource related” expenses are costs that are connected with man-channels management and overall human involvement. In ATM channel these expenses are connected with ATM administration (30%) and Cash incasso service bought from the third counterparties (70%). In branch there are tellers time costs for entering cash transactions data (86%) and counting cash (11%).

Under “IT operational expenses” in ATM channel these expenses are mostly ATM terminal’s fixed assets depreciation costs (66%) and communication lines maintenance (13%). Under “Marketing” expenses we mean costs for managing client relations.

#### *Comparison of transactions unit costs in different bank distribution channels*

The main goal of every company is to maximize profits for its owners and banks are not any exception. Automated e-banking services offer a perfect opportunity for minimizing costs (Table 6).

Table 6

## Unit costs for transactions in different distribution channels

Channel	Europe average (Forrester, 2003)		USA average (Booz et al., 1996)		Nordea (Fin) (Dynamo, 2001)		Union Bank (Est) (Toomla, 2003)
	Euro	%	US \$	%	US \$	%	%
Branch	2.00	100	1.07	100	1	100	100
Call Center	0.96	48	0.54	50			67
Mail	0.27	14					161
ATM	0.22	11	0.27	25			14
Online	0.14	7	0.01	1	0.11	11	7
Direct debit	0.04	2					1
Offline bank			0.015	1			2

According to a survey by Booz, Allen and Hamilton (1996), an estimated cost providing the routine business of a full service branch in USA is \$1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM and 1,5 cents for Internet banking. In Nordea Bank, Finland, one online transaction costs the bank an average of just 11 cents, compared to \$1 for a transaction in the branch (Dynamo..., 2001). The difference in a net cost between the USA and Finnish banks can be explained by smaller population in Finland and the scale effect in case of the USA. Forrester research (June 2003) covered Europe largest banks and found, that average online transactions cost 14 times less than branch tellers'.

Based on the ABC calculations data provided by Hansabank the relative costs for simple domestic payment through different bank distribution channels are as follows (Figure 4)<sup>1</sup>: online bank payments are 12,5 times cheaper, offline bank payments are 30 times cheaper and direct debit is 50 times cheaper than traditional transactions concluded in branch network. The largest distribution channel for payments is online bank (34% of all payments). The second biggest channel is offline bank – 33% and the third is direct debit – 20%.

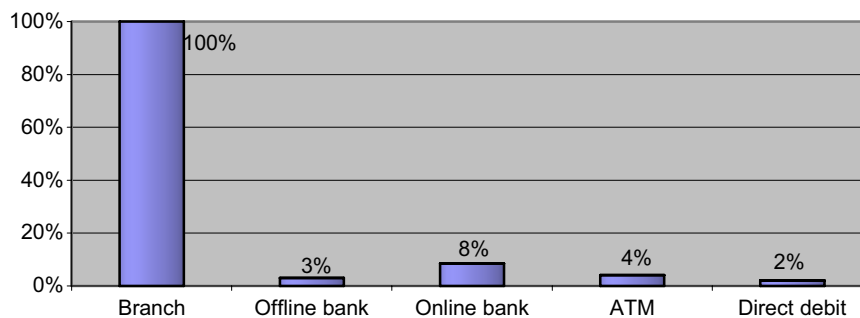


Fig. 4. Relative costs for domestic payment through different Hansabank distribution channels

The results for payment expenses comparison in traditional and e-channels are summarized in Figure 5. According to ABC results, Hansabank bank transfers cost structure between different channels is quite similar to respective results in other Estonian banks (Union Bank, Toomla 2003) as well as results for 13 European banks average (Forrester Research June 2003).

<sup>1</sup> The unit cost calculations are based on 2004 January-May average data and contain simple domestic payments conducted by bank clients in bank channels.

