Stabilization Policies at Crossroads?

An Interim Report from Central and Eastern Europe

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Contents

Foreword

The papers in this volume were written by experts from Central and Eastern Europe and constitute the core of the material presented at the international workshop on *"Macroeconomic Stabilization of Economies in Transition"* held in Prague, Czech Republic from 22 to 24 April 1993. The workshop was organized by the Economic Transition and Integration (ETI) Project of the International Institute for Applied Systems Analysis (IIASA) and the Institute for Economic Policy affiliated to the Ministry of Economy of the Czech Republic. The workshop was the first in a series of three to be arranged within the scope of the ETI research program.

The purpose of the workshop was to assemble policy-makers and interested scholars from Central and Eastern European countries, as well as western experts to thoroughly discuss the accumulated experience with macroeconomic stabilization during economic reforms in Albania, Bulgaria, Croatia, former Czechoslovakia and its successors the Czech and Slovak Republics, Hungary, Poland, Romania, Russia, and Ukraine. Those who presented papers and those who commented drew attention to problems now explicit and urgent in countries which pioneered reform to convert from communist central planning to a pluralist market system. The latecomers to the transition process are very likely to face similar complications and dilemmas. Organizers of the workshop firmly believed that dissemination of experience from more rapidly advancing reform countries could contribute to a better understanding of burdensome stabilization tasks and to a future improvement and refinement of stabilization policies and tools, particularly for the benefit of the transitional laggards.

Macroeconomic stabilization of former centrally planned economies was generally perceived to be a critical requirement in the transition process to a market-type economy, particularly in the central European countries. In most cases, the large demand or monetary overhang accumulated in the past and inherited from the former socialist economy was perceived as a major threat for price stability

at the very beginning of reforms. Widespread fears that latent inflationary pressures would generate — after price liberalization — a hyperinflationary spiral and impede the attainment of other goals called for monetary, fiscal, and wage restrictions or at least soundness. In fact, some decline of output and employment would be necessary, inevitable, or even desirable during transition. Nevertheless, a related rise of unemployment should stay within limits in order to ensure the conservation of social peace as a necessary condition for pushing through painful reform measures. Thus, limited government intervention to moderate the wildest fluctuations were envisaged. Generally, stabilization of crucial macroeconomic variables should set the stage for a smooth and rapid transformation of the institutional background, property rights, and behavioral patterns of economic agents. Consequently, the target of stabilization has been assigned a significant role in most, if not all, reform blue-prints.

While the initial results of stabilization programs have proved to be reasonably promising in some nations and regions, there are also signs of temporary, partial, limited, and, of course, adverse impacts. In any case, several years of experience reveal that the stabilization objective is a relatively easier task to accomplish than other parts of reform packages.

The results of the workshop inferred that the stabilization of a post-socialist economy is a difficult but attainable goal. The character of stabilization policies underwent many modifications and adjustments. Their initial stringency was abandoned and replaced by more adaptive policies in some countries. The workshop participants generally also agreed that regardless of the approach utilized to implement the stabilization effort (shock versus gradual approach), countries face similar problems after the stabilization phase: they comprise long-term and painful restructuring of industries; budget imbalances; extensive restructuring of the public sector; enlarging the scope of currency convertibility; time-consuming privatization; and so forth. Recognition of the dynamic changes in the recent past, as well as the decisions facing policy-makers in post-communist countries in contemplating how to proceed where from each unique position already attained, guided us to choose "Stabilization Policies at Crossroads?" as the title of this volume.

The structure of this collection of papers follows that of the workshop: four main topics were discussed. Part One, "Price Liberalization in Post-Socialist Economies: Impact on Macroeconomic Stability", contains two rather different papers. The first paper by *Ivan Šujan* and *Milota Šujanová* provides an introduction to the whole volume. The authors attempt to develop statistical estimates of the role of reform-induced *versus* external economic factors in the economic decline in the former ČSFR and its two successor states. The economic cost of the split of the country are illuminated and other general features of the transition period are mentioned: while macroeconomic stabilization (curbing inflation, stable exchange rate, and balanced state budget) might be only a relatively short and less

demanding period, extensive and far-reaching economic adjustment (privatization, microeconomic restructuring, and sustainable growth) will require much more time and effort. The second paper by *Ioan Buda* deals with the gradual process of price liberalization in Romania — a unique type of strategy, different than those applied in other countries. The Rumanian lesson provides a serious warning for other countries in transition: the policy mix combining drastic changes with a gradualistic approach is powerful enough to provoke strong inflationary expectations undermining the reform effort in all other areas.

Part Two, "The Role of Monetary, Fiscal, and Wage Policies in the Stabilization Program", touches extremely important policy issues. *Stanislaw Gomulka* presents econometric analysis of the inflationary impacts of budget deficits in Poland and outlines the policy measures that should be taken to maintain inflation within a targeted level. Alternative simulations of the inflation path are generated based on his model. *Pavel Štěpánek* describes the development of the fiscal sphere in the former ČSFR and in the Czech Republic. He points both to the stabilization aspects of fiscal policy and to the issues related to restructuring the public sector. Not to use fiscal policy to stimulate economic growth is one of

his main conclusions and recommendations. *Andrzej Sopočko* discusses the role of monetary policy in Poland during transition. He tries to find an answer to the question of how monetary expansion could boost the industrial restructuring and revitalization without causing inflationary pressures and/or softening the hard budget constraint of firms.

Part Three, "Exchange Rate Policy and External Pressures: Search for a Stabilizing Anchor", compares the experience of Hungary, Russia, and the Czech Republic with exchange rate policies. *Artúr Szentgyörgyvári* examines whether the exchange rate of the forint served as a nominal anchor for the price level in Hungary in the last several years and arrives at a positive conclusion despite the fact that this outcome was never declared as an official policy target of the National Bank of Hungary. *Andrei F. Kovalev* studies the record of foreign currency exchanges and evaluates the efficiency of the Russian Central Bank to stabilize the exchange rate of the ruble by intervening on foreign exchange markets. *Miroslav Hrnčíř* analyses the role the exchange rate regimes and policies during different stages of transformation and identifies both strong and weak features. He investigates the evolution of fundamentals and makes recommendations for the current period of reform.

Part Four, "Microeconomic Issues in Stabilization Policies", partly covers the vast area of interrelations between stabilization policies and microeconomic preconditions and consequences. *Vladimir Schevchenko* deals with the impact of major macroeconomic policy measures in Ukraine on microeconomic optimization, adjustment, and formation of competitive environment. He describes the set of incentives emerging on three kinds of markets and behavioral responses of economic agents entering therein. *Pavel Mertlík* identifies some microeconomic causes of prevailing economic decline in the Czech Republic. He provides insights into the privatization process and critically discusses pros and cons of the whole reform strategy and outlines some features of likely future trends.

We are in debt to all the authors for their generous contributions in time and effort to revise and complete their valuable papers. Much thanks are also in order for everyone who assisted in making the workshop a success; particularly Sharon Jandl, administrative assistant to the ETI Project, who also tirelessly typed several manuscripts and deciphered our often indiscernible editing remarks. Financial support for the project was provided by the former Czechoslovakian National Member Organization and by IIASA. The technical support of IIASA and the Institute for Economic Policy was indispensable. Of course, these institutions and individuals who have helped us are not responsible for the views expressed here, which are solely those of the authors.

The editors thank all those who have made our work possible.

Vít Bárta Christoph M. Schneider

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List of Abbreviations

ATS	Austrian Schilling
BIS	Bank for International Settlements (Basel, Switzerland)
CBR	Central Bank of Russia (Moscow, Russia)
CEP	Centre for Economic Performance (London School of Economics, London, UK)
CEPR	Centre for European Policy Research (London, UK)
CHF	Swiss franc
CIF	cost, insurance, freight
CMEA (COMECON)	Council for Mutual Economic Assistance (Members included: Bulgaria, Cuba, ČSFR, GDR, Hungary, Mongolia, North Vietnam, Poland, Romania, and USSR; formally dissolved June 1991)
CPE	centrally planned economy
CPI	consumer price index
ČSFR	Czech and Slovak Federal Republic (ceased to exist as a state 31 December 1992)
CSK	Czechoslovakian (koruna) crown
CZK	Czech (koruna) crown (introduced 8 February 1993)
DEM	German (Deutsch) mark
DFI	direct foreign investment
EC	European Communities
ECU	European Currency Unit
ETI	Economic Transition and Integration Project (at IIASA)

EÚ ČSAV	Economic Institute of the Czechoslovakian Academy of Sciences (Prague, Czech Republic)
FOB	free on board
FRF	French franc
FRG	Federal Republic of Germany
FSU	former Soviet Union
FSÚ	Federal Statistical Office (Federální statistický úřad), Prague, Czech Republic
FUS	worker's pension fund (Poland)
GATT	General Agreement on Tarrifs and Trade
GDP	gross domestic product
GDR	German Democratic Republic
GNP	gross national product
GPB	British pound
G 24	group of 24 most industrialized nations of the OECD
IFS	international finacial statistics
IIASA	International Institute for Applied Systems Analysis (Laxenburg, Austria)
IMF	International Monetary Fund (Washington, USA)
IPF	investment privatization fund (Czech and Slovak Republics)
ISIC	International Standard Industrial Classification
KRUS	farmers' pension fund (Poland)
LAW	"leaning against the wind" criterion
MANPP	Ministry of the National Property and its Privatization (Czech Republic)
MICEX	Moscow Interbank Currency Exchange
NBER	National Bureau of Economic Research (Cambridge, Massachusetts, USA)
NEER	nominal effective exchange rate
NIS	newly independent states (of the former Soviet Union)
NMP	net material product
OECD	Organization for Economic Cooperation and Development (Paris, France)
OLS	ordinary least squares
OK	"ordinary criterion"

PMR	parallel market rates
PPI	producer price index
PPP	purchasing power parity
REER	real effective exchange rate
RBL, RUB	Russian ruble
SBČS	State Bank of Czechoslovakia (Československá státní banka), Prague, Czech Republic
SOE	state-owned enterprise
SR	Slovak Republic (became an independent state 1 January 1993)
UAK	Ukrainian karbovanets (introduced 12 November 1992)
ULC	unit labor cost
UNIDO	United Nations Industrial Development Organization
USD	USA dollar
USSR	Union of Soviet Socialist Republics (ceased to exist December 1991)
VAT	value-added tax
VHJ	production economic unit (výrobně hospodářská jednotka) in Czechoslovakia (before 1990)
WB	World Bank (Washington, USA)
WPI	wholesale price index

Part I

Price Liberalization in Post-Socialist Economies: Impact on Macroeconomic Stability

Chapter 1

Macroeconomic Development in the Czech Republic

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1.1 Introduction

As in other post-communist countries, the macroeconomic situation in the Czech Republic has changed dramatically during the last five years. It has been affected mainly by the start of the economic reform and the split of former Czechoslovakia. The aim of this paper is to provide a brief analysis of the macroeconomic development before and after these changes.

This paper begins with an evaluation of Czechoslovakian economic performance before the 1989 revolution. Special attention is paid to overvalued growth rates given in the official statistics and to deformation of the industrial structure. In the third section, the economic reform scenario and its implementation is described. The fourth section contains an analytical estimation of the macroeconomic impacts of both reform and external factors. In the fifth section, the macroeconomic impacts of the split of Czechoslovakia are discussed and estimated. The predicted impacts on the Czech and Slovak GDP are compared with the actual data for 1993. Section

An earlier version of this paper was presented at the 20th International Conference "Macromodels '93", Lodz, Poland, December 1993. Although the authors did not attend the workshop "Macroeconomic Stabilization of Economies in Transition", they have generously allowed us to include this relevant and valuable contribution in this volume.

six then provides a comparison of the Czech economy with those of Slovakia, Hungary and Poland. An evaluation of the recent macroeconomic trends in the Czech Republic, as well as short-term forecasts are given in section seven of the paper, followed with some concluding remarks.

1.2 The Czechoslovakian Economy Before the 1989 Revolution

The economic status of pre-World War II Czechoslovakia was reasonably comparable with countries like Germany, France, Belgium, or Austria. According to the statistical data on industrial production, Czechoslovakia was one of the 10 most industrialized countries in the world before World War II.

