

наслідок враховувався викид вуглекислого газу. Для отримання результату була прийнята лінійна функція витрачання капіталу, яка виснажить через 30 років.

Дане дослідження дало можливість сформулювати варіанти передачі технологій для розвитку економіки в межах динамічної структури витрат-випуску. Модель трансферу технологій дозволила систематично одержувати оптимальні графіки передачі технологій по кожному індустріальному сектору, використовуючи інвестиційний контроль в кожний період розвитку, щоб максимізувати соціально-економічний розвиток, зважений на негативні екологічні наслідки.

В умовах лінійного програмування поставленої проблеми була використана спрощена модель, з метою впровадження розширеної моделі. Крім того враховувались екологічні наслідки та регіональні взаємозалежності даної моделі трансферу технологій. Для прикладних цілей визначалась придатність даних для компілювання до Філіппін, де необхідний серйозний захист навколишнього середовища. Японія ж була вибрана як джерело передових технологій, з метою їх подальшої передачі. Ефективність моделі була досліджена використанням числового прикладу.

Висновки. Щоб вирішити проблему застарілих, низькопродуктивних технологій, які не сприяють стрімкому розвитку національної економіки, необхідно розробити та впровадити національну модель трансферу технологій. Дана модель повинна враховувати особливості національної структури промисловості та національного розвитку. Крім того, результати моделі передачі технологій необхідно враховувати при розробці програм соціально-економічного розвитку на майбутні десятиліття.

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EARNING POWER OF POLISH BANK SECTOR. COMPARATIVE ANALYSIS

INTRODUCTION

The Polish banking sector is the second largest in Central and Eastern Europe; the largest sector in the region is Russia's. In YEAR, bank assets in Poland equaled 67% of its Gross Domestic Product; the comparable figure for Western Europe was, on average, 227%. One interpretation of these data is that investment potential, through bank intermediation, remains relatively high in Poland. Indeed, Poland is a young and burgeoning free market economy with exceptional growth opportunities. The number of banking facilities – 130 as of YEAR – is relatively low. By comparison, the numbers of facilities in Germany and Great Britain are roughly 550 and 250, respectively¹. In any case, Poland's banks plan to expand their reach in the near future.

Graph 1 illustrates the market shares of the five largest banks, by assets, in Poland and other Central and Eastern European countries that entered the European Union when Poland did. Whereas the five biggest banks in Poland comprise 50% of the market there, the five biggest banks in Germany and Holland comprise 22% and 84% of their respective markets. Indeed, according to this measure, Poland's banking sector ranks 16th in the EU in terms industry concentration.

Poland's banking sector is relatively more competitive than several of its European counterparts, which is indissolubly tied with the fact that majority of banks has landed up in hands of foreign financial groups. Bank sectors as well as in Germany and in France are the biggest in countries of „old 15”. Together they represent half of bank asset in European Union. In countries where bank sector is relatively small (like Cyprus, Malta, Lithuania, Estonia or Holland), it is taking a stand occurrence of concentration around several big financial institutions.

