Katerina Šmídková

THE EMERGENCE OF FINANCIAL MARKETS IN TRANSITION - THE CZECH EXPERIENCE

Praha 1996
WP No. 59

The views and opinions in this study are those of the author and are not necessarily those of the Czech National Bank

The author would like to thank to Neil Bjorksten, Milena Horcicová, Malinka Koparanova, Luboš Kurnas, Howard Stein, Lina Takla and participants of the IE CNB seminar for useful comments and suggestions.

Contents

I. The Process of Emergence: Where Did It Start - Where Does It Go?

The development of well-functioning financial markets is indisputably one of the decisive factors of a successful transition to a market economy. The Czech experience[1] can offer an insight into the complexity of the process of their emergence. In order to understand that, it is necessary to emphasize the initial pre-reform situation. In 1990 - year "zero" of the reform, the Czech Republic started its transition path with a one-tier state banking system, without institutions fundamental to financial markets such as a stock exchange or investment funds, and with non-convertible currency. The group of financial assets available to the private sector was very homogenous since the only existing financial markets (although very distorted by central planning) were those with deposit, loans and foreign exchange.

[1] The paper analyzes the emergence of the Czech financial markets. Hence it refers to the Czech experience even for the period of 1990-1992 during which the Czech Republic was a part of the former Czechoslovakia.

The markets with short-term bills, state or corporate bonds, shares and derivatives were completely absent. Saving and investing activities facilitated by the state financial system were inefficient. Some economic actions such as risk-trading between heterogeneous economic agents were not supplied by the financial system at all.

It follows that there was a very long way ahead of a transitional economy in order to develop well-functioning financial markets. In this paper, it is suggested to distinguish the three essential stages of the development process: (i) the emergence of financial institutions of two types: those providing a framework for financial markets as well as those playing on them, (ii) the emergence of financial markets that in most cases required some leading institution to introduce previously non-existent financial asset, and finally, (iii) the improvement as well as significant broadening of economic activities facilitated by the markets. The similar methodology can be used when analyzing the process of emergence of financial markets in other transitional countries. For all three stages, there is a crucial factor of development - the presence of the institutional leader. In the Czech Republic, the first two stages were driven both from the top down by institutional transformation as well as from the bottom up by the responses of the private sector to the government's privatization scheme, financial liberalization or policies of the central bank. The third stage had proven to be a difficult and lasting process.

There has been intense discussion in economic literature on the topic of where would newly emerged financial markets go. Corbett, Mayer (1991) provide an excellent overview of this discussion. According to them, there are two main alternatives: (i) the market model that is associated with the US economy in which the stock market plays an important role, investment and commercial activities are separated, hostile takeovers take place, and the outside system is a method of corporate control, or (ii) the banking model which is associated with a majority of developed countries (continental Europe or Japan) that have general banking systems where banks hold equities, sit on the boards of firms, and there are crossshare-holdings between companies, concentrated ownership of quoted companies, and an inside system of corporate control.

Corbett, Mayer (1991) argue that the banking model should have been the target of financial reform since transitional economies are closer to continental Europe in many aspects, and moreover, the advantages of the market model are outweighed by its disadvantages.[2] Hence the backbone of economic development in transitional economies should be the formation of an effective banking sector related closely to a privatized enterprise sector. Also, it is suggested that banks should not be involved in speculative and short-term activities. It is concluded that financial reforms in transitional countries were designed in order to approach the market model. On the contrary, the analysis of the Czech experience presented in this paper demonstrates that the financial system has converged to the banking model during transition. Although the privatization strategy of the government contributed to the development of the equity market, the commercial banks became the major players since they were funded as universal banks and allowed to participate in the voucher privatization scheme.

This paper is organized as follows. The emergence of the financial institutions is analyzed in the second section (Main Players on the Czech Financial Markets). The central bank and the government are identified as leaders on the

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[2] The reasons of disadvantages outweighing advantages in the market model are summarized in Stiglitz (1990) as the new paradigm. According to him, there are several important problems that were overlooked by the previous literature analyzing the financial systems: the imperfect and costly information (adverse selection problem), contracts are difficult and costly to enforce (enforcement problem), managers do not act in interests of shareholders (incentives problem) and the ownership is too wide spread to ensure monitoring (free rider problem). Hence in the market model collected funds often do not promote economic growth since the system suffers from hostile takeovers, profits are channeled to managers instead of the firms or shareholders, and investment horizon is shortened. In the banking model, outside investors are provided with debt contracts, and the risk of the project as well as the costs of screening and monitoring are beard by the small group of inside investors -usually banks- who have the power to enforce contracts, know-how to analyze information, and who take the profit

financial markets, and the major commercial banks as the most important private players that have gained their position in a bottom to top process initiated by voucher privatization. The emergence of the financial markets is examined in the third section (Financial Markets in Transition: Structure, Reasons for Emergence and Depth of the Czech Financial Markets). After five years of transition, the structure of the Czech financial markets was as follows. The money market, foreign exchange market, bond market, short-term securities market, and equity market started functioning. The more sophisticated products linked to inter-temporal risk trading such as warrants or options were not introduced on a significant scale. The emerged markets were liberalized, usually formed by several major domestic players with the strong participation of the foreign investors. However, only some of those markets could be labeled as well-functioning. The last section (The Emerged Financial Markets: Roles and Recommendations) summarizes the roles of financial markets in transition, and some policy recommendations on how their performance in facilitating the important economic activities could be improved according to the Czech experience.

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in the case of success. In the both models, the existence of the anti-trust agency is necessary in order to prevent monopolies and collusion.

II. Main Players on the Czech Financial Markets

In the beginning of transition, there were only two important financial institutions in the Czech Republic - the government itself and the state one-tier banking system. After five years, the variety as well as the number of players on the Czech financial markets had increased immensely. The emergence of a financial sector was pre-determined by the transitional strategy of the Czech state authorities. The key institutions - banks and private as well as the state funds were formed in the framework of the voucher privatization in which some institutions participated as investors and others were subject to it. This section explains who were the most important players on the Czech financial markets, how they emerged, and what the main problems were they faced.

II. 1. The Role of the Central Bank

In 1990, new laws came into effect on the State Bank of Czechoslovakia and on Banks and Savings Banks that restructured the one-tier banking system into a two-tier. The central bank was separated from nine state financial institutions (out of them 7 commercial banks), and started to fulfill its transitional tasks. The Czech experience suggests that there are three main roles for the central bank during transition. First, the central bank undertakes all standard tasks necessary in order to ensure stability of the domestic currency. However, the monetary instruments available are not as powerful as those of central banks in market economies. Specifically, during the first transitional years, the Czech National Bank (CNB) [3] gradually replaced non-market monetary instruments (direct credit limits, central allocation of credits, interest rate ceilings) with market ones (minimum reserve requirements, credit auctions and discount policies). Moreover, the design of the monetary policy was confronted with a sequence of shocks both transformational (VAT reform, large privatization) as well as those generated by the split of the former Czechoslovakia (including monetary dissolution, banking and financial separation, and a separation of the central bank itself). The CNB monetary policy created a very stable environment for the developing financial sector since the exchange rate of the koruna [4] (CZK) was successfully fixed [5] and inflation remained low (See Figures 1 and 2) during the whole period.