However, during the post-war period until 1989, the allocation of resources through central planning rather than by the market mechanism resulted in a long-term slowdown of the growth in productivity and in the standard of living, as well as in the deterioration of international competitiveness of Czechoslovakian industry. Especially over the last 20 years of central planning, Czechoslovakia's economic performance has been disappointing.

After the exhaustion of the so-called 'extensive sources' of growth, clear tendencies towards stagnation and a decline in production were already appearing in the last decade of central planning. The disintegration of the economic union of the former CMEA hastened the inevitable collapse of the socialist system. The transition to a market economy was supposed to be, in this situation, the only effective way to tackle the problems which have consequently accumulated.

Table 1.1 portrays a considerable deterioration of the performance of the Czechoslovakian economy during the 1980s as compared with the previous decade. The average annual growth rate of real GDP contracted from 4.8% to 1.5%. A similar slowdown occurred in other macroeconomic indicators including average wages, productivity of labor, and productivity of fixed capital. On the other hand, inflation (expressed by the CPI) increased.

According to many studies (including Marer 1990 and Nachtigal 1991), the real growth rates of macroeconomic indicators in the CMEA countries given by the official statistics were systematically overvalued because the corresponding deflators were undervalued. The lower part of *Table 1.1* contains the growth rates corrected for estimated hidden inflation. In the period 1970–1980, these rates were just about one half of the official data and were even negative or close to zero in 1980–1990. The most severe decline occurred in gross fixed investment. Corrected average real wages stagnated during the 1970s and in decline during the 1980s.

Table 1.1 Basic Macroeconomic Indicators of the ČSFR

Indicators (in constant prices)	Average Annual Rate of Growth in %	
	1970–1980	1980–1990
Gross domestic product (approximation)	4.77	1.50
Net material product produced	4.66	1.31
Gross material product produced	4.84	1.81
Gross material product distributed	4.30	1.98
Personal consumption	3.22	1.69
Material social consumption	5.52	4.84
Gross fixed investment	5.77	0.89
Consumer price index	1.14	2.17
Average nominal wages	3.13	2.08
Average real wages	1.99	–0.09
Labor productivity in material sector	4.48	1.65
Fixed capital productivity in material sector	–0.95	–2.89
Import intensity of gross material product	–0.37	–0.07
Indicators corrected for hidden inflation:		
Gross domestic product (approximation)	2.7	–0.7
Net material product	2.1	–1.5
Personal consumption	1.5	0.4
Gross fixed investment	3.1	–5.1
Consumer price index	2.8	3.5
Average real wages	0.3	–1.4

Source: Statistical Yearbooks for Czechoslovakia and author's own calculations.

Another serious problem was a deformation of the industrial structure in the Czechoslovakian economy. According to econometric analysis covering 20 industries in 10 countries over 20 years (Šujan and Štrauch 1990), the industrial structure in developed market economies depends primarily on economic level and size of the country. Using estimated parameters from this analysis, actual data on Czechoslovakia's economic level (real GDP per capita), and the size of the economies (volume of real GDP), the corresponding expected structure for Czechoslovakia was computed (*Table 1.2*, second column). It shows that the actual data for Czechoslovakia differed considerably from the computed data, as well as from the average structure in selected small Western European countries. In Czechoslovakia, the shares of mining, metallurgy, machinery, and production of transport equipment in total industrial production were too large, while the shares of food industry, furnitures, printing, and energy industry were too small. These

Table 1.2 Industrial Structure of Production (valued added) in %

Industry	Average of 5 Small Countries[1] 1987	Computed Data for ČSFR 1987	Actual Data for ČSFR 1980	1987	1990
Mining and quarrying	1.5	1.1	7.50	6.30	5.26
Food, beverages, tobacco	13.0	13.8	7.93	7.15	8.22
Textiles	2.7	6.2	5.54	5.24	5.18
Wearing apparel	1.4	2.9	1.36	1.35	1.40
Leather and products	0.2	0.5	0.47	0.44	0.48
Footwear	1.1	1.1	1.51	1.29	1.35
Wood products	2.9	1.5	1.95	1.93	2.31
Furnitures, fixtures	2.4	3.2	1.06	1.02	1.15
Paper and products	5.6	3.4	1.97	2.07	2.27
Printing, publishing	4.9	3.8	0.68	0.68	0.74
Chemical/rubber productions	11.9	12.6	11.69	10.77	11.62
Non-metal products	3.5	6.2	6.24	5.66	5.92
Iron, steel, other metals	5.0	7.5	10.48	9.23	9.82
Metals products	6.8	6.3	3.99	3.94	3.93
Non-electrical machinery	9.2	7.7	17.39	20.04	17.91
Electrical machinery	7.4	6.4	4.30	6.30	6.49
Transport equipment	7.0	5.1	8.45	9.25	8.31
Professional goods	1.2	0.8	0.47	0.46	0.51
Other manufacturing	1.0	1.1	1.12	1.05	1.15
Electricity, gas, etc.	11.3	8.8	5.90	5.83	5.98

[1] Austria, Belgium, Denmark, Finland, and Sweden.

Source: OECD Paris, Central Institute for Economic Research, Prague, and author's own calculations.

differences cannot be explained by specific natural conditions. They are simply deformations as a consequence of central planning and the CMEA system.

A considerable part of the traditional Czechoslovakian exports to the former USSR and other socialist and third-world countries (supported by government credits with doubtful returns), the production of arms, and a substantial part of outdated production for domestic use no longer finds sufficient demand and cannot survive in a market economy. The first phase of the economic transformation, therefore, led inevitably to a temporary decline in production. Only in the following phase with the gradual development of effective and competitive production is it possible to renew the growth of industrial output.

1.3 The Economic Reform Scenario

The Czechoslovakian government's economic reform proposals were summarized in an "Economic Reform Scenario", adopted by Parliament in October 1990. This program emphasized the need for a radical transformation of the economy and the introduction of a market-based economic system at the earliest possible date. In addition to anti-inflationary economic stabilization policies, it contained a comprehensive set of structural reform proposals. These included measures to liberalize prices and imports, alter ownership and management patterns at the enterprise level, promote the private sector, and bring about the internal convertibility of the Czechoslovakian crown (CSK) by granting domestic enterprises unrestricted access to foreign exchange for current account transactions.

More specifically, the government's economic reform package contained the following crucial reform measures, which were implemented within as short a space of time as possible after 1 January 1991 (Klaus 1992, 1993):

1. The liberalization of a wide range of domestic prices, including those of all tradeable goods and non-tradeable goods produced under reasonably competitive conditions;
2. The introduction of the internal convertibility of the currency and the establishment of a unified exchange rate responsive to supply and demand;
3. The installation of an adequately financed social net to meet the needs of those individuals becoming unemployed or otherwise suffering losses in income as a result of the adjustment process;
4. The progressive restructuring and privatization of state-owned enterprises; and,
5. The implementation of restrictive macroeconomic policy to achieve economic stabilization through fiscal and monetary restraints and appropriate exchange rate, price, and wage policies.

However, the fiscal and monetary policies in the first half of 1991 were too restrictive. Therefore, the Federal Government adopted several changes in macroeconomic policy in order to stimulate both domestic and foreign demand for the second half of 1991.

Statistical evaluation of the economic development in 1991 and 1992 revealed that the Czechoslovakian economy, was passing relatively successfully through the first phase of transformation despite worsened external conditions and had good prospects for successful completion. This was confirmed also by the evaluation of several foreign institutions (including IMF, OECD, UNIDO, etc.), which usually listed the ČSFR in first place among the reforming post-socialist economies (UNIDO, 1992).

By applying restrictive macroeconomic policies, the Czechoslovakian government succeeded in rapidly extinguishing inflationary pressures brought about by the one-shot liberalization of about 85% of all prices on January 1, 1991. The ability to eliminate inflation in three to six months and maintain complete price stability while liberalizing an additional 10% of prices was an impressive accomplishment. The economy also adjusted remarkably so that the private sector developed rapidly in response to the removal of administrative restrictions, price liberalization and provision of bank credit, and exports recovered after an initial period of significant decline.

On the negative side, one observed an economy that plunged into a much more severe recession than was generally expected and forecasted by government officials. According to our analysis the recession was, to a significant extent, caused by external shocks associated with the disintegration of the CMEA. Nevertheless, the restrictive government policies also played a part. In undertaking the tough measures, the government greatly benefitted from the willingness of the population to undergo a painful transition. However, it was an open question of how much greater a decline would be tolerated. As a result, the government was prudently shifting emphasis from stabilization to restructuring and growth in 1992.

Another major problem was the fact that state enterprises avoided the impact of the restrictive policies by relying to an increasing extent on inter-enterprise debt (credit). This debt rose rapidly and, despite the macroeconomic restrictions, very few enterprises were forced to close down. The impressive stabilization exercise was thus accompanied by only limited enterprise restructuring.

1.4 Macroeconomic Impacts of the Reform and External Factors

In the first year of the radical economic reform (1991), Czechoslovakia experienced a considerable decline of all major components of GDP, as well as an increase in inflation and unemployment. On the other hand, the current account balance was surprisingly positive. Similar changes occurred in other economies in transition.

However, unfavorable economic development in the post-communist countries during the first stage of transition was not solely an unavoidable result of economic reform since the collapse of the CMEA and other external shocks also played an important role. Estimated impacts of the external shocks and the economic reform process on the changes in basic macroeconomic indicators of the ČSFR between 1990 and 1991 are shown in *Table 1.3.*[1] The figures show that external shocks (with a predominant role of the collapse of the CMEA) were responsible for

Table 1.3 Estimated Impacts of the Reform and Other Factors on the Czechoslovakian Economy in 1991

Indicator	Total Changes 1991/1990	Impacts of the Collapse of the CMEA[1]	Impacts of the Economic Reform			
			Total	*of which:* Liberalization of Prices	*of which:* Devaluation of Currency[2]	*of which:* Restrictive Macroeconomic Policy
Annual Changes %:						
Gross domestic product, real	–15.1	–5.8	–9.3	–5.1	2.4	–6.6
Private consumption, real	–23.9	–4.3	–19.6	–10.1	–4.4	–5.1
Gross fixed investment, real	–31.8	–3.9	–27.9	–4.1	–9.8	–13.9
Consumer price index	57.9	6.0	51.9	49.3	15.1	–12.5
Annual Absolute Changes:						
Current account, in billion USD	1.7	–2.9	4.6	0.5	3.4	0.7
Unemployment rate, in %	5.6	2.2	3.4	1.9	–0.9	2.4

[1] Including other external shocks like the Gulf War and slowdown in the world trade.

[2] Including other steps enabling liberalization of foreign trade.

Source: Statistical Yearbooks for Czechoslovakia and author's own calculations.

about 5.8 percentage points of the total 15.1% decline in real GDP (Šujan 1993a). Trade disturbances considerably reduced the volume of Czechoslovakian exports implying (via multiplier effects) the decline in aggregate output. Another impact consisted of the decline in consumption and investment, as well as the increase in unemployment. External shocks also partially contributed to inflation mainly due to increasing import prices resulting from the shift to world prices and hard currency payments in trade with the former CMEA countries. As these shocks led to lower export volumes and higher import prices, they created strong pressure for a current account balance.

The rest of the changes in macroeconomic indicators might be attributed to the impacts of the main steps of the economic reform process. From among this group of factors, the massive liberalization of prices since January 1, 1991 was the main source of inflation that year. Secondary effects of relatively high inflation were reflected in reduced real demand for consumer goods and investment, which contributed 5.1 percentage points to the contraction of GDP, having had a corresponding effect on the rise of unemployment.

Another important factor within the reform package was the massive devaluation of the currency (accompanied by supplementary steps such as the introduction of a temporary import surcharge, internal convertibility of currency, etc.). This factor had a positive impact on exports and negative impact on imports, which resulted in a highly positive current account balance, as well as in a positive contribution to real GDP (by 2.4 percentage points), though simultaneously reducing domestic consumption and investment in favor of higher exports. Of course, devaluation contributed significantly to domestic inflation (more than one quarter of total inflation).

As mentioned above, macroeconomic policy (including monetary and fiscal policy as well as wage control) appeared to be too restrictive in 1991, especially in the first half of the year. It reduced inflation by an estimated 12.5 percentage points and contributed to the current account surplus, but at the same time considerably reduced domestic demand (mainly demand for fixed investment), which resulted in an additional decline of about 6.6 percentage points in GDP, again with an adverse impact on the unemployment rate.

