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**Bank performance under privatization**  
**A case from three fast-track transition countries (Czech, Poland and Hungary)**

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## Table of content

|   | <b>Page</b> |
|---|-------------|
| <b>Abstract</b>   | <b>2</b>    |
| <b>1. Introduction</b>  | <b>3</b>    |
| 1.1 Motivation  | 3           |
| 1.2 Method  | 7           |
| 1.3 Hypothesis  | 9           |
| <b>2. Review of literature</b>  | <b>10</b>   |
| 2.1 State ownership versus private ownership  | 10          |
| 2.2 Circumstances for a successful privatization  | 15          |
| 2.3 Factors affecting privatization   | 20          |
| 2.4 Method to privatize   | 21          |
| 2.5 A brief description of bank privatization<br>in three fast-track transition countries | 23          |
| <b>3. Data and Methodology</b>  | <b>27</b>   |
| 3.1 Sample Data collection and research approach  | 27          |
| 3.2 Regression results and analyses   | 35          |
| <b>4. Summary and conclusion</b>  | <b>41</b>   |
| <b>References</b>   | <b>42</b>   |
| <b>Appendix</b>   | <b>54</b>   |
| Table 1& Figure 1   | 29          |
| Table 2a, 2b  | 30          |
| Table 2c  | 31          |
| Figure 2a, 2b   | 32          |
| Figure 2c&Table 3   | 33          |
| Figure 3  | 34          |
| Table 4&Figure 4  | 35          |
| Table 5&Figure 5  | 37          |
| Table 6&Figure 6  | 38          |
| Table 7&Figure 7  | 40          |

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Bank privatization under performance--A case from three fast-track transition countries (Czech, Poland and Hungary)

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**Abstract**

A lot of empirical studies argue that bank privatization has positive effect on bank performance. The purpose of this paper is to go through the bank privatization literature and to test this argument in three fast-track transition countries (Czech, Poland and Hungary). The empirical results of this paper indicate that privatization does have significantly positive effect on bank profitability and loan portfolio quality improvement, but has slight effect with operating cost efficiency in these countries. The research uses ordinary regression to examine the relationship between ownership structure change (the symbol of privatization progress) and annual profitability, operating cost and non-performing loans respectively, additionally we use means of those three performance indicators in CPH countries and put those three indicators together along with the mean of ownership structure changes to test the correlation among them. Overall, the findings support the argument. As china is embarking on significant bank privatization now, and china shares a lot of sameness with the three fast-track transition countries politically and economically, the researcher hopes this paper can be somehow useful to china's bank industry.

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**Key words: bank performance under privatization, regression tests**

## **1. Introduction**

### **1.1 Motivation**

After WTO entry in December 2001, China is embarking on a significant reform of its banking industry, partially privatizing its dominant “Big Four” state-owned banks and taking on minority foreign ownership of these institutions.

In 2003 the government created China Banking Regulatory Commission (CBRC) to achieve better monitoring of the banking industry. Other banking laws were subsequently issued, including revisions of the 1995 Central Bank Law and 1995 Commercial Bank Law. Also in 2003, the State Council granted US \$45 billion to Bank of China (BOC) and China Construction Bank (CCB) to increase capital, instead of writing off bad loans. New systems of external and internal monitoring of asset quality were also implemented.

Foreign investment in domestic banks became intensified in 2003, under the new rules, foreigners can own up to 25% of a domestic bank, with any single investor allowed up to 20%, with regulatory approval. Examples of strategic foreign investments post-WTO includes Citigroup’s 4.6% share in Shanghai Pudong Development Bank (a Shanghai-based commercial bank, about 40% state-owned) and a consortium including Hang Seng Bank Ltd., IFC, took a 24.98% stake in Industrial Bank (a southern Fujian Province-based bank, 34% held by Fujian Provincial Bureau of Finance).

In 2004, New bridge Capital Ltd. (a U.S. investor group) bought 18% stake of Shenzhen Development Bank Co. (a national Shenzhen-based listed bank), the first time that foreign investors came to be the largest and controlling shareholder of a national domestic bank. Hong Kong & Shanghai Banking Corp. (a unit of HSBC Holding PLC.) also agreed to purchase 19.9% stake of Bank of Communications (the fifth-largest bank in China, 23.76% owned by Ministry of Finance of China) and it secured the right to double this share when regulations allow. However, after the investment, the Ministry of Finance increased its shares so that it remains the largest shareholder, potentially a sign that that the Chinese government remains caution about foreign investment in banking.

The partial privatization has now spread to three of the Big Four banks. On June 17, 2005, Bank of America made a deal to buy a 9% stake in China Construction Bank (CCB, one of China's Big Four state-owned banks) and committed to invest a further US \$500 million to maintain its ownership level when CCB proceeds with the planned IPO. Bank of America also has a nonexclusive, 5 1/2-year option to increase its stake to 19.9% at the price of shares in the IPO. Bank of America's deal with CCB is the first foreign equity investment in one of the Big Four banks that dominate banking in mainland China (Wall Street Journal, Eastern edition, June 17, 2005, pg. A.3).

At the same month (June 2005), China Construction Bank signed a deal with Temasek from Singapore who would to pay US \$1.5 billion for a 5.1% stake and then invest a further US \$1 billion in shares when the bank goes public. (International Herald Tribune, 2005/9/21). In September 2005, Royal Bank of Scotland and Temasek have agreed to buy each of 10% stake in Bank of China (BOC, second-largest among the Big Four state-owned banks) (International Herald Tribune, 2005/9/21). On Aug 31, 2005, a group of foreign investors, including Goldman Sachs Group Inc., American Express Co., and Allianz AG have agreed to purchase 10% shares of ICBC (Industrial & Commercial

Bank of China, one of China's biggest state-owned commercial banks) at the price of more than US \$3 billion.

China Construction Bank (CCB) has now gone public. On October 20, 2005, CCB issued 26.49 billion shares to investors in the Hong Kong stock exchange, raising HK \$62.25 billion (i.e., US \$8 billion) with a group of underwriters including China International Capital Corp., Credit Suisse First Boston (a unit of Credit Suisse Group), and Morgan Stanley, thus becoming the first among Big Four to go public and the largest issuer in the world among the IPOs that were issued within last four years. Moreover, Bank of America (which purchased a 9% stake earlier in the year) has promised to buy US \$500 million of CCB's shares in the IPO, and Temasek (which purchased a 4.49% stake earlier) said it will buy an additional US \$1 billion of CCB's shares in the offering (Wall Street Journal, Oct 20, 2005, p. 1).

Eight city commercial banks had also reached agreement with foreign investors by September 2005. Foreign institutions have spent about US \$17 billion buying sizable stakes in Chinese domestic banks over the past three years. The Chinese regulators are considering further raising the permitted level of foreign investment in Chinese banks. (Wall Street Journal, Eastern edition, Sept 15, 2005, pg. A18)

It is under such background that this thesis studies for bank privatization in three fast-track transition countries. But before we go ahead, we need to ask why we choose these three fast-track transition economies? First, let's take a brief bird eye view on Chinese banking system Pre-WTO entry. The Chinese socialist banking system was established in the late 1940s following the system in the former Soviet Union. Under reforms begun in 1978, the banking system expanded by establishing several large state-owned commercial banks, and splitting the Big Four state-owned banks and the lending functions from the People's Bank Of China (the central bank) .These banks

were initially limited to only serve their designated sector of the economy as policy lending for the government, and lacked incentives to compete. The asset quality of the state-owned banks deteriorated significantly during the 1990s, as the state-owned banks made most of their loans to state-owned enterprises (SOE), which had little incentive to repay.

Two major legislative reforms occurred in 1995. The 1995 Central Bank Law of China confirmed PBOC as the central bank and substantially reduced the influence of local governments on credit allocation decisions. The 1995 Commercial Bank Law of China officially termed the major state-owned banks as “commercial banks,” and directed them more towards commercial business based on market principles instead of policy lending. New banks also entered the market in the mid-1990s. By the end of 1999, there were 12 national shareholding commercial banks, with total assets of 1,447.7 billion yuan (PBOC 2000). The central government also allowed local governments to establish local banks in the mid-1990s by consolidating local rural and urban cooperatives as city cooperative banks. By the end of 1999, 90 such banks were operating in China, with total assets of 554.7 billion yuan (PBOC 2000).

The Chinese government has been very conservative in allowing foreign bank entry. Foreign banks were first permitted to make deposits and loans in local currency (i.e., yuan) in the Shanghai Pudong New Zone in 1996. By the end of 1999, 25 foreign banks had permission to conduct local currency business, with totals of 21,813 million yuan in assets, 11,341 million yuan in loans, and 15,100 million yuan in deposits. Total assets of all foreign banks in China reached US \$32,844 million (nearly 272 billion yuan) by 1999. Regulatory permission for foreign investors to hold minority stakes in domestic banks was forthcoming more slowly. The first case was in 1996, when Asian Development Bank (ADB) bought a 1.9% stake in China Everbright Bank<sup>3</sup> (a national shareholding commercial bank, majority state owned). But after WTO entry, Foreign

investment in domestic banks became intensified as we have discussed above.

As Chinese banking system and political system followed former Soviet Union before reforms begun in 1978 and since then china economy has experienced significant change and rapid growth and this rapidly developing economy has been intensively market-oriented now, there are similar background between china's economy and the three fast-track transition economies (Czech Republic, Poland and Hungary), it seems to be logical for this study to focus mainly on bank privatization in these economies.

## **1.2 Method**

The purpose of this study is to examine the bank performance under privatization in three fast-track transition countries, briefly spoken CPH in this paper, namely Czech Republic, Poland and Hungary. We choose these countries because there are similar background between china and them as we have mentioned above. Besides, both have similar inefficient banking sector and not well developed legal and financial infrastructure.

Further, the profit efficiency findings of banks in china suggest that in terms of majority ownership, foreign banks are the most efficient, followed by private, domestically-owned banks, with state-owned institutions – particularly the Big Four – being measured as least efficient. These results are consistent with findings for these transition nations. The cost efficiency findings from china present similar evidences to these three transition countries that state-owned institutions have relatively high measured cost efficiency – possibly due to government subsidies on the cost side.

Finally, similar investigation suggests any subsidies on the cost side are more than



consumed by poor loan revenues as state-owned banks have much higher rates of nonperforming loans both in china and in these countries.

The theoretical literature indicates that private banks, or in this case, privatized banks should outperform government-owned banks, but Whether is there a relationship between bank performance and privatization? Empirical evidence is needed to confirm this theoretical hypothesis for banks in these transition countries.

This paper assesses the effect of privatization on bank performance in these countries over the period 1995-2004. CPH undertook a major privatization program during this period, divested banks constituting more than 90% of total banking system assets. However, this period was also characterized by other major changes in the financial system. We therefore evaluate the effects of privatization on bank performance relative to the commercial and all other banks during the starting privatization, privatization and post privatization period, namely, 1995-2004. Specifically, we assess the performance of privatized banks, i.e. the return on assets (ROA) as well as the share of non-performing loans (NPL), operating cost (OC) relative to other banks in the financial system and relative to their performance before privatization.

We use state ownership structure change as the symbol of privatization and three indicators (ROA,NPL,OC) as the symbols of bank performance and apply different ordinary regression tests on state ownership cut and bank performance. Our results indicate performance improvement due to privatization although the results are subject to some research limitations. First, poor data quality makes it not so easy to find very significant relationships between bank characteristics such as ownership and bank performance. The fact that we find significant and robust relationships in spite of these shortcomings makes us more confident in our findings. Second, limited information on the privatization transactions and the individual banks limit our analysis to a primarily statistical one. We try to offset these hurdles with a thorough sensitivity analysis.

The remainder of the paper is organized as follows. Section 2 offers theoretical background on bank privatization. Section 3 describes our sample data and the methodology to test the effect of privatization on bank performances. Section 4 presents our main results and analysis confirming the positive effect of privatization on bank performance. Section 5 concludes our discussion and research. We analyze the relationship between ownership structure change and loan portfolio quality, profitability, cost efficiency by using 576 annual observations over 1995-2004 on commercial and all other banks in these three countries that have been privatized and to provide the support about effect of privatization on bank performance.

### **1.3 Hypothesis**

Before this paper, lots of empirical researches on this issue suggesting that there has been existing a positive effect of privatization on bank performance. This research is based on a deductive approach to data collection and testing of significance about privatization. We mainly collect data of state ownership change (Privatization), return on assets, operating cost, non performing loans (the three indicators of bank performance) from banking sector performance annual reports made by Financial Supervision Authorities, National banks and bank associations in CPH countries, as well as annual reports of individual large banks over 1995-2004. Following the above background, now this paper has its own question: Whether there is a relationship between bank performance and privatization? Therefore, the hypothesis to be tested in this research is:

H0: Bank privatization improves bank performance.

## **2. Review of literature**

### **2.1 State ownership versus private ownership**

There is an enormous theoretical and empirical literature on state versus private ownership of non-financial firms. This is surveyed in Megginson(2005). Economists have offered four principle reasons why state ownership will be inherently less efficient than private ownership. First, SOE managers will have weaker and adverse incentives than will managers of privately owned firms because no individual or group has a clear interest or stake in the assets of the enterprise, and thus will be less diligent in maximizing revenues and minimizing costs. Second, state enterprises will be subject to less intense monitoring by owners, both because of collective action problems-potential monitors have less incentive to carefully observe managerial performance because they bear all the costs of doing so but reap only a fraction of the rewards-and because there are few methods of effectively disciplining SOE managers in the event that sub-par performance is detected. Third, the politicians who oversee SOE operations cannot credibly commit to bankrupting poorly performing SOEs, or even to withholding additional subsidized funding, so state enterprises inevitably face soft budget constraints. The final, and in many ways most compelling, critique of state ownership is that SOEs will be inefficient by design, since they are created specifically so that politicians and bureaucrats can maximize their institutional and individual self-interest and power rather than the wider public interest in society. These theories fit with the empirical findings that state-owned enterprises have been used in developing countries to finance politically motivated projects or provide subsidized finance to favored groups, and that they open too many offices and hire too many employees ( Kikeri, Nellis, and Shirley

1992 and World Bank 1995). The logical conclusion of these theories is that the State should leave productive activity to the private sector. In recent years, a large number of studies have examined the state versus private ownership of banking, and the overall picture points to a similar conclusion.

State ownership of banks varies widely by regions, according to data from the BCL surveys of banking. South Asian (SAR) countries have the highest share of banking sector assets held by government-controlled banks, followed by the transition countries of Europe and Central Asia (ECA), Africa (AFR), Latin America and the Caribbean (LAC), East Asia and the Pacific (EAP), the Middle East and North Africa (MENA), and finally, the OECD countries. During the past 15 years, over 250 commercial banks have been fully or partially privatized by governments of 59 countries. The extent of privatization of state-owned banks has varied widely. From 1999 to 2002, Africa had the steepest reductions in state ownership of banks, ignoring the extensive privatization in ECA and LAC earlier in the decade. East Asia and the OECD countries maintained their levels of state ownership, while South Asia and MENA showed slight increases in state ownership, partly because of state intervention in some troubled private sector banks. The impact of privatization on the banking sector performance has varied across countries and among banks, obviously depending on, among other factors, management, regulatory and supervisory structures, degree of competition and the differences in the way the banks have responded to competitive pressure.

In general, it seems that bank privatization has had a significantly positive impact on the banking sector as a whole. Bonin et al. (2005) test whether privatization improves the financial and operating performance of the 10 largest banks in each of the six central and east Europe transition economies over the period 1994-2002. After unsuccessful partial privatizations in the early and mid-1990s, most of the privatized banks were recapitalized and then sold to foreign strategic investors. Their dataset has

471 annual observations, and they document significant performance improvement after privatization. They also find that privatized banks begin to compete successfully for fee-for-service businesses. The performance of privatized banks in the late 1990s is significantly better than state-owned banks and becomes comparable to foreign Greenfield banks. The most significant impact of privatization on commercial banks in the Caribbean has been in the area of customer service and product innovation. Most of the banks that have been privatized indicate that there has been a considerable improvement in customer service. This has been reflected in better range of products and services to customers. Many banks have now introduced efficient delivery channels, such as Automated Teller Machines (ATMs), debit cards and some are now in the process of introducing internet and electronic banking. All of these have been made possible by the rapid development in information technology. Customer service has become increasingly the main area in which banks in the region compete. The collusive behavior of banks in determining interest rates as well as the lack of product differentiation have forced the banks to improve their customer service significantly. (ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN 2001)

La Porta et al.(2002)find that Government ownership retard financial system development and restrict economic growth rates, higher government ownership in 1970 is associated with significantly slower subsequent financial development and lower growth in per capita income and productivity. Bonin et al (2002) examine the impact of ownership structure on bank performance in the six transition economies of Bulgaria, Croatia, the Czech Republic, Hungary, Poland and Romania, they find robust evidence that profitability is higher for fully private banks than for banks with some state ownership. Barth et al (2004) argue that government ownership of banks is negatively correlated with favorable banking outcomes and positively linked with corruption. However, government ownership does not retain an independent, robust association with bank development, efficiency or stability when other features of the regulatory and

supervisory environment are controlled for. On the other hand, there is certainly no evidence, even in weak institutional settings, that government-owned banks are associated with positive outcomes. Cornett et al (2003) test performance difference between privately owned and state-owned banks in sixteen Far East countries from 1989 through 1998, they find that state owned banks are significantly less profitable than privately owned banks due to state banks' lower capital ratios, greater credit risk, lower liquidity and lower management efficiency. While the performance of all banks deteriorates significantly at the beginning of the Asian economic crisis in 1997 and 1998, state bank's performance deteriorates more than did that of private banks and performance differences are most acute in those countries where government involvement in the banking system is the greatest. Economic growth is also slower in these countries, and there is less financial development. Weintraub and Nakane (2005) go through the privatization experience of roughly 250 Brazilian banks over the period 1990-2001. The authors find that bank size and ownership are important determinants of productivity. In particular, they find that state owned banks are significantly less productive than private banks and that privatization significantly increase productivity.