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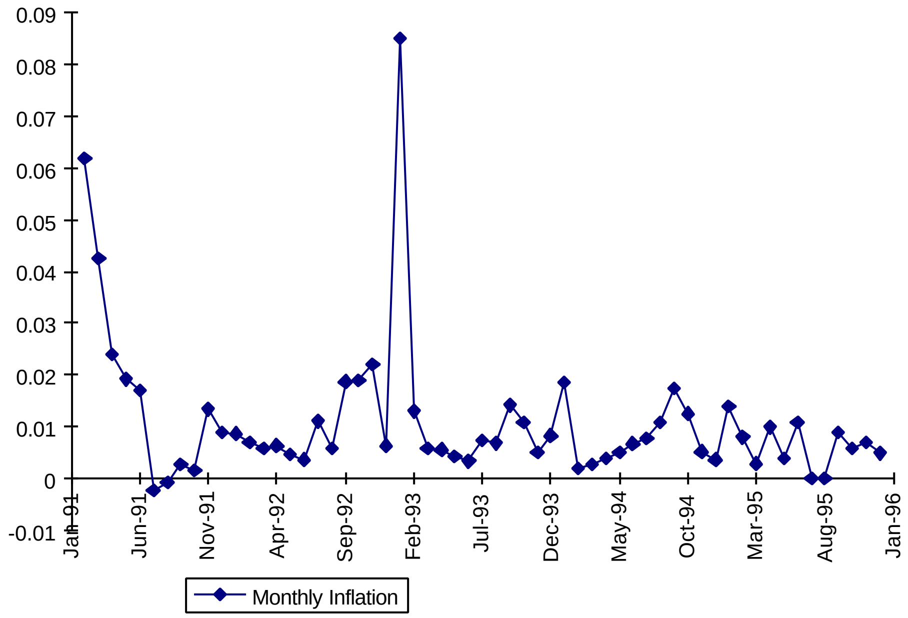
[3] In January 1993, the Czech National Bank (CNB) became the central bank of the Czech Republic - one of the successors of the former Czechoslovakia. For a simplicity, the central bank will be referred as CNB for the whole period since we analyze the banking sector in the Czech Republic.

[4] The koruna -the Czechoslovak crown- was a domestic currency of the former Czechoslovakia, the Czech crown has become the currency of the Czech Republic since February 1993.

[5] Koruna was bounded to five major currencies -USD, DM, ATS, CHF, FRF after a series of large devaluations in 1990: 18% in January, 55% in October and 15% in December.

Figure 1

Internal Stability of Koruna



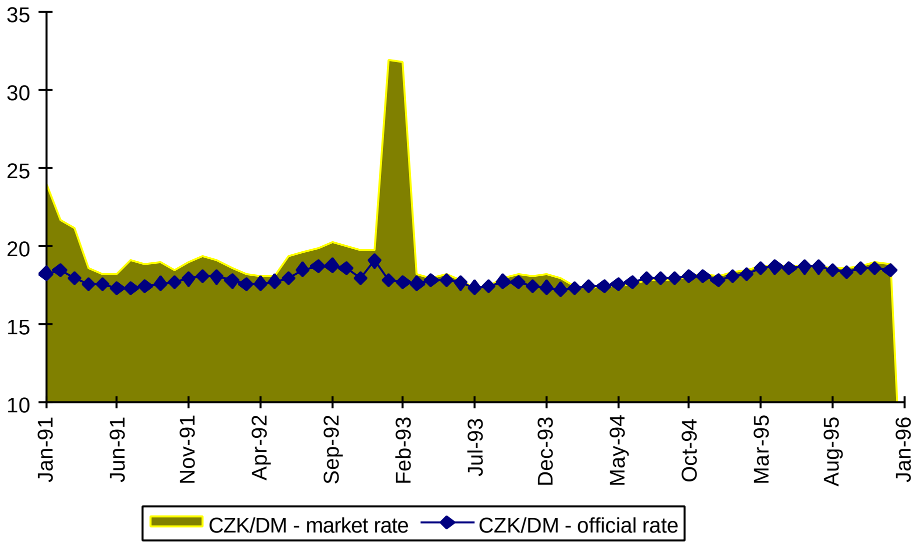
Data Source: Annual Reports (1991-1995), CNB.

Notes: A persistent relatively low inflation (10 % annually) was maintained during the first years of transition (the reported monthly inflation is derived from the consumer price index). The only exceptions were periods of transitional shocks - price liberalization (1991) and VAT reform (1993).

For five years, the exchange rate of koruna remained fixed with a small modification of a currency peg basket to USD and DM only.

Figure 2

External Stability of Koruna



Data Source: Annual Reports (1991-1995), CNB.

Notes: The policy of pegging the nominal exchange rate to a basket of currencies was a very successful in the Czech Republic. The difference between the official (targeted) rate and the market rate determined on the foreign-exchange market was insignificant. Temporary deviations that appeared during periods of uncertainties - price liberalization (1991) and the separation of the Czechoslovak currency (1993) - were easily accommodated by CNB's interventions. One of the reasons of this success was a series of considerable devaluations of the koruna in 1990.

The second role for the central bank is to lead the transformation of the banking sector. In 1992, a bundle of transformational targets was announced by the CNB that was met over the next three years. The CNB coordinated the transformation of commercial banks payment and information systems, and it regulated the speed of entrances to the banking sector. The Czech experience indicates that as the financial sector develops rapidly by size as well as by a range of activities (often introduced via a learn-by-doing process), the supervision activities of the central bank should increase accordingly. There are several steps that should not be overlooked during the first years of transition: strategies towards healthier banking portfolio,[6] providing banks with the know-how concerning the riskiness of newly introduced financial operations, a law on deposit insurance, measures improving competition within the banking sector and a careful design for the privatization of large state banks.

The role of creator of short-term financial markets represents the third important role for the central bank. The CNB contributed significantly to establishing both the foreign-exchange as well as the money market. Specifically, the CNB acted as market-maker on both embryonic markets. The CNB's strategy of gradually expanding the convertibility[7] of the koruna led to an expansion of the markets with swaps and forwards when entrepreneurs allowed to establish foreign-exchange accounts started hedging themselves against the exchange-rate risk in 1994.

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[6] In 1993, the new regulations came into effect by which banking supervision was amended. For example, minimum required capital was increased and more strict rules of credit classification were implemented and monitored more strictly by the newly established department of the CNB. In 1994, the need for additional rules emerged after the second small bank had collapsed. The Act on Banks supplements was passed in order to provide rules for deposit insurance and a space for the CNB to deal with problematic banks. The insurance system was established for declared deposits limited up to 100 thousand CZK with one bank. The Deposit Insurance Fund (DIF) was created to which banks paid contributions (0.5% of total declared deposits).

[7] There were different stages of internal convertibility implemented that broadened the category of payments abroad internally carried out by means of crown accounts. Also, limits of foreign exchange for citizens were increased several times. Finally, the law on convertibility according to the IMF article VIII was passed in October 1995 by the Parliament.

Also, the CNB established a new market with short-term securities, and in the later stage when the volume of assets traded was sufficient enough, the CNB allowed commercial banks to become market makers, and only intervened since August 1994. The main reason why the CNB undertook this role was the policy of pegging the exchange rate. The CNB intervened on the foreign exchange market during quite long periods of capital inflows. Hence, open-market operations became an important CNB instrument when meeting its monetary target. Due to unavailability of other instruments such as government bonds, the CNB had to become a borrower, and issue its own short-term securities (CNB-bills) in order to sterilize inflows.

II. 2. The Banking Sector

In the first years of transition, the banking sector expanded rapidly due to a liberal licensing policy, the gradual opening of domestic financial markets as well as the privatization of state commercial banks. As stated earlier, the initial size of the transformed banking sector was seven commercial banks. The majority of large domestic banks (Komercní Banka, Investicní Banka, Zivnostenska Banka, Ceska Sporitelna) went through voucher privatization. Only Konzolidacní Banka remained purely state owned in order to consolidate the old debts of state enterprises. By 1995, 59 commercial banks had already been established (out of which 1 state, 17 domestic commercial banks, 14 with mixed ownership, 11 with full foreign ownership, 10 foreign branch offices), 41 representations of foreign banks and 6 building and loan associations. Moreover, laws on savings and credit cooperatives were being discussed and a new Act on Banking was being prepared that would support the development of mortgage banking with state participation (the support of long-term credits financing construction).[8] The Czech Export Bank was established in order to promote the export performance of the Czech Republic. In addition to banks, 33 insurance companies (and 40 branches) competed with banks for savings of private sector.