Some have argued that so massive a devaluation of the currency and such restrictive macroeconomic policy at the beginning of the radical economic reform process were not necessary. However, it is obvious that potential effects of the main reform steps strengthened by external shocks were very uncertain and their ex-ante estimation was extremely difficult. Moreover, it has been also argued as desirable to create two buffers epitomized in a low exchange rate and in low real wages

level for the sake of medium-term macroeconomic stability during the period of transition.

1.5 Macroeconomic Impacts of the Split of ČSFR

The Czechoslovakian Federation ceased to exist December 31, 1992. It has become obvious, that the split of a relatively stable Czechoslovakian economy (showing the first signs of output recovery in the second half of 1992) had significant effects on the economies of the newly independent Czech and Slovakian Republics. The macroeconomic impacts of the split of the former ČSFR may be sorted into three groups:

1. The direct additional costs connected with the issues of new banknotes, state documents and valuables, and so forth. In this group, one should also calculate all costs connected with the division of the state administration, army, common properties, representative offices abroad, with the re-drafting and ratification of international agreements, with the decline in the international position of the ČSFR, and, last but not least, with the deceleration of international capital flows and consequent fall of export ability. These last influences would be worse for Slovakia, which is considered to be less politically and economically stable. While some of the additional costs may be proportional in both countries (e.g., the costs of issuing new banknotes), some of them are relatively higher in Slovakia (e.g., the costs of creating a new central bank, as the former Czechoslovakian Central Bank was situated in Prague).
2. The impacts of the inevitable reduction of mutual trade as a result of the change from internal to external trade under more difficult conditions for payments, crossing borders, and so on. Decline in mutual trade has had a negative impact on aggregate demand and consequently on GDP in both countries. However, the same volume of trade reduction constitutes a considerably higher share of Slovakian GDP than Czech GDP: consequently, its negative impact is relatively higher in Slovakia.
3. The third group of effects follows from the end of the transfers between the two republics. There was a continuous net transfer of resources from the Czech Republic to Slovakia throughout the entire post-WWII period. These transfers were mostly indirect, like unproportional allocation of tax revenues and budget expenditures in favor of Slovakia, as well as non-market pricing of some deliveries in favor of the Czech Republic. The total net transfers from the Czech Republic to Slovakia in 1992 have been estimated by the Secretariat of OECD as 25 billion CSK or 7% of Slovakian GDP. In addition to this,

a considerable refinancing of Slovakian commercial banks from the Czech banks took place. With the end of the former ČSFR, all these transfers were stopped. It is clearly a loss for Slovakia and a gain for the Czech Republic, and is reflected as a considerable deficit in the Slovakian government budget and a surplus in the Czech budget in the first three quarters of 1993.

The total summarized impacts of the split of the ČSFR are negative in both countries, but they are much worse in Slovakia. Our ex-ante estimates (Šujan 1992) of the total impacts of the split were −2.1% in Czech GDP and −5.7% in Slovakian GDP. Actual data thus far seem to confirm this prediction since Czech GDP growth was −2.2% on an annual basis in the first quarter and −0.9% over the first three quarters of 1993. The Slovakian GDP declined on an annual basis by approximately 5% in each quarter of 1993. Of course, the development of GDP is affected also by other positive and negative factors, but the split of the former ČSFR seems to be one of the crucial factors of the 1993 decline in both countries.

1.6 The Starting Position of the Independent Czech Economy: International Comparison

The Czech economy is now well behind the developed market economies; however, many argue that it may be the most successful among the post-communist countries. The division of the ČSFR had some negative impacts on the Czech economy, delaying economic recovery by about one year but at which time the Czech Republic will have even better prospects for macroeconomic stabilization and growth (Šujan 1992, 1993b).

Real GDP per capita in USD is commonly used as the key indicator of economic development. In the Central European economies, purchasing power parities (PPP's) may be more appropriate convertors than official exchange rates. According to such indicators, the economic level in the Czech Republic in 1992 was 23% higher than in the Slovak Republic, 31% higher than in Hungary, and 88% higher than in Poland (see *Figures 1.1* and *1.2*[2]). On the other hand, the economic level of the Czech Republic was just 40% of the level of Austria and 35% of the former West Germany.

A comparison of basic macroeconomic indicators of the four Central European countries in 1992 is given in *Table 1.4*. In 1992, real GDP declined in both republics of the ČSFR by about 7%. The recession in Hungary was not so profound and Poland even recorded a moderate recovery. However, Poland and Hungary started the economic transformation earlier, so they experienced a considerable fall in GDP

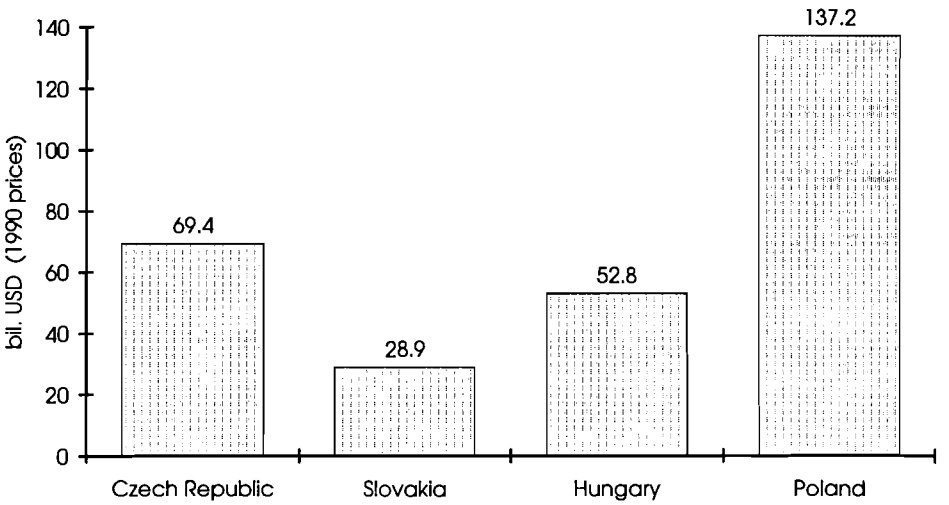

Figure 1.1 Gross Domestic Product, 1992

earlier than the Czech and Slovakian Republics. In the first half of 1993, the Czech GDP declined by just 0.5%, while the Slovak GDP declined by 5.2%. Similar results are also expected for the whole year of 1993, compared to about −1.5% in Hungary and +2.5% in Poland.

While the annual rate of inflation in both the Czech and Slovakian Republics was within acceptable limits (10–11%), it was much higher in Hungary and Poland (23% and 43% respectively). The growth rates of the PPP's of the USD were similar. Because the changes in the official exchange rates were smaller, all the Central European currencies were revalued in real terms. Minor changes in the Czechoslovakian exchange rate just reflected the fluctuations of the dollar value against other convertible currencies, while Hungary and especially Poland made some official devaluations of their currencies, but well below the rate of inflation expressed by the consumer price index (see *Table 1.4*). The ratio of the official exchange rate to the PPP remained significantly higher in Czechoslovakia than in Hungary and Poland, indicating that the Czechoslovakian currency was undervalued.

In 1993, the price level in the Czech and Slovakian Republics increased by 8 to 9 percentage points due to the introduction of value-added (VAT) and consumption taxes. In the first 10 months of 1993, the annual inflation rate was about 21% in the Czech Republic and 23% in Slovakia, where inflation has been accelerated by the devaluation of the Slovakian crown by 10% since July 10, 1993. Inflation in

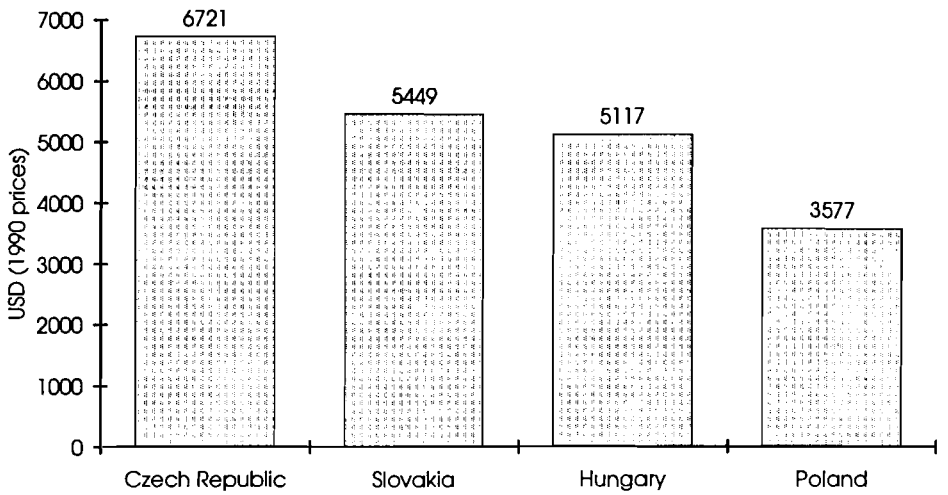

Figure 1.2 Gross Domestic Product per Capita, 1992

Hungary and Poland in the first half of 1993 was similar to the level in the previous year (23% and 37% respectively).

Similar to 1990 and 1991, the Czech Republic also achieved a considerable current account surplus in 1992 (about 7.5% of exports). A relative smaller surplus was attained in Hungary, while Poland and especially Slovakia faced current account deficits. In the first half of 1993, the Czech trade balance and current account were in surplus again, while Slovakia had a moderate trade deficit and Hungarian imports were as much as 54% higher than exports.

Foreign debt of the former Czechoslovakian Federation has been shared by the Czech and Slovakian Republics proportional to their population. In terms of the 1992 ratio of foreign debt to annual exports, it was clearly lower for the Czech Republic (about 74%) than for the Slovakian Republic (about 89%). Polish foreign debt per capita was lower than in Hungary, but its ratio to annual exports was higher (421% against 213%) in 1992.

The unemployment rate in the Czech Republic has been surprisingly low (just 2.6% at the end of 1992); even lower than in all the EC countries except Luxembourg. The updated value for October 31, 1993, is 3.2%. The unemployment rate in Slovakia has been much higher, 10.4% on January 1 and 13.7% on October 31, 1993. The Slovakian unemployment rate is similarly high as in Hungary or

Table 1.4 Basic Macroeconomic Indicators, 1992

Indicator	Czech Republic	Slovakia	Hungary	Poland
Annual Changes %:				
Gross domestic production, real	–7.1	–7.0	–4.5	1.5
Inflation (consumer price index)	11.1	10.1	23.0	43.0
Exchange rate (national currency for USD)	–4.1	–4.1	5.7	28.8
Level in % of Exports:				
Current account surplus	7.5	–13.1	3.0	–2.0
Gross foreign debt, end of period	73.8	89.4	213.4	421.3
Level in % of Labor Supply:				
Unemployment rate, end of period	2.6	10.4	12.3	13.6
Level in % of GDP:				
Government budget deficit	–0.2	–3.3	–7.0	–6.0

Source: Statistical Bulletin of the Czech Republic, Slovakia, Hungary and Poland, No. 3/1993.

Poland (see *Table 1.4*), where unemployment is also rising. The updated rates for June 30, 1993 are 12.6% in Hungary and 14.7% in Poland.

Government budget deficit or surplus is also an important indicator of macroeconomic stability. As can been seen in *Table 1.4*, the Czech budget deficit in 1992 was very small in comparison with much higher relative deficits in the other Central European countries. This advantage of the Czech economy has been even more obvious in the first half of 1993, when the Czech Republic even recorded a budget surplus at 1.3% of GDP, while there were considerable deficits elsewhere (in percent of GDP): 9% in Slovakia, 8% in Hungary, and 5% in Poland.

Summarizing a comparison of the four Central European economies, it is obvious that the Czech Republic has the best starting position at the beginning of the second stage of transition to a market economy: it has the highest level of per capita GDP and savings, a positive current account balance, relatively low foreign debt, very low unemployment, an exchange rate stable over the last 3 years, a balanced Government budget, the lowest inflation in Central Europe, and still very low levels of wages enhancing the competitiveness of Czech products.

