IV. MICROECONOMY

IV.1 Current Privatization Status

Since the end of voucher privatization in 1994, no significant progress has been made in the transfer of state property into private hands. However, several interesting issues have arisen.

First of all, so-called spontaneous privatization emerged during 1998. Financially strong groups have realized that after voucher privatization, state-controlled companies exist with dispersed ownership in which the state's stake is below 50%. These groups started massive yet silent buy-outs from investment funds and small private shareholders. As a result, they were able to collect a higher portion of stakes than was controlled by governmental agencies and thereby override the state's influence. Such takeovers were successful in the case of several firms operating in the coal mining industry, and there were attempts to take over other firms. A similar situation first occurred in 1997 when the "Nomura Group" acquired a larger stake than the government in IPB. Nomura controlled more than 34% and obtained veto power in the bank. Therefore, the government was left with Nomura as the only potential buyer.

Secondly, government officials took offensive action in response to the first few hostile takeovers. The NPF has authorized cooperating brokerage houses to buy the shares of the remaining endangered companies, namely of utility distributors, to increase the state's stake to over 50% in order to maintain control. This might be viewed as a step backward or as corrective action to undo the wrongs of the previous privatization method.

Thirdly, as a reaction to the recession, the Czech government publicly announced its intention to "revitalize" large industrial holding companies. The methods of the pro-

Czech Top 10 According to 1997 Results

	Sales	bil. CZK	Net Profit	bil. CZK	Loss	bil. CZK
1	Škoda auto, a.s.	90	SPT Telecom, a.s.	4.3	Škoda, a.s.	1.8
2	Unipetrol, a.s.	66	ČEZ, a.s.	3.4	Synthesia, a.s.	1.3
3	ČEZ, a.s.	55	Tabák, a.s.	2.4	ZPS, a.s.	1.1
4	Česká rafinérská, a.s.	39	Unipetrol, a.s.	2.1	Spolana, a.s.	0.5
5	SPT Telecom, a.s.	34	Česká rafinérská, a.s.	2.1	Zetor, a.s.	0.4
6	Nová huť, a.s.	30	Severočeské doly, a.s.	1.2	Euronova, a.s.	0.3
7	OKD, a.s	24	Škoda auto, a.s.	1.1	Chemické závody, a.s.	0.3
8	Škoda, a.s.	24	Čokoládovny Praha, a.s.	0.8	Fatra, a.s.	0.3
9	Čepro, a.s.	19	Elektrárny Opatovice, a.s.	0.7	Seliko, a.s.	0.2
10	Chemopetrol, a.s.	19	Sazka, a.s.	0.7	Daewoo Avia, a.s.	0.2

Source: Czech Top 100, ING Barings

Data for fiscal year 1997, most of them audited. Škoda auto, a. s. is not affiliated with Škoda, a. s.

gram remain unclear; nevertheless, as presented they would probably involve a combination of several instruments like debt for equity swaps (using non-performing loans), interest rate subsidies for selected firms, export guarantees, buyouts of certain debts and write-offs, and other standard and non-standard methods of industrial policy.

Finally, there has been a shift in the governmental privatization strategy towards favoring public tenders and direct sales to strategic investors, usually to strong multinational groups. The motivation is to repeat the successful deals of the past, modeled on such ventures as Škoda auto – Volkswagen, Rakona – Procter & Gamble, and Barum – Continental.

The privatization of strategic companies is still lagging behind. For gas and energy companies the first phase of privatization has been completed with the selection of advisors. The preparation of the selected 16 distributional companies has taken almost four years. With the exception of six joint-stock companies (ČEZ, Škoda Praha, Nová huť, Vítkovice, Letka and MERO), the privatization of the remaining 40 non-financial companies where the state still exercises the ownership rights is envisaged.

IV.2 Privatization and Enterprise Restructuring

Economic reform and privatization of companies have led to a great differentiation in the performance of individual companies. These differences have been increasing over time.