Not only did the Czech banking sector develop by size, the variety of its activities increased over the five years as well. In addition to basic banking activities such as accepting deposits, granting credits and ensuring payments, there were new services provided including securities trading, management of securities portfolio, exchange-rate hedging and channeling of international funds to domestic clients. Specifically, some major banks started speculating on the world market with futures, and collected loans abroad.

The rapidly developing banking sector was burdened with several problems during the first years of transition. First, the quality of banks´ portfolios was considerable lowered by bad debts inherited from the previous regime as well as newly granted bad loans. In 1992, the government introduced a write off program in which debts of 50 billion CZK were swapped into state bonds. Bonds were given to the state commercial banks in order to determine those customers whose debts should be written off. Capek (1995) argues that, as a consequence, good customers were punished since banks had chosen debts with the lowest probability of repayment for cancellation imposing soft budget constraint on bad customers. Capek (1995) also demonstrates that the share of bad loans in the total amount of granted credits increased. It stood at 19% in 1992 and 24% in 1993. In 1994, the new methodology of credit classification was introduced. If this change is accounted for, the bad loans stood at 25% of the total granted credits in 1994 and 26% in 1995. The importance of the problem was confirmed by the collapse of several small banks due to their insolvency, and a consequent lack of liquidity. Despite this, public confidence in the banking sector was not threatened because a deposit insurance law was passed in 1994. However, as a result, the expenses of the

[8] In 1996, 6 mortgage banks operated on the Czech financial markets.

banking sector already high due to building up reserves increased further preventing banks from lowering rates on credits to clients.

The second problem that led to imperfections on some financial markets, as analyzed later in the next section, was the structure of the banking sector. Although there was an expansion of the banking industry, the post-privatization structure can be characterized as inherited for two reasons. First, the major banks (those originally state owned) were not restructured during the period of voucher privatization. The only exception was a fusion of two major banks into Investicni a Postovni Banka. Second, the new comers -both branches of foreign banks and new domestic banks - were not sufficiently large to increase competition in the banking industry. Foreign banks were allowed entry mainly to serve their own clients, and did not aim to gain power on the domestic market by means of increased competition. Both types of banks are in this paper referred to as small banks. Indicators of the concentration of the Czech banking sector suggest that large privatized banks remained the leaders in the banking industry (See Table 1) collecting the majority of domestic savings as well as international loans and granting credits to the majority of clients. Specifically, the previously state owned saving bank (Ceska Sporitelna) had a monopolist position on primary deposit market in the first years of transition.

Table 1

Structure of the Czech Banking Sector in 1995

Bank's Own Capital % of Own Capital of Banking Sector	Number of Banks in a Category
20 - 15%	1
14.9 - 10%	1
9.9 - 5%	3
4.9 - 1%	2
less than 1%	45

Data Source: CNB, Hospodarske Noviny (Economic News).

Notes: According to the total asset criteria, in 1994 the large banks accounted for 79.3% of the banking sector, small domestic banks for 8.8%, and foreign banks (including branches) 11.2%. In 1995, the large banks accounted for 73.7%, small domestic banks for 9.2%, and foreign banks (including branches) for 16%.

Third, the banking sector was involved in the voucher privatization scheme. Not only could banks invest a limited portion of collected deposits in equities directly, they also have funded investment privatization funds (IPFs) so they could bid for larger stocks of voucher shares through them. Commercial banks have even been locked into the ownership circle with either other banks' funds or with their own clients. This outcome of voucher privatization is likely to have important consequences for the managing of banking portfolios.

There are two main scenarios for the banks to deal with concerning the new equity market. First, banks will decide to "keep a wall" between themselves and their IPFs, they will monitor them until the funds' debts are repaid. After that, the banks will have a relatively small portion of their portfolios invested in equities. Although it stood at about 10% in 1995, an OECD analysis argued that reserves which the banking sector managed to build in order to cover bad loans were not high enough to cover the losses from trading with securities (specially, due to a steady fall in prices on the stock exchange). According to the second scenario, the banks will maintain the credit link to their IPFs by swapping debts into equities. The banks will become heavily involved in all activities of majority shareholders, and will face the problems of monitoring, enforcing and incentives in the privatized state enterprises. It is difficult to judge which scenario will prevail. On the one hand, a bankruptcy law came into effect in 1993 but banks did not start acting as owners until 1995. On the other hand, one of the large banks (Investicni a Postovni Banka) has already started swapping equities of its IPFs into deposit certificates. Other banks have protected their IPFs against takeovers by other financial institutions. Both scenarios imply that banks will be affected by the development on the equity market in the medium term either directly via results of their own speculative activities or indirectly via the ability of IPFs to repay debts.

II. 3. The Role of the Government

The Czech experience reveals that a variety of roles for the government on the field of financial markets is very broad during transition. First, the government initiates the existence of the majority of the main players either directly as a part of its institutional reform (an independent central bank, major banks, pension funds, stock exchange) or indirectly by creating a framework for a new financial market (voucher investment funds, mortgage banking, insurance companies). Second, similarly to the central bank, the government acts as an institutional leader since it helps to create both equity as well as bond market. An interesting lesson about the importance of the institutional leader that bears the costs of a market creation can be drawn from the Czech experience. While the equity market boomed because of the privatization strategy of government, the bond market remained thin since the government did not accept any strategy to support development of this part of the capital market. Third, the Ministry of Finance gives licenses to all non-banking financial institutions the list of which is summarized in the next paragraph, and supervises these institutions. Moreover, the government is according to the Czech experience a main issuer of bonds in the early stages of transition.

Fourth, not only is the government a major player on a bond market, it can temporarily be - as suggested by the Czech case - a very important player on equity market.[9] Specifically, in 1991, the National Property Fund (NPF) was established by

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[9] While the government can continue issuing bonds and intervening on bond market after transitional period is over, it operates on equity market only temporarily. The government´s fund sells equities during the privatization process but it does not buy them on a large scale. Hence its role diminishes gradually.

the government as a temporary transitional institution. The NPF together with the Ministry of Privatization transformed state-owned enterprises that were subject to privatization into joint-stock companies, organized direct sales, restitution and a voucher privatization scheme.[10] However, as a result of voucher privatization the last wave of which took place in 1994, the NPF was still a powerful player on the equity market even in 1995 since it was responsible for managing shares remaining in state hands. According to NPF reports, 1742 state enterprises were transformed into join-stock companies worth 750 billion CZK during the privatization process. In 1995, the NPF held shares in 1119 companies worth 230 billion CZK which was approximately the same amount as all private IPFs together. The NPF was involved in one half of trade with Czech shares until 1995. Consequently, the NPF could easily affect trading and prices on equity market.

It is worth noting that although the major commercial banks have gone through voucher privatization, the NPF has remained the majority shareholder in them (See Table 2). The optimal speed of privatization of the state portion of shares was difficult to determine. On one hand, the resulting institutional structure (sometimes referred to as “bank socialism”) was identified by some authors [11] as a potential source of inefficiency in the Czech transitional economy. On the other hand, world rating agencies (e.g. Standard and Poor's) gave only these banks with a positive rating which was close to the very good rating of the Czech Republic because they considered these banks as low risky due to the state guarantee.[12] Also, these banks had access to international funds, and were able to collect them at a rate very close to LIBOR.

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10 The revenues from sales of shares went mainly to inter-firm debt clearing operations of state enterprises and re-capitalization of commercial banks. For more detailed description of the Czech privatization process see Frydman, Rapaczynski and Earle (1993).

11 See for example Èapek, Mertlík (1996).

12 Although all the small banks were not considered by rating agencies - so it is not possible to judge in general which category of banks has received a better rating - the included small banks did not get equally good rating.