1.7 Recent Macroeconomic Trends in the Czech Republic and a Short-Term Forecast

The satisfactory level of macroeconomic stability reached in the former ČSFR has been maintained and even improved in the Czech Republic during 1993. On the other hand, the recovery of economic growth which started in the second half of 1992 has been interrupted by the split of the ČSFR and postponed to 1994.

Estimated impacts of major positive and negative factors on Czech GDP in the first half of 1993 are given in *Table 1.5*. The statistical data on GDP components reveals, that a moderate decline in GDP in the first half of 1993 has not arisen from the lack of demand. Aggregate demand increased by 14 billion Czech crown or CZK (in constant 1984 prices), or 4.6%. All components of domestic and foreign demand increased except exports to Slovakia. On the other hand, the increase in aggregate demand was fully satiated by an increase in imports, so there was no room left for GDP growth. Especially imports of investment goods increased very rapidly, which may support the future competitiveness of Czech industry.

As shown in *Table 1.5*, the continuing world recession was one of the negative factors influencing the downward trend in Czech GDP, by an estimated 2.1%. The negative impact of the division of the ČSFR was similar (−2.2%). Another negative factor was a too restrictive budget policy (creating unnecessary surplus) which might be responsible for a further 1.8% of the decline in GDP. On the other hand, continuing inflow of foreign capital, as well as an expansion of Czech exports (significantly supported by the relatively low exchange rate and low level of wages) were the major positive factors with 2.7% and 3.1% contributions respectively. A small negative decline in GDP (by 0.5%) was the difference between the positive and negative impacts.

A more careful look at the statistical data also reveals quarter-to-quarter growth in Czech GDP in 1993: by 3.1% in the second quarter and 4.8% in the third quarter. Following this trend, fourth quarter growth will continue to be positive – so much so that when combined with second and third quarter growth they will compensate for the steep first quarter fall. Annual growth would thus attain the 0% predicted for the year in *Table 1.6*.

Table 1.6 also contains forecasts of other macroeconomic indicators for 1993. Along with GDP, the most important ones are annual CPI or inflation (21%), unemployment rate (3.5%), and current account surplus including the account with Slovakia (2.1% of GDP).

In addition, *Table 1.6* contains our forecasts of basic macroeconomic indicators of the Czech Republic for 1994 and 1995. GDP has been estimated to grow by

Table 1.5 Impacts of Major Factors on Czech GDP in the First Half of 1993 (bln. CZK, constant 1984 prices)

	Data for the First Half Year			Contributions of Factors to the Change					
Indicator	I/1992	I/1993	Change	World Recession	Split of the ČSFR	Inflow of Foreign Capital	Expansion of Exports	Restrictive Budget Policy	Other Factors
Private consumption	98.0	101.5	3.5	–1.3	–4.8	2.8	3.3	–1.1	4.6
Government consumption	32.7	34.1	1.4	–0.4	1.4	0.9	1.1	–3.9	2.3
Gross capital formation	50.1	57.6	7.5	–0.7	0.9	6.5	1.6	–0.6	–0.2
Aggregate domestic demand	180.8	193.2	12.4	–2.4	–2.5	10.2	6.0	–5.6	6.7
Exports excl. the SR[1]	96.2	107.3	11.1	–2.9	4.2	3.8	6.0	—	—
Exports to the SR[1]	30.0	20.5	–9.5	–1.1	–8.4	—	—	—	—
Aggregate demand	307.0	321.0	14.0	–6.4	–6.7	14.0	12.0	–5.6	6.7
of which:									
Imports incl. the SR[1]	113.9	128.9	15.0	–2.4	–2.5	8.9	6.0	–2.1	7.1
Gross domestic product	193.1	192.1	–1.0	–4.0	–4.2	5.1	6.0	–3.5	–0.4
Impacts on GDP in %	100%	99.5%	–0.5%	–2.1%	–2.2%	2.7%	3.1%	–1.8%	–0.2%

[1] Exports and imports including services.

Source: Czech Statistical Office and author's own calculations.

Table 1.6 Macroeconomic Indicators of the Czech Republic

	Actual		Forecast		
Indicator	1991	1992	1993	1994	1995
Annual Changes %:					
Gross domestic product, real	–14.2	–7.1	0.0	2.5	4.2
Industrial production, real	–22.3	–10.6	–5.0	0.0	2.8
Construction works, real	–27.5	22.0	-2.4	5.0	8.4
Retail sales, real	-33.5	16.4	2.7	4.5	5.0
Gross fixed investment, real	–17.7	3.8	2.0	6.5	8.5
Exports excluding the SR[1]	–13.5	6.1	15.8	11.0	10.0
Exports to the SR	—	–5.7	–17.0	–10.0	0.0
Imports excluding the SR	–27.5	27.9	7.0	12.5	7.5
Imports from the SR	—	–15.7	–13.7	–5.0	4.0
Consumer price index	56.6	11.1	21.0	9.2	6.5
Average nominal wage	16.4	22.6	25.8	16.8	15.0
Average real wage	–24.0	10.1	4.0	7.0	8.0
End of Period Values:					
Unemployment rate in %	4.1	2.6	3.5	5.0	5.5
Trade balance in % of GDP					
excluding the SR	3.5	–2.5	–2.6	–3.0	–2.2
with the SR	0.5	1.6	0.9	0.0	–0.5
Current account in % of GDP					
excluding the SR	4.9	3.0	1.7	1.3	2.2
with the SR	2.1	2.4	0.4	0.0	–0.2

[1] SR = Slovak Republic.

Source: Czech Statistical Office and author's own calculations.

2.5% in 1994 and 4.2% in 1995 under the following assumptions (Novotný 1994, Šujan 1994):

- the world recession will finish and recovery will start during the next two years;
- the negative impact of the division of the ČSFR will be successively exhausted;
- inflow of foreign capital will increase reflecting the remarkable macroeconomic stability in the Czech Republic, its convenient geographic position, low exchange rate, low wage costs, and skilled labor force;
- expansion of Czech exports will continue taking advantages of the low exchange rate, low wage costs, and support of foreign capital, including a growing share of machinery equipment imported from advanced countries; and,

- macroeconomic policy (including fiscal, monetary, and wage policy) will be slightly expansionary.

From among forecasts of other important macroeconomic indicators, the annual inflation as measured by the CPI is expected to fall to about 9.2% in 1994 and 6.5% in 1995. This forecast comprises 'core inflation' of about 5–6% and the impact of some additional abolishment of remaining price controls (3% in 1994 and 1% in 1995). The unemployment rate is expected to increase to about 5% and 5.5% respectively, at the end of 1994 and 1995. An increase in unemployment despite the GDP growth reflects expected speeding-up in the industrial restructuring of the Czech economy.

It may be expected that the expansion of exports will nearly offset growing imports which are necessary for restructuring and creating higher competitiveness of Czech industry. Under the assumption of the slightly negative trade balance and continuing highly positive balance of services, the current account is expected to remain in surplus of about 1.5–2% of GDP until 1995.

1.8 Conclusions

Before the 1989 revolution, the macroeconomic performance of former Czechoslovakia was disappointing. The country was loosing its pre-war position among the advanced industrialized countries. The past decade saw no real growth in GDP and personal consumption. The inflexible industrial structure considerably prevented further economic progress.

The radical economic reform was prepared in 1990 and started January 1, 1991. The implementation of the reform was successful from the point of view of macroeconomic stability (relatively low inflation, stable exchange rate, current account surplus and nearly a balanced state budget). However, it was accompanied by a sharp decline in real GDP, which was further worsened by the collapse of the former Council for Mutual Economic Assistance.

Another shock came from the split of the Czechoslovakian Federation, which affected negatively the expected economic recovery in both successor republics. As expected, the Slovakian Republic has suffered much more.

According to the international comparison, the Czech Republic is now in the best macroeconomic position from among all the post-communist countries. Recent macroeconomic trends and short-term forecasts are promising. However, some important reform steps have yet to be completed (privatization, restructuring and initiating economic growth). Czech macroeconomic policy should be cautious

since any expansion under imperfect market conditions may cause higher inflation, current account deficit, and other undesirable developments.

Notes

[1] These impacts have been estimated based on our method. Similar estimates have been published in some other studies (Bleaney 1993, Vintrová 1992).

[2] GDP converted into USD using purchasing power parities. Source: Statistical Bulletin of the Czech Republic, Slovakia, Hungary and Poland, No. 3/1993, ČSU Prague 1993, and authors' own calculations.

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Chapter 2

Price Liberalization in Romania

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2.1 Introduction

After the events in 1989, it was hoped that promoting the development of a market economy would place Romania on the path to increased efficiency, progress, and eventually prosperity. Although generally recognized as bearing certain sacrifices, there was a belief that economic policy measures like price liberalization, liberalization of trade, fiscal and monetary austerity, and the internal and subsequent full convertibility of the national currency would also rapidly lead to stability and economic growth. After three years of transition to a market economy, it has become apparent that these hopes were premature. Real gross domestic product (GDP) continued to decline dramatically as a result of the decrease of production, prices increased with unexpected irregularity, real wages continued to fall, and the national currency was drastically devalued.

The aim of this paper is to present the Romanian experience regarding price liberalization, the factors determining price increases, and the manner in which these factors behaved in the Romanian economy. The final section of the paper presents several policy measures that are considered necessary to continue price

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liberalization, while simultaneously ensuring proper social protection, in order to attain price stability – an important element of the macroeconomic stabilization policy – as soon as possible.

2.2 The Main Characteristics of the Romanian Economy after Three Years of Transition

Romania made significant progress in enabling the transition towards a market economy since 1989 and demonstrated a commitment to reform in the face of difficult circumstances. Indeed, initial preconditions for an economic transformation were worse in Romania than in other Central or Eastern European states. Former state-directed industrial and investment policies were aimed at strictly equitable regional development, creating heavy industries with a large share of the labor force located in remote areas far from resources and infrastructure. The legacy is a large number of municipalities that are entirely dependent on single industries for employment of the local labor force. No attempt for economic liberalization was made under the previous communist government, unlike in some other countries in Eastern and Central Europe. Though foreign debt repayments were made ahead of schedule and debt was reduced to near zero by 1989, new foreign investment did not arrive due to political risk and structural weakness of the economy. An extremely distorted economic structure implied large output losses inevitably accompanying the shift towards a market economic system with actual market-driven prices.

Most of the necessary legal framework was soon in place, though it has yet to be fully implemented. Prices were liberalized (though only partially), foreign trade fully liberalized, a two-tier banking system established, reform of the fiscal system was planned, enterprise ownership was restructured, and preparatory measures for large scale privatization were taken. Agriculture, small businesses, and retail trade have since been privatized. Direct foreign investment was subsequently protected by a law adopted in 1991 that was to ensure national treatment for foreign firms in all activities.

Despite these achievements, the adopted policy of gradualism proved to be costly; GDP continued to decline precipitously in subsequent years (13% in 1991 and 15% in 1992), inflation climbed to over 200% for 1992 as a whole (on average 9.6% per month), real wages fell markedly, the unemployment rate rose to 9% by the end of the year, international currency reserves were sufficient for only a few weeks of imports, and the exchange rate of the lei was unstable and depreciating rapidly. Between 1989 and 1992, the official exchange rate was devalued annually

by an average of 1800% against the US dollar. Foreign currency evolved as the only reliable and available store of value, so foreign exchange was demanded virtually at any exchange rate.

In 1990, the new government's main objective was to raise the standard of living by redirecting resources towards consumer demand. Nominal wages were increased whilst prices remained frozen. Credit was extended to state enterprises even though demand for capital goods was declining, leading to inventory accumulations. The consequent increase in demand, coupled with trade liberalization, resulted in a collapse in the balance of payments. The balance of payments deficit reached 9% of GDP and the foreign currency reserves fell to just two weeks of import equivalent. In November 1990, the lei was devalued and the prices partially liberalized. Since 1991, the Romanian government pursued macroeconomic stabilization policies and the share of budgetary expenditures and incomes in GDP was reduced.

