INNOVATION IS THE ENGINE OF HIGH PROFITABILITY OF ESTONIAN BANKS

Mart Sõrg *

Abstract

Estonian banking sector efficiency is continuously higher that it is in euro area. It has several reasons like high banking concentration, cheap loan resources and quick growth of loan portfolios. Special reason of high profitability of Estonian banking is also banks trust to the innovation in the banking business: banks are very fond to introduce new products and new servicing methods. The share of electronic banking in Estonia is much higher than in other Baltic states. Relative costs of electronic bank distribution channels are per unit tenth times lower than branch offices. Our research showed that E-banking is an engine of saving continuously high incomes of banks in Estonia despite of the tendency of decreasing interest margins.

1. Introduction

Innovation is a firm's renewing process: for improving competitiveness abilities in changing business environment and market situation. Innovation is a process of finding new ideas and methods and implementing them. Innovation is extremely important for surviving in a transition economy where situation in market may change unexpectedly and amplitude of changes may be very high.

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. For that reason innovation in transition banking was the main survival measure.

Development of the financial sector in transition economies has been one of the more difficult areas of reform, since at the start of transition there were virtually no relevant financial institutions or market (Fries and Taci, 2001).

Research on banking reconstruction in Estonia and other Baltic States shows that innovation was not a single bank activity in introducing new financial products and the major banks of Estonia very quickly reached the level of developed countries' banking in relation to the banks' trustworthiness,

* University of Tartu, Tartu, Estonia; mart.sorg@ut.ee
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contemporaneity of products and standards. This is also a claim of global economy for survival, which has been realised generally by the banking of transition economies. But the disadvantage of such kind of development is the utmost concentration of banking as a result of which the competition, which is essential to guarantee a stable development and the stability of services and prices in a banking market, will disappear gradually.

The managements of banks must therefore ensure high profitability of banks in order for their banks to remain competitive despite any unforeseeable developments in the market. Thus, they eagerly grasp at any profit opportunities.

Estonian banking sector efficiency is continuously higher that it is in euro area. It has several reasons like high banking concentration, cheap loan resources and quick growth of loan portfolios. Special reason of high profitability of Estonian banking is also banks trust to the innovation in the banking business: banks are very fond to introduce new products and new servicing methods. The share of electronic banking in Estonia is very high and much higher than in other Baltic states. Relative costs of electronic bank distribution channels are per unit tenth times lower than branch offices. Our research showed that E-banking is an engine of saving continuously high incomes of banks in Estonia despite of the tendency of decreasing interest margins.

In our paper we try to analyze the roots of high profitability of Estonian banking sector. Our hypothesis is that in 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 macroenvironment and the differences in the level of risk management the productivity of banks is very different and the profitability is very volatile. The profitability of basic banking services is usually more stable and uniform, but that of new products and participation in non-financial businesses is more unstable.

2. Profitability of Estonian banks

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; Goddart *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.

Fortunately some studies investigates 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; Athanasoglu *et al.*, 2006), 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).

Financial sector (and especially banking system) development, performance and efficiency have been considered as one of the most important factors for the successful implementation of economic reforms. But the banking system is vulnerable to systems crises which are typical for transition period. So Estonia expected serious banking crises in 1992–1994 and later in 1998–1999. After the first banking crisis most of Estonian banks had ambitious growth strategies. Growth was achieved by introducing new ideas in banking business. Table 1 show us that loan portfolio of banks grew during four years more than five times and borrowing to individuals grew even 8,6 times.

Table 1. Loan portfolio of Estonian commercial banks by groups of customers (mill. kroons)

	31.12.1994	**31.12.1996**	**31.12.1998**
Loan portfolio total	**4 526,6**	**12 323,8**	**23 898,7**
o/w to non-residents	152,5	692,5	1 183,9
foreign currency nominated loans	461,6	4 252,6	18 193,3
General government	41,7	170,7	277,4
Financial institutions	3,8	1 798,5	4 292,5
Commercial undertakings of state and local governments	363,2	304,6	315,3
Other commercial undertakings	3 623,2	8 221,4	14 748,9
Non-profit associations	–	10,7	33,1
Individuals	494,6	1 817,9	4 231,5

Source: Bank of Estonia.