The most common findings for developing nations are that on average, foreign banks are more efficient than or approximately equally efficient to private, domestic banks. Both of these groups are typically found to be significantly more efficient on average than state-owned banks, but there are variations on all of these findings. To illustrate, some research using data from the transition nations of Eastern Europe finds foreign banks to be the most efficient on average, followed by private, domestic banks, and then state-owned banks (Bonin, Hasan, and Wachtel 2005a,b). However, another study of transition nations finds the mixed result that foreign banks are more cost efficient, but less profit efficient than both private, domestic and state-owned banks (Yildirim and Philippatos 2003). Claessens, Kunt and Huizinga(1998) examine the extent of foreign ownership in 80 national markets over the 1988-1995 period, and find

that foreign banks achieve higher profits than domestic banks in developing countries. Clarke et al (2001), Majnoni et al(2003),Bonin et al (2005) and Djankov et al (2005) document similar findings about foreign bank ownership's efficiency. A study using 28 developing nations from various regions finds foreign banks to have the highest profit efficiency, followed by private, domestic banks, and then state-owned banks (Berger, Hasan, and Klapper 2004). For cost efficiency, the private, domestic banks rank higher than the foreign banks, but both are still much more efficient than state-owned banks. Two studies using Argentine data (prior to the crisis in 2002) find roughly equal efficiency for foreign and private, domestic banks, and that both are more efficient on average than state-owned banks (Delfino 2003, Berger, Clarke, Cull, Klapper, and Udell 2005). A study employing Pakistani information finds foreign banks are more profit efficient than private, domestic banks and state-owned banks, but all of these groups have similar average cost efficiency (Bonaccorsi di Patti and Hardy 2005). Finally, a study of banks in India finds that foreign banks are more efficient on average than private, domestic banks (Bhattacharya, Lovell, and Sahay 1997). Bonin, Hasan, and Wachtel (2005) provide evidence that on average, foreign banks are more efficient than domestic banks in developing countries. Foreign banks headquartered in developed countries have generally superior managerial expertise/experience, access to capital, use of hard-information technologies, and ability to diversify risk in most developing host countries, where domestic institutions have not acquired comparable skills.

In sum, state owned banks are less efficient than privately owned banking sectors, foreign banks are more efficient than or approximately equally efficient to private banks and state domination of banking imposes increasingly severe penalties on those countries with the largest state banking sectors, but the question is under what circumstances privatization of banks will improve performance over continued state ownership.

## **2.2 Circumstances for a successful privatization**

### **2.2.1 The institutional framework matters.**

Although there are strong theoretical arguments against state ownership, but it does not necessarily follow that privatization will cure these problems. In any event, a number of countries had already learned the demerits of public ownership of banks. Inefficient operations and banking failures were enough testimony of the demerits of State ownership of banks in many countries. In fact, in many developing countries, the issue was not whether financial sector privatization was necessary, but the institutional framework in order to maximize the benefits from the process.

A lot of studies believe that Political objectives, poor information, and principal/agent problems, underdeveloped capital markets, weak court systems, inadequate procedures for bankruptcy or takeover etc. will all prevent privatized firms from performing efficiently, especially in developing countries where these market and institutional failures are common (Adam, Cavendish, and Mistry 1992; Caves 1990; Commander and Killick 1988; Cook and Kirkpatrick 1988; 1997; Stiglitz 1999). From 1991 to 1997 Mexico has conducted two experiments with its banking system, the first experiment failed and the second experiment was disappointing . The first one led to a banking system that became insolvent within four years and that had to be bailed out at a cost estimated at \$65 billion. The second one produced a banking system that is profitable and stable, but that is risk averse. It therefore extends only modest amounts of credit to firms and households. The ratio of private sector lending to GDP in Mexico is only 11%, an extraordinarily low figure in relationship to that of other middle-income developing countries. There were two fundamental flaws in the Mexico privatization experiment. The first flaw was that Mexico had weak institutions to assess the



creditworthiness of borrowers ex ante and enforce the contract rights of bankers ex post. The second flaw was that the Mexican government faced a serious fiscal crisis and thus sought to maximize the prices at auction for the banks, political economy fundamentally shaped the process of privatization. In order to get Mexico's bankers to pay high prices, however, the government was compelled to make a series of decisions that reduced the incentives of bank directors, bank depositors, and bank regulators to enforce prudent behavior by the privatized banks. Consistent with its goal of maximizing prices on offer, the government also did not bring Mexico's accounting standards in line with generally accepted accounting standards. (Stephen Haber 2004)

Chile was the forerunner and had privatized 19 of 20 State-owned banks by 1973. However, the initial phase of privatization in Chile led to a financial crisis, as the prudential and regulatory framework was ill-suited to the fairly rapid liberalization. This led to renationalization and eventually to a second wave of privatization that was more successful. Argentina, like other Latin American countries, was affected by banking sector problems, including the low mobilization of deposits, and non-performing loans provided the impetus to privatization. Privatization was so widespread that by 2000, State-owned banks had declined to 15 from 40 in 1990. In Brazil also, the government continues to privatize State-owned banks. In 2000, two large regional banks, Banestado and Banespa were privatized. Meanwhile, in Peru, Banco Continental made a public offering of shares amounting to US\$256 million in 1995.

Even in the Least Developed Countries (LDCs), a number of financial reforms and liberalization policies were undertaken aimed at deepening the financial sector and increasing available resources for investment. Almost all of the LDCs have allowed the entry of new private sector banks and non-bank financial institutions. Again, the privatization were not gone successfully because of weak regulation and supervision, not well developed financial and legal system. (Brownbridge and Gayi, 1997).

### **2.2.2 Macroeconomic stability matters**

In most of the Asian developing countries, increased private sector participation in the financial sector was associated with greater financial depth, measured by growth in bank deposits and broad money supply (M2) to GDP<sup>3</sup>. This was because many of these countries had attained macroeconomic stability, which provided a platform for growth in the financial sector. In Bangladesh and Nepal, for instance, bank deposits grew by around 8 percentage points of GDP between 1985 and 1995. Financial depth improved in some African countries, such as Botswana and Uganda, but weakened in others, including Tanzania, Zambia and Malawi. The worsening situation in some of these countries, in any event, stemmed not from purely financial difficulties, but from macroeconomic instability, particularly high inflation and public sector deficits, and political instability in others.

### **2.2.3 Privatization mode and strategies matter**

Economists have long noted the importance of properly sequencing financial sector reform and liberalization. The sequencing may be divided into three stages (Sundararajan, 1994 and Alexander *et al*, 1995). The first stage is preparatory such as: Introduction of a minimal program of financial restructuring policies to deal with fixed rate loans, selected nonperforming loans, capital adequacy and subsidized selective credit; Review of legal and organizational arrangements for banking supervision; Strengthen the licensing and entry regulations and put in place a framework for orderly intervention and liquidation of banks. The second stage is to initiate market development including: The reform of commercial bank accounting and bank reporting systems; The prudential regulations, particularly loans classification and provision, credit concentration limits, credit appraisal guidelines and foreign exchange exposure rules based on new accounting standards; Strengthen the capital adequacy norms in line

with bank restructuring strategy; Active pursuit of Institutional development of banks, Formulation of a comprehensive program of bank restructuring, bank liquidations, loan recovery and loan workout arrangements; Implementation of simple financial restructuring policies for banks. The third stage is to strengthen financial market Continuation of comprehensive reforms to foster bank and enterprise restructuring systematically in lines with the program designed in the second stage. Recapitalizing and restructuring of state-owned banks followed rapidly by their privatization to an independent strategic investor aligns incentives properly. Restructuring must include both a clean up of the balance sheet and a change in on going lending practices to avoid moral hazard problems of continuing bailouts. Effective methods of dealing with bad loans prior to or during the privatization process are essential. The early recapitalizations of the Czech banks were not gone well because non-performing loans and soft lending practices continued and future bailouts became necessary. By contrast, the continual recapitalizations of Hungarian banks were successful because bad loans were ultimately written off completely and privatization to independent foreign strategic investor rapidly left Hungary with the strongest banking sector in the region .In a number of Caribbean countries, including Jamaica, the Netherlands Antilles and Trinidad and Tobago, improper sequencing of reforms and regulation led to bank failures that impacted negatively on the financial sector for some time.( ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN 2001)

The credible transfer of control from the state is the crucial aspect of a successful bank privatization program. During the first unsuccessful round of privatization in the Czech Republic and Poland, when the governments divested more of its shares, Performance improved somewhat, but the subsequent divestiture of all government shares led to unambiguous performance gains. Comparing banks within Brazil and Nigeria leads to a similar conclusion: government ownership is associated with weaker bank performance. Performance improved in Brazil's fully privatized banks but

remained unchanged in the state restructured banks (Beck, Crivelli, and Summerhill 2003). Poland lost its credibility with an inconsistent policy that switched from attracting a strategic foreign investor to attempting to arrange two large politically motivated bank mergers, and thus, delayed this crucial transfer of control and finally slowed the momentum of bank privatization due to a fear of foreign dominance of the banking sector. Hungary, on the other hand, gained credibility when it ceded control of its largest banks to strategic foreign investors soon after recapitalization and restructuring (Abarbanell, Jeffrey S. and John P. Bonin 1997). Voucher privatization in Czech Republic resulted in the transfer of less than fifty percent of the bank shares to individual and investment funds with no dominant strategic owner emerging and the dispersed ownership is not conducive to achieving the primary goal of independent governance. (Snyder, Edward A. and Roger C. Kormendi 1997)

Foreign ownership and participation is an essential and inevitable part of bank privatization. Fundamental reasons why foreign strategic investors are important to the banking industry are such that Foreign ownership helps clarify private sector control independent of the government, transfer modern banking technology, increase competition and the international integration of financial markets , reduces the potential for politicization of bank lending and the likelihood of financial crises and Foreign banking interest is a genuine market test of the value and soundness of domestic banks etc. (Bonin et al 1997).Hungary has been more accommodating on this issue and now has the strongest banking sector in the region. Poland has been slower to recognize the importance of foreign participation in banking to smooth its way into Europe. The Czech Republic is yet to acknowledge fully the necessary role of foreign banking. Privatization to insiders has been relatively unsuccessful. Privatized firms in transitional economies will be less efficient if they were sold to their managers and workers since this may prevent necessary restructuring and limit capital infusion (Earle et. al. 1995; Barberis et al 1996; Dyck 1999; Claessens and Djankov 1999; and Nellis 1999).

### **2.3 Factors affecting bank privatization**

Economic factors are significant determinants of bank privatization in both developing and developed countries. A common objective of privatizations is to raise revenue for the government. Haber (2005) and Verbrugge et al (2000) find that governments appear to structure SOB privatizations in order to maximize the proceeds from the sale. Governments frequently use the proceeds from privatization to offset budget deficits.( Megginson et al 1994) Poorly performing banks are more likely to be privatized than those performing well.(Beck et al 2005, Berger et al 2005, and Clarke and Cull 2002)Governments facing an economic crisis, such as systemic bank failures, are more likely to privatize. (Clarke and Cull 1997,,2002 and World Bank 1995)

Privatization through public share offerings can jumpstart stock-market development and trigger gains in economic growth and efficiency. For example, the privatization of large banks through share offerings should enhance the liquidity of the nation's equity market. With more shareholders, the market becomes more efficient. This encourages more firms going to public and the capital market experiences rapid growth.(Perotti and Oijen 2001, Subrahmanyam and Titman 1999) A government may also use SOB privatizations to enhance the country's private banking sector. (Boehmer et al 2005)

Higher levels of provincial unemployment and higher shares of public employees reduces the likelihood of privatization.(Clarke and Cull 2002) Larger banks are less likely than smaller banks to be privatized.(Clarke and Cull 2002) In addition to economic characteristics, political and legal factors also influence the privatization decision. (Denis and McConnell 2003) Politicians choose to privatize when the political benefits of privatization exceed the political costs (Clarke and Cull 2002 ). Less stable governments may lack the ability to effectively enforce property and contractual rights

and thus more possible to privatize banking sectors. (Svensson1998, Claue et al 1996) Since politicians who are more accountable to voters may be less willing to expropriate value from SOEs, these politicians should view privatization as a more viable option. Therefore, greater accountability to voters, by limiting the ability to extract political benefits from SOBs, should increase the likelihood of privatization.

Beck et al (2001) identify the economic orientation of each country's ruling government, classifying right-wing governments as those that favor less state control over the economy and left-wing governments as those that exert more state control. Megginson et al (2004) use similar measures of ideology and find that a government's economic orientation figures significantly in its privatization decisions.

After examining the political economy of sales of thirteen banks by Argentine provincial governments after the passage of the April 1991 Convertibility Act, Clarke and Cull (2002) conclude that overstaffing tends to reduce the probability of privatization because the post-sale staff cuts needed will be too politically painful and that the onset of the Tequila Crisis in 1995 increased the likelihood of privatization by raising the financial costs of continued state bank subsidization.

## **2.4 Method to privatize**

Governments usually choose one of three techniques to privatize: asset sales, share-issue privatization, or voucher privatizations.

Boehmer et al. (2003) examines 270 transactions from 51 countries over the period 1982-2000, which raised a total of €119 billion for divesting governments, find that 46.7% of these sales are executed using SIPs, while the remaining 53.3% employ asset sales. Public offerings of equity in the banks lead to diffuse ownership that favors entrenched management. IPO privatization usually results in only a partial government

divestiture of state ownership and in dispersed ownership. Hence, they fail to create an environment for the development of a modern, independent banking sector. In weak institutional environments share offerings produce lower performance gains than direct sales to strategic investors; SIPs in less developed countries (Czech , Egypt, Poland , Nigeria ) were less successful (Bonin et al. 2003). Cross country analysis in Otchere (2003) also shows few or no performance gains in banks sold through SIP. Problems arise because of the underdeveloped infrastructure for handling the processing of claims from a large number of small owners and due to the lack of absorption capacity of nascent domestic capital markets in which bank stocks dominate market capitalization. In such instances, bank SIPs may be prone to market manipulation, true reform of the banks may be delayed and the government may not realize as much revenue from the privatization process as it could.

The attraction of privatization through asset sale is that such a transfer of ownership and control facilitates necessary changes in management, often transfers knowledge of modern banking techniques, and promises much needed capital injections. Control is transferred from the government to a new owner with the skills and financial capability to develop an independent, efficient bank. However, governments find it difficult to set a price for this control. If the price appears to be too low, the government is accused of giving away the bank to a powerful group or to a foreigner. If the price is too high, or if a hesitant government restricts the offer of control of bank assets and activities, there will be little interest from strategic investors. To further complicate the issue, potential investors who have the resources and interest in making hefty investments in not so healthy banking firms are often foreign financial institutions. There may be significant political resistance to foreign ownership of the domestic banking system. Asset sale often involve lengthy negotiations, which delay the privatization of the banking sector.

In theory, voucher privatization provides a speedy transfer of ownership using an egalitarian process that does not favor any particular interest groups. Furthermore, it

avoids the need to set a price administratively for the transaction. The clearest disadvantage is that the transaction does not provide any revenue to the government or lead to any capital infusion to the privatized bank. Moreover, this method is likely to result in dispersed ownership and it is not conducive to achieving the primary goal of independent governance. As designed in the Czech Republic, voucher privatization of banks resulted in the transfer of less than fifty percent of the bank shares to individual and investment funds with no dominant strategic owner emerging.

Both SIPs and voucher privatization provide attractive relatively quick means for the transfer of partial ownership but that is not the sole goal of privatization. These approaches do not facilitate the development of an independent market-oriented banking system. Such development requires a transfer of control of the bank and its assets to a strategic investor with the incentive to modernize the banking business. Although fraught with potential political problems, the role of a strategic investor is crucial and recent developments in transition countries suggest that this has now been accepted. (Bonin & Wachtel 1999)

## **2.5 A brief description of bank privatization in three fast-track transition countries (Czech, Poland and Hungary)**

Before transition, banking sectors were designed to serve for a centrally planned economy in these three countries and were usually segmented functionally. A state savings bank, with an extensive branch network, collected virtually all household deposits. A foreign trade bank handled all transactions involving foreign currency. An agricultural bank provided short-term financing to the agricultural sector. A construction bank funded long-term capital projects and infrastructure development. During the first half of the 1990s, the first step in banking sector reform in the three countries involved creating a two-tier system with commercial banking activities carved out of the old central bank, the new banking sectors in these countries consisted of the



newly created commercial banks and the specialty banks, both types having universal banking licenses, along with a few foreign green-field banks and many relatively undercapitalized domestic private banks under lax entry requirements.

The three countries embarked on significantly different bank privatization programs. Even before the political change, the Hungarian government had allowed three foreign banks to operate in the country from 1985. By the end of 1994, the Hungarian foreign trade bank had been purchased by a foreign owner and foreign investors held about 20% of total banking assets in Hungary. During the 1990s, the initial phase of the banking sector's reform was consolidation. As the first step, the state executed a portfolio cleaning in 1992 - 1993. As consolidation failed to solve several problems, full recapitalization of the Hungarian banking sector became indispensable. After the successful reconstruction and stabilization, the government decided to privatize commercial banks. Privatization aimed to attract mainly foreign strategic investors in order to get access to the necessary technological background, know-how and management skills. After 1990s, the Hungarian financial system began to develop rapidly. At present, approximately 80% of the total Hungarian banking sector is in foreign hands as a result of the above described privatization process. Of the foreign investors, 85% is strategic investor: these are mainly foreign banks and other financial institutions. The remaining 20% is controlled by private investment companies and very few is controlled by state hand.