Overall, rapid growth in private sector trade, services, construction and agriculture were not sufficient to counterbalance the collapse in industrial production. It dropped by about 50% between 1989 and 1992 due to existing structural problems and shortages of inputs, especially energy, that led to idle capacities. Large scale heavy industries, in particular, continued to consume scarce resources as a consequence of the central administrative allocation system, which operated contrary to market criteria. Moreover, government support via credits and import quotas caused industry's demand for foreign exchange to grow despite erratic and unpredictable levels of foreign financial support. The financial discipline of enterprises deteriorated and high levels of inter-enterprise debt formed a severe obstacle to reform. Preferential credit was widespread and there were several rounds of enterprise debt forgiveness not accompanied by measures to prevent the renewal of debt accumulation. Thus, debts had again reached the same nominal level as in 1991 by the end of 1992.

In spite of all these developments, the restructuring of the economy appears to be more successful than macroeconomic stabilization. The situation of the Romanian economy and the evolution of the main macroeconomic indicators are presented in *Table 2.1A* in the *Appendix*.

In February 1993, the government obtained parliamentary approval for a revision of the economic reform program. This new plan prescribed tighter macroeconomic policies and reaffirmed the government's commitment to carry out effective microeconomic reforms and industrial restructuring. The reform program envisaged a further liberalization of prices, the topic dealt with throughout this paper.

2.3 The Evolution of Price Policy between 1990 and 1992

The transition from a highly centralized price system to a new, less regulated price system and policy started at the beginning of 1990, when:

(i) the system of free pricing for privately produced goods was introduced;
(ii) agricultural product contract prices in the state and co-operative sectors were increased for centralized acquisitions and the possibility to sell the excess quantities on the free market was guaranteed; and,
(iii) the competence of the existing institutional framework (official and governmental agencies) in setting prices was reduced.

These measures were considered as a gradual decentralization of the price establishment. The changes, constituting the core of what has been called "a process of price liberalization" were based on Article 48 of Law No. 15/1990 regarding the restructuring of state economic units as "regies autonome and commercial companies". The entities reorganized according to this law are free to set prices according to the relationship between demand and supply. However, this freedom was restricted under two circumstances:

(i) either when there were less than three economic agents supplying the same goods or services; or,
(ii) when the prices were subsidized from the state budget.

In such cases, the prices were to be established by the government after negotiations with the economic agents. As a consequence of the various measures taken by government, the price system evolved continuously and passed through the following key stages:

Stage 1: Real price liberalization started only on 1 November 1990, when the principle of free negotiation was introduced. The two restrictions, provided by Law No. 15/1990, had been extended to include:

- products requiring protection and rational use; and,
- products and services of major importance for the national economy and for the population.

The level of new prices was negotiated on the basis of the official exchange rate of the lei, which was then 35 lei/1 USD compared to a rate of 21 lei/1 USD introduced on 1 February 1990 and a rate of 16 lei/1 USD valid before

that date (for more details concerning the exchange rate of the lei see *Figure 2.1* presented later as well as *Table 2.3A* in the *Appendix*). Together with the new pricing system, a compensation/indexation system of incomes was introduced. At this time, the list of the subsidized products destined for industrial consumption included 21 items, and that for final consumption consisted of 11 items.

Stage 2: On 1 April 1991, maximum indices for the price increases were established. The declared and envisaged purpose of this measure was to prevent monopolistic pricing practices and to discourage the excessive increase of the general price level. The prices for imported goods and for domestic basic raw materials were based on an exchange rate of 60 lei/1 USD. The list of the subsidized products for industrial consumption was reduced from 21 to 13 items, while the list of products for final consumption was maintained.

Stage 3: On 1 July 1991, the previous indicative ceilings which were not in accordance with the principle of free negotiation were abrogated. The formula constituting quarterly adjustments of natural gas prices and monthly adjustments of prices for crude oil, electric energy, and raw materials (according to the import price levels) were adopted. The need for notification of the intention to negotiate price increases three months in advance was imposed. The lists of temporarily subsidized products were changed to 15 items of mining raw materials and 14 items of consumer goods and services.

Stage 4: As of 1 November 1991, free negotiation of prices was permitted on the basis of the initiative and responsibility of the economic agents. Negotiation was supposed to take into account the influences of:

(i) unifying the exchange rates at the level of 180 lei/1 USD;
(ii) alignment of the prices of domestic basic raw materials, fuels, and energy to the world market level; and,
(iii) the new salary indexation.

The compulsory notification regarding the intention to negotiate price increases was set at 90 days in advance with a punitive extension possibility. The level of mark-up was limited to 30% no matter how many intermediaries were involved in the distribution from the producer or importer to the final consumer.

Stage 5: On 1 August 1992, the manner of price and tariff negotiations were regulated under the conditions of completely liberalizing the exchange rate of the lei. It was stated that the following factors could be taken into account

when negotiating prices: liberalization of the exchange rate of the lei; aligning the pricing to the long run tendencies of world market price evolution; the new level of contribution for social security; and, the indexation scheme of salaries.

The negotiated price level of basic raw materials, electric and thermal energy, and some liquid fuels was not to exceed that of similar products on the world market under comparable conditions of delivery and quality, expressed in lei using the actual exchange rate. In order to realize these provisions, a maximal increase indices would be taken into account (defined for 24 items instead of 35 items previously). The restriction regarding the level of mark-up remained in force, but the notification of the intention to increase as well as negotiate prices needed to occur only 30 days in advance (instead of the 90 days defined earlier).

Regarding the relationship between the state and private sectors, it was stated that the commercial companies with state capital could buy their supplies, for industrial consumption or resale, from the private or co-operative sectors at only the prices and tariffs not exceeding the level of the offer from the state sector. The list of subsidized mining raw materials and other products was to be further maintained. According to the program of removing budgetary subsidies for consumer goods and services, the number of items was reduced and the subsidies were decreased. The subsidies for edible oil, sugar, meat and meat products, dairy products, cotton wool, and interurban passenger, bus, and railway transport were eliminated.

By the end of 1992, the price system and price policy can be summarized as follows: compared with a 'pure' system wherein the prices are established exclusively on the free action of market forces, the price regulation and interventions were considered generally as restrictions and exemptions from free market principles.

Although Law No. 15/1990 regarding the reformation of state economic units sets forth that all prices must be negotiated between economic agents on the basis of demand and supply, the supervision of negotiations and the interventions and/or temporal restrictions imposed are economically motivated and based on given market conditions. Negotiations concerning the prices of those products and services not facing real competition — manufactured, sold, or distributed by less than three usually state-owned economic agents — as well as those temporarily subsidized from the public budget were to take place under the supervision of central or local public administration authorities. The number of products and services subjected to the price negotiation process under the supervision of public administration authorities were continuously decreasing in accordance with the creation of a significantly competitive environment and to the extent to which government subsidies were eliminated. In early 1993, still 112 products and

services were subject to supervised negotiations, though this number was scheduled to be reduced to 77 within a short period.

Free negotiation of prices between parties without any interference and on a demand and supply basis had become practically overwhelming, i.e. 100% in the private sector and over 80% in the state-owned sector. The purpose of supervising was to prevent state-owned suppliers from having the dominant position on the market and imposing monopolistic or speculative prices. To this end, public administration authorities were empowered by the government to analyze whether price increases were based on objective factors such as:

- evolution of exchange rate of the national currency, which has direct effects on the prices for imported goods, and, further, via the basic raw materials, fuels, and energy prices, practically on all prices in the national economy;
- price evolution to world levels of imported goods;
- indexation of wages within a social protection program; and,
- increase in the amortization of capital equipment for the revaluation of fixed assets.

Thus, the objective of regulation was to prevent the negotiated prices from transferring adverse influences generated by mismanagement of companies, thefts of material values, shortage of inputs, and so forth. In the cases of raw materials and of basic materials for industrial consumption, care was taken that the negotiated prices between the economic agents with state-owned capital did not exceed the world prices prevailing on the relevant markets for comparable products calculated in lei at the actual exchange rate. Supervisory bodies paid special attention to economic agents using primarily state-owned capital to produce goods and services similar to those existing in the market in order to insure that the negotiated prices would be in accordance both with the relation between demand and supply, and with the qualitative characteristics of the goods and services compared.

2.4 Evolution of the Price Level

The movement of prices is illustrated by the data presented in *Table 2.2A* in the *Appendix*. The accelerated increase of the general level of prices between 1990 and 1992 was determined by:

(i) the critically high level of costs and low level of profitability in many enterprises and industrial sectors in the 1980s; and,

(ii) the subordination of the 'price system' to a general resource allocation system drafted and maintained for multilateral development with autarck economic tendencies until 1989;
(iii) the imbalance between demand and supply on the domestic market which existed previously, but was accentuated by excessive revendication on the part of the employees in 1990;
(iv) the rapid devaluation of the national currency after 1990.

The increase of wholesale prices was more rapid than that of the consumer prices. The determination and the pressure of wholesale prices on consumer prices was obvious due to the coincidental increases. The tendency of the producer and consumer price indices to move together was clearly apparent in the period between 1990 and 1992. In certain periods, the postponement of actualizing the prices according to modifications of the exchange rate generated rigidity of prices. The price level continued to be altered as a result of understating the depreciation of capital equipment which occurred due to the delay in updating the values of fixed assets.

The development of consumer prices showed the specific flexibility commensurate with the situation of diminishing incomes over the three year period. The prices of food products increased more than those for non-food and both exceeded the dynamics of the prices for services. Food products constituted more than 50% of the average family's consumer expenditures. Furthermore, the limitation of the mark-up restricted the movement of relative prices, granting protection to the producers against an unexpected movement (change) in demand.

The Romanian economy exhibited the characteristic features of an inflationary situation during the period studied in this paper. The presence of imported inflation can not be ignored, considering the decline of domestic production and the increase of imports. In these circumstances, three factors are acting jointly: the 'emptying' of the domestic market, the pressure on imports of consumer goods, and the increase of the exchange rate. In fact, Romania made an effort to fulfill its commitment to liberalize foreign trade and not create new restrictions in this area. However, there are experts who support the maintenance of some commercial restrictions in the period of unification and liberalization of the exchange rate.

In the period from 1990 to 1992, domestic production shrank (to 50% compared with industrial production of 1989) and imports of consumer goods could not cover the difference. The monetary overhang accumulated in the past tended to dissolve. The polarization of incomes determined important structural changes in aggregate demand. The development of real wages between October 1990 and February 1993 is shown in *Table 2.1.* The real wage (monthly average) in January 1993 represented only about 60% of its level in October 1990, when price

Table 2.1 Real Wages, October 1990 to February 1993, (in %)

	1990 Oct.	1991 Oct.	1992 Oct.	1992 Dec.	1993 Jan.	1993 Feb.
Whole economy:						
Net average wage	100.0	287.1	705.4	955.5	887.7	932.1
Consumer prices	100.0	352.6	1035.0	1330.0	1483.0	1605.0
Real wage	100.0	81.6	68.2	71.8	59.9	58.1
(Oct. 1991 = 100)		100.0	83.6	88.0	73.4	71.2
(Dec. 1992 = 100)				100.0	83.4	80.9
Industry:						
Net average nominal wage	100.0	293.1	729.8	991.5	912.2	960.5
Real wage	100.0	83.1	70.5	74.5	61.5	59.8
Industrial output	100.0	83.2	63.8	59.7	61.0	70.3
Labor productivity	100.0	89.6	78.1	74.2	75.7	85.2

Note:
The sources for statistical data for this table apply also to all other tables.
Sources:
National Commission for Statistics, Monthly Price Statistics Bulletins (multiple issues 1990-1993). National Commission for Statistics, Romanian Statistical Yearbook 1993. Ministry of Finance, Deparment for Prices and Protection of Competition.

liberalization began. This drop discloses the drastic impact of price liberalization on the purchasing power of the population.

During the period observed, the exchange rate surged ahead of prices (see *Figure 2.1* and refer to *Tables 2.2A* and *2.3A* in the *Appendix*). The contribution of the devaluation of the lei to the revival of exports was hampered by increased costs of the inputs. About 60% of Romanian imports were nonsubstitutable and the production costs depended on the level of the exchange rate to more than 50% via direct imports and via the adjustment of domestic prices according to the evolution of the exchange rate. Further negative trends arose in response to the depressive effect of the restrictive monetary policy and the hesitation in maintaining other strict budget constraints as well as the lack of support by and co-ordination with the measures of trade policy. The estimated influence of various factors on the price increase in the liberalization process is shown in *Table 2.2*. The price increase is mostly due to the depreciation of the lei. In fact, the data already referred to in *Table 2.2A* in the *Appendix* clearly illustrates a 16 fold increase of the general price level compared to a 32 fold decrease of the exchange rate level of the lei during the three years of transition (from January 1990 to February 1993).