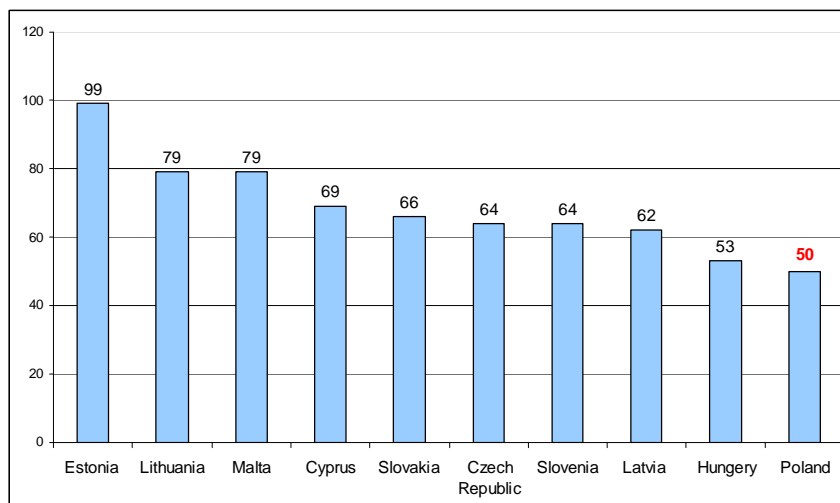
Financial results for the Polish banking sector in 2005 indicate growth in consumer credit. Growth of credits taking by companies is possible to define as trace level. From one part this is factor, which limits economic development of a country, but from second side it shows that in Poland it is still small advantages for taking of proficient instrument used in management financial risk. This situation on financial market and strictly on credit market, carried criterion in general categories are getting out of hand. It happens because, it is observable from appearance about hard explanation and big disparities in using different form of credits. In last year debt of consumer has grown for about 29,4%. This increases amount to over 24 billion zloty and surpassed dynamics written down in two last years. In the same time banks have lended over 200 thousand residential credit, but from estimates of Associations of Polish Banks results, that in this year the action will includes over 230 thousand of new credits². Growth of lended value credits in bank sector is forecasted at the level of 12% a year³. Demand on residential credits has to stimulate situation on whole bank market. In 2005 Polish banks earned, on net, 9 billion PLN; the comparable figure for the prior year totaled 7.4 billion zloty. From 2002 to 2005, net earnings did not

¹ Source: Computerworld

² Source: Gazeta Bankowa

³ Source: Internet Securities Businesswire

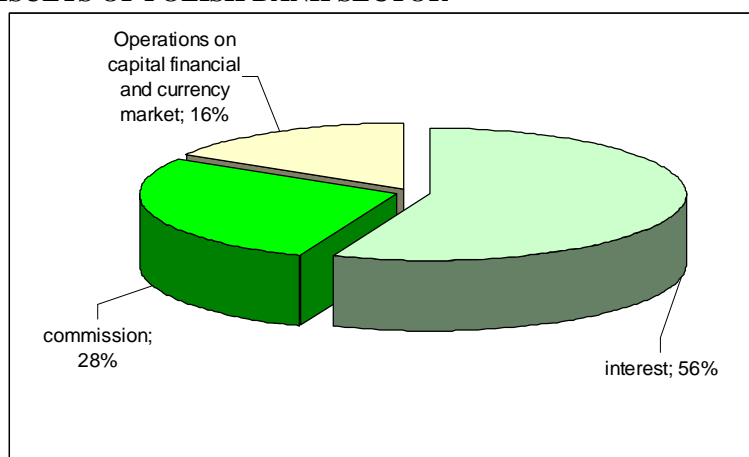
surpass half the 2005 level. Index of returning capital in scale of whole sector has amounted to about 20 %⁴. It would indicate on high profits, that Polish bank sector generates. Considerable incrimination of commissions and payments have allowed to correct the results of banks and contribute the stability of their market position.



Graph 1. The participation of five biggest bank in bank assets in sectors of 10 countries accepted to UE in 2004

Source: Elaboration based on date from Rzeczpospolita.

FINANCIAL RESULTS OF POLISH BANK SECTOR



Graph 2. Main sources of revenues in bank sector (date given from a year 2005)
Source: Own elaboration based on date form NBP.

Half of banks' income is comprised of interest (56%), 28% is comprised of commissions, and 16% are from operations related to capital, financial or currency market. By comparison, in countries with relatively advanced banking systems, revenues are comprised primarily of payments and commissions.

LAWS CONCERNING VAT IN THE POLISH BANKING SECTOR

The Polish Banking sector is relatively heavily taxed, and high compulsory bank reserves have limited the sector's development. Recently reserves have been interested. Efficiency Polish banks which indices of assets have achieved average level among near to 1,7%, what places our country on third position between most effective banking systems⁵.