One of the main reasons of the second banking crisis was that rapid growth in several years led to excess capacity of banking and also to underestimation of risk management. The same reasons had also Japanese banking crisis (Kanaya and Woo, 2001).

Comparing the years 1997 and 1998, it can be seen that in 1997, the banks earned ca 200 million kroons of net interest income more than administrative expenses and that commission income also gave a positive outcome of ca 500 million. But profit was significantly larger than 750 million, being close to 1.1 billion. Therefore, the year 1997 was good with respect to other income. These were the new securities market services and the banks' own financial investments. But in 1998, when the net interest income was 300 million higher than administrative expenses and the positive balance of commission income was even larger than the year before, the loss amounted to 0.5 billion. The reason for this was that other sources of profit, especially from business activities and securities markets, which the banks were engaged in without worrying about future, trusting their own gut feeling and the experts' rosy predictions, brought loss in that year, as they are much more risky and volatile than the basic activities. Of course, it may turn out that one wins big with these, but it may turn out otherwise – which happened to several Estonian banks in 1998.Thus, the lesson of the 1992 banking crisis hadn't been learnt sufficiently.

After 2000 profits in Estonian banking sector have stabilized (Table 2). In 2006 in euro area banks average cost-income ratio was 60,4% and ROE 19,6% (ECB, 2007: S30). In Estonia cost-income ratio was only 46,6%.

Table 2. Key efficiency ratios in Estonian banking (%)

	Solo banks				Euro area financial institutions average 2006
	2000	2002	2004	2006	
Cost to income ratio	72,5	61,6	45,8	46,6	60,40
Return on assets	1,2	1,6	2,1	1,7	1,54
Equity multipler	7,4	7,3	8,8	10,7	11,51
Return on equity	8,0	14,7	20,0	19,8	19,6
Net interest margin	4,3	3,6	2,4	2,2	
Spread	4,1	3,4	2,3	2,1	

Source: Eesti Pank. Financial Stability Review; ECB Financial Stability Review, 2007.

Data of the Table 3 also confirm the tendency that banks efficiency is rising for cost saving management. In period 2000–2007 expenses of banks grew 3,3 times, but incomes more than 4,2 times. Profit before taxes grew during this period even near 12 times.

Table 3. Profit of Estonian banks

	2000 EEK mln	2006 EEK mln	2007 EEK mln	Growth	
				00/07	06/07
Interest income	3744	9340	15453	413	165
• loans	2818	8007	13309	472	166
• deposits	386	822	1188	308	145
Commission income	965	2555	3145	336	123
Other income	1101	2051	5894	535	287
Income total	**5810**	**13946**	**24492**	**422**	**176**
Interest expense	1812	4845	9368	517	193
• loans	214	1260	2861	1337	227
• demand deposits	355	1034	1572	443	152
• time and saving deposits	710	1629	1572	221	97
Commission expense	256	661	820	320	125
Administrative expenses	1374	3195	4171	304	131
Other expenses	1755	1587	2702	154	170
Expenses total	**5197**	**10288**	**17061**	**328**	**166**
Profit before taxation	**613**	**3609**	**7431**	**1212**	**206**

Source: Eesti Pank homepage, 2008.

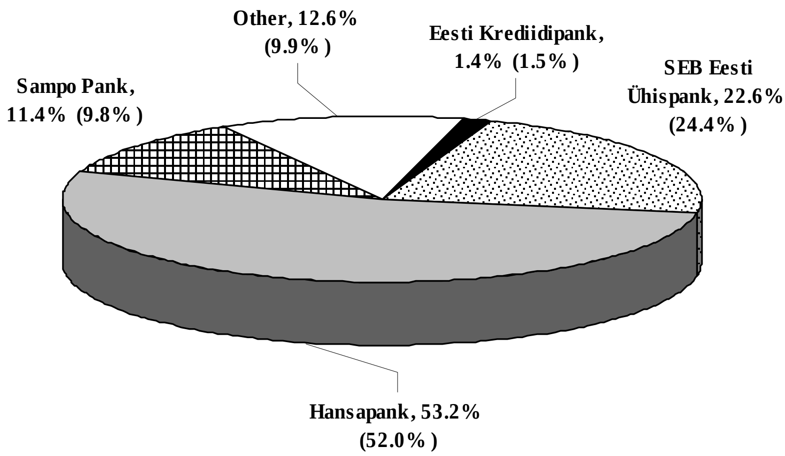
From Table 3 we see that the main source of income of banks is interest income (67,0% from total income in 2006) and quite high is the share of commission income (servicing fees) 18,3%. Probably the fees are a bit too high. For example, the survey of the GfK Custom Research Baltic of bank customers showed that in Estonia they are most unsatisfied about high servicing fees and they have the opinion that banks are found only of their profits (Eestlased käivad usinalt netipangas, 2008). Some commentators have also mentioned that in Sweden servicing fees are in mother banks lower than in Estonia.