The starting conditions were not favorable for the Czech financial sector. Compared to the other post-communist countries the situation of the Czech banking sector was even more complicated. At the beginning of the transformation, the SBCS's (Central bank then) monetary policy relied mostly on administrative instruments. In line with the development of the payment system this situation steadily changed and the SBCS/CNB moved to standard market instruments. In 1992, Act on SBCS (22/1992)

and Act on Banks (21/1992) took effect – specification of banking license and banking supervision, fines, credit exposure rules, required capital of bank increased from CZK 500 million to CZK 300 million . In 1994, Act on Banks amended – CNB empowered to lower capital of bank, conservatorship better specified, deposit insurance established, required capital increased to CZK 500 million; CNB issued regulation on loan classification and provisioning. In 1996, Regulation on bank loans issued (new risk weights for KoB, NPF and EGAP). In 1999-Stabilization Program, CNB issued regulations on capital adequacy of banks incorporating credit and market risks (effective 1 April 2000) and on supervision on consolidated basis. In 2001, Act on the CNB and Act on Banks harmonized with EU legislation; deposit insurance scheme rules amended; Central Credit Register introduced. In Czech Republic, every single bank was privatized differently. due to the problem within banks´ balance sheets – NPLs (non-performing loans), low inflation environment and more restrictive monetary policy disabling a solution of existing debts by devaluating (unlike in other countries with higher inflation), a special institution was created to clean the banks´ balance sheets –Consolidation Bank, later Czech Consolidation Agency. After cleaning their balance sheets the banks were privatized (ended 2001, but the “cleaning up” process ended with the termination of the Czech Consolidation Agency on December 31, 2007.) In the Czech Republic, three of the largest four banks participated in the first wave of voucher privatization in 1992. Investment funds, the largest of which were created by these banks, were an integral part of the Czech voucher privatization program. Hence, this initial divestiture of state holdings resulted in interlocking ownership with the state retaining large controlling stakes of voucher-privatized Czech banks. At the end of 1994, although foreign investors held about 6% of banking assets in the Czech Republic, none of the large banks had any foreign ownership. Afterwards, the Czech government was late to recognize the importance of attracting strategic foreign investors, beginning with 1998, bank privatization, including that of banks initially privatized by voucher method and then re-nationalized, was done by sell-to-foreign strategic investor method.

Presently, all the large banks in the Czech Republic are foreign-owned.

In January 1989 the Sejm (The Polish Parliament) passed two Acts related to banking - the Banking Act and the Act on the National Bank of Poland, a two-tier structure of Polish banking was established. Another step in the process of the construction of a new banking system was the passing of three Acts aimed at the rehabilitation of the banking sector and at increasing its stability. The adopted privatization strategy allowed foreign strategic partners to take over the holding of no more than 30% of the total shares issued, it was also assumed that the State would retain about 30% of shares with voting rights limited to strategic decisions (with the option to dispose of this interest in the future) and the remaining shares (about 30%) would be offered to individual investors in a public offer and to employees, on privileged terms. The change of the government's policy versus foreign capital was reflected in 1998 by the selling to foreign investors (Bayerische Hypo- und Vereinsbank and Bank Austria AG) of significant equity holdings (representing 36.72 % and 33.3% of capital, respectively.) In accordance with the obligations assumed by Poland when joining the OECD, at the beginning of 1999 formal restrictions against foreign banks in respect of establishing branches were abolished. At the end of September 2001 the share of foreign capital (5.2 bn zloty) in the equity capital of commercial banks in Poland stood at 57.4%. The largest amounts were invested by German capital and by American capital. Assets controlled by the foreign capital as of the end of September 2001 amounted to 78.3% of the total assets of the sector. As of 2001 there were 75 commercial banks in Poland, with only one being state owned and 2 further banks having state majority capital.

### **3. Data and Methodology**

#### **3.1 Sample Data collection and Research approach**

The paper focuses on three fast-track transition countries-Czech Republic, Hungary and Poland-chosen because they had high levels of state ownership at some point in the 1990s and undertook a relatively high number of privatizations. We mainly collect data from banking sector performance annual reports made by those countries' Financial supervision Authorities, National banks and bank associations from 1995 through 2004, with a total of 576 observations. Since not all variables are available for all banks, fewer observations are included in some of the regressions. In our empirical analysis, we focus on the performance of banks that were privatized during the sample period. We also collect performance data from all large banks' annual reports in CPH countries, because those large banks generally account for at least 2/3 of the whole banking sector in each country in CPH.

In the bulk of our empirical analysis we focus on three performance measures. Return on assets (ROA) is profits relative to average total assets. Since some share of banks' profits came from foreign exchange operations, in some specifications we use measures of ROA that exclude foreign exchange profits. Excluding foreign exchange operations should provide a better indication of banks' profitability in financial intermediation. Secondly, we employ operating cost ratio(OC) to test banking efficiency in CPH. Finally, we also use the share of nonperforming loans (NPL)-the loan portfolio quality measure as a performance indicator. Data resources of these three indicators are

collected mainly from annual reports made by Financial Supervision Authorities in CPH, as well as by individual banks and bank associations. The details can be checked in the Appendix of this paper. Since data resources are dispersed in annual reports, some even can only be found in the articles of reports, the researcher can not get all data exhibited in the attached Appendix.

We assess the effect of privatization on bank performance by analyzing the relationship between the structure change of ownership (the symbol of privatization) and bank performance( ROA,NPL,OC) during the sample period, while controlling for other bank characteristics, we use the following regression model:

$$Performance_{it} = a \pm b * Privatization_{it}$$

Where:  $Performance_{it}$  is the performance of bank i. over time t. As noted, this variable includes return on assets (ROA), non performing loans (NPL) and operating cost (OC).

We use ROA excluding foreign exchange incomes.

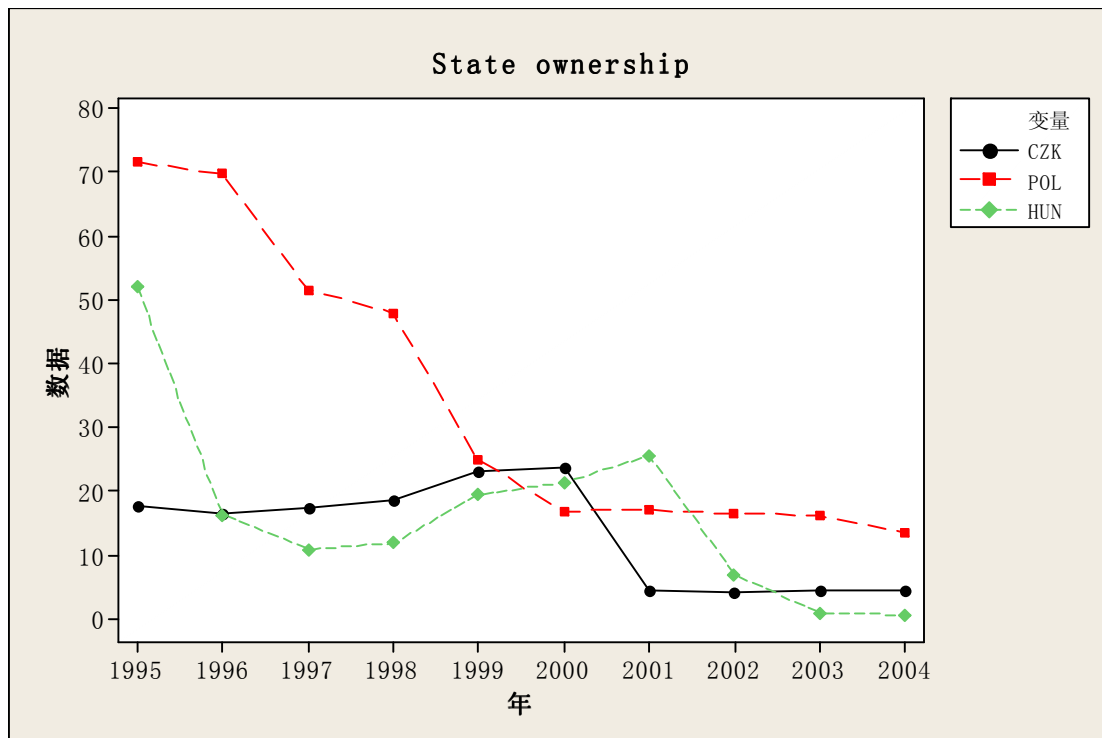
We use state ownership cut as the symbol of privatization of bank i. over time t.

In Table 1 we document the structure change of state ownership (Privatization) in CPH during the sample period and thus we have Figure 1, the structure change trend Graph. It's easy to find since 1995 privatization in this area has been progressing very fast, and during 1997-1999 the privatization was intensified and experienced very dramatic change, after this period the privatization in CPH has been undergoing steadily. 1997-1999 can therefore be regarded as the changing time point of privatization effect on bank performance in this research.

**Table 1: State ownership in % in CPH countries**

|         | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---------|------|------|------|------|------|------|------|------|------|------|
| Czech   | 17.6 | 16.6 | 17.5 | 18.6 | 23.1 | 23.6 | 4.3  | 4.1  | 4.4  | 4.4  |
| Poland  | 71.7 | 69.8 | 51.6 | 48.0 | 24.9 | 16.9 | 17.0 | 16.5 | 16.2 | 13.4 |
| Hungary | 52.0 | 16.3 | 10.8 | 11.8 | 19.5 | 21.3 | 25.6 | 6.9  | 0.9  | 0.5  |

Sources: Annual reports of Hungarian Financial Supervision Authority, National bank of Poland, National bank of Czech as well as annual reports of individual banks. In addition, data are also taken from Ceska Bankovni Asociace (Czech Republic) and *Hungarian Banking Association* from 1995 to 2004.

**Figure 1**

We collect profitability and operating efficiency data during the sample period and made the table 2. It shows the performance of banking sectors in CPH countries over the whole sample period. Accompanying with privatization (here is the reducing of state ownership), banking sectors' annual profitability (ROA) in CPH countries has been improving gradually (somehow very significantly in Hungary) during the period, while the non-performing loan (NPL) reducing apparently (not very apparently in Poland) and

operating cost (OC) going down slightly. This indicates a positive performance effect of privatization in CPH and the indication is expressed vividly by Figure 2(a,b,c).

**Table 2a: Profitability and operating efficiency in CPH countries**

| CZK million<br>The end of each<br>December | Total assets | Net profit | Non performing<br>Loan(%) | ROA  | Operating<br>Cost(%) |
|--|--------------|------------|---------------------------|------|----------------------|
| 2004                                       | 2635554      | 32852      | 4.1                       | 1.3  | 1.8                  |
| 2003                                       | 2527701      | 30193      | 4.9                       | 1.2  | 1.9                  |
| 2002                                       | 2503726      | 28170      | 8.1                       | 1.1  | 1.9                  |
| 2001                                       | 2500308      | 16951      | 13.4                      | 0.7  | 2.1                  |
| 2000                                       | 2255259      | 14385      | 19.1                      | 0.6  | 2.2                  |
| 1999                                       | 2533895      | -5628      | 21.5                      | -0.3 | 2.2                  |
| 1998                                       | 2424235      | -8236      | 20.8                      | -0.4 | 2.2                  |
| 1997                                       | 2222313      | -3356      | 22.2                      | -0.2 | 2.0                  |
| 1996                                       | 2033399      | 5059       | 24.3                      | 0.3  | 2.0                  |
| 1995                                       | 1852236      | 1328       | 33.6                      | 0.1  | 1.9                  |

**Table 2b**

| HUF Billion<br>The end of each<br>December | Total assets | Net profit | Non performing<br>Loan(%) | ROA  | Operating<br>Cost(%) |
|--|--------------|------------|---------------------------|------|----------------------|
| 2004                                       | 14,926.419   | 275.9      | 1.9                       | 2.3  | 3.0                  |
| 2003                                       | 12,860.695   | 155.5      | 1.8                       | 1.8  | 3.3                  |
| 2002                                       | 10,195.580   | 151.3      | 2.1                       | 1.7  | 3.6                  |
| 2001                                       | 9,040.289    | 129.0      | 2.2                       | 1.6  | 3.6                  |
| 2000                                       | 8,427.399    | 101.4      | 2.8                       | 1.3  | 3.8                  |
| 1999                                       | 7,336.100    | 42.2       | 3.7                       | 0.6  | 4.1                  |
| 1998                                       | Na.          | 40.1       | 4.9                       | -2.2 | 4.0                  |
| 1997                                       | Na.          | 58.7       | 4.7                       | -3.1 | 3.9                  |
| 1996                                       | Na.          | 61.4       | 7.5                       | 0.2  | 4.2                  |
| 1995                                       | Na.          | 44.1       | 10.2                      | -5.8 | 3.7                  |

**Table 2c**

| Million<br>Polish Zloty<br>The end of<br>each<br>December | Total assets | Net profit | Non<br>performing<br>Asset(%) | ROA | Operating<br>Cost(%) |
|---|--------------|------------|-------------------------------|-----|----------------------|
| 2004  | 538037.5     | 7292.5     | 15.5                          | 1.5 | 3.1                  |
| 2003  | 488961.6     | 2345.4     | 21.8                          | 0.5 | 3.3                  |
| 2002  | 467117.8     | 2338.3     | 22.0                          | 0.5 | 3.4                  |
| 2001  | 469706.9     | 4233.4     | 18.6                          | 1.0 | 3.5                  |
| 2000  | 428486.3     | 4212.3     | 15.5                          | 1.0 | 3.6                  |
| 1999  | 363427.4     | 3180.8     | 13.7                          | 1.0 | 3.6                  |
| 1998  | 318726.8     | 1824.9     | 11.2                          | 0.7 | 3.7                  |
| 1997  | 247668.9     | 4495.6     | 11.0                          | 2.1 | 3.7                  |
| 1996  | 197215.2     | 4420.5     | 13.2                          | 1.2 | 3.6                  |
| 1995  | 149342.2     | 2848.3     | 25.7                          | 0.9 | 3.5                  |

Sources: Annual reports of Hungarian Financial Supervision Authority, National bank of Poland, National bank of Czech as well as annual reports of individual banks. In addition, data are also taken from Ceska Bankovni Asociace (Czech Republic) and *Hungarian Banking Association* from 1995 to 2004.