Adverse tax regulations cause that banks cannot count out VAT, therefore it touches directly clients. The Act concerning VAT does not include one-valued regulations, on based which banks could define in simple manner precise the value of tax to count it out supporting by ratio of structure sales. Since law changed, relation with accession Poland to UE, could appeared new capabilities of counting out VAT e.g. each bank has right for count out tax related with financial services rendering for clients behind UE.

Banks and insurance companies from countries of European Union could benefits on planned corrections for regulations from 1977 year which dismiss financial services from VAT. The propositions of amendments will have

⁴ Source: Parkiet

⁵ Source: Rzeczpospolita

lodge in last quarter of year. At present regulations mean, that banks and insurance companies are dismissed from counting out VAT for services supplied for their clients. However, they must pay VAT for products and services, which they buy on their own⁶. It has saddled sector with additional cost and administrative loads.

European Commission will have lodge proposal on purpose of directive amending about VAT form 1977, till the end of this year. Brussels will take under note reactions on consultative document as well as results of estimates performed by consulting companies. In present regulations are conceived as huge barrier in integration of finance such as companies supply services with higher percentage of product and with dismissed services from VAT in order to other sectors of economies. The changes in tax law of European Union require unanimous support almost of 25 European countries.

One of proposal are discharging return of VAT for companies selling product or services financial groups is finding the solution of problem with covering VAT for banks and underwriters. Situation of double VAT in banks relies on paying it of all bought commodities and services. Therefore bank who is lending a credit, calculates due percentage but in such manner that it could finances shopping cost performed by bank including uncounted VAT. Weight of uncounted tax is transmitted by bank on commercial debtor, who taxes this value again selling commodity and services in favor of ultimate consumers. According to principle of neutrality VAT businessman should not incur counted weight of tax in periods of turns, that counting leads to cascade clocked VAT up. Then problem of double taxation appears also, when local businessman takes credit from local bank.

THE PRICES OF BANK SERVICES AND PRODUCTS

High return margins on money turn in Poland and amount to 3,5%, when in countries of western Europe they present about 2% in Italy and Spain, Germany and France even 1%. High level of margin in Poland is tied with high demand on consumers credits. However, sharpening competition will lower Polish banks revenues and lead for approximation of price level in UE countries. Banks are outpaced in completion conceding fast credits, what can speed up these changes.

Credit card-derived revenues are the second largest source of bank revenues in Poland, whose banks have issued about 3 million credit cards to date. Polish banks depend on the growth of residential credit, because such credit arrangements facilitate long-term client relationships. Bank earns on mortgage credit less than 1%⁷, but competition grows dynamically in conceding of fast credit. Few years ago banks earned on given credits two, even three times higher than on west. To maintain existing profits banks should sell more credits than it was in the past. The other sources of bank revenues are margins from selling shareholding unit of investment fund. Sharpening competition in this sector will cause slowly introduction reform and escalation of affection, but battle about client will be connected with expected lowering of price indissolubly. Absorption of union center, which co-fund investments of polish enterprises, promotes boost of interest investment credits. Such situation is called „stuff private investment expense public investment”. On financial results of banks also effects quick ratio which forms cost incurred on capital bank stock. Relation of credit to deposits is keeping at the smallest level than 80%, it causes generation liquidity, which promotes relatively better result for banks and have own blank of liquidity (taking a stand when this relation totals over 120%).

The majority of Poles are convinced that Polish banks charge their consumer clients inordinate fees. Nonetheless, as Polish banks progress toward automated banking services, consumers’ use of banking services should grow.

Table 1. Banking sector in Poland

| | 2002 | 2003 | 2004 | 2005 |
|---|------|------|------|------|
| Assets (% GDP) | 57,7 | 58,1 | 58,4 | 60,7 |
| Credit for no-financial sector (% GDP) | 25,5 | 26,2 | 24,7 | 26,7 |
| Deposit of no-financial sector (% GDP) | 34,5 | 34,3 | 32,8 | 34,0 |
| Number of bank departments on 100 thousand inhabitants | 34 | 32 | 30 | 31 |
| Number of bank commercial departments on 100 thousand inhabitants | 26 | 24 | 22 | 22 |
| Number of commercial banks | 59 | 58 | 54 | 55 |

Source: Author’s calculations based on data from NBP.