3. Reasons of high profitability of Estonian banks

Reforms in Estonian banking sector started in 1988. During the two decades five banks remained from more than 50 licensed commercial banks, the rest were not able to continue independently, they merged or have failed. The bad result of such kind of development was also the excessive high concentration in banking sector. Market share of the biggest bank by assets in Estonia is over 50 per cent (Figure 1).

Researches have shown that the increase in the degree of concentration in the European banking sector is negatively related to competition (Bikker and Groenveld, 2000). Higher concentration and lower competition are linked to higher ROA (Athanasoglu *et al.*, 2006). As banking concentration in Estonia is very high it is helping bigger banks to increase their profits.

Figure 1. Market shares of banks in Estonia according to total assets at the end of 2007 (in bracket end of 2006)



Source: Eesti Pank; author's calculations.

The second reason of high profitability of Estonian banks is cheap loan resources. The development of the banking sector during past 20 years has been stormy and has undergone crises in which a remarkable share of the population either lost their savings in their entirety or lost part of their savings exchange value during hyperinflation period.

Such developments after the crisis period have made the population suspicious of the banking sector. The research which was ordered by Eesti Pank in November 2007 showed that one quarter of respondents are doubtful about creditability of banking sector in Estonia even now (Estonian residents' opinion, 2007). This is indicated by the large share of demand deposits of banks' deposits in Estonia (approximately 60%). During the second banking crisis in years 1998–1999 when the share of demand deposits grew and stabilized on the level a bit higher of 60%. Surely demand deposits share is too high taking into account Estonian currency board monetary system stable economic policy and that fact that the main owners of leading banks are all known Scandinavian banks.

Extremely high share of demand deposits has also second reason. Near every adult citizen in Estonia has the banking account and gets his or her regular incomes to this account. But more than half of bank account holders are not able to save. It may be noticed also from the average sum of the deposits, which was at the end of 2006 approximately 36,2 thousand kroons by all groups of customers and of individuals only 15,2 thousands (ca € 1000) (Table 4). Average wages were in Estonia in 2007 more than 11 thousand kroons per month. So average deposit of individuals is 1–2 month salaries

Table 4. Average deposits by groups of customers (end of the year, EEK thousands)

	2004	2005	2006
Average deposit	**22.1**	**30.0**	**35.2**
Average deposit attracted from general government	308.0	492.9	796.1
financial institutions	1,996.5	1,671.4	1,993.1
commercial undertakings	163.8	246.3	277.3
individuals	10.7	13.0	15.3

Source: http://www.eestipank.info

Denizer and Wolf (2000) suggest that savings increased, in the ex-communist countries, after the fall of the communist regime, whish is explainable, taking into account three mechanisms:

- The state got less involved in financing public services, which made people resort to savings for paying their access to health services, educational services, legal services, etc.
- During the communist regime, a greater than usual amount of cash in hand (in home) was necessary for the rapid purchase of consumption good

which might have appeared in town over night (for instance, a superior quality blanket, or a chandelier). Afterwards, the free distribution of these goods made superfluous the amount of cash retained for "surprise" buying.

- Finally, the elimination of involuntary savings (like mutual help funds, or the lists for buying a car) allowed more rational individual and/or family saving plans to emerge.