As was the case in 1997, the biggest improvements in performance may be observed in the foreign-controlled sector. This sector, representing about one fifth of total industrial sales, grew by more than 3 % in the first half of 1998 and led the industry's growth. Foreign investors have been permanently enhancing productivity which is currently 41% above the average level in the remaining industrial sectors. Employment in the foreign-controlled sec-

Indicators by Sectors According to the System of National Accounts

Indicator	Av. Number of firms	Sales			Number of employees		
		Bil. CZK	%	Index	Thousands	%	Index
Industrial firms with more than 20 employees – total	8,404	803.9	100.0	105.2	1,282.7	100.0	96.7
out of which:							
Public sector	266	132.5	16.5	96.3	147.1	11.5	90.0
Private sector	6,019	514.2	64.0	102.2	953.5	74.3	95.8
Sector under foreign control	824	142.8	17.8	130.9	142	11.1	109.6
Households	1,295	14.4	1.8	100.9	40.1	3.1	97.6
Non-state sector*	8,138	671.4	83.5	107.2	1,135.6	88.5	97.4

* Non-state sector is composed of the private sector, the foreign-controlled sector and households (physical persons not included in the register).

Source: CSO

tor has been steadily growing, while in other sectors it has been decreasing. The average monthly sales per employee in current prices rose by 26.9 % (19.4 % in constant prices) in the first half of 1998 compared to 1997, while average monthly wages grew by 11.6 %. The trend in the public sector followed a less healthy pattern: monthly sales per employee increased by 13.4 % (7.0 % in constant prices) and wages grew by 13.7 %. The respective figures in the private sector were 14.0 % (6.6 %) and 11.6 %.

Significantly higher performance in the foreign-controlled sector was also exhibited by financial indicators: in the same period profits increased by 144.4 %, value-added by 52.3 % and returns on equity by 117.5 %. The private sector grew by 14.3 %, 9.8 % and 20.0 % which was quite similar to the public sector whose growth rates equaled 16.8 %, 7.2 % and 15.2 % respectively.

In the first half of 1998 the best results were realized by organizations with 1000 – 1499 employees which achieved a growth in profits before taxation of 77.2 % and an increase in value-added of 35.2 % compared to the first half of 1997. The worst performing large organizations exhibited growing insolvency.

It may be assumed that performance indicators reflect the scope and intensity of restructuring. Clearly, restructuring still has to take place in the majority of Czech companies. This unfavorable situation has resulted from "ficticious privatization" (a remaining significant share of direct or indirect state ownership), privatization to owners who lack a long-term committment, and a still insufficient number of declared and executed bankruptcies. The slow privatization of the banking sector is another contributing factor. These factors, together with poor corporate governance, have hampered restructuring processes in the microsphere and improvements in competitiveness of Czech companies.

Since July 1998, the higher dynamics of the comparable period of the previous year started to slow down the growth indices and resulted in a decrease in industrial production. In October 1998 industrial production fell by 7.4 compared to October 1997. This represents the worst result since 1996, when the Statistical Office started to

The Number of Declared Bankruptcies in Europe

	1992	1993	1994	1995	1996	1997	1st half 1998
Switzerland	9,578	10,513	10,350	9,761	10,192	9,182	4,460
Belgium	5,115	6,154	6,354	7,088	7,539	9,300	3,426
Italy	11,703	14,094	16,506	13,347	15,500	14,300	5,650
UK	61,219	58,982	49,969	41,303	41,107	36,368	19,236
France	57,795	60,481	56,573	54,800	58,576	60,600	26,835
Finland	7,348	6,769	5,502	5,234	4,800	2,743	1,351
CR	1	66	294	727	808	1,251	984
Slovakia		7	33	70	126	329	300
Hungary				1,616	2,000	4,569	3,649
Poland				1,008	683	550	426

Source: Intercredit Prague, Ministry of Justice

Corporate Governance

Czech legislation created a hybrid of corporate governance, combining features of both the unitary (Anglo-saxon) and two-tier (German) model, but there is no concrete conception of how this model should work. The main weaknesses of the existing system are a vague legal framework resulting in an unclear role for the statutory bodies, with a lack of checks and balances found in the original models, and an underdeveloped capital market whose role in providing capital is dominated by the banking sector. Neither the former nor the latter resulted in appropriate pressure on the boards to improve the poor quality of corporate governance in general.