The largest source of income growth among Polish banks is residential debt, which is present in Poland for about 4% during when it was formed in other countries at the level of 60 – 90%. The Polish banking sector remains in an incipient stage of development. This fact is supported by proof about affirmation concerning news that sector has written down profits of financial result from 2004 on 2005 year and among them to 39,9%. On achievements of so good result, has effected decrease of bank which balanced reserves and modernized of their value.

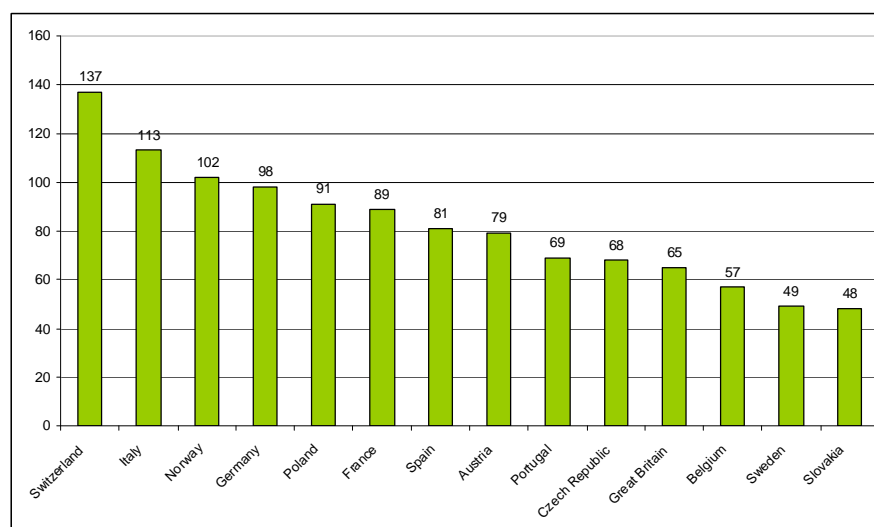
Capgemini report in different countries about prices of bank services has showed advantageous from the point of view of client in Poland, prices level of banking services. However, taking under note in conversion of level GDP calculated on one inhabitant, showed these results in completely different appear. This index becomes the highest in Europe.

Average Pole issues equivalence on margin related with conducting of account 91 euro a year, during when inhabitant of Czech Republic performs disbursement for near 68 euro, but Slovak for 48 euro. Inhabitants of other European countries earn several times more and pay less from Poles. Polish banks are translating it that citizens are

⁶ Source: www.e-gospodarka.pl

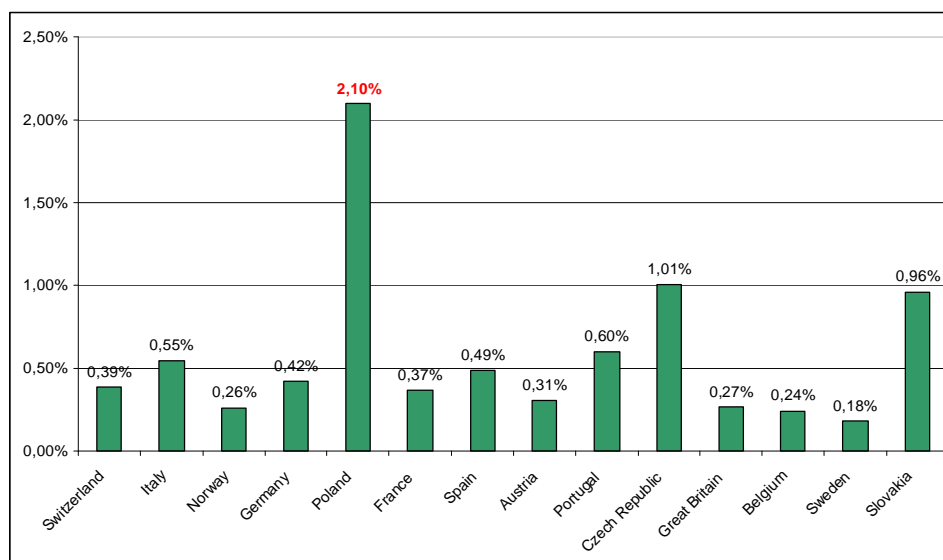
⁷ Source: Gazeta Wyborcza

using only 50 – 60% of bank services⁸.