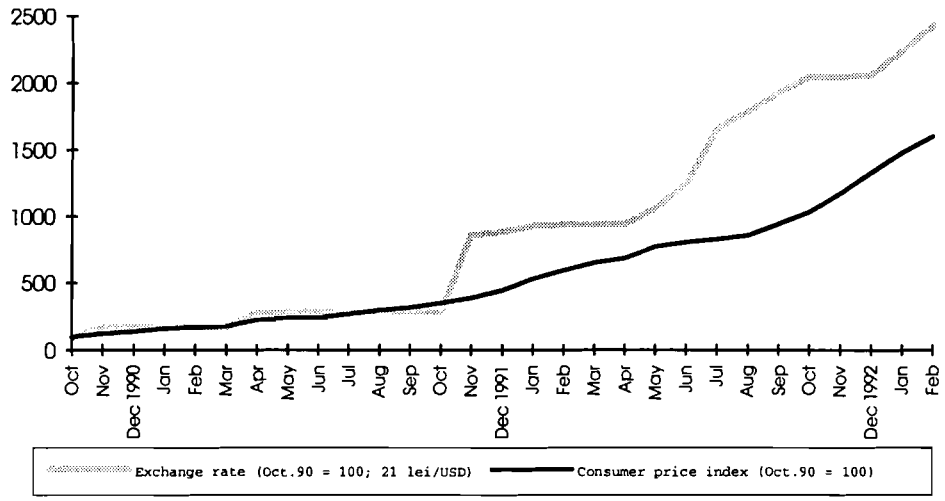

Figure 2.1 Exchange Rate of Lei to USD and the Consumer Price Index

Thus, some of the fundamental economic indicators — as wages, for instance — reach alarming heights when converted into USD.

As far as prices are concerned, the level attained could be explained by the general unfavorable condition of the economy: the reduced utilization of the output

Table 2.2 Estimated Influence of Selected Factors on Price Development, 1991 and 1992

	1991		1992	
	Wholesale prices (industry)	Consumer prices	Wholesale prices (industry)	Consumer prices
The price index (end of year) compared with October 1990 (%) *of which:*	676.3	344.5	1836.0	1230.0
modification of exchange rate	313.0	167.0	1092.0	662.0
modification of wage level	240.0	114.0	529.0	385.0
reduction of subsidies	—	—	—	57.2
other factors	123.3	63.5	215.0	125.8

Source: see *Table 2.1.*

Table 2.3 Exchange Rate and Consumer Price Index in Romania and Other Countries (1989=100)

	1991 (December)		1992 (December)	
	CPI	Index of exchange rate (devaluation)	CPI	Index of exchange rate (devaluation)
Romania	425.2	1160.0	1352.0	2704.0
Hungary	181.4	130.0	203.0[1]	148.0[1]
ČSFR	183.5	189.7	190.0[2]	181.9[2]
Poland	1309.4	769.4	1733.3[3]	961.7[3]
Bulgaria	—	—	1460.0[4]	850.3[4]

[1] July 1992
[2] October 1992
[3] August 1992
[4] Basic year 1990
Source: see *Table 2.1.*

capacities; the increase of the specific material consumption; increase of nominal wages; lack of financial discipline; and so forth. In the case of the exchange rate of the lei, which followed the trend to align with inflation, the level in mid April 1993 should have been 320 lei/1 USD; however, the actual rate was about 600 lei/1 USD — 37.5 times higher than the rate in January 1990.

In contrast to Romania, other countries in transition have exhibited a much closer relationship between price development and devaluation of their national currencies (see *Table 2.3*). The data shows that the countries which devalued their currencies less, registered smaller price increases. As a rule, except for Romania and the ČSFR (until December 1991), the devaluation index is not in excess of the price index. In Romania, the price increase is smaller than the devaluation of the lei due to the measures taken by the government to combat the monopolistic tendencies of the economic agents. The process consisted of the notification of the intention to increase prices three months in advance (now 30 days) and selling goods from inventories at the old prices in order to erode the profits to compensate for the unfavorable influence (increase) of the exchange rate and, generally, the prices of inputs.

The objective of sharply devaluating the lei was to encourage exports, while some additionally relevant side-effects were largely ignored. These included, for example, inflationary impacts of the imports and vanishing of the export stimulus when the rate of growth of the domestic price level exceeds the rate of devaluation of the currency. In fact, the Romanian government resorted to the import tax and

turnover tax exemptions and as well as to the reduction of profit taxes on exported goods in order to stimulate more export. As already mentioned, imports have been a necessity for Romania and, in most cases, the main supply of basic raw materials and energy resources. By increasing the exchange rate, the costs of those who use imported resources inevitably increased. For example, domestic crude oil was sold to the oil distilleries at 2,000 lei/ton in October 1990 and 42,225 lei/ton in October 1992. In comparison, prices of imported crude oil were 52,000 to 54,000 lei/ton. The price of gasoline increased 15 times and that of diesel oil 16 times in the same period. According to our estimates, about 60% of the increase of the price level could be attributed to the increase of the 'cost' of foreign currency, i.e. to the devaluation of the Romanian lei.

If all the influences of the exchange rate were transferred into prices, the inflation in Romania could reach alarming dimensions. Indeed, this could destabilize the social equilibrium, including the minimum agreements reached with the social partners (trade-unions) in 1991 and 1992. From this point of view, pushing the exchange rate upwards had a destabilizing impact and did not support in anyway the interests of the Romanian economy throughout the transition period. Under such circumstances, the application of the rules acting in a standard market economy is completely unrealistic. The theoretical construction implemented until today in the Romanian economy, no matter how substantiated in other countries, was in no position to resolve the crisis the country was confronted with at the time this paper was prepared. The entire range of regulations in the field of pricing were to facilitate the alignment of domestic prices for energy, fuels, and other basic raw materials with world market prices. Since the electric power costs constitute a portion of almost all products' prices, the impact of the exchange rate is obvious.

The prices of imported consumer goods are based on the prices in hard currencies negotiated with foreign suppliers and converted into lei at the current exchange rate. The final prices are supplemented by import duties, turnover taxes, and the commercial margins of the wholesalers, intermediaries, and retailers. The higher the exchange rate, the higher will be the domestic market price. A substantial contribution to the increase of consumer goods prices was brought about by the importers, who often added an exorbitant margin of up to 3,000% (which was, in fact, meant to cover their costs and profits). This situation required better regulation of import pricing so that the determination of the prices would remain free as before, but the possibilities of charging speculative prices would be limited.

The exchange rate of 600 lei/1 USD in the spring of 1993 pushed up the general price level. The price increase due only to the devaluation of the lei was expected to be as follows when compared with the price levels registered in August 1992 (when the exchange rate was 375 lei/1 USD):

- basic raw materials, fuels, and energy (which have already internationally aligned prices) by 65%;
- other industrial products by 30-52%; and,
- consumer prices by 30%.

2.5 Projections Regarding the Price Regime and Policy

The modification of reform strategy approved by the Romanian Parliament in February 1993 envisaged a complete liberalization of prices as an integral part of the future economic reform. The focus was to be on the following measures:

(i) Reducing the scope and amount of subsidies for mining products. This could reduce costs in the subsidized sectors and lead to a better and more efficient mechanism for the allocation of resources. As a counterweight, this measure could stimulate imports and exert pressure on the exchange rate via the trade balance. The implementation of such a measure should take into account the sometimes exclusive dependence of some localities on such activities as mining. This implies a need for creating new activities which could be achieved only on the grounds of economic recovery and which should ensure both the import of the relevant resources and diversification of all branches and industries;

(ii) Elimination of subsidies for all consumer goods and services scheduled for 1 May 1993 was to be achieved under the condition of full compensation for these products and with wage indexation for the other price modifications. The expected impact of removing the subsidies was a 50% price increase as compared to December 1992 (see *Table 2.4*).

(iii) Subsidies for agricultural inputs (chemical fertilizers, pesticides, and veterinary medicines) should be treated differently. In order to support this important sector, these subsidies could be removed but replaced by a premium to be granted to farmers for the agricultural products supplied.

(iv) The normalization of the evolution of prices by means of correction of consumer prices and wholesale prices. The measures for adjustment which should be taken into account for 1993 consist of eliminating the remaining subsidies to consumer goods; application of a new regime for amortizing calculated on the basis of the reevaluated value of fixed assets; and the introduction of a value added tax. In order to assure a certain price stability, these measures should be combined with a proper exchange rate policy.

(v) Abrogation of the compulsory notification of price increases and of the 30% limit on the mark-up at a suitable time.

Table 2.4 Estimated Impact of Total Elimination of Subsidies as of 1 May 1993 on Consumer and Wholesale prices (December 1992 = 100)

Consumer price index	150
of which:	
Food products	137
Other commodities	169
Services	138
Wholesale price index - average	147

Source: see *Table 2.1.*

The implementation of the above mentioned measures should be accompanied by granting the necessary social protection which will generate important wage increases with new effects on the level of prices. It is, therefore, advisable that the supervision of price negotiations by the public authorities should have been maintained throughout 1993 in all cases where no substantial competition existed or where products and services were subsidized. Under these circumstances, the inflation expected for 1993 should amount to 80-100% as compared with 200% in 1992. These projections have been made considering:

- a possible continuation of the devaluation of the lei;
- the total elimination of subsidies for consumer goods;
- application of a new regime of amortization in addition to the revaluation of fixed assets; and,
- introduction of the value added tax.

Reconsideration of the reform strategy by the Romanian government is expected to result in the reduction of annual inflation to only 15% in the subsequent 3-4 years.

2.6 Conclusions

In early 1990, price liberalization began in ernest as a crucial policy instrument of economic reform in forging the transition process to a market economy in Romania. Since this procedure took place in a highly monopolized environment, the Romanian government adopted a policy of 'gradualism'; namely, a step-by-step

deregulation of prices while simultaneously imposing some restrictions in cases where no real competition existed or where prices were subsidized from the state budget. As a consequence, price liberalization evolved in a continuous fashion. Free negotiation of prices based on demand and supply became pervasive, eventually reaching 100% in the private sector and 80% in the state-owned sector. And, today, the supervision of price negotiations is still maintained for a limited number of products in order to prevent state enterprises from unfairly utilizing their often dominant market position to charge monopoly or speculative prices.

Nonetheless, recurrent shocks to the price system (such as structural changes, liberalization by stages, partial elimination of subsidies, and so forth) combined with a marked decrease in production as well as poor financial discipline at the microeconomic or enterprise level have created and consolidated inflationary expectations of economic agents and the population in general. These developments are further reflected in high inflation rates and a continuous depreciation of the lei. Indeed, this induced new price increases and subjected Romania to undergo a very difficult period of economic recession and inflation. According to our estimates, approximately 60% of the increase in the price level can be attributed to the devaluation of the Romanian lei, particularly since prices for imported and domestic raw materials and energy resources are determined at parity with world prices. The impact of price liberalization on the purchasing power of the population and domestic demand was drastic: the level of real wages in January 1993 was only 60% of its level in October 1990, the year price liberalization began.

As excessive restrictions and gradualism of deregulation persistently proved to be costly policy alternatives, the Romanian government decided to introduce more rapid price liberalization and limit state prerogatives to a minimum with respect to this procedure. The main underlying objective of the shift in government policy is that all domestic prices should reach parity with world price levels over an acceptable time horizon and at a realistic exchange rate, hopefully stimulating structural adjustment and enterprise restructuring. Direct price control should be replaced by more indirect control through competition. In this spirit, measures to create and support a competitive environment favoring privatization, establishment of new commercial companies, as well as restructuring and eliminating existing monopolies and monopsonies must be adopted. The authors believe that the experiences of many other countries imply a need for further price regulation of goods and services produced by natural monopolies and public utilities. Active policies are required to promote enterprise restructuring and limit the price increases on various products that risk being subject to monopoly pricing due to a lack of competition and inefficiency of domestic producers. Such measures will foster a certain price stability and markedly reduce the rate of inflation.