Table 2

The Role of State Authorities in Financial Sector

1995	Komercni Banka	Ceska Sporitelna	Ceskoslovenska Obchodni Banka	Investicni a Postovni Banka	Ceska Pojistovna
Ownership of NPF	48%	45%	67% *	33%	26%

Data Source: NPF.
Note: * Together with the CNB and the Czech government.

II. 4. Non-Banking Financial Institutions

Due to the Czech privatization scheme, other institutional reforms of the government and the liberal government licensing policy, a large variety of non-banking private financial institutions emerged during the transition (See Table 3).

Table 3

The Non-Banking Financial Sector in 1995

Type of Institution	Number of Institutions
Securities Markets	3
Pension Funds	44
Insurance Companies	33
Investment Companies	162
Investment Privatization Funds	272
Mutual Funds	283
Security Dealers *	389
Brokers	932

Data Source: Ministry of Finance of the Czech Republic, CNB.

Notes: Leasing companies have become an important part of non-banking financial sector. They started providing the so called secondary credits but were not subject to banking regulations. *) 45 ot them banks.

The state authorities initiated the emergence of three securities markets. The institutional framework was created by The Securities Act, The Societies and Investment Funds Act and The Stock Exchange Act in 1992. The Prague Stock Exchange (PSE), the over-the counter-system (RM-S) and the Securities Center (SC) for direct trading with shares were funded. The three markets differ in the method and speed of settlement, price setting, liquidity, costs of trading, price levels and the volumes of trading. The PSE is a major official market where main players licensed by the PSE (such as banks, investment funds or companies) trade among themselves. Small private investors have access to the PSE only via these intermediaries. The RM-S is an official market oriented towards small investors - mainly households who were given the initial stock of shares during the voucher privatization scheme. However, the SC that facilitates direct trading between the two parties was the most important market in the first years of transition. Consequently, the information content of the PSE or RM-S index was low. The role of equity prices as signals for investment activities was distorted since the SC prices were not announced in the fist stage of the market emergence. In 1995, the PSE facilitated 33.9% of total trading volume, the share of the RM-S was 4.4%, and the share of the SC was 61.7%.

In 1994, the number of pension funds and insurance companies started increasing due to the newly formed institutional framework (the new law on pension insurance was passed in November 1994). There were many IPFs, mutual funds and private investment companies funded that competed for citizens' vouchers during the two waves of voucher privatization. The bidding process was a prototype of the bottom to top process. An unexpectedly large number of funds was established, and functioned as a very important factor driving the formation of the Czech capital market. In addition, many security traders and brokers started speculating on the Czech financial markets. The above-listed financial institutions have been supervised by the Ministry of Finance.[13]

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[13] In the beginning of 1996, some private IPFs started transforming themselves into holding companies in order to avoid the supervision of the Ministry of Finance. The agreement of shareholders' meeting was the only condition for the change in status.

III. Financial Markets in Transition: Structure, Reasons for Emergence and the Depth of the Czech Financial Markets

The main feature of the whole process of markets' emergence was the quick sequence of institutional reforms that were followed by the expansion of foreign investors activities as well as a variety of newly emerging private domestic financial institutions. According to the Heritage Foundation Index,[14] during the transition period, Czech financial markets were one of the most free markets with patterns similar to Asian countries. This section aims to answer the following three questions. How wide were financial markets in the Czech Republic after five years of transition? Why did various markets emerge? How deep were they?

[14] The index evaluates banking systems, monetary policies, taxation, output consumed by government, regulations, volumes of black market, wage and price controls.

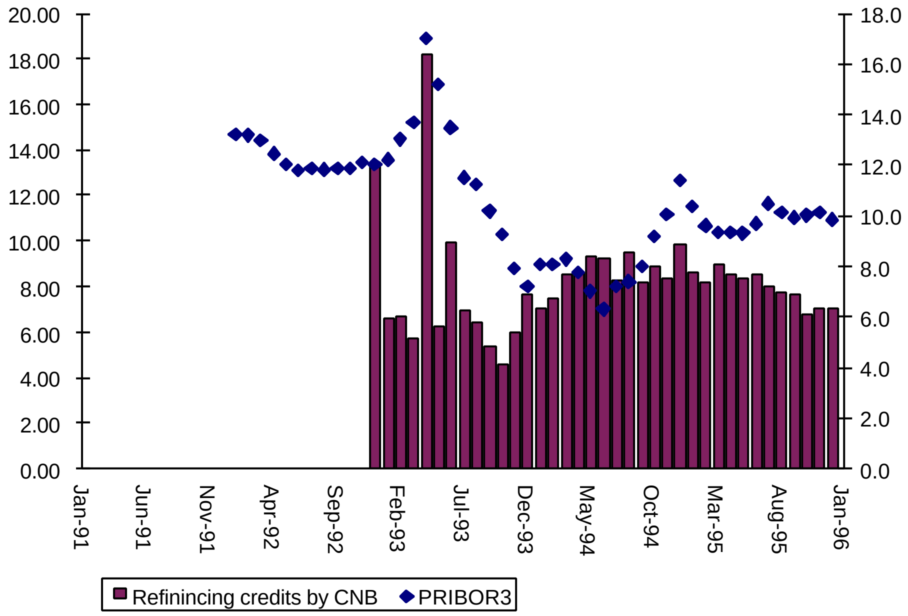
III. 1. Money market

The money market institution was established in 1991. However, in the first two years, the number of monetary instruments was very small. The majority of operations was performed by granting credits directly. There was a "parallel" market created in the form of trade credits used by enterprises in order to overcome a credit crunch. Although there was a disproportionate liquidity between the major commercial banks (surplus of primary resources) and small banks (lack of resources), large banks did not trade on the inter-bank money market since they preferred lending to state authorities. Consequently, the inter-bank money market rates remained high and the volumes traded were not significant (see Figure 3). The discriminating attitude of major banks toward newly established smaller banks was one of the consequences of the inherited structure of the banking sector. Only foreign banks were not subject to this attitude, having access to foreign resources.

In the later stage of transition, a persistent capital inflow contributed significantly to the inter-bank money market development since it was necessary for large banks to redistribute foreign resources among domestic investors. Subsequently, the inter-bank money market rates started falling followed by client rates. In 1994 and 1995, the money market expanded further. More interest rates were quoted, more commercial banks were acting as reference banks, trading volumes increased and new forms of trade were implemented such as repo-operations. The spread between the offer rate on the money market and rate on short-term deposits fell from 1,63% in 1993 to 0,89% in 1995. The short-term rates (up to 3-month rates) became "true" market prices due to increasing trading volumes on the money market.

Figure 3

Indicators of the Inter-Bank Money Market Performance



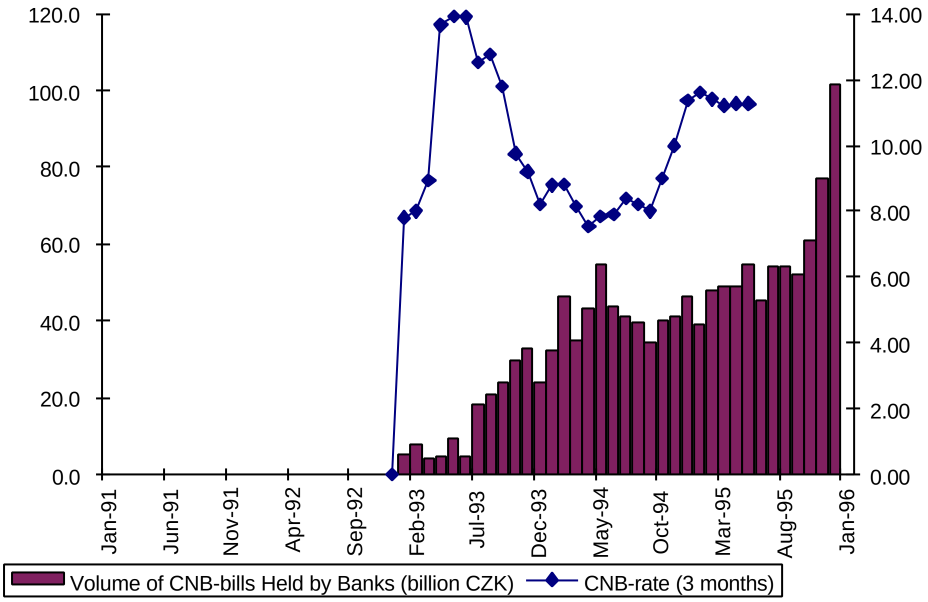
Data Source: Annual Reports (1991-1995), CNB.

