

## IV. MICROECONOMY

### IV.1 Division of Gross Domestic Product

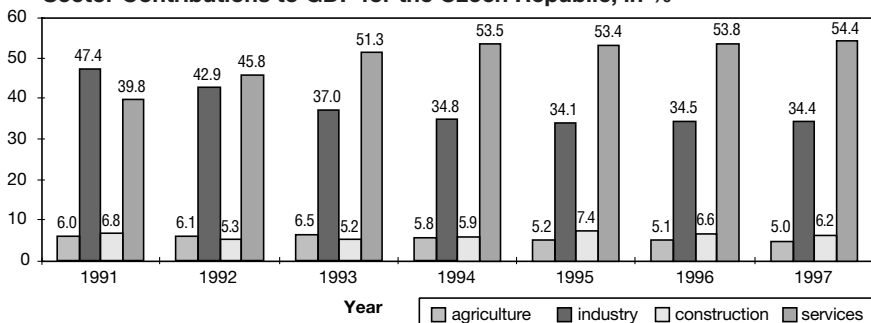
Since the beginning of the transformation the service sector has been experiencing the largest boom. Services currently make up more than half of GDP. The service sector has increased its share of GDP by more than 30% since 1991. Agriculture has declined slightly, responding to weaknesses in the government's agricultural policy. At first sight, construction is not exactly performing well. However, its steady share of GDP following its original decline and eventual increase in the growth of output suggests this sector has yet unexplored possibilities. The flooding may help boost output in the construction section as well. Industry paid the heaviest toll due to structural changes and the break-up of long-lasting manufacturing and trade patterns. Its continuously declining share of GDP should not leave us in sweet macroeconomic dreams because not only theoretical macroeconomics has its foundations in microeconomics.

#### Top Ten Czech Companies:

1. Škoda, Automobilová a.s., Mladá Boleslav
2. Microsoft, s.r.o., Prague
3. Chemapol Group, Prague
4. Československá obchodní banka, a.s., Prague
5. Plzeňský Prazdroj, a.s., Plzeň
6. BVV, a.s., Brno
7. Čokoládovny, a.s., Prague
8. Škoda, a.s., Plzeň
9. Investiční a poštovní banka, a.s., Prague
10. SPT Telecom, a.s., Prague

Source: Ranking of Pan-European Association for Culture, Education, and Research and Technological Cooperation, Comenius, based on the votes of 1,500 respondents. *Hospodářské noviny*, November 28, 1997.

Sector Contributions to GDP for the Czech Republic, in %

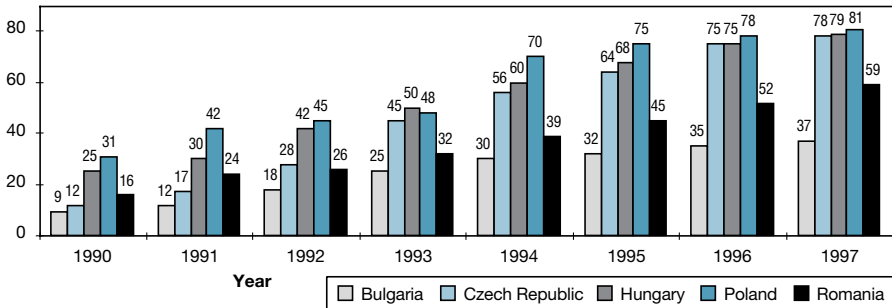


**Sector Contributions to GDP for the Czech Republic, in %**

	Agriculture	Industry	Construction	Services
1991	6.0	47.4	6.8	39.8
1992	6.1	42.9	5.3	45.8
1993	6.5	37.0	5.2	51.3
1994	5.8	34.8	5.9	53.5
1995	5.2	34.1	7.4	53.4
1996	5.1	34.5	6.6	53.8
1997	5.0	34.4	6.2	54.4

Source: CNB, Economic Survey of Europe, 1997 CERGE estimates

**Private Sector Contribution to GDP, in %**



**Private Sector Contributions to GDP, in %**

	Bulgaria	Czech Republic	Hungary	Poland	Romania
1990	9	12	25	31	16
1991	12	17	30	42	24
1992	18	28	42	45	26
1993	25	45	50	48	32
1994	30	56	60	70	39
1995	32	64	68	75	45
1996	35	75	75	78	52
1997	37	78	79	81	59