Appendix

Table 2.1A Main Statistical Indicators of the National Economy, 1989–1992 (A: current prices); (B: percentage variation as compared to the previous year)

		1989	1990	1991	1992	1992/89 (%)
GDP (bln. lei)	A	798.0	844.0	2109.7	5450.0	
	B		-7.4	-13.7	-15.4	67.9
of which:						
Industry	A	412.9	407.0	919.0	2462.3	
	B		-16.6	-20.2	-22.5	51.6
Agriculture	A	110.9	152.0	391.2	1234.4	
	B		10.4	-4.7	-8.7	87.4
Construction	A	50.6	47.9	104.6	281.5	
	B		-9.5	-19.0	-9.9	66.0
Transportation and	A	60.0	56.5	95.6	294.9	
Telecommunications	B		-10.2	-26.2	-16.1	55.6
Sales Turnover	A	48.2	59.3	178.5	265.5	
	B		23.2	-11.1	-17.1	90.8
Other Services	A	106.4	121.3	420.3	911.4	
	B		9.4	2.6	-6.5	96.3
GDP/Employee (thousand lei)	A	72.9	77.8	195.3	534.0	
	B		-6.5	-13.3	-10.5	72.6
Investment (bln. lei)	A	236.4	168.4	314.0	700.0	
	B		-38.3	-25.8	-20.0	36.6
Total Exports FOB	A	10631.0	6201.0	4368.0	4107.0	
(million RBL + million USD)	B		-38.3	-25.8	-20.0	36.6
Ruble trade (mln.)	A	4641.0	2699.0	830.0	88.0	
	B	-7.3	-41.7	-69.2	-89.4	1.9
Dollar trade (mln.)	A	5990.0	3502.0	3538.0	4019.0	
	B	-9.4	-41.5	1.0	13.6	67.1
Total Imports CIF	A	9034.0	10221.0	5864.0	5514.0	
(million RBL + million USD)	B	10.5	13.1	-44.6	-6.0	61.0
Ruble trade (mln.)	A	5275.0	4565.0	574.0	144.0	
	B	6.8	-13.5	-87.4	-74.9	2.7
Dollar trade (mln.)	A	3759.0	5656.0	5290.0	5370.0	
	B	16.1	50.5	-6.5	1.5	142.9

Table 2.1A Continued.

		1989	1990	1991	1992	1992/89 (%)
Balance of the current account of foreign payments (mln. USD)		2514.0	-3248.0	-1184.0	-1130.0	
External debt (mln. lei)		—	211.0	1121.0	2233.0	
Retail Trade (mln. lei)	A	234.5	291.4	635.0	1609.3	
	B	1.6	17.3	-24.7	-17.5	72.9
Nominal Net Salary (lei/month)						
minimum		1990.0	2500.0	4612.0	9256.0	
average		3063.0	3384.0	7489.0	19756.0	
CPI - Average in %		100.0	130.6	274.4	851.7	
(October 1990 = 100)		100.9	155.1	261.1	310.4	
Real Average Salary (% of previous year)		102.4	104.6	82.8	85.0	71.4
Money supply (bln. lei)	A	420.9	513.5	1033.2	1717.1	
	B		22.0	101.2	66.2	407.9
as % of GDP		52.7	60.8	49.0	31.5	

Source: see *Table 2.1.*

Table 2.2A Indices of Wholesale Prices, Consumer Prices, and Exchange Rate, 1990 to 1993 (1989 = 100)

	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total per year
1990													
Wholesale prices	100.0	100.4	100.4	100.6	101.6	102.3	103.5	103.7	104.1	107.5	243.4	250.1	126.5
Consumer prices	99.5	99.5	99.5	102.1	102.1	102.1	103.2	103.2	103.2	103.2	115.0	128.3	105.1
Exchange rate	100.0	131.3	131.3	131.3	131.3	131.3	131.3	131.3	131.3	131.3	218.8	218.8	143.3
1991													
Wholesale prices	262.0	262.8	262.8	308.8	332.4	332.3	350.9	405.4	467.7	516.3	585.4	834.5	410.1
Consumer prices	160.9	172.1	183.6	232.2	244.0	246.3	272.4	302.8	324.9	356.8	397.8	452.2	279.0
Exchange rate	218.8	218.8	218.8	375.0	375.0	375.0	375.0	375.0	375.0	375.0	1125.0	1159.4	463.8
1992													
Wholesale prices	1026.8	1054.4	1126.6	1142.5	1166.4	1168.9	1206.5	1223.3	1295.9	1523.9	1885.5	1936.1	1313.1
Consumer prices	540.1	607.4	668.2	699.5	784.3	817.5	843.4	871.9	960.3	1052.4	1194.7	1352.3	886.0
Exchange rate	1218.1	1235.0	1237.5	1239.9	1397.9	1633.3	2183.7	2345.3	2531.3	2687.5	2687.5	2703.8	1925.1
1993													
Consumer prices	1507.7	1631.5											
Exchange rate	2938.1	3190.6	3662.5										

Source: see *Table 2.1.*

Table 2.3A Exchange Rate (lei/USD) and Consumer Price Index (Oct. 1990 to Feb. 1993)

	Exchange Rate		Consumer price index
Month	lei/ 1 USD	% (Oct. 1990 = 100)	% (Oct. 1990 = 100)
1990			
October	21.00	100.0	100.0
November	35.00	166.7	123.4
December	35.00	166.7	137.4
1991			
January	35.00	166.7	158.1
February	35.00	166.7	169.2
March	35.00	166.7	180.4
April	60.00	285.7	228.2
May	60.00	285.7	239.8
June	60.00	285.7	244.5
July	60.00	285.7	267.7
August	60.00	285.7	297.6
September	60.00	285.7	319.4
October	60.00	285.7	352.6
November	180.00	857.1	391.0
December	185.85	885.0	444.5
1992			
January	194.90	928.1	531.2
February	197.60	940.0	597.4
March	198.00	942.9	657.3
April	198.38	944.7	688.0
May	223.66	1065.0	771.3
June	261.32	1244.4	804.4
July	349.39	1663.8	829.6
August	375.44	1786.9	857.6
September	405.00	1928.6	944.5
October	430.00	2047.6	1035.0
November	430.00	2047.6	1175.0
December	432.60	2060.0	1330.0
1993			
January	470.30	2239.5	1483.0
February	510.50	2431.0	1605.0

Source: see *Table 2.1.*

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Part II

The Role of Monetary and Fiscal Policies in the Stabilization Programs

Chapter 3

Budget Deficit and Inflation in Transition Economies

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3.1 Introduction

Whatever the health of public finances just before the start of transition reforms, post-socialist economies tend to develop a fiscal problem, in some cases a fiscal crisis, in the course of transition. The causes of this tendency are reasonably well understood, and I shall discuss them only briefly. Less clear but vital for policy-makers are the implications of a budget deficit for the inflation rate, given the ways of financing the deficit, the recession conditions, the servicing requirements

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Earlier versions of this paper were presented at a Conference on Transition Economies at the London School of Economics, Centre for Economic Performance, on September 28-29, 1992 and at the International Workshop on Macroeconomic Stabilization of Economies in Transition in Prague 22-24 April, 1993. In writing this paper, I have benefited much from extensive discussions with Polish policy-makers. I want in particular to thank Leszek Balcerowicz, Stefan Kawalec, Andrzej Olechowski and Jerzy Osiatynski for their comments, questions and encouragement. All computer simulations were performed by Joanna Gomulka. I also wish to acknowledge the helpful comments made by Andrzej S. Bratkowski and Mark Schaffer. Section 2 on the causes of the fiscal problem draws on Gomulka (1993).

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of the accumulating public debt, and the credit requirements of the economy. Considering these implications, it is then very important to decide on budget deficit reducing policy responses which would be sufficiently effective to keep the inflation rate on a downward path and which would minimize the social concerns of the population over tax increases and expenditure cuts.

The primary aims of this paper are (i) to propose a simple macroeconomic model for the purpose of computing inflationary implications of budget deficits, (ii) to report simulation results of the model in terms of the inflation-budget deficit relationship under assumptions pertaining to transition economies, and (iii) to discuss specific policy measures intended to reduce the budget deficit. In order to make the simulation results instructive, the specific initial conditions chosen are those of the Polish economy at the end of September 1992. The model and its simulations, used in Poland in 1992 for the purpose of constructing the 1993 budget, can be utilized to discover the ratio of the budget deficit to GDP that is consistent with an inflation path and acceptable to the policy-maker. Alternatively, the model can also be used to compute the inflation path which, given the assumptions, inevitably results from a given path of the deficit/GDP ratio.

In the first year of Polish reform, the budget deficit was low and the inflation rate was high, much of it due to corrective price increases. In the second and third years of reform, 1991 and 1992, the deficit/GDP ratio tended to increase sharply while the inflation rate tended to decline. This led some economists to suggest that the relationship between the inflation rate and the deficit rate is negative. However, this apparently paradoxical phenomenon was easy to explain by noting that the observed inflation rate was the joint outcome of the cost-push and demand-pull factors, and that the initially dominating cost-push contribution to inflation was declining rapidly. The concern was, however, that there may come a point when the deficit is large enough to arrest and then to reverse the downward trend of inflation. Knowing where this point would be in 1993 was of immediate interest to Polish policy-makers in 1992.

3.2 Causes of the Fiscal Problem

Polish fiscal developments in aggregate terms are shown for the years 1987 to 1993 in *Table 3.1* (1993 values were forecasted in late 1992). The numbers indicate that the share of general government expenditures in GDP has been reasonably stable. The primary cause of the newly emerging fiscal gap has been on the revenue side. The central government was even able to reduce its expenditures as a share of GDP by some five percentage points in 1991-92, compared to the levels in the years 1987-90. State revenues as a share of GDP,

Table 3.1 Fiscal Indicators in Poland, 1987-93 (as % of GDP)

Indicator	Pre-reform			Transition				
	1987	1988	1989	1990	1991	1992[1]	1993[2]	1993[3]
State budget								
Revenues	34.2	35.5	30.8	33.3	25.8	27.1	25.0	27.5
Expenditures[4]	37.7	37.0	36.9	32.7	31.7	34.3	35.0	32.7
Balance[4]	-3.5	-1.4	-6.1	0.7	-5.9	-7.2	-10.0	-5.2
General								
Revenues	47.0	48.0	41.4	47.9	41.6	41.3	41.0	42.6
Expenditures	47.8	48.0	48.8	44.8	47.2	48.2	51.0	47.2
Balance[4]	-0.8	0.0	-7.4	3.1	-5.6[5]	-6.9	-10.0	-4.8

[1] Preliminary.
[2] Expected outcome in the absence of corrective measures, the author's estimates.
[3] Expected outcome following the approval of corrective measures by parliament.
[4] On a commitment basis, except external interest which is on a cash basis.
[5] This IMF estimate of the 1991 deficit is on a commitment basis; except external interest, which is on a cash basis. The date of the estimate is Spring 1993 (Supplementary Backgroud Material for the GATT, March 17, Table 1).
Definitions:
State budget is the budget of the central government. General government includes central government, local authorities and extra-budgetary funds.
Sources:
IMF (September 3, 1993) for 1988–1993, and the Polish Finance Ministry. The primary data are all provided by the Polish authorities.

however, fell by about ten percentage points in 1991 and have remained low. This fall can be traced mainly to the collapse of enterprise profits, but also in part to a fall in revenues from turnover taxes as industrial output fell much more than the GDP. This suggests that the primary remedy for the budget deficit problem must be found on the revenue side, probably through an increase of indirect taxes.

Nevertheless, the expenditure side is also interesting because of large shifts in composition. Perhaps the most reform-related expenditure items are subsidies. Their pre-reform structure — about two-thirds of the total going to the household sector and about one-third to the enterprise sector — has remained virtually unchanged. Yet, the total sum of subsidies has fallen dramatically, from about 16% of GDP in 1987-8 to 12.9% in 1989, 8.2% in 1990 and only 4.8% in 1991. However, the budgetary transfer to pension funds and the Labor Fund increased from 4% of GDP in 1987 to about 8% in 1990-91. The cost of unemployment benefits is still a relatively minor burden, about 1% of GDP in 1991-2.