The spirit of the law (if not the explicit letter) suggests that the corporate boards be obliged to act in compliance with the interests of the company. This has not been the case until recently. Empirical evidence gathered from 1995-97 showed executive management teams were clearly dominant in corporate decision-making. Only the 1998 survey of the board members of more than 50 of the top 100 Czech corporations conducted by Pricewaterhouse Coopers showed changes in this attitude. The survey revealed the adoption of two governance approaches: serving the interests of owners (17 % of respondents considered only majority owners, 40% were concerned with all owners), and serving the interests of owners and respecting other stakeholders (37 %). This reflects the fact that the loyalty principle has been incorporated into companies' by-laws, codes of conduct or similar documents.

This survey also revealed a growing preference for the German model (with executives serving on the board of directors and owners represented on the supervisory board), still insufficient strategic involvement of boards, and improvements in the formal corporate governance structures. Despite these improvements, the performance of companies has been decreasing. The hypothesis that good governance leads to good performance was confirmed only indirectly: the lowest performing companies had the lowest quality of corporate governance (measured, for example, by the number of independent directors, the existence of formalized procedures for appointing board members and specialized committees such as audit and remuneration committees, and regularly scheduled and well-planned board meetings).

Dispersed ownership, a result of mass privatization, was not an operating model. The economic rationality of ownership concentration, which started to take place after the completion of voucher privatization, is obvious. On the other hand, this process, which was started in the name of freedom, democracy and a market economy, led to the concentration of power in the least accountable institutions. The consequences are observable in two negative trends: the transfer of wealth to irresponsible owners and the marginalization of individuals and small investors. Thus, ownership concentration has not been a strategy aimed at creating partnerships, facilitating restructuring, or improving competitiveness.

The most recent developments, however, indicate a change for the better: major companies seem to share the view that improved corporate governance is a precondition
– for access to (international) financial markets,
– for enhancing competitiveness, and
– for EU accession.

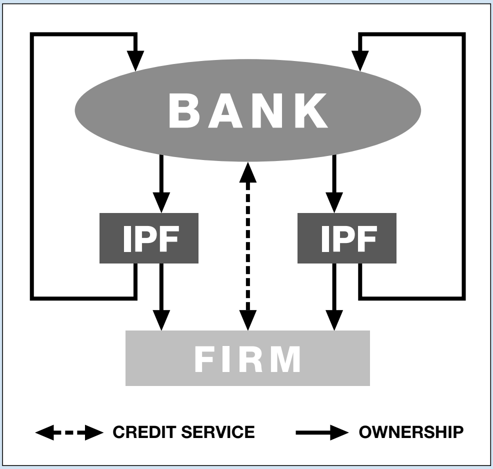
There are clear signals that Czech companies are recognizing the need to identify the "best practices." The best practices in promoting good corporate governance seem to be also favored by the government that assumes to take a more active role in exercising ownership rights. Similarly, enhancing professional awareness and introducing adequate control mechanisms is being supported by the Czech Securities Commission.

(Based on Bohata, M.: Some Implications of Voucher Privatization for Corporate Governance of Czech Join-stock Companies. Prague Economic Papers, No. 1, 1998)

Incestuous Ownership

A major problem of the current ownership structure is its so-called incestuous or circular structure. This feature is quite common and can be observed even in banks and investment funds, although incestuous ownership in the banking sector has been severely criticized.

While a legal limit exists on the share of a firm which can be owned by a single IPF, there is no constraint ruling out the ownership of a firm by several IPFs with one major owner. Moreover, the share register is prohibited from providing information on ownership which is less than 5%. Since most banks have created more than five IPFs, they can easily control a firm by a simple majority and not reveal this fact to the general public. For example, in the first wave of voucher privatization, Agrobanka (formerly the largest private bank) founded 13 funds.



Example of Cyclical Ownership

Nevertheless, the highest market shares belong to Česká Spořitelna (15.5%), První Investiční (11.6%) and Harvard Funds (9.2%). In the second wave, Harvard Funds created 23 IPFs and ranked only third in terms of market share (7.5%), leaving the top place for A-Invest with two funds and a 7.9% share, and second place for the Expandia group with a 7.8% market share.