These reasons are in force also in case of Estonia. This would count as an indicator of transition progress in developing countries, as savings rate is high in developed countries (Tomkiewicz, 2003).

The intress rate of current accounts in Estonia in last years is usually 0,2–0,25% per year. When more than 60% of deposits are namely current deposits, the average prise of credit resources for banks is very low.

Third reason is extremely quick growth of loan portfolio. From Table 5 we see that in this millennium Estonian banks loan portfolio grew near seven times. Additionally to the domestic resources banks borrowed money also from mother banks. Total sums from foreign credit institutions have grown 18 times like we see also from Table 5.

Table 5. Growth of loans and its sources of Estonian banks

Year	Loan portfolio EEK bln	Loans from foreign credit institutions EEK bln	Share %
2000	34,3	6,1	17,8
2001	40,7	6,1	15,0
2002	50,0	11,7	23,4
2003	69,2	16,5	23,8
2004	92,6	26,8	28,9
2005	125,5	45,1	27,8
2006	177,7	64,6	36,4
2007	239,5	110,3	46,1
Growth % 2000–2007	698	1808	259

Source: Eesti Pank.

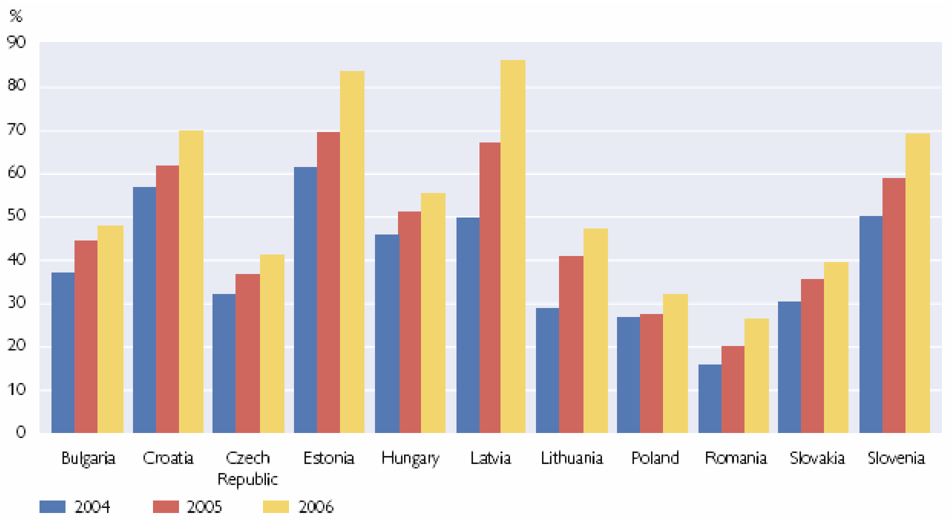
Researches have found that it is profitable for international banks to open subsidiaries in transition economies for profitability of these subsidiaries exceeds that for parent banks in home countries (Havrylchyk and Jurzyk, 2006). For example, by data of Estonian banks in third quarter of 2007 SEBs (SEB Eesti Ühispank owner) ROE was 17,3% and Swedbanks (Hansapanks owner) ROE 18,1%. In Estonian banking sector at the same time ROE was comparatively 31,0%.

The positive result of second banking crises was that during this period foreign banks bought from Tallinn stock exchange the cheapened shares of the

Estonian major banks and became their strategic owners. Now in growth period they sent their resources to Estonia for taking big profit. And really, in his interview the president of Swedbank Mr. Liden Characterized the effectiveness of their Baltic policy. He said that Swedbank's business in the Baltic accounted for about 20% of the parent group's turnover and almost 30% of its profit (of which 50% comes from Estonian bank, 25% from each Lithuania and Latvia) (Swedbank chief says …, 2008).

After joining EU in new EU member states credit to the private sector started rapidly to grow. From Figure 2 we may notice that in Estonia, Latvia and Romania growth was the highest and per GDP in Latvia and Estonia the portfolios were biggest in this group of countries.