Notes: In the first two years of transition, inter-bank money market rates were high as shown by Pribor-3 - the three-month Prague Inter-bank Offer Rate (scaled on the right-hand side). Trading between banks was not significant, and the CNB was refinancing smaller bank with its credits. In the later stage, inter-bank rates fell except for period of uncertainty (currency dissolution in 1993) although the CNB intervened with its bills from 1994 to neutralize excessive liquidity from the capital inflows. Refinancing credits remained stable since commercial banks started trading credits among themselves.

Due to capital inflows, the CNB entered the money market when applying its sterilisation policy of issuing CNB-bills (See Figure 4). As a result, a new market with short-term securities was created. Interestingly, the bills were perfect substitutes for money because the CNB ensured fully their liquidity. In 1995, the market started widening when other institutions such as the NPF or large commercial banks followed the central bank in issuing short-term bills. Due to the higher liquidity that was a consequence of the expansion of money market as well as an improved self-discipline of enterprises, a parallel market of trade credits stopped increasing.

Figure 4

The Emergence of the Short-term Securities Market



Data Source: Annual Reports (1991-1995), CNB.

Notes: The market with CNB-bills emerged in 1993. In the very beginning, interest rates on bills (scaled on the right-hand side) were set by the CNB. However, since the expansion in issuing CNB-bills in 1994, the rates fell determined by the market. The volumes of CNB-bills held by commercial banks increased due to the CNB´s sterilization policy.

III. 2. The Foreign Exchange Market

The Inter-Bank Foreign Exchange Market was founded in 1991 to secure the internal convertibility of the koruna. The CNB and commercial banks licensed by the CNB were the major participants. After a large devaluation of the koruna in 1990, rapid development of the foreign exchange market was possible due to persistent capital inflows. The CNB continued accumulating foreign exchange reserves for the next five years[15] (see Figure 5). Gradually, the rules for open-foreign-exchange positions were liberalized. Since 1994 participants have traded among themselves on daily fixing where the CNB intervened abandoning its position of a market-maker. Trading among commercial banks become a major type of transitions on the foreign exchange market signaling that the market had overcome its embryonic stage. In 1995, the convertibility of the koruna according to Article VIII of the IMF was introduced. As a consequence, a market with forwards and swaps developed gradually, and it was expected that it would develop extensively once the fluctuation bands around the central parity are broadened. The markets with more sophisticated products were not well-established since the fixed-exchange-rate regime did not burden private sector with exchange-rate risk. Hence there was no market pressure to start trading with futures or options.

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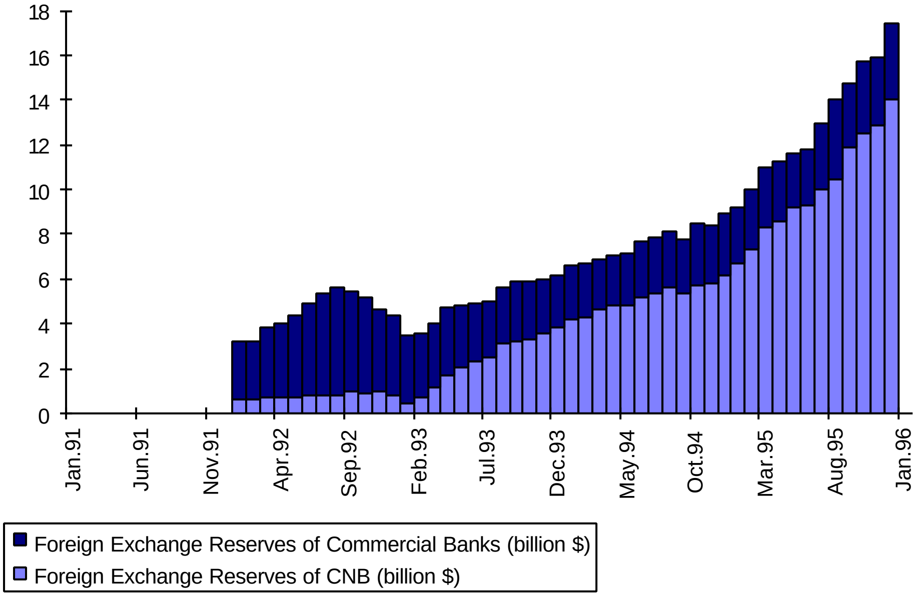
[15] The Czech Republic was very successful in building its foreign exchange reserves. The CNB even paid ahead of schedule the credits by IMF, and the Czech Republic became a creditor vis-a-vis the IMF.

Figure 5

Foreign Exchange Reserves of the Czech Banking Sector



Data Source: Annual Reports (1991-1995), CNB.

Notes: Foreign reserves of the Czech Republic have been only reported since 1992. Both the CNB as well as commercial banks built up their reserves gradually. The share of CNB reserves was increasing due to sterilization measures. The only period of a fall in reserves was in the first quarter of 1993 when the expectations of currency dissolution resulted into a significant capital outflow.

III. 3. The Capital Market

In the Czech Republic, the equity market was leading the process of capital market emergence although at the start of the transition the capital market had been restricted to a preliminary bond market on which only a very limited number of issues was auctioned. Due to a government surplus there was no large issue of state bonds. The only other traded bonds were those of Komercni Banka. The equity market boomed in the second half of 1993 when the first wave of voucher privatization was completed and the second wave started.[16] Trading with shares significantly increased both the width (number of traded issues) and the depth (volumes of trading) of the capital market. For example, the number of issues traded on the PSE increased from 9 to 630 in June 1993. In November, shares of investment funds further enlarged the number of traded issues.

Figure 6 demonstrates the size of the boom in the capital market by looking at the trading on the PSE.[17] Several phases of development of the equity market can be distinguished.[18] In general, due to a mismatch of supply and demand and due to other limiting factors,[19] it took some time for trading volumes to increase. The equity market grew slowly, prices declined until September 1993. Then the embryonic stage was passed. Undervalued shares were traded at a larger scale, and prices started rising. Specifically, shares of banks and large enterprises on which sufficient information was available were demanded. At the end of 1993, trading volumes were enlarged because the investment funds needed to meet

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16 In May, voucher shares were traded for the first time on the RM-system in periodical auctions. The period between auctions was being shortened gradually from seven to two weeks (later on the RM-S started running continuous auctions as well). In June, voucher shares were traded for the first time on the Prague Stock Exchange.

17 Trading on the PSE has been chosen as an indicator of development for two reasons. First, in general, demand for shares came from the other sectors than households - the initially targeted sector. As a result, the RM-S to which households had access directly, was not a decisive market, and followed the expansionist tendency only slowly. Second, the unofficial trading organized directly between sellers and buyers was not reported by the Center of Securities until 1995 although the official trading was approximated to be only 20% of the total trading with voucher shares. Hence both trading volumes and prices on PSE should be understood as indicators only.