A firm could be, for example, forced 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, and there is evidence that this has in fact happened.

The bank is either controlled by the state, which does not exercise its ownership rights thereby permitting managers and other owners (IPFs) to take charge, or is privately owned and there is a risk of transfers (tunneling) from IPFs to third parties. These outsiders, which under normal conditions would not get more than their fair share of profits, are benefiting at the expense of the minor shareholders of the banks, IPFs and firms.

Internet against Monopoly

At the beginning of November 1998, SPT Telecom – the monopolistic telephone service provider in the Czech Republic – announced a price rise as of January 1st, 1999. The calculations provided by Telecom suggested a price rise of about 4%; however, since Telecom is providing both local and long distance services, one can adopt several measures to weight the price changes. The proposed changes (which were subsequently approved by the state regulatory authorities) included a 35% rise in fixed payments and a 33% increase in local toll calls from public phones. The major price increase affected local calls: the price of one pulse increased from 2.40 CZK to 2.60 CZK and the pulse was shortened by one third (from three minutes to two during the day, and from six minutes to four off-peak hours). Together this comprises a 62.5% price increase. Price cuts in long distance and international calls varied widely. For example, the rate for calls to the USA has been cut between 35% and 50%, calls to Hong Kong between 3% and 5%.

The proposed local toll increase will harm mostly Internet users who are connected to their providers for quite a long time via modem and are charged local phone rates. They argued that their local phone bill will, with "moderate frequent" use of the Internet, increase from about 3000 CZK to 5000 CZK monthly (hardly a negligible amount considering the average wage is about 11,000 CZK) and this increase will ruin small businesses. Telecom itself reports that average usage of the Internet costs 640 CZK (20 USD) monthly at the current rates.

Internet users started a petition campaign entitled "Internet against Monopoly," where they expressed concerns about the future of the whole communications sector and free access to information in the Czech Republic. In the petition they asked for an alternative reasonable price scheme for local calls. The petition was signed by more than 100,000 people and supported by about 1,000 Czech Internet servers. On November 18th, 1998, a boycott of the Internet and Telecom services was organized. According to the Czech Press Agency (CTK) at least 60% of Internet users joined the boycott and the transferred data volume was halved on that day.

Boycott logo
http://www.bojkot.cz

After this massive protest Telecom promised to introduce a special service called "Internet 99" with longer pulses. However, according to the protest organizers this reduction is only a minor step and does not provide the Czech Republic with a good basis for participating in the telecommunications revolution. Negotiations are still in progress and Czech governmental authorities expressed their willingness to consider changing the regulatory policy for telecommunications. In late December 1998, a consumer group demanded a court decision on the legality of the price increase, but no decision has been reached at this time.

Cellular Phone Competition: Monopoly Becomes Duopoly

The Czech mobile phone market can serve as a textbook example of how consumers can profit from competition. Till 1996 Eurotel was the only (monopolistic) provider on the mobile phone market and was able to charge exorbitant prices for their services. For example, in 1994, their so-called "Economic" program cost 12,800 CZK for setup, almost 5,000 CZK in monthly charges, and 5 CZK for each minute of connection during peak hours.

During the summer of 1996, two cellular phone operators entered the Czech GSM 900 market (this acronym signifies "Global System for Mobile Communication", a digital system operating at 900 MHz). The first entrant, Eurotel, already had a NMT 450 (Nordic Mobile Telephone, an analog and technically obsolete system) license since 1991 and can be viewed as the incumbent. The second company, Radiomobil, was a new entrant. Eurotel is owned by SPT Telecom and Atlantic West (which have 51% and 49% of the shares, respectively); Radiomobil has a similar ownership structure (České radiokomunikace has 51%, and Cmobil, 49%).