Graph 3. Local profile of prices in bank sector for 2005 (€)

Source: Capgemini „Word Retail Banking Report 2005”.



Graph 4. Prices of services as a percentage of GDP per capita

Source: Capgemini „Word Retail Banking Report 2005”.

Table 2. Financial service fees as percent of consumable expenditures

| Country | 2005 | 2006 |
|----------------|---------------|---------------|
| UE 25 | 1,03 % | 1,08 % |
| UE 15 | 0,98 % | 1,04 % |
| Belgium | 0,3 % | 0,25 % |
| Czech Republic | 1,5 % | 1,25 % |
| Denmark | 0,98 % | 1,85 % |
| Germany | 0,47 % | 0,46 % |
| Estonia | 0,15 % | 0,15 % |
| Greece | 0,16 % | 0,16 % |
| Spain | 0,03 % | 0,03 % |
| France | 0,62 % | 0,63 % |
| Ireland | 0,06 % | 0,06 % |
| Hungary | 0,57 % | 0,6 % |
| Poland | 2,24 % | 2,09 % |
| Portugal | 0,1 % | 0,1 % |

Source: ww.bankier.pl, Eurostat.

⁸ Source: Gazeta Wyborcza: Dłaczego banko zdzierają z nas skórę” 22.03.2006.

The costs of bank services in Poland are considerably greater than those in many others European countries. In part, the high costs associated with modernizing the Polish banking sector are to blame for these relatively high fees. But clients due to it can obtain modern products today and be served faster. It is simply to administer of banks. Really, since a short time banks are prepared for operation in big scale. If scale of memorials is more superior then individual cost are low. It is connected with falling prices of services too.

CONCLUSIONS

Progressing consolidation in the nearest 10 years will leave on polish market two or three strong players, but for the rest banks it will only remains specializing in concrete services. Concentration of sector does not effect on high prices in contrary to expecting fears, which proved earlier remark about indicators of concentration and prices. Small activity of Poles in using financial services and low number of bank account in comparison with number of housekeeping, forms high level of financial services offered by banks. Personal bank account owns only 57% of Poles, when on west of Europe it is 84%. This index in some economically developed countries surpasses even 90%⁹. Level of payments and commissions, increases also low and depend on inflation and it evokes shrinking of profits margin.

Recently in Poland it amounts to over 10 point percent, that allowed banks to covered so high credits operations costs and credit risk. It was formed in commercial banks at the level of 3,2 point percent in last year, and now it is forecasted the farthest decrease will sets up the level even of 1,7 point percent. Falling revenues from profits margin banks must substitute from other sources of income. Banks now are applying a big push on giving new consumers credits or sale units of investment fund which has to become in future additional sources for banks. Banks have to upgrade the prices for the most popular products and services. In spite of that credit are raising rapidly, retail credits relatively to GDP in Poland amount to 7-8 percent in comparison to 53 percent in UE countries.

Bank sector in Middle- Eastern Europe is very big and did not use potential which prove already remark dependences of asset in bank to GDP. However, banks invest outsized part of increment to baseline infrastructure, which exists on West already. At present Polish services bank market is characterized presently which fastest growth and superior highest profitability than in Western Europe¹⁰. For Poles remains it only hope, that prices of banks services will be cheaper in future thanks to economic growth in Poland. One of factor, which stimulates decrease of bank prices, could be the consequence of proceeding clients on cheapest channels of accesses to bank. Internet will play here the key role.

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⁹ Source: www.e-gospodarka.pl

¹⁰ Source: Central and Ekstern European Banking Study 2006 (CEEBS)