Figure 2a: Time Series Plots for CPH countries

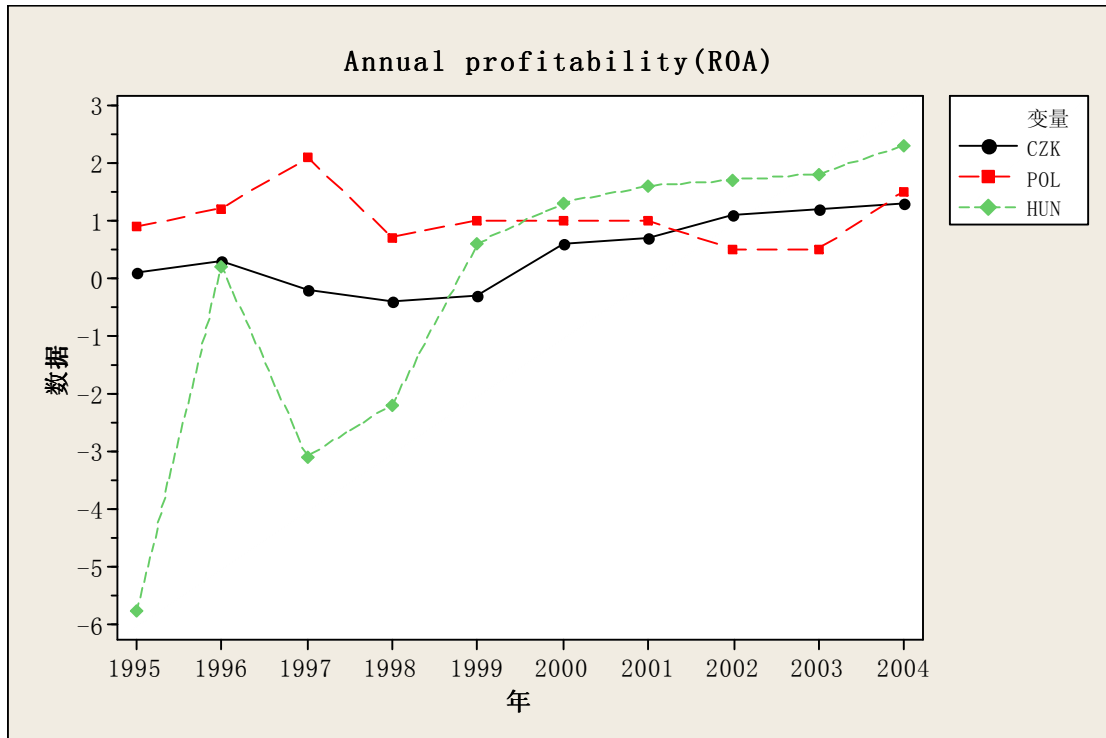


Figure 2b

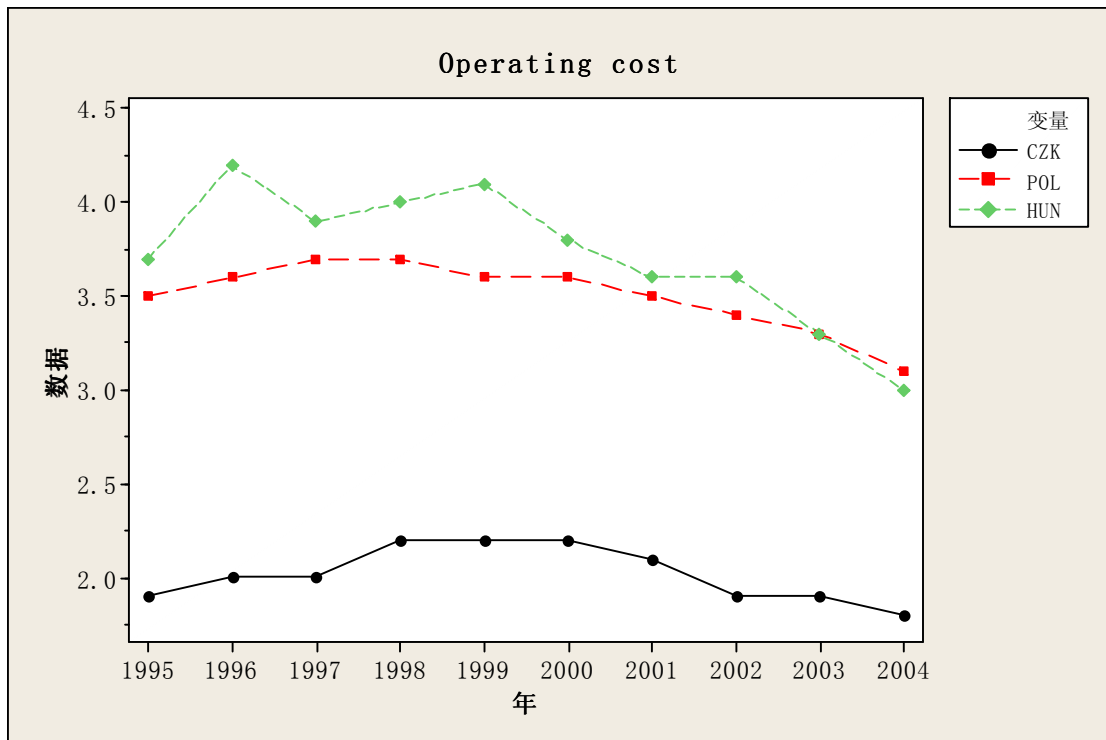
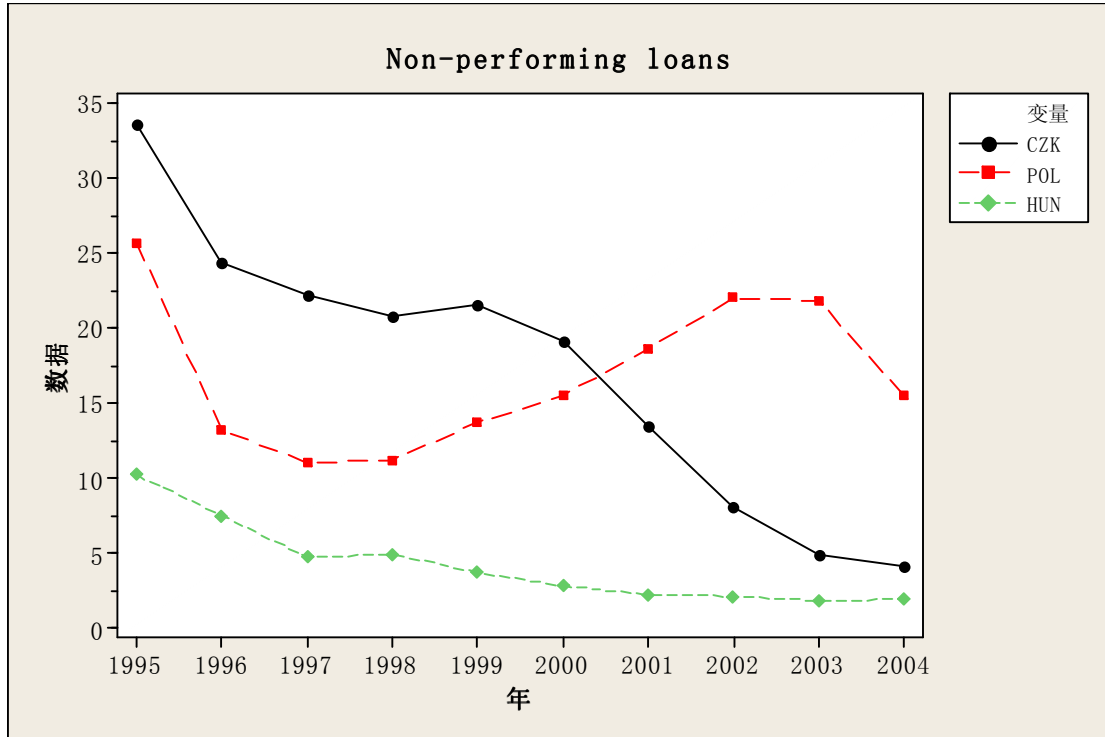


Figure 2c

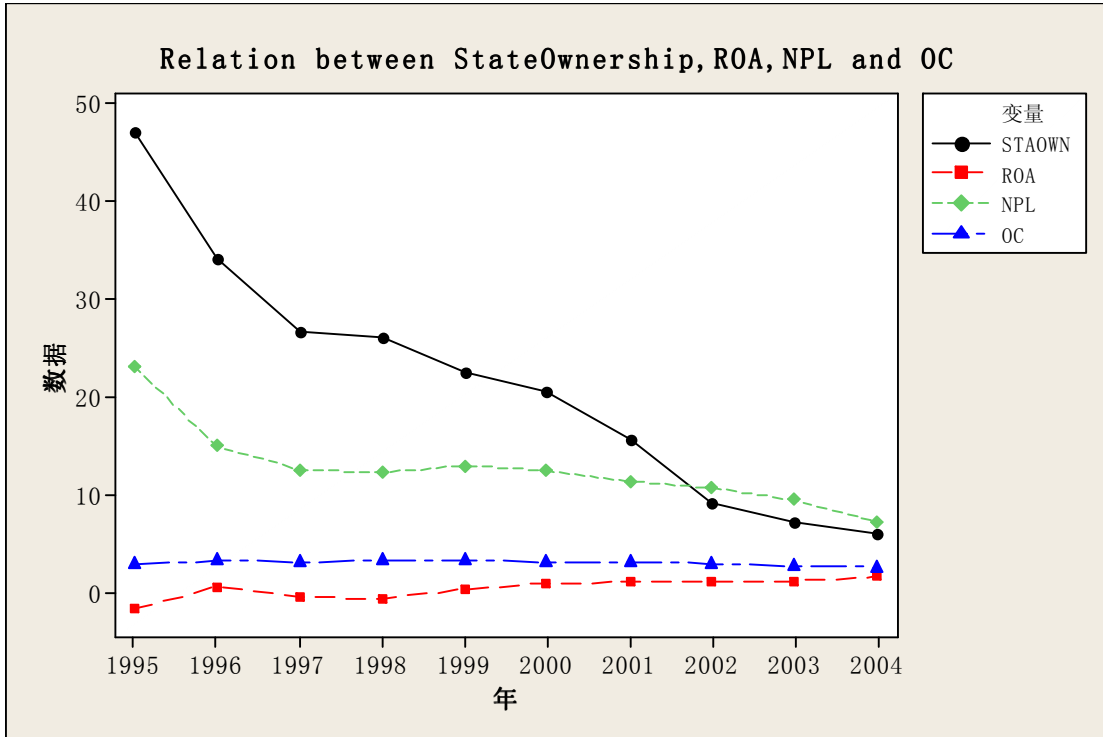


Further, we take CPH countries as a whole unit because they share a lot of sameness with each other politically and economically, then we use the mean of ownership structure change (Privatization) and the means of bank performance indicators (ROA,NPL,OC) from CPH countries from 1995 to 2004 to test the effect of privatization on bank performance in the whole CPH, again, we saw a positive performance effect of privatization below both by table 3 and by Figure 3.

**Table 3: The means of State ownership, ROA,NPL,OC in CPH countries**

| Means           | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| State ownership | 47.1 | 34.2 | 26.6 | 26.1 | 22.5 | 20.6 | 15.6 | 9.2  | 7.2  | 6.1  |
| ROA             | -1.6 | 0.6  | -0.4 | -0.6 | 0.4  | 1.0  | 1.1  | 1.1  | 1.2  | 1.7  |
| NPL             | 23.2 | 15.0 | 12.6 | 12.3 | 13.0 | 12.5 | 11.4 | 10.7 | 9.5  | 7.2  |
| Operating cost  | 3.0  | 3.3  | 3.3  | 3.3  | 3.3  | 3.2  | 3.1  | 3.0  | 2.8  | 2.6  |

Figure 3



Finally, to assess the effect of privatization on bank performance, while controlling for other bank characteristics, we use the different ordinary regressions to examine the relationship between change of ownership (Privatization) and profitability (ROA), bank efficiency (OC), non-performing loans (NPL) respectively, additionally we put the means of these three performance indicators together along with the means of ownership change to test the relationship among them by regression.

### 3.2 Regression results and analyses

Based on the above table 3, We use Minitab15 in this research as the analytical tool to carry out following regression tests. State ownership cut is the symbol of Privatization in this research.

#### 3.2.1 Regression Analysis: ROA versus STAOWN

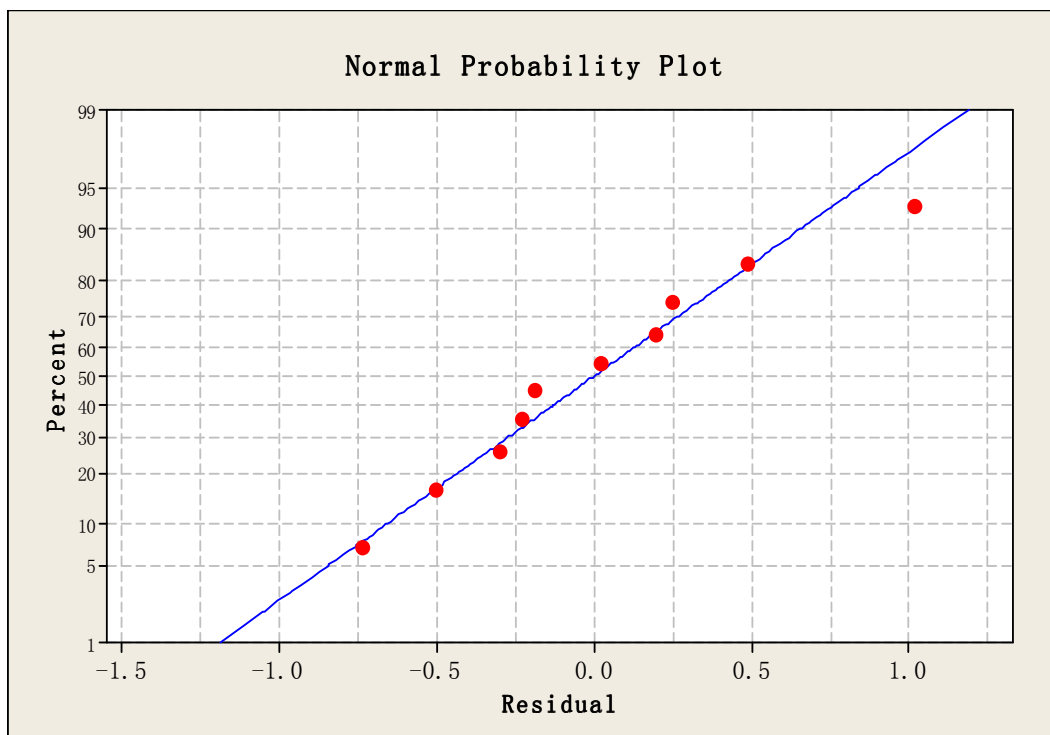
The regression equation is

$$\text{ROA} = 1.92 - 0.0684 \text{ STAOWN}$$

**Table 4: Relationship between ROA and State ownership**

| Y   | X               | Constant | Coef.    | R-Sq  | R-Sq(adj) | P-value |
|-----|-----------------|----------|----------|-------|-----------|---------|
| ROA | State ownership | 1.9211   | -0.06836 | 74.8% | 71.7%     | 0.001   |

**Figure 4**



In this regression, R-Sq = 74.8%, P=0.001. Generally, state ownership cut or

privatization progressing is positively correlated with annual profitability (here is ROA) during the sample period in CPH. During 1995-1999, profitability in CPH is minus, because the privatization was concentrated and intensified in CPH, the main cause of the year-on-year ROA minus in overall was associated with the bank's creating of reserves and provisions. Furthermore, the crisis in the Far East and in the Russian market affected the area's economy, as well as the banking system. Besides, the technology updating and the construction of electronic banking in the area cost a lot and led to the profit decline.

After 1999, the annual profitability has been improving year on year, the biggest component (accounting for around 61% of the total) was interest profit. Profit from fees and commissions was up by more than 13% yearly, making up one quarter of the total. This is because by using more advanced forms of electronic banking, customers can execute certain transactions themselves and banks can thus reduce the number of contact staff working in branches. Further, this increase in surplus profit is due on the one hand to the rise in profit and on the other hand to an annual decline in expenses (of more than 13%). The main cause of the year-on-year decline in overall regular expenses associated with bank's operation, coverage of risks and costs arising from sales of low-quality assets and most importantly, thanks to improved loan portfolio quality, it was not necessary to create provisions and reserves in such large volumes as in previous years.

### 3.2.2 Regression Analysis: NPL versus STAOWN

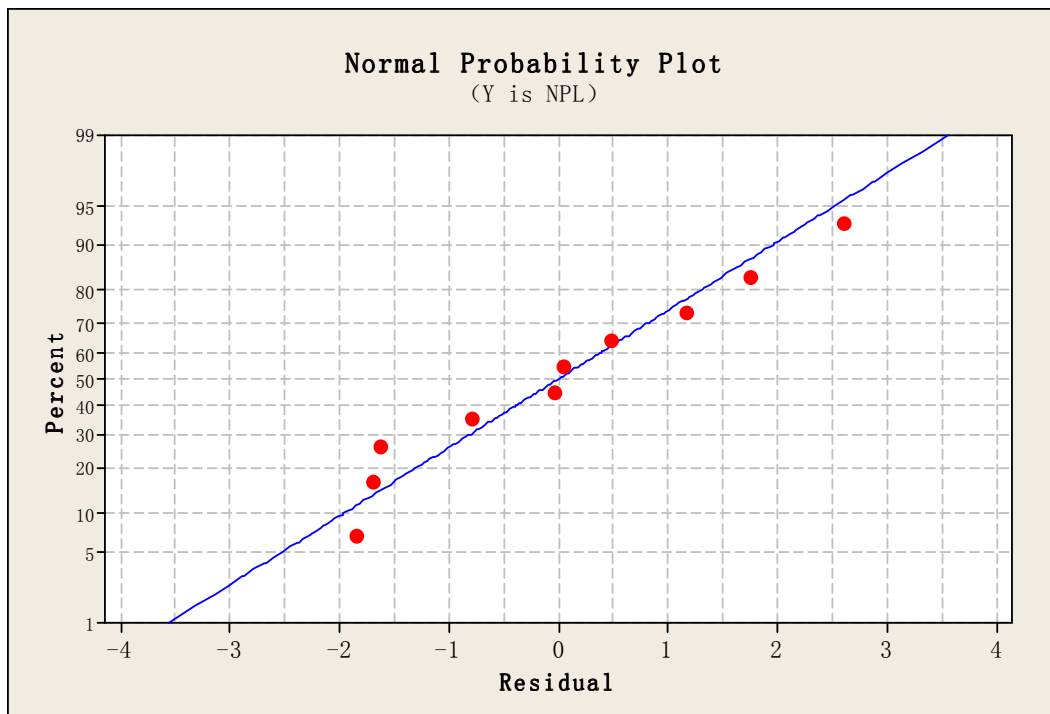
The regression equation is

$$\text{NPL} = 6.13 + 0.307 \text{ STAOWN}$$

**Table 5: Relationship between non performing loans and state ownership**

| Y   | X               | Constant | Coef    | R-Sq  | R-Sq(adj) | P-value |
|-----|-----------------|----------|---------|-------|-----------|---------|
| NPL | State ownership | 6.128    | 0.30726 | 87.0% | 85.4%     | 0.001   |

**Figure 5**



We have  $R\text{-Sq} = 87.0\%$ ,  $R\text{-Sq}(\text{adj}) = 85.4\%$  here to suggest this high correlation between the two indicators. In this regression, we saw a significant correlation between the privatization and the loan portfolio quality. Accompanying with the privatization intensification and progressing, the non performing loans has been reducing fast.

In CPH, Virtually until 2002, banking assets were cleaned up by transferring bad loans outside the banking sector with effective assistance from the state connected with the sale of the state's interests in large banks. Another factor is the now firmly

established increase in banks' prudence when assessing credit transactions. A considerable improvement in economic performance has fundamentally affected the financial condition of the entire corporate sector. And finally, there has been a shift in the loan portfolio structure towards loans provided to households, predominantly housing loans. Besides having high-quality collateral, this type of loan is associated with lower risk. The share lending to households was also increasing than that in the sector as a whole. The rising share of loans to households in total loans of the banking sector is thus positively affecting loan portfolio quality.