At the very beginning of the GSM competition in the summer of 1996, the incumbent reduced setup costs to 5,000 CZK and its "Optimal" program cost about 1,700 CZK monthly, with additional charges of 6.6 CZK per minute during peak hours. Currently, *the incumbent charges 2,500 CZK for setup and 2,000 CZK monthly. The new entrant selected a price-cut strategy. In 1998 its program named "Diamant" had setup costs of 3,500 CZK including a free phone, a monthly charge of 1,800 CZK, and a basic peak rate of 3.9 CZK. Both operators offer a variety of programs, which differ in the number of free minutes, fixed charges, peak and off-peak minute charges, types of phone included, and supplementary customer services.*

The number of customers rose rapidly; we can observe positive spillover effects of the "competitor's" advertising. Although price cuts were substantial, the incomes (as yet unaudited) of both the incumbent and entrant are still rising.

In 1998, Radiomobil even challenged the fixed phone provider: it introduced an international call service named "Internet Call" which used the Internet to transfer digitized speech into the destination state. This strategy allowed them to introduce prices at about 50% of the nationwide monopolistic provider SPT Telecom. The company claims that this is a legal way to provide international calls and not to use the SPT Telecom services. (Telecom has an exclusive monopoly on international voice services till the end of the year 2000.) Telecom has filed a complaint against Radiomobil with the Czech regulatory authorities. Although the authorities decided that this service does not conform to the exclusivity rule granted SPT Telecom, Radiomobil expressed its intention to appeal the ruling, and no final legally binding decision has been made yet. Nevertheless, these events represent a pioneering application of new technologies on the phone market.

Eurotel and Radiomobil Comparison

Period	GSM Customers (thousands)		Revenue (quarterly cumulative) bil. CZK	
	Eurotel	Radiomobil	Eurotel	Radiomobil
1996	n.a.	32	n.a.	0.5
1997	285	173	10.4	3.0
1998/q1	331	n.a.	2.9	n.a.
1998/q2	387	256	6.3	2.6
1998/q3	450	310	10.5	n.a.

Sources: Eurotel and Radiomobil.

Business Environment

The corruption index (CI) characterizes the perception of corruption in the public sector. Corruption is understood as the misuse of public power for private benefits, e.g. bribing public officials, kickbacks in public procurement or embezzling public funds. The Czech Republic was ranked 37th out of 85 evaluated countries. More important than the ranking (which may vary year to year due to different compositions of the sample) is the score. Compared to previous evaluations covering about 50 countries in 1996 and 1997, the score for the Czech Republic in 1998 fell by 0.47 and 0.4 respectively, to 4.8, placing the Czech Republic close to countries like Hungary, Greece, Italy and Poland, which received scores 5.0, 4.9, 4.6 and 4.6, respectively. The fact that post-communist countries (except Russia and some other member states of the former USSR) have received quite similar evaluations is consistent with the hypothesis that corruption is primarily a systemic problem and should be tackled as such, i.e., by coordinated efforts of the government, private sector and NGOs. The National Anti-corruption Program, which was outlined by the Ministry of the Interior

The country CI Score measures the degree of corruption perceived by businesspeople, risk analysts and the general public (see sources below) and ranges between 10 (highly clean) and 0 (highly corrupt).

Surveys Used refers to the number of surveys used to assess a country's performance. A total of 12 surveys were used, and at least 3 surveys were required for a country to be included into the 1998 index. These surveys include:

- *Economist Intelligence Unit (Country Risk Service and Country Forecasts),*
- *Gallup International (50th Anniversary Survey),*
- *Institute for Management Development (World Competitiveness Yearbook 1996-1998),*
- *Political and Economic Risk Consultancy (Asian Intelligence Issue 1997, 1998),*
- *Political Risk Services (International Country Risk Guide),*
- *World Bank (World Development Report and Private Sector Survey),*
- *World Economic Forum and Harvard Institute for International Development (Global Competitiveness Survey 1996-1998).*

Corruption Perception Index for Selected Countries

Country Rank	Country	Score
1	Denmark	10.0
2	Finland	9.6
3	Sweden	9.5
15	Germany	7.9
26	Estonia	5.7
33	Hungary	5.0
36	Greece	4.9
37	Czech Republic	4.8
39	Italy	4.6
	Poland	4.6
47	Belarus	3.9
	Slovak Republic	3.9
69	Ukraine	2.8
76	Russia	2.4
83	Honduras	1.7
84	Paraguay	1.5
85	Cameroon	1.4