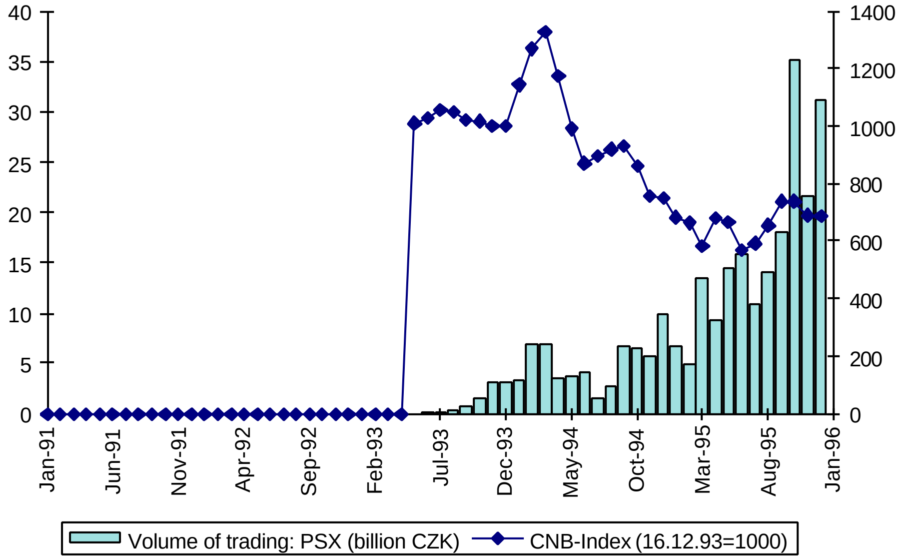
18 The summary is based on the analysis of the Czech capital market published weekly in Hospodarske Noviny (Economic News), and on the analysis of CNB's experts that are available in Annual Reports of the CNB.

19 Among main factors that limited trading in the first months of capital market's existence were technical and administrative barriers that diminished gradually in a learn-by-doing process.

legal requirements on their portfolios before the deadline.[20] In the first half of 1994, both prices and volumes on the stock market increased pushed mainly by high demand for shares of 'market leaders'.[21] After the initial re-distribution of voucher shares, the illnesses of the emerging market affected trade volumes and prices on the market with shares from the second half of 1994.

Figure 6

The Emergence of the Czech Capital Market



Data Source: Annual Reports (1991-1995), CNB.

Notes: Volume of trading on the Prague Stock Exchange (scaled on the left-hand side) describes the process of emergence of the Czech capital market. Significant official trading appeared only after the first wave of voucher privatization was finished in June

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[20] Specifically, the portion of shares that funds could hold in one enterprise was restricted. Another hypothesis suggests that investment funds aimed to increase the market price of their portfolios in order to charge higher fees to customers in the end of the year.

[21] Shares of commercial banks, glass producers, Czech Energetic Complex were among the most important market leaders.

1993 (only since then have price indexes been available). The second boom came in 1995 with the second wave of voucher privatization.

There was a lack of domestic liquidity. Moreover, domestic investors were disappointed by the poor protection of minority shareholders, low dividends and falling prices. It is interesting to note that there were several signs of inefficiency in the equity market - the room for arbitrage trading between the two official markets and prices not-reflecting the dividend performance of companies.[22] Foreign institutional investors complained that there was a lack of information on smaller enterprises as well as on the volumes and prices from direct trading. Also, a part of the foreign demand for Czech financial assets was absorbed into the newly emerged money and bond markets. In 1995, the importance of the equity market increased further because shares from the second wave of voucher privatization were issued. Subsequently, prices of shares stopped falling. The increased market depth and width were not the only improvements. The Czech Capital Information Agency has been established with the aim to improve the quality and quantity of information available to investors. The credibility of the market increased when the Czech Republic entered OECD.

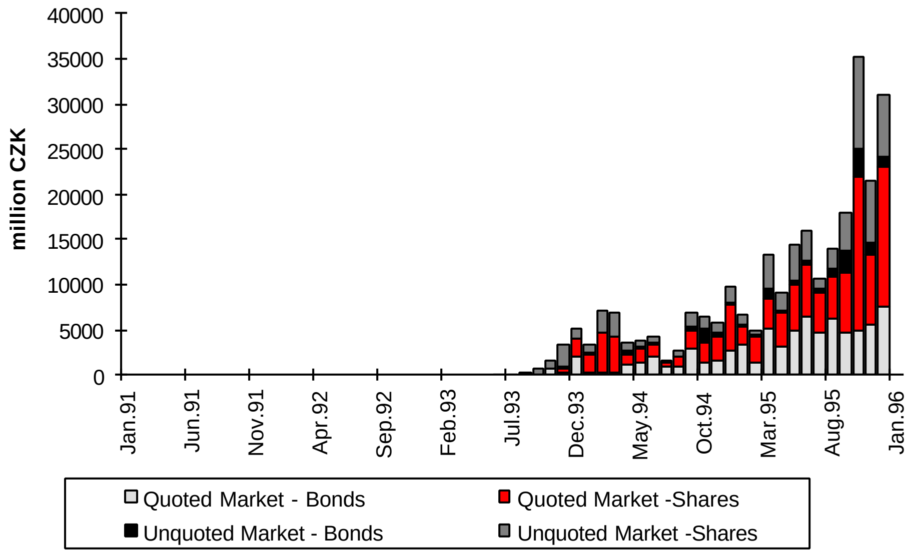
In comparison to the equity market, the bond market unaffected by voucher privatization remained thin. The share of bonds in the total trading on the PSE increased from 5% in 1993 to 30% in 1995 (See Figure 7). The initial very small stock of state bonds that formed the quoted bond market was not increased at a larger rate due to the government’s strategy of a balanced budget. Only from 1994, several new issues of corporate bonds (the City of Prague, Czech Energetical Complex and Komercni Banka) have been quoted on the PSE. The under-developed market with state bonds made allocation decisions more difficult since there was no information on the market price of a risk-free long-term asset available

[22] However, less than 10% of companies traded on the PSE offered dividends in 1994. Hence the general fall in prices could be understood as a natural consequence of low dividends and high uncertainty involved.

to portfolio makers and potential corporate bond issuers. As a result of uncertainties, the unquoted bond market did not develop, and in general, companies did not issue new bonds in order to raise funds.

Figure 7

The Relative Importance of the Bond and Equity Markets



Data Source: Annual Reports (1991-1995), CNB.

Notes: The make up of securities traded on the PSE demonstrates the relative importance of market with voucher shares and bonds in the first years of transition in the Czech Republic. In 1993 when the capital market emerged the voucher shares were the major traded asset. In 1994, the PSE started to quote some of voucher shares that were considered most liquid, profitable and of low risk. Only in 1995 did bonds start to be traded on a larger scale. However, the unquoted bond market which could serve as a means of raising finances for companies lacking access to bank credits did not develop.

As was said, the structure of trading on the PSE had only limited information content. For this reason, the ratios of the stock of four considered categories of financial assets (money, voucher shares, government bonds and corporate bonds) and the gross domestic product might better indicate the depth of the respective financial markets (Table 4).[23]

Table 4

The Depth of the Financial Markets in the Czech Republic (1995)

Financial Asset	The Stock of Asset as % of GDP
Money (M2)	85.56%
Equities *	39.19%
Government bonds	6.93%
Corporate bonds	2.00%

Data Source: CNB, NPF, Ministry of Finance.
Note: * The majority of equities belongs to a category of voucher shares.

According to this indicator, in 1995 the money market was relatively deep (one of the deepest among the transitional markets). The market capitalization was 48%. Voucher shares remained the leading asset of the capital market. There were several consequences of a very thin bond market. As already stated, the sterilized intervention of the central bank was difficult, and the CNB created a market with short-term bills because of that.[24] The anchor for issues of corporate bonds was missing on the capital market.

In addition, the supply of quoted bonds was considered to be below the level that domestic institutions could absorb, especially, when pension and insurance institutions were funded. Given the rates of 2% above inflation, the Czech capital

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23 The volume of trading on the PSE as a share of GDP stood at 1% for shares and 0.1% for bonds in 1993, at 4% for shares and 2% for bonds in 1994, and at 12% for shares and 10% for bonds in 1995.