Source: IMF, Economic Survey of Europe, 1997 CERGE estimates

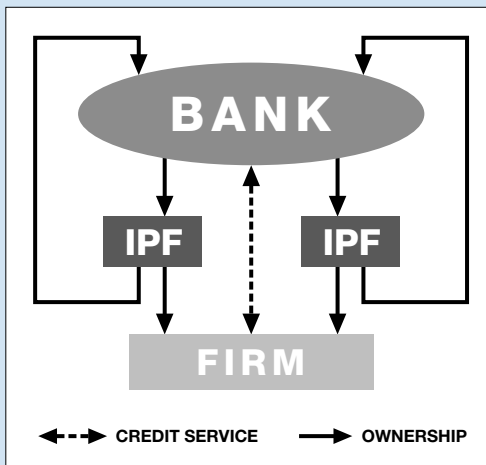
**Incestuous Ownership Structure**

The major problem with the current structure of ownership is the so-called incestuous or circular structure depicted in the figure below. This feature is quite common and can be observed other than just in banks and investment funds; however, incestuous ownership is most highly criticized in the banking sector.

There is a legal limit on the percentage of a firm that can be owned by a single IPF; however, there is no constraint ruling out a firm's ownership by several IPFs with one major owner. Moreover, the share register is prohibited from providing information on any ownership which constitutes less than 5% of the total company. Since most banks have created more than five IPFs, it is no problem for them to control a firm by a simple majority and not to reveal this fact to the general public. For example, in the first wave of voucher privatization, Agrobanka (the largest private bank) founded 13 funds; however the highest market share belonged to Česká Spořitelna (15.5%), První Investiční (11.6%) and Harvard Funds (9.2%). In the second wave, Harvard Funds created 23 IPFs and they ranked only third in total market share (7.5%), leaving the top place for A-Invest with 2 funds and a market share of 7.9%, and second place for the Expandia group with a 7.8% market share.

The firm could be forced, and there is evidence that it really happens in practice, to take a loan from a certain bank at a high interest rate even if it is possible for the enterprise to borrow at a lower rate from a competing bank or abroad.

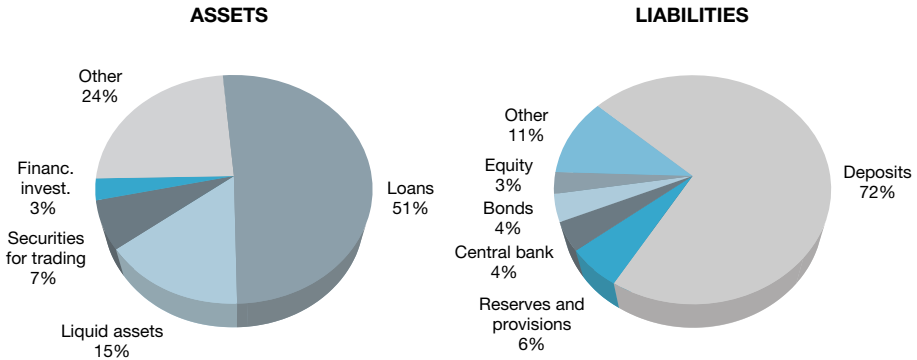
**Example of Cyclical Ownership**



The bank is either controlled by the state which does not exercise its ownership rights, leaving space for managers and other owners – IPFs –, or it is privately owned and there is room left for transfers (tunneling) from IPFs to third parties. These outsiders, which would not have got more than their fair share of profit under normal conditions, are benefiting on account of the minor shareholders of the bank, the IPFs and firms.

## IV.2 Bank Privatization

### Assets and Liabilities of the Czech Banking Sector as of June 1997



Major Czech banks (KB, ČS, IPB, ČSOB) are still controlled by the state by means of the NPF, the Ministry of Finance and the Czech National Bank. In the fall of 1997, the government decided to privatize the state share of these banks mainly by direct sale to a strategic partner. So far, a partner was found

and agreed upon only for IPB. By now the Nomura group already owns about 12% of IPB and it controls, through agreements with third parties, an additional significant share (about 49% in total). If the whole state share is given to Nomura, they would control about 80% of the outstanding shares.