Source: Transparency International, TI Newsletter, December 1998 *in September and is currently the subject of public as well as professional debates, assumes such a concerted initiative, simultaneously taking into account the principles of the OECD guidelines on combating corruption.*

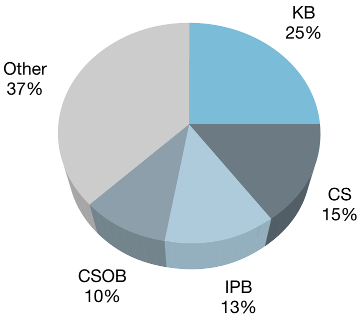
Despite recent waves of corruption scandals, the overwhelming majority of the population (80% according to GFK's March 1998 survey) does not rank corruption among the three most severe problems in Czech society. Some 20% of the population is nonetheless very worried about this phenomenon. This situation might be explained by the widespread belief that corruption is a useful and efficient practice which can be justified and tolerated. This survey revealed that more than one quarter of the population and about one third of the working population had some personal experience with corruption. Corruption among public servants is viewed as pervasive. Only 12% of respondents believe that corruption practices are exceptional among ministerial officials and similarly within the customs department (15%), police and parliament (16%), medical services (18%), justice department (22%), banks (25%), and universities (30%). In fact, the majority of Czech citizens are convinced that they live in a corrupt environment, and 42% of respondents view corruption as growing, while 31% expect a further increase. Compared with the situation in 1989, the outlook is quite pessimistic: the percentage of respondents who believe bribes are necessary increased from 8% to 22% and simultaneously, the percentage of respondents convinced that bribes are absolutely needless decreased from 39% to 22%.

Paradoxically, the share of corrupt acts committed or witnessed by respondents actually decreased. As might be expected, the most significant decrease was exhibited in acquiring consumer goods (from 39% to 2%). The only sphere where this share increased was in state administration which is presently considered the most corrupt. One of the interesting findings of the survey is that respondents have paid fewer bribes while their feeling that corruption has been intensifying has grown. This perception may be attributed to several causes such as the growing bureaucracy, the privatization process (creating many opportunities and temptations), and the media attention accorded to major corruption cases. The media's focus on scandals might have contributed to the creation of a distorted picture. This picture of massive corruption does not conform to the reality of quickly disappearing petty corruption (facilitating payments) which was common practice under the previous regime.

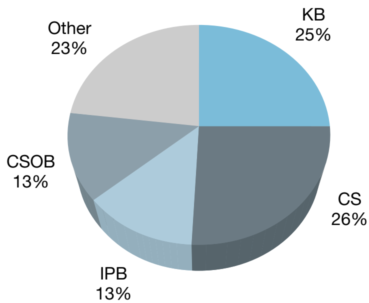
Political responsibility for corruption in the eyes of the population must be borne by the government. Suspicion of corrupt practices has reached massive proportions: eight of ten respondents did not believe that the previous government was really concerned with combatting corruption.

IV.3 Bank Privatization Issues

Total Customer Loans



Total Customer Deposits



A major microeconomic problem is stimulating real restructuring at the enterprise level. However, unclear and inefficient corporate governance and ownership structures are obstacles to this process. Bank privatization hence offers the first step toward the solution of the corporate governance problem. Three major Czech banks, KB, ČS, and 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 by means of direct sale to a strategic partner. Governmental advisory agencies were selected for each bank: Goldman Sachs is in charge of KB; Merill Lynch takes care of ČS; and Schroders is overseeing the case of ČSOB. The Czech sub-contractors are Patria Finance, Expandia Finance and Wood & Company. In the beginning of 1998, IPB, one of the four largest state-owned banks in the past, was privatized by the Nomura group.

Shares to Privatize

Bank	State Share (total)
Komerční banka (KB)	49.23%
Česká spořitelna (ČS)	45.00%
Československá obchodní banka (ČSOB)	89.82%

State share includes stakes formally owned by the Slovak Republic.