### 3.2.3 Regression Analysis: OC versus STAOWN

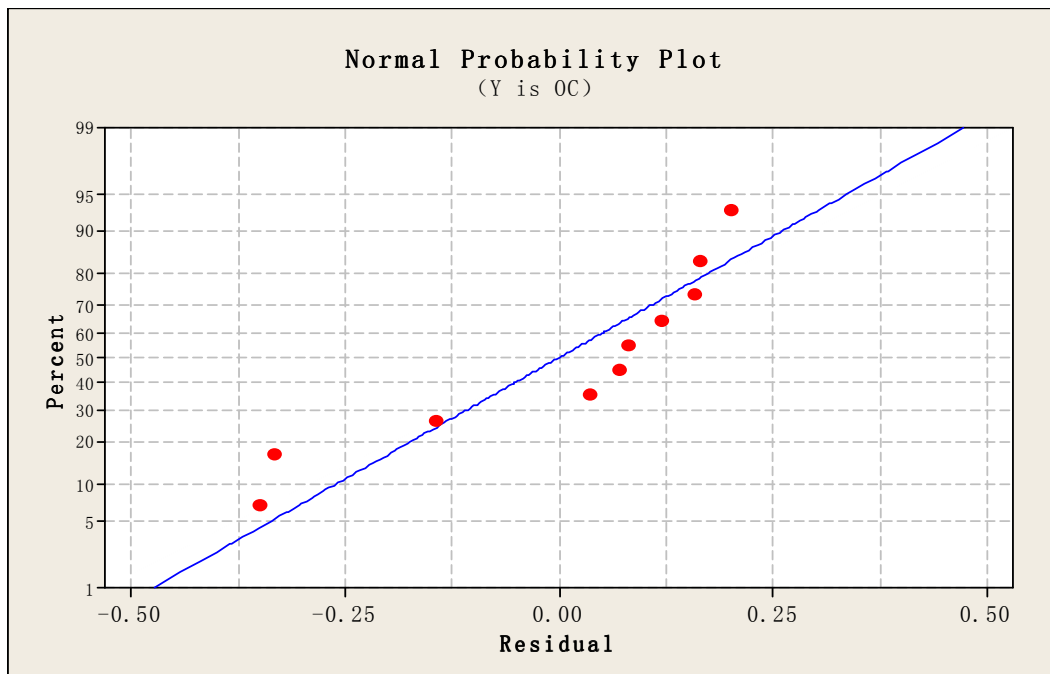
The regression equation is

$$OC = 2.87 + 0.00987 \text{ STAOWN}$$

**Table 6: Relationship between operating cost and state ownership**

| Y  | X               | Constant | Coef     | R-Sq  | R-Sq(adj) | P-value |
|----|-----------------|----------|----------|-------|-----------|---------|
| OC | State ownership | 2.8675   | 0.009873 | 29.3% | 20.5%     | 0.000   |

**Figure 6**



R-square here is low, showing a slight correlation with privatization progressing. This is because that banks in CPH under privatization have been applying new banking

technology ( such as electronic banking, ATMs etc.) to the system and that cost really a lot.

Nonetheless, we still find that operating cost is going down slightly over the period, as facilitating parallel growth in both the efficiency of banking activities and the quality of the services offered is the automation of certain operations, this reduces the number of outlets and the active participation of individual bank employees using state-of-the-art computer and communications technology. The various forms of electronic banking, from payment cards to trading via the Internet, are being used to an ever greater extent by banks in CPH now. The ongoing rationalization of work at the large banks' head offices and the introduction of new technology into the organization of internal processes and distribution of banking services looks set to continue. In addition to improving the efficiency of bank management, these changes should continue to increase the range and quality of products and services offered by the banking sector.

To expand the market, banks now are employing alternative distribution channels, direct banking and business network sharing within financial groups. They are also streamlining their existing branch networks. The branch network is going through a partial restructuring, with the distribution of banking units being tailored to changing client needs and current shifts in demand.



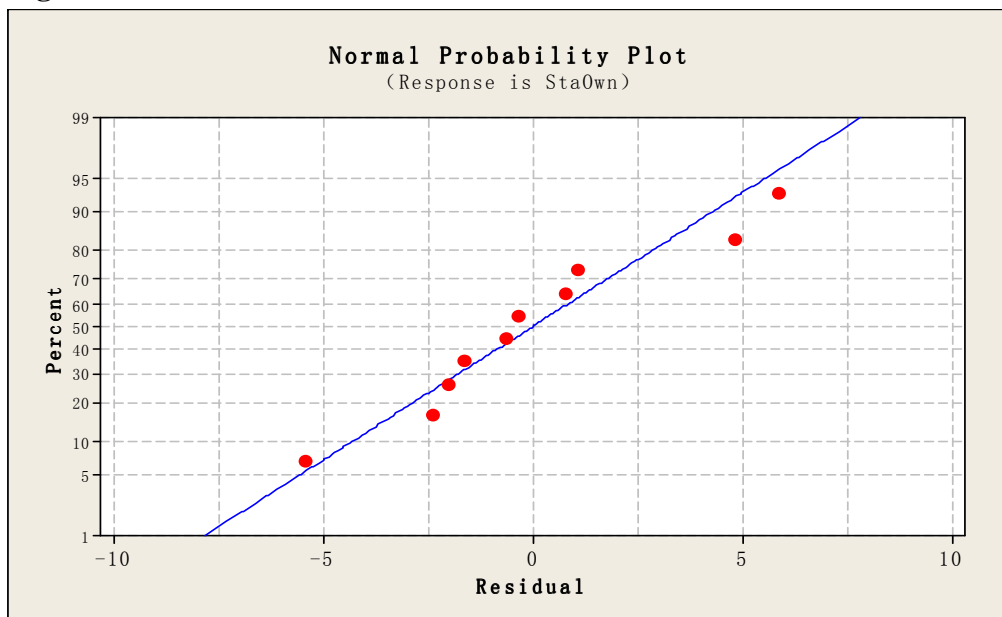
### 3.2.4 Additional Regression: Privatization versus bank performance

$$\text{STAOWN} = -37.6 - 2.67 \text{ ROA} + 2.08 \text{ NPL} + 11.0 \text{ OC}$$

**Table 7: Relationship between state ownership and bank performance**

| Y               | X           | Constant | R-Sq  | R-Sq(adj) | P-value |
|-----------------|-------------|----------|-------|-----------|---------|
| State ownership | Performance | -37.60   | 93.0% | 89.5%     | 0.001   |

**Figure 7**



In this regression, we have R-Sq = 93.0%, R-Sq(adj) = 89.5%, P-value 0.001

Very significant correlation was found between privatization and three bank performance indicators. This further confirmed that state ownership is followed by poor profitability, high non performing loans and low operating efficiency, totally in contrast to the situation of improved bank performance under privatization. During the privatization, foreign ownership plays an important role in improving bank performance in the CPH countries, we here leave this issue untouched due to poor data resources and time limitation of study.

#### **4. Summary and Conclusion**

According to theory, it was suggested that bank privatization has positive effect on bank performance ( Bonin, Wachtel et al ). As state ownership in banks normally leads to poor profitability, low efficiency and severe loan portfolio problem, thus privatization matters on bank performance ( Clarke, Cull et al ).

In this paper, we first go through the literature and take this argument as this paper's hypothesis, put it under test in three fast-track transition countries ( Czech, Poland and Hungary ), chosen because they had high levels of state ownership at some point in the 1990s and undertook a relatively high number of privatizations. Further, because they have a lot of sameness with china politically and economically.

Based on the 30 annual reports, 576 observations from Financial Supervision Authorities, National banks, bank associations and from individual banks in these three countries from 1995 through 2004, we employ ordinary regressions to examine the relationship between state ownership cut, or, privatization and profitability, operating cost, non performing loans respectively. At last, we use means of the three performance indicators and put them together along with the mean of state ownership cut or privatization under regression test. The outcomes are positive between privatization and profitability, loan portfolio quality improvement, but slight correlated with operating efficiency. Overall, this research supports our hypothesis.

In the CPH countries, foreign strategic investors played an important role during the whole privatization due to their high technology, sophisticated management and know-how techniques on bank performance improvement, we leave this issue not discussed because of the poor data resources and time limitation on study.

China is embarking on a significant bank privatization now, the researcher hopes that this paper can be somehow meaningful to oncoming bank reform in china.

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## **Appendix**

Annual balance sheet and income statement by:

Polish Financial Supervision Authority

Czech Financial Supervision Authority

Hungarian Financial Supervision Authority

National bank of Poland

National bank of Czech

National bank of Hungary

Hungarian bank association

Large banks` websites in the three countries ( Annual reports )

## Annual reports from Czech Financial Supervision Authority 1995-2004

| <b>Income and expenses</b><br>(for banks with licences as of 31 December 2004; in CZK millions) |              |              |         |         |         |         |
|---|--------------|--------------|---------|---------|---------|---------|
|   | 31 Dec. 2002 | 31 Dec. 2003 | 2004    |         |         |         |
|   |              |              | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Interest income   | 121,162      | 99,603       | 24,981  | 50,017  | 76,221  | 102,644 |
| Interest expenses   | 65,962       | 45,300       | 10,578  | 20,981  | 31,705  | 42,885  |
| Interest profit (including securities)  | 55,201       | 54,303       | 14,403  | 29,037  | 44,516  | 59,760  |
| Income from fees and commissions  | 29,647       | 35,657       | 8,701   | 17,466  | 26,208  | 38,085  |
| Expenses from fees and commissions  | 6,133        | 9,314        | 1,555   | 3,056   | 4,555   | 6,760   |
| Profit from fees and commissions  | 23,514       | 26,343       | 7,146   | 14,410  | 21,653  | 31,326  |
| Interest profit (including fees and commissions)  | 78,715       | 80,645       | 21,549  | 43,446  | 66,169  | 91,085  |
| Profit from shares and other equity instruments   | 1,122        | 824          | 24      | 1,109   | 1,215   | 1,369   |
| Profit from foreign exchange transactions   | 5,441        | 6,347        | 2,642   | 5,197   | 7,430   | 9,567   |
| Profit from other transactions (including derivatives transactions and sales of securities)     | 6,088        | 2,436        | -324    | -685    | -312    | 1,464   |
| Profit from financial activities  | 91,367       | 90,252       | 23,892  | 49,067  | 74,503  | 103,486 |
| Administrative expenses   | 46,975       | 47,513       | 11,642  | 24,060  | 35,859  | 48,819  |
| Creation of reserves and provisions, write-offs and receivables transfer losses (net)           | 8,537        | 733          | 3,228   | 5,438   | 8,117   | 10,256  |
| Other operating income (+) / expenses (-)   | 5,763        | -744         | 1,594   | 1,504   | 1,147   | 904     |
| Gross operating profit  | 39,914       | 41,251       | 10,603  | 21,110  | 31,724  | 45,366  |
| Extraordinary income (+) / expenses (-)   | 1,705        | 11           | 13      | 3       | -8      | -10     |
| Pre-tax gross profit  | 41,619       | 41,262       | 10,616  | 21,113  | 31,716  | 45,355  |
| Taxes   | 11,223       | 11,068       | 2,746   | 5,112   | 7,921   | 12,490  |
| Net profit  | 30,396       | 30,193       | 7,870   | 16,001  | 23,795  | 32,865  |

| <b>Profitability and efficiency</b><br>(for banks with licences as of 31 December 2004) |              |              |         |         |         |         |
|---|--------------|--------------|---------|---------|---------|---------|
|   | 31 Dec. 2002 | 31 Dec. 2003 | 2004    |         |         |         |
|   |              |              | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Profit from banking activities/assets in per cent                                       | 3.71         | 3.62         | 3.75    | 3.81    | 3.83    | 3.96    |
| Gross profit/assets in per cent   | 1.69         | 1.65         | 1.67    | 1.64    | 1.63    | 1.74    |
| Net profit/assets in per cent   | 1.24         | 1.21         | 1.24    | 1.24    | 1.22    | 1.26    |
| Net profit/Tier 1 in per cent   | 27.41        | 23.80        | 22.45   | 22.80   | 22.60   | 23.35   |
| Total interest income/interest earning loans in per cent                                | 4.88         | 3.92         | 3.73    | 3.68    | 3.73    | 3.78    |
| Total interest expenses/interest bearing deposits in per cent                           | 2.80         | 1.88         | 1.60    | 1.58    | 1.61    | 1.64    |
| Interest rate spread in per cent  | 2.09         | 2.04         | 2.13    | 2.10    | 2.12    | 2.14    |
| Net interest margin in per cent   | 2.34         | 2.26         | 2.33    | 2.31    | 2.33    | 2.36    |
| Number of employees in banking sector   | 39,493       | 39,004       | 38,862  | 38,659  | 38,644  | 38,160  |
| Per employee in CZK thousands:  |              |              |         |         |         |         |
| total assets  | 62,824       | 64,806       | 66,260  | 68,417  | 68,591  | 69,066  |
| profit from financial activities  | 2,313        | 2,314        | 2,459   | 2,538   | 2,571   | 2,712   |
| net profit  | 770          | 774          | 810     | 828     | 821     | 861     |
| administrative expenses   | 1,189        | 1,218        | 1,198   | 1,245   | 1,237   | 1,279   |
| personnel expenses  | 559          | 600          | 149     | 302     | 463     | 643     |
| General operating expenses/assets in per cent   | 1.91         | 1.90         | 1.83    | 1.87    | 1.84    | 1.87    |



## Czech

## Income and expenses

(for banks with licences as of 31 December 2002; in CZK millions)

|  | 31 Dec. 2000 | 31 Dec. 2001 | 2002    |         |         |         |
|--|--------------|--------------|---------|---------|---------|---------|
|  |              |              | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Interest income  | 135 090      | 143 129      | 33 266  | 64 419  | 95 043  | 122 604 |
| Interest expenses  | 84 476       | 86 204       | 19 494  | 35 326  | 52 073  | 66 522  |
| Interest profit (including securities)                       | 50 614       | 56 925       | 13 772  | 29 093  | 42 970  | 56 082  |
| Income from fees and commissions                             | 21 351       | 25 767       | 7 042   | 13 952  | 21 437  | 29 962  |
| Expenses from fees and commissions                           | 4 797        | 4 797        | 1 253   | 2 340   | 4 165   | 6 174   |
| Profit from fees and commissions                             | 16 554       | 20 970       | 5 789   | 11 611  | 17 271  | 23 788  |
| Interest profit (including fees and commissions)             | 67 168       | 77 895       | 19 561  | 40 705  | 60 242  | 79 870  |
| Profit from shares and other equity instruments              | 654          | 942          | 11      | 1 027   | 1 075   | 1 134   |
| Profit from foreign exchange transactions                    | 9 831        | 7 154        | 1 538   | 214     | 4 194   | 5 536   |
| Profit from other transactions                               | -380         | 3 456        | 1 362   | 5 800   | 4 914   | 6 085   |
| (Including derivatives transactions and sales of securities) |              |              |         |         |         |         |
| Profit from financial activities                             | 77 272       | 89 447       | 22 472  | 47 746  | 70 425  | 92 625  |
| Administrative expenses                                      | 41 840       | 47 939       | 10 843  | 23 426  | 34 765  | 47 916  |
| Creation of reserves and provisions (net)                    | 59 549       | 22 228       | 3 002   | 6 860   | 7 299   | 12 853  |
| Other operating income (+) / expenses (-)                    | 36 401       | 2 717        | 3 011   | 3 505   | 5 676   | 7 791   |
| Gross operating profit                                       | 10 881       | 20 270       | 10 870  | 19 704  | 33 176  | 37 959  |
| Extraordinary income (+) / expenses (-)                      | 1 403        | 1 726        | 768     | 1 261   | 861     | 1 687   |
| Pre-tax gross profit   | 12 284       | 21 996       | 11 637  | 20 965  | 34 037  | 39 646  |
| Taxes  | -2 100       | 5 046        | 2 768   | 4 714   | 7 505   | 11 476  |
| Net profit   | 14 385       | 16 951       | 8 870   | 16 251  | 26 532  | 28 170  |

## Profitability and efficiency

(for banks with licences as of 31 December 2002)

|   | 31 Dec. 2000 | 31 Dec. 2001 | 2002    |         |         |         |
|---|--------------|--------------|---------|---------|---------|---------|
|   |              |              | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Profit from financial activities/assets in per cent           | 3.59         | 3.77         | 3.70    | 3.90    | 3.80    | 3.73    |
| Gross profit/assets in per cent                               | 0.57         | 0.93         | 1.92    | 1.71    | 1.84    | 1.59    |
| Net profit/assets in per cent                                 | 0.67         | 0.72         | 1.46    | 1.33    | 1.43    | 1.13    |
| Net profit/Tier 1 in per cent                                 | 13.08        | 14.41        | 29.84   | 25.42   | 27.62   | 22.05   |
| Total interest income/interest earning credits in per cent    | 6.35         | 6.23         | 5.57    | 5.29    | 5.07    | 4.90    |
| Total interest expenses/interest bearing deposits in per cent | 4.08         | 3.87         | 3.36    | 3.02    | 2.91    | 2.80    |
| Interest rate spread in per cent                              | 2.26         | 2.37         | 2.21    | 2.28    | 2.17    | 2.10    |
| Net interest margin in per cent                               | 2.53         | 2.47         | 2.36    | 2.48    | 2.40    | 2.35    |
| Number of employees in banking sector                         | 44 932       | 40 871       | 40 720  | 40 157  | 40 299  | 40 625  |
| Per employee in CZK thousands:                                |              |              |         |         |         |         |
| total assets  | 50 193       | 61 176       | 58 842  | 63 065  | 62 343  | 61 630  |
| profit from financial activities                              | 1 720        | 2 189        | 2 207   | 2 378   | 2 330   | 2 280   |
| net profit  | 320          | 415          | 871     | 809     | 878     | 693     |
| administrative expenses                                       | 931          | 1 173        | 1 065   | 1 167   | 1 150   | 1 179   |
| personnel expenses  | 434          | 563          | 538     | 546     | 546     | 552     |
| General operating expenses/assets in per cent                 | 1.94         | 2.02         | 1.78    | 1.91    | 1.87    | 1.93    |