### Shares to Privatize

Bank	State Share (Total)*	Slovak Share
Komerční banka (KB)	48.74	12.80
Česká spořitelna (ČS)	45.00	0
Investiční a poštovní banka (IPB)	31.49	0
Československá obchodní banka (ČSOB)	89.82	24.13

\* Including the Slovak share

Source: Governmental proposal

### IV.3 Capital Markets

#### The Prague Stock Exchange

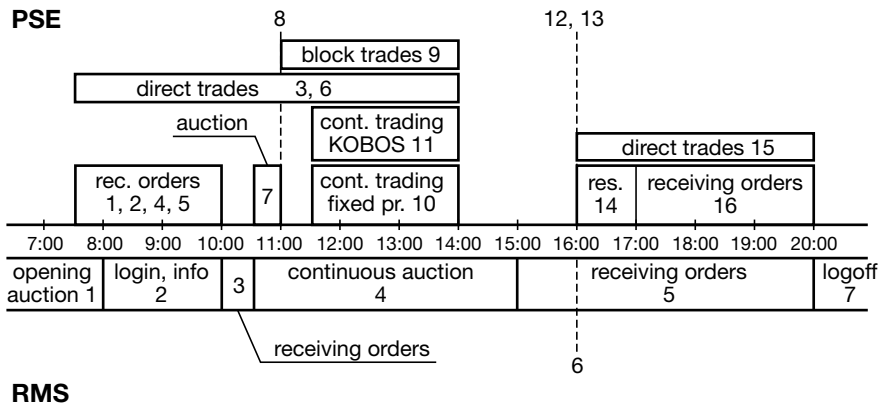
The Prague Stock Exchange (PSE), an electronic-type exchange, was re-opened on April 6, 1993 after a 55 year closure. In the beginning, trading on the PSE was held one day per week and only 7 securities were traded, most of which were government or corporate bonds. By July 13, 1993, after the introduction of stocks from the first wave of voucher privatization, the number of securities had increased to 961. On November 4, 1993, trading was increased to two days per week, and then on March 14, 1994, to three days per week. Since September 19, 1994, trading has occurred five days a week. Stocks from the second wave of voucher privatization have been traded since March 1, 1995, when the number of securities reached 1,699. By September 1997, 1303 companies had been de-listed from the PSE in the following waves: March 1997 – 100 stocks, April 1997 – 391 stocks, June 1997 – 509 stocks, and September – 303 stocks.

#### RM-System

##### (electronic over-the-counter exchange)

In May 1993, the RMS (Registrační Místa System, i.e., “Registration Places System”), a separate over-the-counter exchange, opened. The RMS was essentially an extension of the infrastructure of the registration-offices which supported voucher privatization. The license to organize a securities market was issued to the RM-System on March 19, 1993, and actual trading began on May 24, 1993. Unlike the PSE, it is not based on the membership principle. Any individual can directly access the market organized by the RMS through one of more than one hundred entry places which allow on-line access to the central RMS work place. The network of the RM-System share shops, which are located throughout the Czech Republic, totaled 155 in 1996 (208 in 1995, 242 in 1994, 333 in 1993).

The Time Table of a Trading Day on the PSE and RMS



## Trading Volume on Registered Capital Markets, in billions of USD

Trading volume*	1993**	1994	1995	1996	1997
PSE	0.3	2.16	7.36	14.47	20.80
RMS	0.1	0.15	1.03	3.68	4.86

\* Average exchange rates

\*\* April-December (PSE), July-December (RMS)

PSE	From	Till	
1	7:30	9:30	Receiving of on-line external orders (orders requested in by members of the Exchange through terminals in their remote offices)
2	7:30	10:00	Receiving of on-line internal orders
3	7:30	14:00	Receiving of on-line orders for direct trade
4	8:00	9:30	Receiving of external orders from the floor
5	8:00	10:00	Receiving of internal orders from the floor
6	8:00	14:00	Receiving of orders for direct trade from the floor
7	10:30	11:00	<b>Auction</b> of received orders
8		11:00	Announcement of mid-day prices
9	11:00	14:00	Block trading of securities
10	11:30	14:00	<b>Continuous trading at a fixed price</b>
11	11:30	14:00	<b>Continuous trading at a variable price (KOBOS)</b>
12		16:00	Announcement of the final prices of traded securities
13		16:00	Announcement of the list of securities for next-day trading
14	16:00	17:00	Delivery of the final daily results of trading
15	16:00	20:00	Receiving of on-line orders for direct trade
16	17:00	20:00	Receiving of on-line orders for auction