Source: public sources

IV.4 Czech Capital Markets

The structure of the Czech capital markets has been to a large extent determined by voucher privatization in the Czech Republic. About 1,700 firms were privatized during the two waves of voucher privatization. As a byproduct of this privatization, the majority of Czech citizens became shareholders of previously state-owned firms. To allow people to trade the shares acquired, two capital markets opened soon after the end of the first wave of voucher privatization. While, by its institutional design, the RM-System was (from its opening in May 1993) more suited to the trading needs of small individual shareholders, the Prague Stock Exchange (which opened in April 1993) hoped to attract institutional investors.

Despite the increasing total volume of trade on both markets, the role of the central markets has decreased overall; in other words, the price discovery process has led to higher inefficiencies. It can be easily affirmed that the initial volume of trade on both central markets represented about one quarter of the total volume of trade in a particular market; since 1997, these figures have dropped below 5%.

The high number of securities, traded in varying volumes and frequencies, market capitalisation, varying information disclosures, and the non-transparency of the market in general, resulted in several attempts to restructure the PSE:

1. Segmentation. New segments of the PSE were introduced on September 1, 1995, when the PSE market was split into three main tiers. The listing requirements for each trading group are summarized in Table 1.

2. Delisting. The following criteria were applied: volume of trade, market capitalisation, number of days traded per year. By September 1997, 1303 companies had been de-listed from the PSE in the following blocks: March 1997 – 100 stocks, April 1997 – 391 stocks, June 1997 – 509 stocks, September 1997 – 303 stocks.

3. Dealers Market. Blue chips have been traded via a dealers market (SPAD) since 1998.

Notes. It was expected that these new market segments and trading groups (1), supported by delisting (2), would increase the transparency of the market, attract fore-

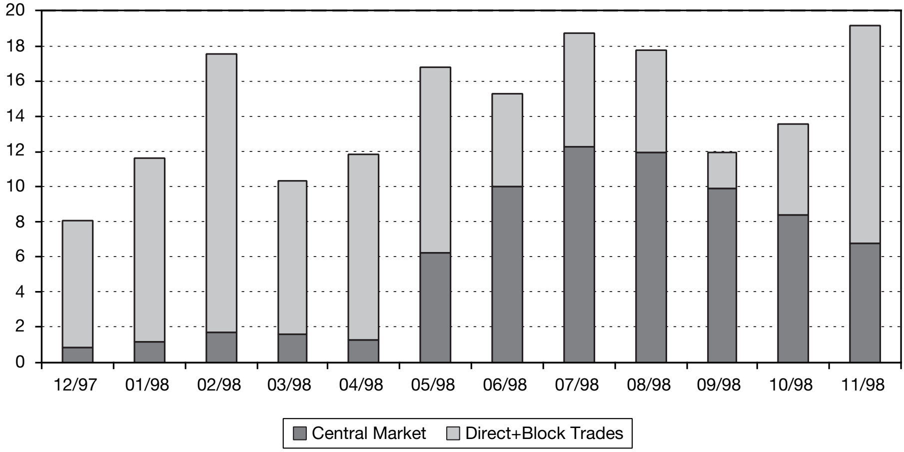
Listing Requirements for the PSE (1996)

Trading Group	Requirements		
	Disclosure	Liquidity*	Capital**
Tier one	Quarterly	> 300,000	Public offer > 200 mill. Registered capital > 500 mill.
Tier two	Semi-annually	N/A	Public offer > 100 mill. Registered capital > 250 mill.
Tier three	Annually	N/A	N/A

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)

Source: PSE

Monthly Trade Values in Central Market and in Direct and Block Trade – Shares and Units (bil. CZK)



ign investors and significantly increase liquidity. The main reason for the failure of this move was the fact that shares were quite heavily traded off-market. The SCP Control Department noted that the vast majority of off-market trades were actually settled by registered brokers. Therefore, since mid 1997 PSE members have not been authorized to trade at the SCP. Nevertheless, this restriction did not increase liquidity at the central market as was hoped. The only change observed was that a significant part of off-market transactions turned into direct trades; in other words, transactions occurred in an off-market manner without any influence on the central market price. The introduction of a market-maker system (SPAD) for the most liquid shares has substantially increased trading on the central floor of the Prague Stock Exchange. It will be interesting to see if these reforms (and other changes proposed by the World Bank mission in 1998) can restore the initial advantageous position of the Czech market.