## Czech

## Income and expenses

(for banks with licences as of 31 December 1999, excluding Konsolidační banka, in CZK millions)

|  | 31 Dec. 1997 | 31 Dec. 1998 | 1999    |         |         |         |
|--|--------------|--------------|---------|---------|---------|---------|
|  |              |              | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Interest income                            | 171 194      | 227 660      | 47 653  | 91 672  | 131 072 | 167 983 |
| Interest expenses                          | 121 510      | 161 666      | 33 003  | 62 789  | 87 973  | 109 649 |
| Interest profit                            | 49 684       | 65 994       | 14 650  | 28 883  | 43 099  | 58 334  |
| Income from fees and charges               | 13 273       | 17 067       | 4 287   | 9 085   | 13 985  | 19 959  |
| Expenses from fees and charges             | 1 594        | 4 151        | 1 423   | 2 077   | 3 563   | 5 320   |
| Profit from fees and charges               | 11 679       | 12 916       | 2 864   | 7 007   | 10 422  | 14 638  |
| Interest profit including fees and charges | 61 363       | 78 910       | 17 514  | 35 891  | 53 521  | 72 972  |
| Profit from securities                     | 12 110       | 2 270        | 981     | 285     | 2 062   | 4 141   |
| Profit from foreign exchange operations    | 12 733       | 12 856       | 2 846   | 5 380   | 8 711   | 11 858  |
| Profit from other banking operations       | 1 207        | 2 824        | 388     | 793     | 1 155   | 1 351   |
| Profit from banking activities             | 87 412       | 96 860       | 21 728  | 42 348  | 65 448  | 90 323  |
| General operating expenses                 | 42 519       | 48 094       | 10 836  | 23 456  | 35 295  | 51 149  |
| Creation of reserves and provisions (net)  | 29 726       | 14 673       | -284    | 2 112   | 18 025  | -3 376  |
| Other operating income (+) / expenses (-)  | -18 146      | -42 218      | -10 142 | -17 286 | -16 379 | -49 742 |
| Gross operating profit                     | -2 979       | -8 126       | 1 033   | -506    | -4 251  | -7 192  |
| Extraordinary income (+) / expenses (-)    | 702          | 2 958        | 201     | 689     | 1 069   | 2 700   |
| Pre-tax gross profit                       | -2 277       | -5 167       | 1 235   | 183     | -3 182  | -4 492  |
| Taxes                                      | 1 080        | 3 069        | 175     | 464     | 1 026   | 1 137   |
| Net profit                                 | -3 356       | -8 236       | 1 059   | -281    | -4 208  | -5 628  |

## Profitability and efficiency

(for banks with licences as of 31 December 1999, excluding Konsolidační banka)

|   | 31 Dec. 1997 | 31 Dec. 1998 | 1999    |         |         |         |
|---|--------------|--------------|---------|---------|---------|---------|
|   |              |              | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Profit from banking activities/assets in %                | 4.54         | 4.49         | 4.29    | 3.91    | 3.96    | 4.01    |
| Gross profit/assets in %                                  | (0.12)       | (0.23)       | 0.24    | 0.02    | (0.19)  | (0.20)  |
| Net profit/assets in %                                    | (0.17)       | (0.36)       | 0.21    | (0.03)  | (0.25)  | (0.25)  |
| Net profit/core capital in %                              | (3.53)       | (8.26)       | 4.29    | (0.56)  | (5.43)  | (5.27)  |
| Total interest income/interest earning assets in %        | 11.86        | 11.71        | 10.31   | 9.05    | 8.46    | 8.11    |
| Total interest expenses/interest bearing liabilities in % | 8.09         | 8.19         | 7.05    | 6.08    | 5.58    | 5.40    |
| Interest rate spread in %                                 | 3.77         | 3.52         | 3.25    | 2.96    | 2.88    | 2.71    |
| Net interest margin in %                                  | 2.94         | 3.42         | 3.21    | 2.92    | 2.85    | 2.76    |
| Number of employees in banking sector                     | 51 170       | 51 650       | 50 681  | 50 791  | 50 103  | 48 955  |
| Per employee in CZK thousands:                            |              |              |         |         |         |         |
| total assets  | 40 692       | 43 926       | 46 411  | 45 753  | 46 210  | 47 761  |
| profit from banking activities                            | 1 708        | 1 875        | 1 715   | 1 668   | 1 742   | 1 845   |
| net profit  | -66          | -159         | 84      | -11     | -112    | -115    |
| operating expenses  | 831          | 931          | 855     | 924     | 939     | 1 045   |
| personnel expenses  | 238          | 256          | 61      | 132     | 202     | 297     |

## Czech

### Profitability and Effectiveness

(Including bank branches abroad, banks under conservatorship excluded)

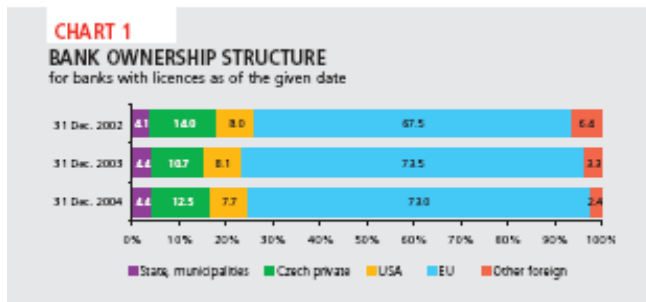
|  | 31.12.94 | 31.12.95 | 1996   |        |        |        |
|--|----------|----------|--------|--------|--------|--------|
|  |          |          | 31.03. | 30.06. | 30.09. | 31.12. |
| Banking activity profit/assets in %              | 5,14     | 4,46     | 3,74   | 3,79   | 3,89   | 3,90   |
| Gross profit/assets in %                         | 0,75     | 0,20     | 0,96   | 0,86   | 0,93   | 0,30   |
| Net profit/assets in %                           | 0,48     | 0,09     | 0,92   | 0,82   | 0,87   | 0,27   |
| Net profit/core capital in %                     | 14,02    | 2,49     | 27,54  | 24,31  | 25,66  | 8,15   |
| Total interest revenues/interest earning assets  | 11,91    | 10,89    | 9,97   | 9,96   | 10,06  | 10,29  |
| Total interest cost/interest bearing liabilities | 8,24     | 7,70     | 7,53   | 7,54   | 9,77   | 7,79   |
| Interest rate spread in %                        | 3,674    | 3,189    | 2,439  | 2,414  | 0,292  | 2,497  |
| Net interest margin in %                         | 4,48     | 3,71     | 2,88   | 2,88   | 3,74   | 2,92   |
| Number of employees in banking sector            | 57.075   | 59.550   | 59.991 | 60.194 | 60.510 | 60.137 |
| Per employee CZK in thousands:                   |          |          |        |        |        |        |
| total assets                                     | 25.944   | 31.104   | 31.249 | 32.139 | 32.663 | 33.813 |
| profit from banking activity                     | 1.140    | 1.143    | 1.105  | 1.130  | 1.179  | 1.200  |
| net profit                                       | 107      | 22       | 271    | 243    | 264    | 84     |
| operating costs                                  | 452      | 550      | 522    | 580    | 602    | 660    |

### Revenues and Costs

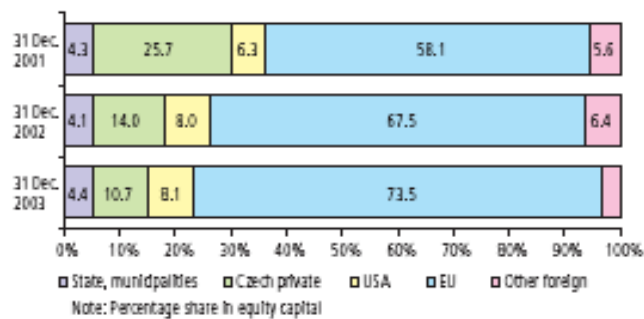
(CZK in mil., including bank branches abroad, banks under conservatorship excluded)

|  | 31.12.94 | 31.12.95 | 1996   |        |         |         |
|--|----------|----------|--------|--------|---------|---------|
|  |          |          | 31.03. | 30.06. | 30.09.  | 31.12.  |
| Interest earned                                    | 123.843  | 129.528  | 34.129 | 68.870 | 106.459 | 146.105 |
| Interest paid                                      | 77.298   | 85.418   | 24.288 | 48.920 | 75.699  | 104.648 |
| Interest yield                                     | 46.545   | 44.111   | 9.842  | 19.951 | 30.760  | 41.457  |
| Fees and commissions earned                        | 9.284    | 10.124   | 2.598  | 5.614  | 8.851   | 12.868  |
| Fees and commissions paid                          | 772      | 1.071    | 298    | 644    | 956     | 1.511   |
| Fees and commissions profit                        | 8.512    | 9.053    | 2.300  | 4.970  | 7.895   | 11.357  |
| Interest yield including fee and commission profit | 55.057   | 53.163   | 12.141 | 24.921 | 38.655  | 52.814  |
| Securities revenue                                 | 4.256    | 6.176    | 2.575  | 5.290  | 9.001   | 11.296  |
| Foreign exchange operations revenues               | 5.355    | 7.159    | 1.590  | 3.370  | 4.921   | 6.680   |
| Other banking operations revenues                  | 375      | 1.548    | 265    | 440    | 936     | 1.354   |
| Banking activity profit                            | 65.042   | 68.046   | 16.572 | 34.020 | 53.513  | 72.144  |
| General operating costs                            | 25.792   | 32.751   | 7.829  | 17.462 | 27.298  | 39.662  |
| Reserve and provision creation (net)               | 26.729   | 25.597   | 3.484  | -255   | -922    | 7.294   |
| Other operating revenues (costs)                   | -3.415   | -6.997   | -969   | -9.124 | -14.615 | -19.605 |
| Gross operating profit                             | 9.106    | 2.701    | 4.289  | 7.689  | 12.523  | 5.583   |
| Extraordinary revenues (costs)                     | 395      | 323      | -42    | 65     | 273     | -85     |
| Pre-tax gross profit                               | 9.502    | 3.024    | 4.246  | 7.754  | 12.796  | 5.498   |
| Taxes  | 3.388    | 1.697    | 182    | 436    | 805     | 439     |
| Net profit   | 6.113    | 1.328    | 4.064  | 7.318  | 11.991  | 5.059   |

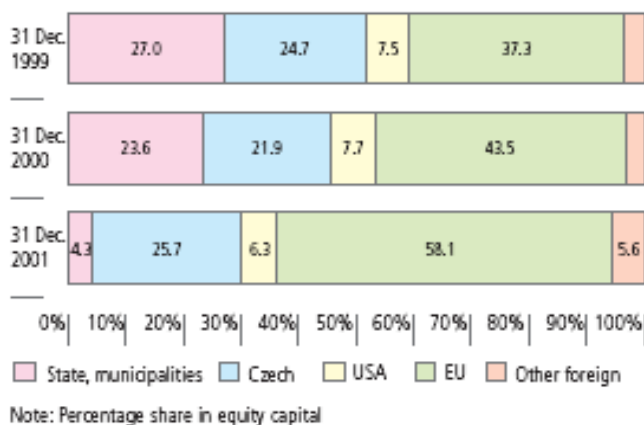
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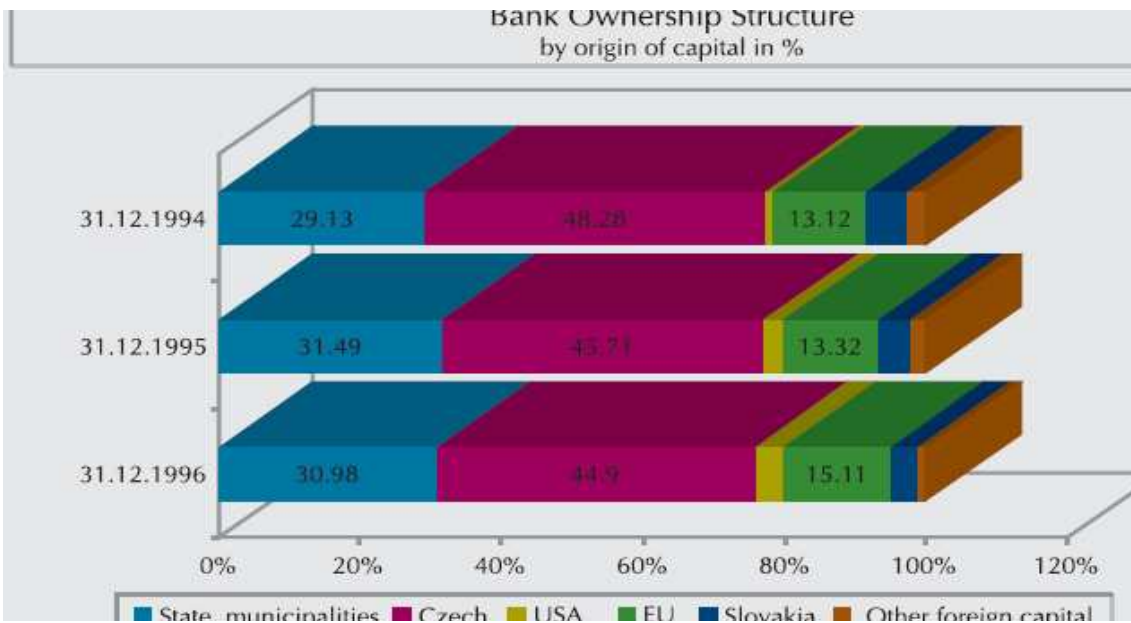
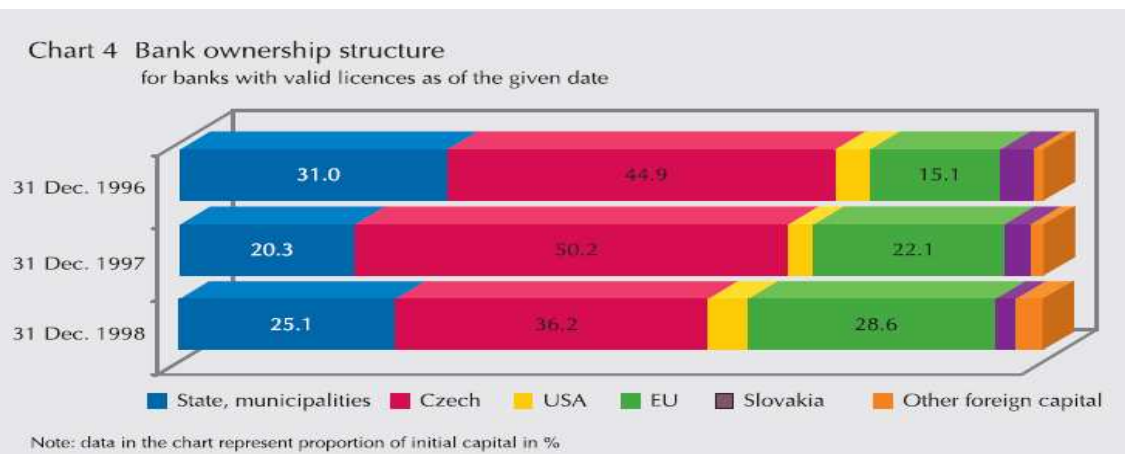
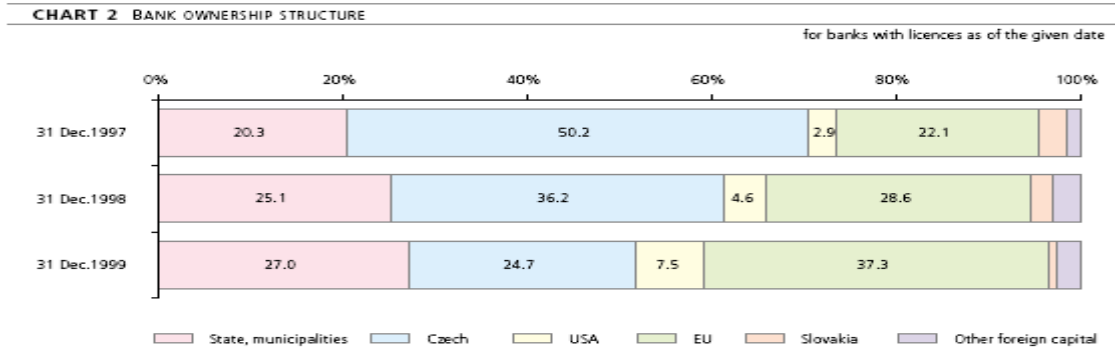
**CHART 1**  
**BANK OWNERSHIP STRUCTURE**  
for banks with licences as of the given date



**CHART 1**  
**BANK OWNERSHIP STRUCTURE**  
for banks with licences as of the given date



Czech



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**TABLE 6**  
**STRUCTURE OF CLASSIFIED AND NON-PERFORMING LOANS**  
 for banks with licences as of 31 December 2004

|                                      | 31 Dec. 02      | 31 Dec. 03 | 31 Mar. 04 | 30 Jun. 04 | 30 Sep. 04 | 31 Dec. 04 |
|--------------------------------------|-----------------|------------|------------|------------|------------|------------|
| Classified loans in CZK millions     | 147,102         | 114,009    | 116,212    | 114,190    | 111,358    | 118,826    |
| as percentage of total loans         | 15.8            | 11.2       | 11.2       | 10.8       | 10.2       | 10.8       |
| Non-performing loans in CZK millions | 75,770          | 49,608     | 49,955     | 47,127     | 47,147     | 44,506     |
| as percentage of total loans         | 8.1             | 4.9        | 4.8        | 4.5        | 4.3        | 4.1        |
| of which:                            | in CZK millions |            |            |            |            |            |
| watch loans                          | 71,332          | 64,400     | 66,257     | 67,063     | 64,211     | 74,320     |
| substandard loans                    | 27,515          | 19,298     | 19,416     | 18,371     | 19,376     | 19,344     |
| doubtful loans                       | 11,689          | 6,913      | 7,375      | 6,886      | 5,772      | 5,306      |
| loss loans                           | 36,566          | 23,398     | 23,165     | 21,869     | 21,998     | 19,857     |
| of which:                            | in per cent     |            |            |            |            |            |
| watch loans                          | 48.5            | 56.5       | 57.0       | 58.7       | 57.7       | 62.5       |
| substandard loans                    | 18.7            | 16.9       | 16.7       | 16.1       | 17.4       | 16.3       |
| doubtful loans                       | 7.9             | 6.1        | 6.3        | 6.0        | 5.2        | 4.5        |
| loss loans                           | 24.9            | 20.5       | 19.9       | 19.2       | 19.8       | 16.7       |