RMS	From	Till	
1	0:00	8:00	<b>Opening auction</b> of orders from previous trading day
2	8:00	10:00	Logging-in, inspection of demand and supply patterns after the opening auction
3	10:00	10:30	Receiving of orders for trade
4	10:30	15:00	<b>Continuous auction:</b> receiving of orders for trade, validation and matching of orders, implementation of trade
5	15:00	20:00	Receiving of orders for the next trading day
6		16:00	Announcement of the admissible price spreads for the next trading day
7	20:00	22:00	Logging-off, transfer of the data on trades made by an investor during a given day

## Volume of Trade by Type of Security and by Market in the 2nd Quarter of 1997

		PSE	RMS	SCP (off-market)	Total
Shares	CZK [bil.]	54.4	16.6	45.5	116.5
	% of volume	46.7	14.2	39.1	100.0
	Pieces [mil.]	63.0	33.5	79.3	175.8
Trust units	CZK [bil.]	0.6	0.7	2.0	3.3
	% of volume	19.3	21.3	59.5	100.0
	Pieces [mil.]	5.3	14.6	11.9	31.8
Bonds	CZK [bil.]	12.9	1.5	100.7	115.1
	% of volume	11.2	1.3	87.5	100.0
	Pieces [mil.]	12.6	15.8	10.4	38.8
Total	CZK [bil.]	67.9	18.8	148.2	234.9
	% of volume	28.9	8.0	63.1	100.0
	Pieces [mil.]	80.9	63.9	101.6	246.4

***(Non)Transparency of the Czech Capital Market***

*Voucher privatization in the Czech Republic resulted in the highest ratio of stock market capitalization to GDP in the region. On the other hand, the Czech capital market is one of the worst in the region if judged by its transparency, settlement, minority-shareholder protection rights, and legal framework. The fact that shares have been traded simultaneously on two parallel markets and very heavily off market (70-90%) has been one of the most significant barriers to market transparency. Agents operating in this complex environment see many risks that would not exist in standard capital markets. The price of a single security could be (and in the beginning, indeed, was) very different on different exchanges (e.g., the Prague Stock Exchange (PSE) versus the RMS, an over-the-counter-system), thus offering possible arbitrage opportunities.*

*The high number of securities, their very different frequencies and volumes of trade, market capitalizations, varying information disclosures, and the non-transparency of the market in general resulted in the first restructuring of the PSE. The new segmentation of the PSE started on September 1, 1995, when the PSE market was split into three main tiers. Listing requirements for each trading group are summarized in the following table.*

## Listing Requirements for PSE

Trading Group Disclosure	Requirements		Segment notation	
	Liquidity*	Capital**		
Tier one	Quarterly	> 300,000	Public offer > 200 mil. Registered capital > 500 mil.	A1, A2
Tier two	Semi-annually	N/A	Public offer > 100 mil. Registered capital > 250 mil.	B2
Tier three	Annually	N/A	N/A	C2, C3

All figures are in CZK

\* Average volume per session (last five months)

\*\* Capital requirements vary for firms (public offer) and for investment trusts and units (registered capital)

## Characteristics of the Particular Trading Groups

Date	A1	A2	B2	C2	C3	On RMS only**
<b>April 1995</b>						
# of stocks (04/03/95)	7	36	48	568	1050	256
Avg. daily volume of trade on PSE *	15831	11529	4002	28032	2333	-
Avg. daily volume of trade on RMS *	1991	2384	789	8060	715	1146
Ratio of volume of trade PSE/RMS	7.95	4.84	5.07	3.48	3.26	-
% of market cap. on PSE	39.52	23.53	9.08	22.98	4.89	-
% of market cap. on RMS	38.20	22.43	8.57	22.04	5.47	3.29
<b>February 97</b>						
# of stocks (02/18/97)	8	37	52	564	1030	399
Avg. daily volume of trade on PSE *	61144	37267	17501	49554	1392	-
Avg. daily volume of trade on RMS *	9415	11176	4468	17947	1003	4264
Ratio of volume of trade PSE/RMS	6.49	3.33	3.92	2.76	1.39	-
% of market cap. on PSE	44.57	29.25	10.46	13.68	2.04	-
% of market cap. on RMS	43.30	28.31	10.11	13.27	2.09	2.92