24 Due to inefficiencies of emerging markets, the success of monetary and exchange-rate policies relies relatively more on the coordination between the central bank and the government during transition. It is interesting to mention that although the Czech government did not support the central bank by developing the bond market, some atypical actions were employed as temporary fiscal policy tools. Specifically, when the sterilization of capital inflow proved to be difficult, the NPF withdrew its funds from commercial banks to the CNB.

market absorbed the primary issues at prices above their nominal values implying an excess demand for low-risky securities. Consequently, newly funded pension institutions ended up with a rather atypical portfolio of assets relying on time deposits in commercial banks instead of bonds. Hence, together with voucher privatization, even pension insurance became a concern of the universal commercial banks.

IV. The Emerged Financial Markets: Roles and Policy Recommendations

There is general agreement on the meaning of the concept of well-functioning financial markets.[25] They ensure mobilization of domestic savings, efficient allocation of funds, enforcement of budgetary constraint, properly defined incentives for managers, and efficient monitoring of enterprises. Since their efficiency promotes investment, they are an important factor of economic growth. This section tries to analyze how good the emerged financial markets in the Czech Republic were in fulfilling those roles, and to summarize some policy recommendations on how their performance could be improved.

As was said, there was immense expansion in the variety as well as the number of financial institutions operating on the Czech financial markets. However, neither this boom attracted more savings nor promoted competition for deposits. The saving ratio reported in the balance of income and expenditures of households

[25] See for example Stiglitz (1990) for the summary.

was nearly constant and relatively low over the period. It stood at about 10%. The spread between average interest rates on credits and deposits remained high. It was 6.3% in 1992, 7.1% in 1993, 5.75% in 1994 and 5.82% in 1995. There were two main reasons for low mobilization of domestic savings: (i) due to a strategy of fast financial liberalization, financial institutions had a relatively easy access to cheaper foreign funds, and (ii) there was no alternative well-developed market to which households could channel their savings. Hence the banks did not need to compete for domestic deposits. Since the Czech housing market has been distorted, and the law on mortgages has been passed, the relatively low domestic savings may cause problems in the future. According to experience of developing countries, if the housing scheme is introduced, households tend to switch their savings into the housing program, they stop lending to enterprises, and investment is depressed. Moreover, the banking sector that mobilizes savings help reducing demand pressures on inflation.

As far as the role of financial markets in the promotion of investment is concerned, there was no immediate impact of their development observed during the first five years of transition. The investment grew significantly. It stood at 30.2% of GDP in 1992, 28.25% in 1993, 32.12% in 1994 and 35.73% in 1995. However, according to the Czech Statistical Office, the most significant part of it was financed from internal sources. In 1993, 73% of investment was financed internally, 17% from bank credits, 5% from subsidies, 2% from abroad and 3% from other sources. It is worth noting that the most important external source of investment funds were credits by domestically registered banks since the boom of equity market did not bring any funds to enterprises (the shares were either transferred from the state to the private sector via vouchers or sold to foreign investors through the NPF that used the revenues for overcoming the transitional problems such as old bank debts). Table 5 gives us an interesting result.

Table 5

Investment Credits and Fixed Investment in the CR

(in billion CZK)

Investment Credits to Enterprises	1991	1992	1993	1994	1995
Short-Term Credits	1,6	9,0	16,8	9,7	11,6
Medium-Term Credits	35,8	56,2	71,9	67,0	68,7
Long-Term Credits	71,7	63,0	65,3	65,1	69,7
Total Investment Credits (TIC)	109,1	128,2	154,0	141,8	150,0
Change in TIC	-	19,1	25,8	-12,2	8,2
Fixed Investment *	-	122,6	113,2	132,8	154,2

Data Source: CNB, Czech Statistical Office.
Note: *Investment at current prices.

In 1992, a change in total investment credits stood at 15.5% of fixed investment. In 1995, this share fell to 5.3%. This implies that the most important market with investment funds was not expanding. Moreover, the non-decreasing share of bad loans in the total amount of granted credits [26] did not signal that the banking sector improved the efficiency of fund allocation. In summary, the banking sector did not expand its activities in the redistribution of resources from the traditional net lender (households) to the net borrower (enterprises) significantly (See Figure 8).

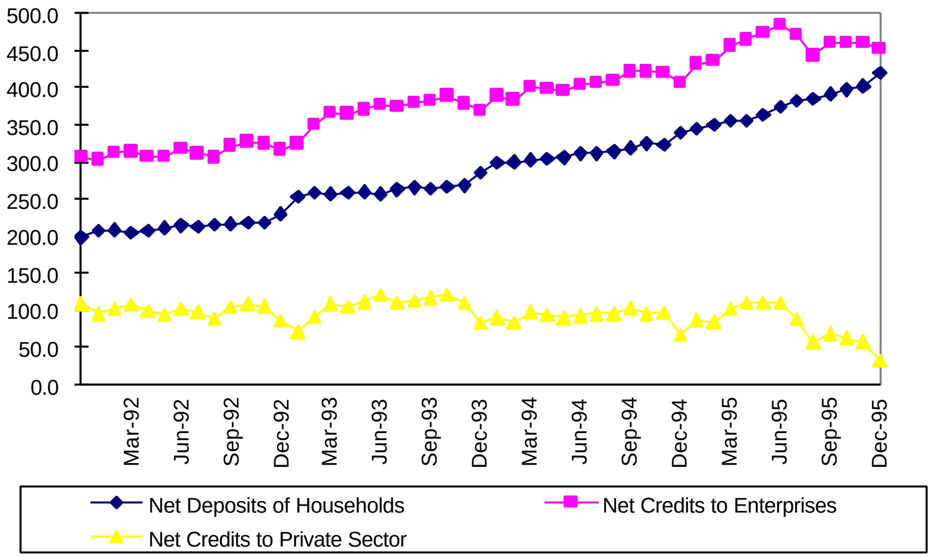
There was a relatively stable increase in net deposits of households (the growth rate was three times lower in real terms). However, the amount of net credits to the whole private sector fell. Since the banking sector has partially switched to other forms of financing enterprises such as investing into corporate bonds, it is likely that the intermediary role of banks remained rather stable. The switch from credits to other forms of financing might appear due to tight monetary policy of the

[26] The shares are reported on pp. 9: 19% in 1992, 24% in 1993, 25 % in 1994 and 26% in 1995.

CNB in the second half of 1995, and was allowed by a starting expansion of the corporate bond market.

Figure 8

Redistribution of Funds from Net Lender to Net Borrower through Banks (billion CZK)



Data Source: CNB.

Note: The indicators are defined as follows. Net deposits of households = checkable deposits of households plus time deposits of households minus credits to households. Net credits to enterprises = credits to enterprises minus checkable deposits minus time deposits of enterprises. Net credits to private sector = net credits to enterprises minus net deposits of households.

In this paper, the long-term credit market was identified as the main determinant of the growth of externally financed investment. Bernanke, Blinder (1988) argue that there is a strong link between availability of credits and economic growth. In this context, the main problem of the Czech capital markets seem to be a shortening of the time horizon. According to the CNB, the share of long-term credits in total credits fell during the transition. It stood at 42% in 1991, 36% in 1992, 30% in 1993, 29% in 1994 and 26% in 1995. Interestingly, Fischer, Reisen (1992) relate the problem of the shortening of the time horizon to the under-developed bond market [27] and to a lack of information. The Czech experience supports this general analysis. In order to promote the long-term activities of banks, the state authorities can assist in developing rating agencies. The weak bond market should be strengthened by swapping the transitional government debt from its atypical forms into long-term bonds.[28] This would improve the portfolio quality of all leading players - commercial banks, pension funds and the central bank, and enlarge their horizon when extending investment credits. The other alternative could be to expand the domestic market with foreign government bonds through which banks could diversify their portfolio more broadly.