**TABLE 6**  
**STRUCTURE OF CLASSIFIED AND NON-PERFORMING CREDITS**  
 for banks with licences as of 31 December 2003

|  | 31 Dec. 01      | 31 Dec. 02 | 2003    |         |         |         |
|--|-----------------|------------|---------|---------|---------|---------|
|  |                 |            | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Classified credits in CZK millions     | 199,285         | 147,102    | 137,712 | 128,504 | 121,534 | 114,014 |
| as percentage of total credits         | 20.8            | 15.8       | 15.0    | 13.4    | 12.3    | 11.2    |
| Non-performing credits in CZK millions | 128,94          | 75,770     | 69,948  | 60,509  | 52,426  | 49,610  |
| as percentage of total credits         | 13.4            | 8.1        | 7.6     | 6.3     | 5.3     | 4.9     |
| of which:                              | in CZK millions |            |         |         |         |         |
| watch credits                          | 71,091          | 71,332     | 67,764  | 67,994  | 68,107  | 64,404  |
| substandard credits                    | 31,859          | 27,515     | 29,268  | 22,822  | 21,486  | 19,299  |
| doubtful credits                       | 29,447          | 11,689     | 9,311   | 8,692   | 9,222   | 6,913   |
| loss credits                           | 66,889          | 36,566     | 31,370  | 26,995  | 21,719  | 23,398  |
| of which:                              | in per cent     |            |         |         |         |         |
| watch credits                          | 35.7            | 48.5       | 49.2    | 52.9    | 56.9    | 56.5    |
| substandard credits                    | 16.0            | 18.7       | 21.3    | 17.8    | 17.7    | 16.9    |
| doubtful credits                       | 14.8            | 7.9        | 6.8     | 6.8     | 7.6     | 6.1     |
| loss credits                           | 33.6            | 24.9       | 22.8    | 22.6    | 17.9    | 20.5    |

**TABLE 7**  
**STRUCTURE OF CLASSIFIED CREDITS**  
 for banks with licences as of 31 December 2001, excluding banks under conservatorship

|                                       | 31 DEC.<br>1999 | 31 DEC.<br>2000 | 31 MAR.<br>2001 | 30 JUN.<br>2001 | 30 SEP.<br>2001 | 31 DEC.<br>2001 |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Classified credits<br>in CZK millions | 291 061         | 257 762         | 252 463         | 243 096         | 228 362         | 209 866         |
| as percentage of total                | 32.15           | 29.83           | 28.99           | 27.74           | 23.55           | 21.53           |
| of which:                             | in CZK millions |                 |                 |                 |                 |                 |
| watch credits                         | 92 124          | 85 814          | 84 324          | 79 998          | 75 697          | 75 984          |
| substandard credits                   | 39 379          | 54 910          | 50 031          | 45 607          | 40 465          | 32 295          |
| doubtful credits                      | 38 433          | 27 276          | 33 660          | 33 214          | 30 299          | 29 725          |
| loss credits                          | 121 125         | 89 762          | 84 448          | 84 277          | 81 901          | 71 862          |
| of which:                             | in per cent     |                 |                 |                 |                 |                 |
| watch credits                         | 31.7            | 33.3            | 33.4            | 32.9            | 33.1            | 36.2            |
| substandard credits                   | 13.5            | 21.3            | 19.8            | 18.8            | 17.7            | 15.4            |
| doubtful credits                      | 13.2            | 10.6            | 13.4            | 13.6            | 13.3            | 14.2            |
| loss credits                          | 41.6            | 34.8            | 33.4            | 34.7            | 35.9            | 34.2            |

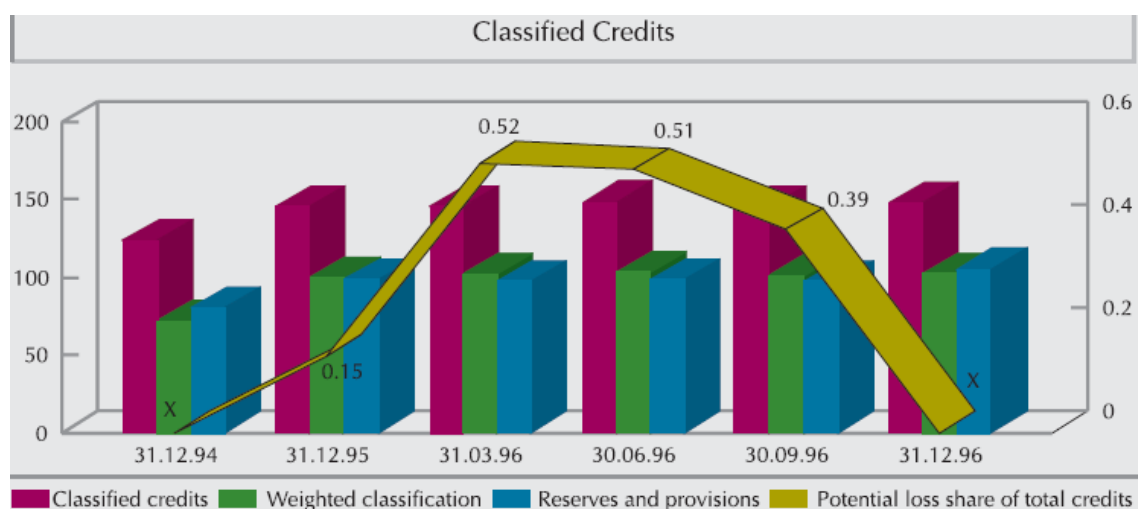
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**TABLE 4**  
**STRUCTURE OF CLASSIFIED CREDITS**

for banks with licences as of 31 December 2000, excluding Konsolidační banka and banks under conservatorship

|   | 31 Dec. | 31 Dec. | 2000    |         |         |         |
|---|---------|---------|---------|---------|---------|---------|
|   | 1998    | 1999    | 31 Mar. | 30 Jun. | 30 Sep. | 31 Dec. |
| Classified credits,<br>in CZK millions    | 258 004 | 291 061 | 246 147 | 243 927 | 243 302 | 256 047 |
| as a percentage of total<br>credit volume | 26.45   | 32.15   | 28.55   | 28.48   | 28.07   | 29.63   |
| of which: watch credits                   | 58 721  | 92 124  | 89 683  | 88 368  | 84 292  | 85 341  |
| substandard credits                       | 33 427  | 39 379  | 32 556  | 36 787  | 36 768  | 54 064  |
| doubtful credits                          | 35 538  | 38 433  | 31 894  | 32 367  | 33 387  | 27 488  |
| loss credits                              | 130 318 | 121 125 | 92 014  | 86 406  | 88 835  | 89 154  |

**Chart 32 Structure of classified credits**  
for banks with valid licences as of 31 Dec. 1998, excluding Konsolidační banka



## Annual reports from Hungarian Financial Supervision Authority 1995-2004

*Major factors of the profitability of the banking sector (%)*

|  |  | 2002        | 2003        | 2004        |
|--|--|-------------|-------------|-------------|
| <b>As a percentage of average assets</b> |  |             |             |             |
| 1.                                       | net interest earning (interest margin) | 4.20        | 3.88        | 3.91        |
| 2.                                       | non-interest earnings                  | 1.17        | 1.25        | 1.40        |
| 3.                                       | operating expenses                     | 3.71        | 3.34        | 2.98        |
| 4.                                       | extraordinary profit                   | 0.03        | 0.03        | 0.00        |
|  | <i>profit before tax</i>               | <i>1.69</i> | <i>1.82</i> | <i>2.32</i> |
|  | <b>profit after tax (ROA)</b>          | <b>1.39</b> | <b>1.50</b> | <b>1.97</b> |

|   | December<br>2001 | December<br>2002 |
|---|------------------|------------------|
| Total assets (bHUF)   | 9,499            | 10,825           |
| Loan portfolio (bHUF)   | 5,137            | 6,534            |
| Deposit portfolio (bHUF)  | 6,064            | 6,714            |
| Equity (bHUF)   | 920              | 1,021            |
| Pre-tax profit (bHUF)   | 135.3            | 16.8             |
| Of that pre-tax profit of commercial banks (bHUF)                             | 129.0            | 151.3            |
| Capital adequacy ratio (%) (the 2002 year-end figure is estimate)             | 15.64            | 14.00            |
| Proportion of below average facilities in the portfolio (%)                   | 2.9              | 3.7              |
| proportion of below average facilities in the commercial banks' portfolio (%) | 2.2              | 2.0              |
| Proportion of foreign participation in registered capital (%)                 | 63.0             | 60.5             |
| Loan portfolio/GDP (%)  | 34.5             | 38.5             |
| Deposit portfolio/GDP (%)   | 118.0            | 102.8            |
| ROA (%) (pre-tax profit or loss /average total assets)                        | 1.57             | 0.17             |



## Hungary

|  | December<br>2001 | December<br>2002 |
|--|------------------|------------------|
| ROE (%) (pre-tax profit or loss /average equity) | 15.72            | 1.67             |
| average ROA of commercial banks                  | 1.60             | 1.71             |
| average ROE of commercial banks                  | 18.62            | 18.65            |

*Key elements of banks' return on asset (ROA) (in percentage)*

| Description  | 1998  | 1999  | 2000  |
|--|-------|-------|-------|
| As a ratio of average total assets   |       |       |       |
| Interest revenues  | 15.30 | 13.05 | 10.19 |
| Interest costs   | 10.87 | 8.92  | 6.19  |
| Net profit from interest (interest margin)                                     | 4.43  | 4.14  | 4.00  |
| Net specific provision creation  | -3.70 | -1.11 | -0.58 |
| Profits from other financial and investment services (excl. securities' trade) | 1.19  | 1.45  | 1.68  |
| commission income  | 0.87  | 0.91  | 1.01  |
| foreign exchange trade and fluctuation   | 0.28  | 0.50  | 0.45  |
| Other profits (incl. securities' trade, excl. specific provision utilization)  | -0.05 | -0.09 | 0.03  |
| Gross profit from financial and investment services                            | 1.95  | 4.57  | 5.22  |
| Overheads  | 3.98  | 4.05  | 3.78  |
| Net profit from financial and investment services                              | -2.03 | 0.52  | 1.44  |
| Profit or loss before tax (ROA)  | -2.16 | 0.55  | 1.30  |

**2.1 Banking sector**

Table 2 – Key characteristics of banks (credit institutions operating as stock corporations)\*

|   | 1999   | 2000   | 2001   | 2002   | 2003   | 2000/<br>1999 | 2001/<br>2000 | 2002/<br>2001 | 2003/<br>2002 |
|---|--------|--------|--------|--------|--------|---------------|---------------|---------------|---------------|
| Number of institutions (no & %)                               | 43     | 42     | 41     | 37     | 36     | 97.7          | 97.6          | 90.2          | 97.3          |
| Average number employed (no & %)                              | 28,394 | 26,695 | 26,270 | 26,615 | 27,163 | 94.0          | 98.4          | 101.3         | 102.1         |
| Total assets (bHUF & %)                                       | 7,336  | 8,427  | 9,499  | 10,196 | 12,860 | 114.9         | 112.7         | 107.3         | 126.1         |
| Loan portfolio (bHUF & %)                                     | 3,259  | 4,323  | 5,137  | 6,097  | 8,126  | 132.6         | 118.8         | 118.7         | 133.3         |
| Deposit portfolio (bHUF & %)                                  | 4,657  | 5,371  | 6,064  | 6,660  | 7,277  | 115.3         | 112.9         | 109.8         | 109.3         |
| Own capital (bHUF & %)  | 632    | 782    | 920    | 888    | 1,099  | 123.7         | 117.7         | 96.4          | 123.8         |
| Pre-tax profit (bHUF & %)                                     | 37.0   | 96.8   | 135.3  | 155.5  | 215.9  | 261.6         | 139.8         | 115.0         | 138.8         |
| Proportion of below average facilities in the portfolio (%)   | 3.7    | 2.8    | 2.9    | 2.0    | 1.7    | 75.4          | 105.1         | 68.9          | 85.0          |
| Proportion of foreign participation in registered capital (%) | 65.3   | 66.7   | 63.0   | 78.3   | 81.9   | 102.1         | 94.5          | 124.3         | 104.6         |
| ROA (%) (pre-tax profit or loss /average total assets)        | 0.55   | 1.25   | 1.57   | 1.69   | 1.85   |               |               |               |               |
| ROE (%) (pre-tax profit or loss /average own capital)         | 6.36   | 13.84  | 15.72  | 18.27  | 21.13  |               |               |               |               |

\*The comparability of 2001 and 2002 year-end figures is limited, because the year-end figures from 1999 to 2001 still include data from MFB, EXIM bank and PK bank, while the year-end 2002 figures do not.

## Hungary

Table 4 – Ownership structure of the banking sector based on registered capital

|                                     | Portfolio (bHUF) |          | Change (Dec 2003/ Dec 2002) |       | Distribution (%) |          |
|-------------------------------------|------------------|----------|-----------------------------|-------|------------------|----------|
|                                     | Dec 2002         | Dec 2003 | %                           | bHUF  | Dec 2002         | Dec 2003 |
| Direct public interest              | 23.9             | 3.6      | 14.9                        | -20.3 | 6.9              | 0.9      |
| Direct domestic private interest    | 35.2             | 49.2     | 139.8                       | 14.0  | 10.2             | 13.1     |
| Total direct domestic interest      | 59.1             | 52.8     | 89.3                        | -6.3  | 17.2             | 14.0     |
| Direct foreign interest             | 269.3            | 308.0    | 114.4                       | 38.7  | 78.3             | 81.9     |
| Preferential and repurchased stocks | 15.7             | 15.1     | 96.4                        | -0.6  | 4.6              | 4.0      |
| Grand total                         | 344.0            | 375.9    | 109.3                       | 31.8  | 100.0            | 100.0    |

|                                     | <b>December 2000</b> | <b>December 2001</b> |
|-------------------------------------|----------------------|----------------------|
| State ownership                     | 21.3                 | 25.6                 |
| Domestic private ownership          | 9.4                  | 8.9                  |
| <b>Foreign ownership</b>            | <b>66.7</b>          | <b>62.2</b>          |
| Preferential and repurchased stocks | 2.6                  | 3.3                  |
| <b>Grand total</b>                  | <b>100.0</b>         | <b>100.0</b>         |

*Banks' ownership structure (%)*

| Description                      | December 31, 1999 | December 31, 2000 |
|----------------------------------|-------------------|-------------------|
| Government owned                 | 19.5              | 21.3              |
| Domestic private ownership       | 12.8              | 9.4               |
| Foreign private ownership        | 65.4              | 66.7              |
| Preferred and repurchased stocks | 2.4               | 2.6               |
| Grand total                      | 100.0             | 100.0             |

## Hungary

*Ratio of classified items within the portfolio of the banking sector*

|                                      | 12/2002     | 12/2003     | 12/2004     |
|--------------------------------------|-------------|-------------|-------------|
| <b>Total balance sheet items</b>     | <b>3.66</b> | <b>3.05</b> | <b>2.86</b> |
| Placements to credit institutions    | 0.63        | 0.33        | 0.03        |
| Corporate loans                      | 3.73        | 3.64        | 3.92        |
| Loans to household                   | 3.36        | 2.42        | 2.41        |
| Foreign placement                    | 2.60        | 2.97        | 2.99        |
| <b>Total off-balance sheet items</b> | <b>0.42</b> | <b>0.39</b> | <b>0.64</b> |
| <b>Total classifiable</b>            | <b>2.06</b> | <b>1.75</b> | <b>1.92</b> |

*Table 21 - Quality of the composition of the commercial banks' portfolio according to the banks' own classification (percentage)*

|                           | Problem-free |          | Special mention |          | Problem  |          |
|---------------------------|--------------|----------|-----------------|----------|----------|----------|
|                           | Dec 2001     | Dec 2002 | Dec 2001        | Dec 2002 | Dec 2001 | Dec 2002 |
| Total balance sheet items | 88.0         | 88.8     | 8.5             | 7.5      | 3.5      | 3.7      |
| Resident corporate loans  | 85.3         | 85.1     | 12.0            | 11.4     | 2.7      | 3.5      |
| Retail loans              | 92.6         | 93.6     | 2.6             | 2.5      | 4.8      | 4.0      |
| Off-balance sheet items   | 95.9         | 97.2     | 3.7             | 2.4      | 0.4      | 0.4      |
| Total classifiable        | 91.2         | 93.1     | 6.6             | 4.9      | 2.2      | 2.0      |

*Table 22 - Quality of the composition of the commercial banks' problem portfolio according to the banks' own classification (percentage)*

|                           | Substandard |          | Doubtful |          | Bad      |          |
|---------------------------|-------------|----------|----------|----------|----------|----------|
|                           | Dec 2001    | Dec 2002 | Dec 2001 | Dec 2002 | Dec 2001 | Dec 2002 |
| Total balance sheet items | 1.3         | 1.8      | 1.0      | 1.0      | 1.2      | 0.9      |
| Resident corporate loans  | 0.9         | 1.3      | 0.8      | 1.1      | 1.1      | 1.1      |
| Retail loans              | 0.8         | 0.6      | 1.1      | 1.3      | 2.9      | 2.0      |
| Off-balance sheet items   | 0.2         | 0.2      | 0.1      | 0.1      | 0.1      | 0.1      |
| Total classifiable        | 0.8         | 0.9      | 0.7      | 0.5      | 0.7      | 0.5      |