\* All figures are in thousands of CZK

\*\* A group of stocks not traded at the PSE

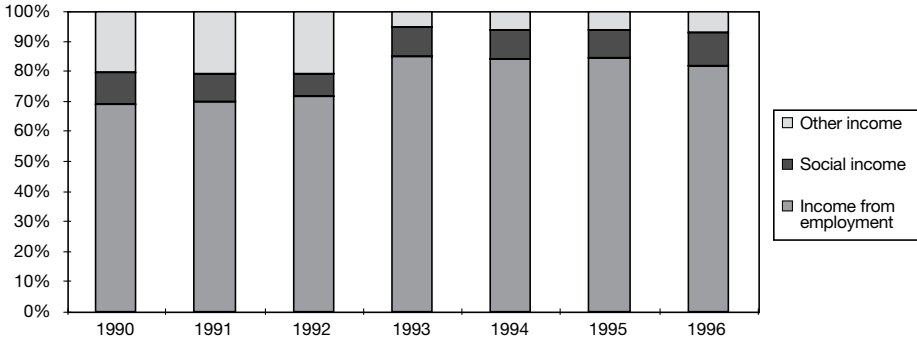


*In order to make the market more transparent, the PSE underwent major reorganization in 1997. The following criteria were applied: volume of trades, market capitalization, and number of days traded per year. By September 1997, 1303 companies had been de-listed from the PSE in the following waves: March 1997 – 100 stocks, April 1997 – 391 stocks, June 1997 – 509 stocks, and September – 303 stocks. Moreover, a law on the Security Exchange Commission has recently been passed by the parliament.*

*Despite the general sentiment that “dealing in Prague is a loser’s guide to investment,” it has been shown in several studies (see CERGE-EI Working Paper series) that the first tier of the PSE **per se** exhibits some degree of market efficiency. It appears that the Czech market responds quickly to changes in underlying fundamentals (which are likely to be highly correlated with those in Germany, the largest external trading partner of all four countries under study), while movements in the Hungarian and Polish markets may be more heavily influenced by foreign capital, which responds to changes in local fundamentals only with a significant lag. The ironic conclusion may be that the poor reputation of the Czech equity market may have discouraged heavy participation by uninformed investors, resulting in a market that better reflects the underlying fundamentals of the local economy than is the case of the other, currently more highly-regarded, markets in the region.*

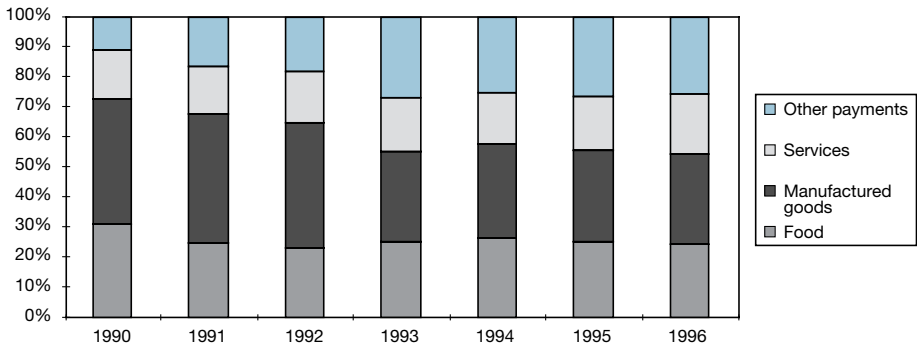
## IV.4 Household Economy

### Household Income



Source: CSO

### Household Expenditures



Source: CSO

The pattern of household expenditures reflects the impact of price liberalization which started in 1991. Since the price shock in 1991, all other changes have occurred gradually, except for the introduction of the VAT in 1993. Nevertheless, electricity and housing are the next targets. According to the government plan, these prices should be liberalized in 1998. Subsidies for heating will be abolished as of January 1998.

The effects of continuing price liberalization are expected to be positive. Although core inflation will rise in subsequent years, labor mobility and the functioning of the housing market might improve.

Since the number of self-employed people has declined dramatically, household income is generated mainly by income from employment.