The Czech experience also suggests that during the transition, financial institutions promoted the role of activities other than the allocation of funds. They were more involved in short-term operations (and speculations), and they accomplished the most important role of the secondary markets - forming the new ownership structure during the transition. Specifically, the equity market facilitated an enormous process - the concentration of ownership. While during the official two

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27 According to their study, the absence of the well-developed market with government bonds makes allocation decisions more difficult since there is no market price of a risk-free long-term asset available. Hence domestic markets tend to be very sensitive to foreign demand because of a lack of domestic long-term financial sources. Moreover, there are other serious consequences. Banks have to absorb all shocks, the open-market operations are not effective, and other tools are used such as changes in minimum reserve requirements that can cause repression of domestic banking sector.

28 This argument was developed by the participants of the workshop on macro-modeling organized by the Ministry of Finance in April 1996. During transition there are some government debts in the form of credits or the state participation in the other institutions´ balance sheets. These liabilities can be transformed into the state debt. Although it may seen to be a paradox that government should try to enlarge its stock of debts, this swap would help financial institutions to diversify their portfolio as well as clarify the position of various institutions linked to the government. For example, some assets of the state bank (Konzolidacni Banka) that served as “a hospital” for banks are in fact liabilities of the government, and could be easily transformed into the state bonds.

waves of voucher privatization, state enterprises were transferred into the hands of 8 million small shareholders, during the unofficial "third wave of voucher privatization" IPFs started forming small groups of inside owners. For example, IPFs started colluding when voting on shareholders meetings.[29] According to the Center for Securities, approximately one half of the small shareholders cashed their shares before 1995.

The appearance of the third wave indicated that the emerged financial markets started fulfilling their roles in the screening and monitoring process. Stiglitz (1990) explains the advantages of strong inside groups of investors in enterprises. In comparison to the market model with widespread ownership, due to returns to scale as well as the long-lasting relationship between clients and banks - inside owners, it is relatively easier for creditors to screen investment projects (to collect information in order to decide among projects), to monitor them (to ensure that funds are used according to the project) and to initiate bankruptcy or replace management if the project is not followed or loans are not repaid. Hence if the third wave is successful, the problems of information asymmetry as well as the free rider problem will be eliminated to a large extent. For example, Capek (1995) reports that large enterprises previously owned by the state received cheaper credits. This could be explained as a consequence of the circle of ownership formed during voucher privatization which reduced information asymmetry between large banks and their clients.[30]

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[29] Although there was a regulation on a single IPF to hold less than 20% of shares in a single company (and a single company could not account for more than 20% of IPF's assets), the funds colluded when voting on shareholders meetings. Hence in fact, they exchange ownership rights tacitly.

[30] The circle ownership was not the only link between banks, IPFs and enterprises. The other very important factor that lowered information asymmetry was a credit-deposit link among banks and enterprises. According to unofficial discussions with bank managers, banks invested into equities of their old clients (both debtors as well as depositors). Also, they invested into equities of good customers of other banks, and initiated the establishing of such a link during shareholders meetings. The main aim was to attract the large deposits of good customers, and

With the banks (and their IPFs), the privatized enterprises would be on a short leash. Hence the incentive structure of the managers would be improved after banks develop the know-how necessary for monitoring projects. Since the Czech financial markets seem to be converging towards the banking model, the authorities can improve their performance by overcoming the well-known problems of this model.[31] For example, Stiglitz (1990) shows that managers of enterprises expect credits to be extended since the enforcement of contracts is difficult and costly. It is a very appropriate assumption for a transitional economy in which even the banks under the state control were reluctant to initiate the bankruptcy processes of large debtors. Corbett, Mayer (1991) and Fischer, Reisen (1992) follow a similar reasoning. They argue that government policies towards financial markets can improve their functioning significantly. The main function of the secondary markets is seen in rent seeking activities with low net social value since the information provided by them cannot be used for long-term investment. Hence the freeing up of those markets is not necessarily welfare improving. Studies conclude that there is a need for very strong securities and fraud laws, laws on bankruptcies and collaterals. They should be introduced in the early stage of reform. The studies also expose the second disadvantage of the banking model - it encourages collusion. Strong anti-trust agencies are needed to prevent market distortions.[32]

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to sell them own services. The credit-deposit link in the form of trade credits related also a lot of banks' customers among themselves. One of the reasons of the emergence of trade credits is that information asymmetry is lower between two trading partners than between the bank and a new customer.

31 In the surveyed literature, there is agreement that if the control problem is not solved by financial markets in the banking model, there are two alternatives (i) the total loss of the control due to sales of enterprises abroad and (ii) return of control to the state hands. Non of them ensures economic growth.

32 This disadvantage is common for both market and banking model. In the market model, hostile takeovers take place. Hence the anti-trust agency should work in this model as well in order to prevent monopolies.

According to Caprio (1995), high capital adequacy and strong bank regulation are necessary since banks own newly introduced, risky equities. OECD regulations seem to be too weak for banks during the transition due to relatively higher risk as well as a lack of experience of supervisors. Hence the targeted regulations should not be accepted in the early stages of transition. Caprio (1995) also argues that since banking supervision is weak in the early stages of transition, some incentive structure should be developed for banks to follow the regulations. For example, banks with good results can borrow at a discount window at a more favorable interest rate or can have the privilege to facilitate official loans for the government or other state authorities. Weak supervision should be strengthened by the presence of representatives of the NPF at banks' boards in order to reduce information asymmetry that the supervising authority faces.

This brings us to a very important problem the Czech experience has revealed. It is a question of a strategy in privatizing the large banks in which the NPF was still a majority shareholder after five years of transition. Caprio (1995) identifies a privatization strategy as the determination of the future performance of all sectors. The importance of the problem is stressed by the likely convergence towards the banking model. Two main approaches can be distinguished. First, the fast privatization of the banks would follow the strategy chosen by the Czech government for enterprises. It is argued that the control problem would be solved (the government is "a poor manager") by determining private owners. However, since there is a lack of domestic savings, the only institutions that could bid for bank shares would be foreign investors or banks themselves when borrowing abroad. Consequently, there is a danger of the loss of a control as described in Stiglitz (1990). Second, a different strategy of privatization is chosen for banks. The privatization of the controlling block of shares is postponed, and there is some targeted portion of shares that would remain in the state hands at least in the medium run.

The Czech experience seems to confirm some arguments given in Caprio (1995). There are several advantages in the second approach: (i) Credibility of the state banks is higher than that of newly established small banks, the “visible” state ownership is a form of guarantee and prevents runs, (ii) State presence in large commercial banks affects foreign investors positively. These banks are easily able to raise funds abroad at low cost, and receive better ratings similar to that of the country. In the case of rapid privatization, it is difficult to predict how international capital flows would react. There is a danger of outflows and a subsequent credit crunch, (iii) It is difficult for banks to behave in a safe manner during transition since the amount as well as quality of information on financial assets (credits including) increases only slowly. For example, some prices were still not liberalized in 1995. The information content provided by trading on the PSE was lowered by the large volumes of unofficial trading. The financial market with long-term funds did not signal well after five years of transition. Hence the problem of screening was extremely difficult for banks to overcome. Moreover, some information was available to the government (e.g. prize liberalization scheme) rather than to private banks (this additional temporary information asymmetry might be reduced by the presence of the state in the banking), (iv) It takes time for banking supervisors to learn their role. Hence the role of the NPF in reducing the information asymmetry is important during transition, (v) There are other important financial institutions dependent on the banking sector’s performance. Specifically, a significant portion of pension funds assets are time deposits with commercial banks. In the case of a capital outflow, pension funds could request significant subsidies from the government.

In summary, there might be useful lessons derived for other transitional countries from the Czech experience. Specifically, the costly supervision of the large number of banks including the rescue operations of some of them was not outweighed by the benefits from more efficient banking sector’s activities. Hence the strategy of slower financial liberalization in the sense of providing fewer licenses at the beginning of transition might be considered as an alternative way of financial reform. The privatization of large banks requires a very careful design since the high speed of the process does not ensure significant improvement in the efficiency of financial markets.

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