**Table 10 The qualitative composition of the bank sector's portfolio (percentage)**

|                           | Problem-free |      |      |             | Special mention |      |      |             | Problem* |      |      |            |
|---------------------------|--------------|------|------|-------------|-----------------|------|------|-------------|----------|------|------|------------|
|                           | 1998         | 1999 | 2000 | 2001        | 1998            | 1999 | 2000 | 2001        | 1998     | 1999 | 2000 | 2001       |
| Balance sheet items total | 84.6         | 86.8 | 88.2 | <b>85.2</b> | 7.8             | 7.6  | 7.6  | <b>10.2</b> | 7.6      | 5.6  | 4.3  | <b>4.6</b> |
| Corporate loans           | 78.9         | 84.4 | 87.1 | <b>84.2</b> | 12.2            | 10.7 | 9.5  | <b>12.5</b> | 8.8      | 4.9  | 3.4  | <b>3.3</b> |
| Retail loans              | 86.2         | 85.8 | 87.8 | <b>88.0</b> | 5.1             | 7.8  | 7.4  | <b>6.6</b>  | 8.6      | 6.4  | 4.8  | <b>5.3</b> |
| Off-balance sheet items   | 96.5         | 97.5 | 96.9 | <b>92.1</b> | 2.4             | 1.6  | 2.8  | <b>7.2</b>  | 1.1      | 0.8  | 0.4  | <b>0.7</b> |
| Total classifiable        | 89.4         | 91.1 | 91.5 | <b>88.1</b> | 5.6             | 5.2  | 5.7  | <b>9.0</b>  | 4.9      | 3.7  | 2.8  | <b>3.0</b> |

\*Problem: substandard, doubtful and bad together

## Annual reports from Polish Financial Supervision Authority 1995-2004

## Appendix 32 Total income, total expense, profitability and total cost/income ratio

|                             | Amount (million zloty) |               | Profitability (%)    |                  | Total cost/income ratio (%) <sup>c</sup> |
|-----------------------------|------------------------|---------------|----------------------|------------------|--|
|                             | Total income           | Total expense | pre-tax <sup>a</sup> | net <sup>b</sup> |  |
| <b>Commercial banks</b>     |                        |               |                      |                  |  |
| 1997                        | 38,441.7               | 32,135.7      | 19.6                 | 13.3             | 83.6                                     |
| 1998                        | 48,970.3               | 44,600.0      | 9.8                  | 3.7              | 91.1                                     |
| 1999                        | 50,181.6               | 45,415.1      | 10.5                 | 6.5              | 90.5                                     |
| 2000                        | 74,723.2               | 69,196.3      | 8.0                  | 5.6              | 92.6                                     |
| 2001                        | 84,350.8               | 79,050.4      | 6.7                  | 5.0              | 93.7                                     |
| 2002                        | 86,215.4               | 82,884.5      | 4.0                  | 2.4              | 96.1                                     |
| 2003                        | 74,275.6               | 70,174.2      | 5.8                  | 2.9              | 94.5                                     |
| 2004                        | 77,653.0               | 70,188.0      | 10.6                 | 9.7              | 90.4                                     |
| <b>Cooperative banks</b>    |                        |               |                      |                  |  |
| 1997                        | 2,372.5                | 2,021.8       | 17.3                 | 11.2             | 85.2                                     |
| 1998                        | 2,632.4                | 2,347.3       | 12.2                 | 7.5              | 89.2                                     |
| 1999                        | 2,609.0                | 2,285.5       | 14.2                 | 9.1              | 87.6                                     |
| 2000                        | 3,568.6                | 3,090.9       | 15.5                 | 9.8              | 86.6                                     |
| 2001                        | 4,127.7                | 3,637.9       | 13.5                 | 8.7              | 88.1                                     |
| 2002                        | 3,657.8                | 3,161.9       | 15.7                 | 11.3             | 86.4                                     |
| 2003                        | 3,234.9                | 2,832.9       | 14.2                 | 9.9              | 87.6                                     |
| 2004                        | 3,452.1                | 2,860.8       | 20.7                 | 16.7             | 82.9                                     |
| <b>Total banking sector</b> |                        |               |                      |                  |  |
| 1997                        | 40,814.1               | 34,157.5      | 19.5                 | 13.2             | 83.7                                     |
| 1998                        | 51,602.7               | 46,947.3      | 9.9                  | 3.9              | 91.0                                     |
| 1999                        | 52,790.6               | 47,700.6      | 10.7                 | 6.7              | 90.4                                     |
| 2000                        | 78,291.8               | 72,287.2      | 8.9                  | 6.3              | 92.3                                     |
| 2001                        | 88,478.5               | 82,688.3      | 7.0                  | 5.1              | 93.5                                     |
| 2002                        | 89,873.2               | 86,046.3      | 4.5                  | 2.7              | 95.7                                     |
| 2003                        | 77,510.5               | 73,007.2      | 6.2                  | 3.2              | 94.2                                     |
| 2004                        | 81,105.1               | 73,048.8      | 11.0                 | 10.0             | 90.1                                     |

<sup>a</sup> Ratio of pre-tax earnings to total expense.

<sup>b</sup> Ratio of net earnings to total expense.

<sup>c</sup> Ratio of total expense to total income.

## Poland

## Appendix 33 Key performance indicators (%)

|                             | Net interest margin <sup>a</sup> | Cost/income ratio <sup>b</sup> | ROA <sup>c</sup> | ROE <sup>d</sup> |
|-----------------------------|----------------------------------|--------------------------------|------------------|------------------|
| <b>Commercial banks</b>     |                                  |                                |                  |                  |
| 1997                        | 5.4                              | 53.7                           | 2.1              | 37.0             |
| 1998                        | 4.7                              | 61.3                           | 0.7              | 9.2              |
| 1999                        | 4.0                              | 62.5                           | 0.9              | 12.9             |
| 2000                        | 4.0                              | 61.8                           | 1.1              | 14.5             |
| 2001                        | 3.5                              | 61.0                           | 1.0              | 12.8             |
| 2002                        | 3.3                              | 63.4                           | 0.5              | 5.2              |
| 2003                        | 3.1                              | 67.6                           | 0.5              | 5.4              |
| 2004                        | 3.2                              | 64.3                           | 1.4              | 17.6             |
| <b>Cooperative banks</b>    |                                  |                                |                  |                  |
| 1997                        | 9.5                              | 71.5                           | 2.0              | 30.8             |
| 1998                        | 8.0                              | 75.2                           | 1.4              | 17.9             |
| 1999                        | 7.4                              | 73.7                           | 1.4              | 17.9             |
| 2000                        | 8.6                              | 69.0                           | 1.8              | 22.8             |
| 2001                        | 8.0                              | 69.3                           | 1.6              | 19.4             |
| 2002                        | 6.7                              | 70.6                           | 1.6              | 18.2             |
| 2003                        | 5.6                              | 75.3                           | 1.2              | 12.2             |
| 2004                        | 5.9                              | 71.4                           | 1.8              | 18.3             |
| <b>Total banking sector</b> |                                  |                                |                  |                  |
| 1997                        | 5.6                              | 55.0                           | 2.1              | 34.1             |
| 1998                        | 4.8                              | 62.2                           | 0.7              | 9.1              |
| 1999                        | 4.2                              | 63.2                           | 1.0              | 12.9             |
| 2000                        | 4.2                              | 62.3                           | 1.0              | 14.2             |
| 2001                        | 3.7                              | 61.6                           | 1.0              | 13.1             |
| 2002                        | 3.4                              | 63.9                           | 0.5              | 5.8              |
| 2003                        | 3.2                              | 68.2                           | 0.5              | 5.8              |
| 2004                        | 3.3                              | 64.9                           | 1.5              | 17.6             |

<sup>a</sup> Ratio of net interest income to average total assets less interest due and outstanding on irregular assets.

<sup>b</sup> Ratio of operating expense (general expense and depreciation) to net income from banking activity, adjusted by net income / expense on other operating activity.

<sup>c</sup> Ratio of net earnings to average total assets less interest due and outstanding on irregular assets.

<sup>d</sup> Ratio of net earnings to average core capital.

Appendix 34 Selected bank financial indicators<sup>a</sup>

|  | Commercial banks |                 | Cooperative banks |       | Total banking sector |       |
|--|------------------|-----------------|-------------------|-------|----------------------|-------|
|  | 2003             | 2004            | 2003              | 2004  | 2003                 | 2004  |
| Number of banks analysed   | 56 <sup>d</sup>  | 55 <sup>e</sup> | 600               | 596   | 656                  | 651   |
| Earning assets / total assets (%)  | 88.02            | 88.87           | 89.99             | 90.62 | 88.12                | 88.97 |
| Performing assets / total assets (%)   | 83.88            | 85.79           | 88.50             | 88.91 | 84.12                | 85.96 |
| Net interest income / average total assets <sup>b</sup> (%)<br>(net interest margin)     | 3.05             | 3.16            | 5.62              | 5.94  | 3.18                 | 3.31  |
| Net income from banking activity <sup>c</sup> / average total assets (%)                 | 5.25             | 5.49            | 8.64              | 8.72  | 5.43                 | 5.66  |
| General expense / average total assets (%)   | 3.26             | 3.13            | 5.99              | 5.76  | 3.27                 | 3.40  |
| Net movements in specific provisions and valuation allowances / average total assets (%) | 0.89             | 0.47            | 0.49              | 0.30  | 0.87                 | 0.46  |
| Pre-tax earnings / average total assets (%)  | 0.92             | 1.57            | 1.65              | 2.21  | 0.96                 | 1.60  |
| Average return on interest-earning assets  | 6.43             | 6.53            | 9.00              | 8.97  | 6.56                 | 6.66  |
| Average expense of interest-bearing liabilities  | 3.31             | 3.38            | 3.09              | 2.75  | 3.30                 | 3.34  |

Poland

## Total income, expense and earnings at the banks

| Period                                  | Commercial banks | Banking sector |
|---|------------------|----------------|
| <b>Total income (million zloty)</b>     |                  |                |
| 1993                                    | 17,557.5         | 19,099.9       |
| 1994                                    | 22,402.0         | 23,997.3       |
| 1995                                    | 26,971.7         | 28,661.8       |
| 1996                                    | 31,651.9         | 33,550.6       |
| 1997                                    | 42,853.1         | 45,225.6       |
| 1998                                    | 61,783.2         | 64,415.7       |
| 1999                                    | 76,304.0         | 78,912.9       |
| 2000                                    | 119,386.2        | 122,954.8      |
| 2001                                    | 169,616.9        | 173,757.5      |
| 2002                                    | 389,887.6        | 393,547.6      |
| <b>Total expense (million zloty)</b>    |                  |                |
| 1993                                    | 16,505.2         | 18,172.9       |
| 1994                                    | 21,047.0         | 22,794.5       |
| 1995                                    | 22,420.7         | 23,970.2       |
| 1996                                    | 25,513.8         | 27,147.6       |
| 1997                                    | 36,547.1         | 38,568.9       |
| 1998                                    | 57,413.0         | 59,760.3       |
| 1999                                    | 71,537.4         | 73,822.9       |
| 2000                                    | 113,859.2        | 116,950.2      |
| 2001                                    | 164,316.5        | 167,968.6      |
| 2002                                    | 386,021.6        | 389,176.7      |
| <b>Pre-tax earnings (million zloty)</b> |                  |                |
| 1993                                    | 1,052.2          | 927.0          |
| 1994                                    | 1,355.0          | 1,202.8        |
| 1995                                    | 4,551.0          | 4,691.6        |
| 1996                                    | 6,138.2          | 6,403.0        |
| 1997                                    | 6,306.0          | 6,656.7        |
| 1998                                    | 4,370.3          | 4,655.4        |
| 1999                                    | 4,766.5          | 5,090.0        |
| 2000                                    | 5,526.9          | 6,004.6        |
| 2001                                    | 5,300.4          | 5,788.9        |
| 2002                                    | 3,866.0          | 4,370.9        |
| <b>Net earnings (million zloty)</b>     |                  |                |
| 1993                                    | -214.4           | -401.0         |
| 1994                                    | 316.7            | 121.7          |
| 1995                                    | 2,761.5          | 2,848.3        |
| 1996                                    | 4,229.1          | 4,420.5        |
| 1997                                    | 4,270.1          | 4,495.6        |
| 1998                                    | 1,648.4          | 1,824.9        |
| 1999                                    | 2,972.0          | 3,180.8        |
| 2000                                    | 3,909.3          | 4,212.3        |
| 2001                                    | 3,917.2          | 4,231.8        |
| 2002                                    | 2,357.8          | 2,722.7        |

## Poland

Table 39 Key performance indicators, commercial banks<sup>49</sup>

|   | 2001  | I-III<br>2002 | I-VI<br>2002 | I-IX<br>2002 | 2002 <sup>50</sup> |
|---|-------|---------------|--------------|--------------|--------------------|
| Number of banks analysed  | 65    | 64            | 62           | 61           | 60                 |
| Earning assets / total assets (%)   | 84.02 | 85.72         | 85.53        | 87.00        | 86.06              |
| Performing assets / total assets (%)                                      | 80.71 | 82.24         | 81.71        | 83.01        | 82.30              |
| Interest received / average total assets <sup>51</sup> (%)                | 12.20 | 8.36          | 8.11         | 7.88         | 7.62               |
| Interest paid / average total assets (%)                                  | 8.71  | 5.34          | 4.98         | 4.72         | 4.42               |
| Net interest income / average total assets (%)                            | 3.49  | 3.02          | 3.13         | 3.16         | 3.20               |
| Net income from banking activity <sup>52</sup> / average total assets (%) | 6.33  | 5.66          | 5.97         | 5.97         | 5.97               |
| General expense / average total assets (%)                                | 3.67  | 3.14          | 3.21         | 3.26         | 3.38               |
| Pre-tax earnings / average total assets (%)                               | 1.34  | 1.67          | 1.05         | 1.07         | 0.88               |
| ROA (net earnings / average total assets, %)                              | 0.99  | 1.22          | 0.72         | 0.72         | 0.53               |
| ROE (net earnings / average core capital, %) <sup>53</sup>                | 13.10 | 14.48         | 8.44         | 8.40         | 6.70               |

Table 37 Key bank performance indicators<sup>64</sup>

|    |  | 2000  | I-III<br>2001 | I-VI<br>2001 | I-IX<br>2001 | 2001  |
|----|--|-------|---------------|--------------|--------------|-------|
| 1  | 2  | 3     | 4             | 5            | 6            | 7     |
| 1  | Number of banks analysed   | 73    | 71            | 69           | 69           | 66    |
| 2  | Earning assets/ total assets (%)                                       | 87.60 | 85.18         | 85.03        | 85.45        | 82.06 |
| 3  | Performing assets/ total assets (%)                                    | 84.85 | 82.31         | 82.19        | 82.40        | 78.93 |
| 4  | Interest received <sup>65</sup> / average total assets (%)             | 12.86 | 12.92         | 12.70        | 12.10        | 11.65 |
| 5  | Interest paid/ average total assets (%)                                | 8.83  | 9.62          | 9.39         | 8.86         | 8.34  |
| 6  | Net interest income/ average total assets (%)                          | 4.03  | 3.30          | 3.31         | 3.25         | 3.31  |
| 7  | Net income from core activity <sup>66</sup> / average total assets (%) | 6.22  | 5.80          | 5.88         | 5.80         | 5.99  |
| 8  | General expense/ average total assets (%)                              | 3.65  | 3.23          | 3.39         | 3.31         | 3.47  |
| 9  | Pre-tax earnings/ average total assets (%)                             | 1.50  | 1.66          | 1.63         | 1.53         | 1.39  |
| 10 | ROA (net earnings/ average total assets, %)                            | 1.05  | 1.20          | 1.18         | 1.09         | 1.02  |
| 11 | ROE (net earnings/ average core capital, %)                            | 14.52 | 15.87         | 15.28        | 13.92        | 12.91 |

Table 35 Key bank performance indicators<sup>66</sup>

|    |   | 1999  | I-III<br>2000 | I-VI<br>2000 | I-IX<br>2000 | 2000  |
|----|---|-------|---------------|--------------|--------------|-------|
| 1  | 2   | 3     | 4             | 5            | 6            | 7     |
| 1  | Number of banks analysed  | 75    | 75            | 74           | 74           | 73    |
| 2  | Earning assets to total assets (%)  | 86.98 | 86.47         | 85.22        | 85.73        | 87.22 |
| 3  | Performing assets to total assets (%)   | 85.05 | 84.51         | 83.14        | 83.41        | 84.55 |
| 4  | Interest received to average total assets <sup>67</sup> (%)                       | 11.16 | 12.42         | 12.54        | 12.69        | 12.86 |
| 5  | Interest paid to average total assets (%)   | 7.11  | 8.10          | 8.31         | 8.54         | 8.83  |
| 6  | Net interest income to average total assets (%)                                   | 4.04  | 4.32          | 4.23         | 4.15         | 4.03  |
| 7  | Net income from core banking operations <sup>68</sup> to average total assets (%) | 6.00  | 6.44          | 6.28         | 6.26         | 6.26  |
| 8  | General expense to average total assets (%)                                       | 3.60  | 3.42          | 3.67         | 3.55         | 3.63  |
| 9  | Pre-tax earnings to average total assets (%)                                      | 1.51  | 2.30          | 1.61         | 1.65         | 1.56  |
| 10 | ROA (net earnings to average total assets) (%)                                    | 0.94  | 1.60          | 1.13         | 1.13         | 1.10  |
| 11 | ROE (net earnings to average core capital) (%)                                    | 12.90 | 22.40         | 15.75        | 15.59        | 15.19 |