Figure 2. Private sector credit-to-GDP levels, end of 2004 to end 2006

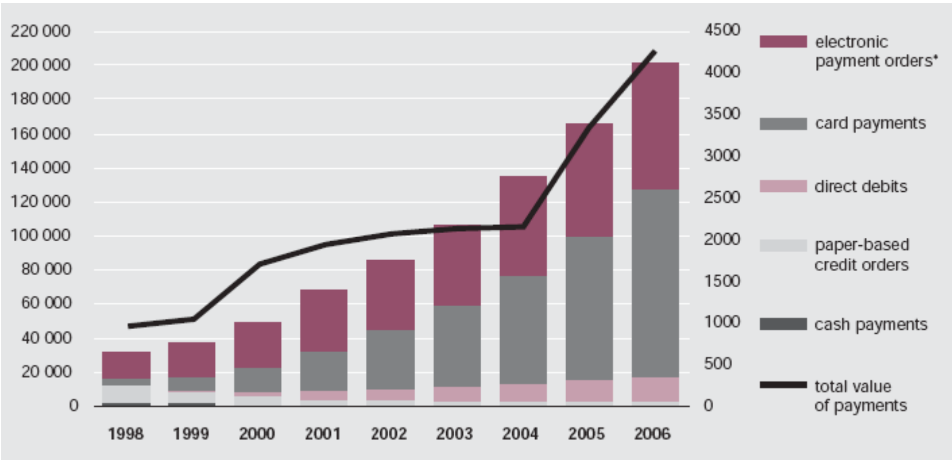


Source: Backe et al. 2007.

The fourth reason of high profitability of Estonian banking is very rapid introduction of e-banking. From Figure 3 we see that electronic payments and card payments share in Estonia is continuously and quickly growing.

The total number of payments in 2007 exceeded that of 1998, the initial year of collecting payment statistics, seven-fold and the total turnover of payments was five times bigger. Within nine years, the volume of payments made via direct debits has grown most drastically (160 times). The number of card payments has increased nearly 27 times. Lately, cash payments and paper-based credit orders have not been very popular among residents who prefer effective electronic payment methods and traditional cash and paper payments use has been decreasing year after year (Eesti Pank Annual Report 2007, 2008).

Figure 3. Number of payments (thousands; left scale) **and their turnover** (EEK bn, right scale) **by payment methods**



Source: Eesti Pank.

By the year-end of 2007, Estonian credit institutions have issued a total of 1.8 million payment cards, exceeding the result of 2006 by 10%. 76% of the bank cards issued was debit cards (1.4 million) and 24% were credit cards (over 421,000). 30% of all payment cards were passive. At the end of 2007, 100% of the population had debit cards and 30% owned credit cards.

By the end of December 2007, Estonia had 1000 ATMs and 85% of them enabled cross-usage. Within the year, 82 new ATMs were installed, i.e. approximately as much as in 2006. The number of points of sale (POS) that accept card payments increased 8% in 2007 compared to the previous year and as at year-end, 15,885 POS provided the opportunity of using payment cards (Eesti Pank Annual Report 2007, 2008).

The main goal of every company is to maximize profits for its owners and banks are not any exception. E-banking services offer a perfect opportunity for minimizing costs. Our previous research showed about transition banking development that relative costs of e-banking are several times smaller than servicing in the branch office (see Table 6).

Table 6. Unit costs for transactions in different distribution channels

	Europe average (Forrester, 2003)		USA average (Booz-Allen & Hamilton Inc., 1996)		Nordea (Fin) (Dynamo, 2001)		Union Bank (Est) (Toomla, 2003)
Channel	**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

Source: Liuhto et al., 2007.

According to numbers in the table above all e-channels provide significant cost saving for banks. The difference in a net cost between the US and Finnish banks can be explained by smaller population in Finland and the scale effect in case of the US. Forrester research (2003) covered Europe largest banks and found that average online transactions cost 14 times less than branch tellers'.

One way to increase the profit capacity is to establish and overtook financial institutions which offer nonbanking services. From Table 7 we see that in the year 2007 in Estonian banks groups profits were bigger than in solo banks (except Sampo Pank).