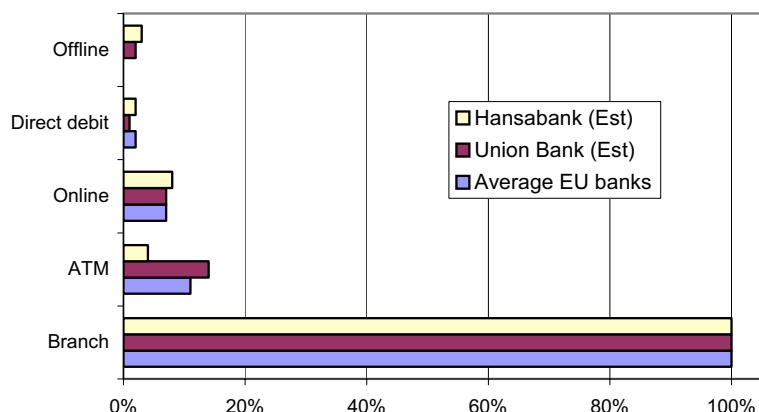


Fig. 5. Bank transfer unit costs in different channels

According to the ABC calculations data provided by Hansabank the relative costs for cash withdrawal through different bank distribution channels are as follows: ATM withdrawal is 10 times cheaper than the same service concluded in branch network. The biggest distribution channel for cash withdrawal is ATM, where 97% of all cash withdrawals are concluded.

For profitability conclusions also some investigation on income side has to be made. In Hansabank, the fee for domestic payment concluded in branch is 12 EEK. Direct debit payment is free of charge; fees in ATM and Internet banks are 0-2,5 EEK, depending on the age of the service user (there are no transactions fees for people younger than 25 and older than 60 years). The usual fee for cash withdrawal from branch office is 0,25% of cash withdrawal amount; cash withdrawal from ATM is free of charge.

Based on this information, it is possible to assume only some proportional data for real fee income on transactions, as there is no information available on proportion of different client segments in a bank and their behavior statistics. For analysis purposes, cost/fee income ratio between different channels can be used. On the fee side (or income side from the bank point of view), average payment in Internet bank costs 4,8 times less, than payment in branch. On the actual cost side (or cost side from the bank point of view), payment in Internet bank costs 12,5 times less than payment in branch. Direct debit payments and ATM cash withdrawal are free of charge for a client and represent significant channels for these services.

Some controversial explanations for this pricing strategy can be proposed:

1. Estonian banks use the difference in actual net cost and actual transaction fees paid by customer to cross-subsidize the delivery channels. It is possible to assume that profitability of branch network transactions is much lower than that of electronic channels. But for some reasons banks do not want to lose traditional channels and cross-subsidize them on purpose.
2. Banks earn additional profits on transactions concluded via electronic channels. It can also be assumed, that e-channel banking services have the high profitability for banks, as absolute unit cost numbers are lower than fees collected from clients.
3. The profitability of transactions is not a priority for banks. It can be assumed, that cross-subsidization between different services groups is used, and for example profits from lending and depositing activities compensate poor profitability from transactions services.

## Conclusions

Estonian commercial banks were mostly established 10-15 years ago. Less than ten banks have remained from more than 50 licensed banks, the rest had not been able to continue in the conditions of economic crises independently or have failed. Taking too high risks has also played a role in this process.

The analysis of the development of commercial banking in Estonia points out several features, which are typical for the starting period of commercial banking in transition countries.

*First.* At all stages of a transition period banks may have a high effectiveness due to taking high risks by the rapid growth of their market shares, a quick implementation of new products and skilful exploitation of the peculiarities of a transition economy. But due to the volatility of the macro-environment and the differences in the level of risk management the productivity of different banks is very different and the profitability is very volatile. The profitability of basic banking services is more stable and uniform, but that of new products and participation in non-financial businesses is more unstable.

*Second.* A transition economy selects quickly in quite a rough way the very limited number of prosperous banks and displaces a great bulk of weaker banks from the market which were not ready to take sufficiently high risks or were unsuccessful in their risk management. Only the top ambitious business plans can be successfully realized.

To summarize electronic banking profitability assumptions, the following can be stated:

*First.* Electronic channels provide cost saving for banks and bank clients. In the case of Hansabank, online bank payments are 12,5 times cheaper and offline bank payments are 30 times cheaper than traditional transactions concluded in branch network.

*Second.* The decrease in transaction costs is slower than expected. The reason for this is that already existing channels cannot be closed in a speed as new distribution channels are introduced and funds invested in their development and maintenance. As the number of transactions in branches has been steadily decreasing, the unit cost expenses related to branch transactions will increase – branches become more focused on consulting and problem-solving than on regular transaction processing (payments, cash operations). The initial investments in e-channels IT and security solutions were high, also IT and product development requires major investment at the beginning stage. We can conclude that e-channels transactions will probably become more cost-efficient for banks after a few years.

*Third.* The detailed information provided by the ABC technique can help bank to regulate and reduce some cost components. Understanding of the IT cost components of e-banking distribution channels gives an insight on IT expenses fixed and floating components and thus make pre-conditions for the cost saving.

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