The Trading Volume on Registered Capital Markets (CZK billion)

Trading volume (CZK billion)	1993*	1994	1995	1996	1997	1998**
PSE Central market	2.0	16.0	22.0	28.8	22.1	5.4
PSE – direct and block trades	7.0	46.0	173.4	364.4	657.5	161.1
RMS Central market	2.9	4.4	5.8	9.5	7.6	2.9
RMS – direct and block trades	–	–	19.4	90.9	151.1	64.0

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

Relationship between Stock Market Returns and Economic Factors for Visegrad Countries.

Formal stock markets have existed in Hungary and Poland since the beginning of 1991 and in the two parts of the former Czechoslovakia since mid 1993. The scope of these markets is very different, however. The Czech and Slovak stock markets were created as a by-product of the voucher privatization scheme launched in the former Czechoslovakia. This has had several implications. Since the voucher privatization programme operated on a large scale, the new Czech stock market had one of the largest market capitalizations in the region. On the other hand, the enormous number of equities overran the market's capacity. The administrative decision to trade shares of all privatized companies on the stock exchange meant ignoring standard listing requirements. This fact, in combination with an inadequate legal framework, made the Czech and Slovak stock markets the least transparent in the region.

By way of contrast, exchanges, Poland and Hungary opted for a standard process of creating a capital market by applying a range of regulations and listing requirements to provide for a step-by-step expansion of the market. Thus, it is interesting to compare the Visegrad stock markets to see how these differences in regulations, disclosure requirements, initial market size, and trading and settlement mechanisms affect efficiency. Several repercussions are obvious. While the Czech Republic began with the highest market capitalization, this has decreased over time. On the other hand, capital markets in Poland and Hungary started with a smaller market capitalization, but have increased in size over time so that by the end of 1997 both countries' market capitalization exceeded Czech market capitalization.

At the end of 1997 over 300 companies were being traded on the Prague Stock Exchange, with a total market capitalization equal to 24% of Czech GDP. Despite the large number of traded firms, the market is dominated by a few firms. The 50 firms included in the PX-50 index amounted to about 85% of total market capitalization in 1997. In the Hungarian market, 49 traded firms had a total market capitalization equal to about 33% of GDP. In Poland, by contrast, the 143 firms traded on the Warsaw Stock Exchange were valued at about 9% of GDP, a figure similar to the 872 traded firms in Slovakia.

The overall conclusion is that while the newly established markets in the Visegrad countries reflect the movement in economic fundamentals, they do so with a lag. Thus, none of the markets can be said to be semi-strong efficient although these results suggest that the Czech market may have come closer to achieving such a result than the other three countries. This last conclusion does not hold up if we examine the development of the relationship between real factors and equity markets over time. In fact recent patterns suggest that price movements in the Czech market have become almost divorced from reality.

There are a number of reasons why this may have happened. As press reports have increasingly focused on the lack of regulation in the Czech market, a self-fulfilling prophecy may have been created whereby rational investors have abandoned the market, leaving it to those who do not treat stocks as conventional instruments for investment purposes, but rather as artificial chips to be used in a game of financial manipulation.

In addition, trading patterns have shifted so that prices on the PSE may have become less indicative of true values. Almost 30% of transactions at the beginning of trading went through the PSE central market, while by the end of 1997 this figure fell below 5%. Moreover, approximately 70% of trading in Budapest and 30% in Warsaw involves foreign investors as compared with only a trivial fraction of trading in Prague. Insight into the possible foreign influence on the Visegrad equity markets can be obtained by examining the relationship between these markets and leading western markets as represented by the DAX (German) and Dow-Jones Industrial (US) indices.

The striking result is that while the Hungarian market is strongly linked to the European (German) and US markets, both instantaneously and with a lag, and there is evidence of a connection between the Polish and Hungarian markets and that in the US, there is no evidence whatsoever of a link between Czech equity markets and their counterparts in the West. Again, in the first years of trading on the PSE, Hanousek and Filer found a contemporaneous link to the German market and a lagged link to the Dow-Jones average. Thus, yet again there is strong evidence that the Czech market has become increasingly divorced from the real world over time.

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