Table 7. Estonian banks profits before taxes (EEK mln)

	Solo banks			Bank group	Share of solo
	2006	**2007**	**growth %**	**2007**	**bank in 2007**
Eesti Krediidipank	75,7	82,7	9,2	81,5	101,5
SEB Eesti Ühispank	913,0	1652,6	81,0	2026,5	81,5
Hansapank	2012,4	4644,1	130,8	7565,2	61,4
Sampo Pank	337,0	651,0	93,2	661,0	98,5
Tallinna Äripanga AS	35,3´2	53,9	53,1	50,9	105,9
BIG	155,5	152,9	–1,7	177,3	86,2

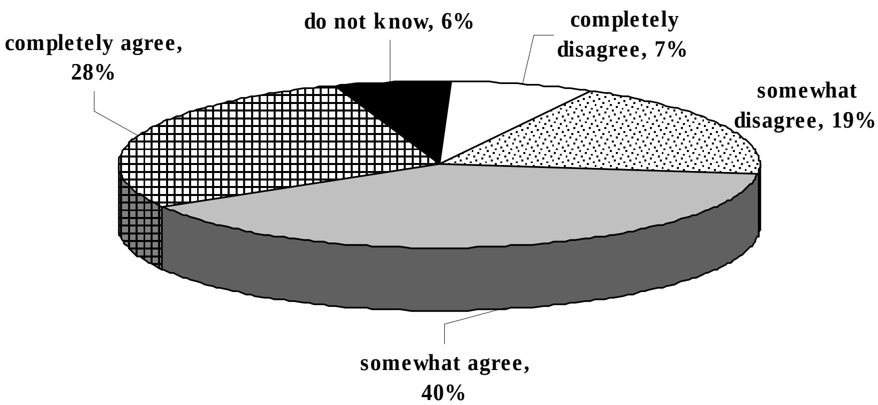
Source: Eesti Pank, author's calculations.

In Table 7 we may also see that our biggest bank Hansapank earned two third of profits outside of solo banking services in Estonia of course part of this profit they earned offering banking services in Latvia and in Lithuania. The second biggest bank SEB Eesti Ühispank earned one fifth of profits from additional financial services. Last published data from the year 2003 are showing that banks ownership in other financial intermediaries was in Estonian leasing sector 99,2%, in life insurance 68,3%, in investment funds 90,3% and in pension funds 87,8% (Eesti Pank Annual Report 2003, 2004).

The implications of newly important financial products, such as hedge funds, private equity funds, wealth and pension funds, are yet not fully understood – it is not clear they will foster stability or volatility in financial sector (Mauro and Yafeh, 2007).

In future banks should to find ways to compensate the tendency of decreasing interest margins and to increase credibility of banks. Last survey from TNS Emor commissioned by Eesti Pank was done at the end of 2007. From Figure 4 we see that only 28% of respondents think that Estonia's banking sector is strong and stable and their money is safe (Estonian residents opinion, 2007).

Figure 4. Please indicate the extent to which you agree with the statement … Estonia's banking sector is strong and stable and my money is safe



Source: Estonian residents' opinion …, 2007.

Banker Richard B. Miller wrote year ago (1989: 183) that the management considers that the bank's most important customers are those on the right side of the balance sheet – the depositors "They come to us for security and we allow then sleep soundly". This opinion is on the place also nowadays in Estonia.

Entrepreneurs and students are more convinced in the credibility of the Estonian banking sector. Apparently, they have a better knowledge of the banking system and/or they have a more positive outlook, will and faith in Estonia's success.

4. Conclusions

Our study examines developments in the profitability, profit sources and success strategies of Estonian banks. We found that high trust to the innovation is the engine of high profitability 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.

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 innovative risks with quick introducing new services and establishing new undertakings and lack of necessary risk management skills have also plaid certain role in this process.

We also prove that new electronical channels provide to banks more cost saving possibilities than traditional channels and explain what the difference in the cost structure is.

We found that in all stages of a transition period banks may have a high effectiveness due to taking high innovative 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.

Our research showed that the very high concentration in Estonian banking sector is helping bigger banks to increase their profits. Banks loan resources are also cheap for high share of demand deposits quickly for they borrowed money also from mother banks. However operating costs of banks grew slower than the loan portfolio profitability also increased. Banks also increase the profits capacity establishing undertakings which offer nonbanking services.

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