The main problem on the expenditure side has been the meteoric rise of expenditure on pensions and other social insurance items. This occasioned the need to transfer resources from the state budget to the main three extra budgetary Funds: FUS (mainly workers' pensions), KRUS (mainly farmers' pensions) and the Labor Fund (mainly unemployment benefits). Total expenditures of the three Funds increased from 11% of GDP in 1987 to 18% in 1991, and 21.6% in 1992. Pensions alone accounted for 6.6% of GDP in 1987, but as much as 11.1% by 1991 and 13.5% in 1992. As subsidies to the household sector were reduced, the authorities apparently felt compelled to increase the average pension to about two-thirds of the average wage rate in 1992, up from about 50% the average wage rate before the reform.

A fortunate aspect of the Polish fiscal position so far has been the light burden, about 1% of GDP, of servicing the external debt. The agreement with the Paris Club of April 1991 on about USD 30 billion of sovereign debt gave Poland three years during which 80% of interest payments due would be forgiven. Poland also continues not to service the bulk of the USD 13 billion of commercial debt. It may therefore be expected that in 1994 and thereafter the burden of servicing the external debt will greatly increase, possibly to about 3% of GDP. This will still be lower than the Hungarian burden now which, at some 5% of GDP, is a major cause of the weak fiscal position in that country.

About 90-100% of the deficit in Poland as well as in most other transition economies, is financed by the banking sector with about one-third to two-thirds of this financed by the central bank. The difficulties in reducing the budget deficit are related to recession and to insufficient political cooperation between the government and the parliament, the latter reflecting in part the rising national concern over social costs of the transition.

The budget problems have also arisen due to inadequate understanding of the reasons for a large budget improvement at the beginning of the reform, in the fourth quarter of 1989 and the first quarter of 1990. During that period of very high inflation, the nominal (zloty) value of inventories of materials, semi-finished and finished goods, increased rapidly. In line with the Polish accounting system, the consequent capital gains were counted as profits. However, insofar as they did not reflect any change in the volume of these assets, the gains were only 'paper profits'. The existence of these profits was well known already in 1989-90, but the extent of their impact on total profits and corporate taxes was never properly estimated. An attempt at such an estimate was made recently by Schaffer (1992) and, independently and less accurately, by Barbone (1992). It appears that these paper profits significantly exceeded 'true profits' in the periods in question (fourth quarter of 1989 and first quarter of 1990), increasing the tax contribution of the enterprise sector by a factor of 2.

Table 3.2 Transfer to Social Insurance Funds in Poland, 1988-92

	1988	1989	1990	1991	1992
To FUS:					
% of state budget	2.0	4.2	4.5	10.5	15.8
% of FUS's expenditures	8.0	12.5	16.3	19.2	26.2
To KRUS:					
% of state budget	1.9	3.5	3.8	6.5	7.9
% of KRUS's expenditures	75.0	99.7	96.8	87.3	94.2

Source: Polish Ministry of Finance.

This automatic anti-inflationary stabilizer had already helped to eliminate the budget deficit in November and December 1989. It also accounts for the fact that, in 1990, corporate income tax and dividend tax revenues represented about 16% of GDP and covered half of the total state budget expenditure, compared with about 11% of GDP in 1985 and 7.8% in 1982, which covered less than one-third of the total expenditure.

It is now clear that the government made two major errors in the fiscal field: (1) it over-estimated the amount of revenues from the corporate and dividend taxes for 1991 by 6.5% of GDP, and (2) it failed to increase indirect taxes sufficiently to quickly compensate for the shortfall in revenues from the direct enterprise taxes. In view of the technical difficulties associated with introducing the VAT system, the government could have sharply increased the turnover tax by broadening its base and raising tax rates. The fiscal situation would also have been improved by a stricter wage policy. The excess wages tax was high and very progressive, but the instrument was ineffective due to the fact that the effective price indexation of wage norms was almost 100%, since the summer of 1990 irrespective of the growth in nominal wages. The excessive and financially unsustainable indexation of wages and benefits continued throughout the period 1990-92. A restrictive incomes policy would have increased profits and therefore budget revenue, and it would have reduced wages in the budget sphere as well as wage-indexed welfare benefits and, therefore, budget expenditure. The imposition of such an income policy would have required, however, close cooperation between the government and parliament, and this was singularly lacking in 1991 and continued to be insufficient in 1992.

Cooperation was and continues to be vital in implementing a program of budget savings. These are necessary in view of the development portrayed in *Table 3.2.* Underlying that table is the data shown in *Table 3.3.* A closer inspection of these figures and of *Table 3.2.* shows that the crisis of public

Table 3.3 Budgetary Costs of Pensions and Unemployment Benefits, 1989-93

	1989	1990	1991	1992	1993
Pensions:					
No. (million)	6.8	7.4	8.0	8.5	8.9
Cost (% of GDP)	7.2	9.4	11.4	12.8	13.3
Unemployment benefits:					
No. (million)	0.0	0.5	1.4	1.4	1.2
Cost (% of GDP)	0.0	0.5	1.0	1.1	1.0
Total cost (% of GDP)	7.2	9.9	12.4	13.8	14.3

Note:
Cost is net of personal taxes; numbers are averages for the year. Pensions are of three categories: old age, early retirement and disability. The first two categories represent about 60% of the total. The average unemployment benefit is about 32% of the average wage and about 50% of the average pension, the latter now being equal to about 65% of the average wage.
Source:
Author's estimates based on Poland's Ministry of Finance data for 1989-92 and projections for 1993.

finance may be interpreted as being largely the result of a sharp increase in welfare expenditures. The cost of unemployment benefits is as yet insignificant compared with the cost of pensions, which is the result of a large increase in both the number of pensioners — the effect of recession and inherited legislation — and the real value of the average pension.

To conclude this discussion on public finance, it is worth noting two circumstances that are important and common to nearly all transition economies and that complicate the policy-maker's task of reducing the budget deficit. One is the poor quality of bank assets and the other is widespread evasion of taxes in the private sector.

The banking sector seeks to improve its portfolio of assets by lending more to the government and less to economic units. Given that, in Poland, about 50-60% of all enterprise debt is not being (properly) serviced and that the government debt is fully serviced, the ability of the banking system to pay reasonable interest on deposits is enhanced with the persistence of a large budget deficit. Apart from stimulating somewhat the real aggregate demand in the short-run, the deficit is thus also a way of providing a safety net for the banking system in the long term. In the course of time, the poor quality debt will be a declining share of all banking assets, and the significance of the budget deficit for the banking sector should consequently also decline.

The tax collection problem is in turn inducing the members of parliament representing taxpayers (who are the majority of the electorate) to impose an inflation tax in favor of other taxes. The reason is that inflation tax, because it is difficult to evade, is also paid by those operating in the black economy.

3.3 The Model

At this point, it is useful to list four basic assumptions of the model.

Assumption (i): *All of the deficit is financed by bank credit from either commercial banks or the Central Bank.* In all transition economies, except Hungary and China, the sale of government paper to the public, domestic and foreign, is in its infancy. Given the low credibility of government policies and the lack of attractive alternative assets, these sales are likely to remain low.

Assumption (ii): *Credit provided to the economy (enterprises and households) is to grow in real terms at a given rate.* This is a side condition which imposes a constraint on the size of the budget deficit. The given rate is a policy parameter. The crowding out of enterprise credit is admitted if the rate is set to be less than the growth rate of the economy. It is implicitly assumed that the demand for bank credit by enterprises and households is always sufficient to use up the credit supplied.

Assumption (iii): *Real GDP grows at a constant rate and dollar reserves grow at another constant rate, both given parameters.* After two or three years of rapidly falling activity, output in transition economies tends to stabilize for a while at a low level and then begins to increase at a moderate growth rate. The model is applied at the point when this moderate growth begins to take place. Given that this is a medium-term analysis, the budget deficit path is assumed to have no impact on the growth path.

Assumption (iv): *The real exchange rate of the US dollar is constant.* The US dollar is taken to be the reserve currency. Dollar reserves are typically assumed to be proportional to imports, and these tend to grow somewhat faster than the real GDP.

Notation:

M_t broad money, end of period t;

$K_{1,t}^{G}$ accumulated credit to government by the Central Bank, end of period t;

$K_{2,t}^{G}$ accumulated credit to government by commercial banks, end of period t;

$K_{2,t}^{E}$ accumulated credit to the economy by commercial banks, end of period t;

R_t net international monetary reserves of the banking system, end of period t;

e_t nominal exchange rate, average in period t;

i_t inflation rate in period t;

r_1 effective interest rate on government debt to the Central Bank;

r_2 interest rate on government debt to commercial banks;

d_t budget deficit as a ratio of nominal GDP in period t;

x_t budget deficit ratio net of servicing the public debt as a ratio of nominal GDP in period t;

v_t velocity of money circulation in period t.

Given our assumptions (i) to (iv), the first group of equations of the model is as follows:

$$Y_t = (1+g)\ Y_{t-1} \tag{1}$$

$$R_t = (1+g+\varepsilon)\ R_{t-1} \tag{2}$$

$$v_t = (1+\gamma)\ v_{t-1} \tag{3}$$

$$e_t = (1+i_{t-1})\ e_{t-1} \tag{4}$$

$$K_{2,t}^{E} = (1+\alpha)(1+i_{t-1})\ K_{2,t-1}^{E} \tag{5}$$

In the simulations of the model economy, the time unit chosen is one quarter of a year. The one-period lags in (4) and (5) are adopted to ease these simulations. Equations (1) and (2) are implied by assumption (iii), equation (4) by assumption (iv) and equation (5) by assumption (ii). According to (3), the velocity of monetary circulation is changing (falling if $\gamma < 0$) exponentially. The behavior of v during transition is an interesting subject in its own right, and we shall discuss it later in the paper.

The second group of equations is as follows:

$$M_t = M_{t-1} + \Delta K^G_{1,t} + \Delta K^G_{2,t} + \Delta K^E_{2,t} + e_t \Delta R_t \tag{6}$$

$$\Delta K^E_{2,t} + \Delta K^G_{2,t} = \beta(\Delta K^G_{1,t} + e_t \Delta R_t) \tag{7}$$

$$\Delta K^G_{2,t} + \Delta K^G_{2,t} = r_{1,t}(K^G_{1,t-1} + K^G_{1,t})/2 + r_{2,t}(K^G_{2,t-1} + K^G_{2,t})/2 + x_t p_t Y_t \tag{8}$$

$$r_{1,t} = \mu\, r_{2,t} \quad \text{where} \quad 0 < \mu \leq 1 \tag{9}$$

$$r_{2,t} = i_t + \delta \quad \text{where} \quad \delta > 0 \tag{10}$$

$$M_t = p_t Y_t / v_t \tag{11}$$

$$p_t = (1+i_t) p_{t-1} \tag{12}$$

$$d_t = (\Delta K^G_{1,t} + \Delta K^G_{2,t}) / p_t Y_t \tag{13}$$

By (6), components of the change in broad money are: new net credit to government by the banking system, new net credit to the economy by commercial banks and the value, in domestic currency, of a change in international reserves. This equation follows from the definition of broad money:

$$M_t = NDA_t + e_t R_t$$

where *NDA*, net domestic assets of the banking system, are:

$$NDA = \textit{total accumulated credits} + \textit{other net assets}$$

The change in 'other net assets' equals the valuation adjustment of the net international reserves, which is $-\Delta e_t R_t$. Hence,

$$\begin{aligned} \Delta M_t &= \Delta(NDA_t) + \Delta(e_t R_t) \\ &= (\textit{net new credits})_t - (\Delta e_t) R_t + (\Delta e_t) R_t + e_t \Delta R_t \\ &= (\textit{net new credits})_t + e_t \Delta R_t, \end{aligned}$$

which is equation (6).

In equation (7), new credit to the government by the Central Bank, ΔK_1^G, and the value of a change in reserves, $e\Delta R$, are taken to be a proxy for a change in the base money of the banking system. The volume of new credit expansion by commercial banks is assumed to be proportional to the amount of that new base money.

These two equations, 6 and 7, may be solved in terms of ΔK_1^G and ΔK_2^G, giving this result:

$$\Delta K_{1,t}^G = \frac{1}{1+\beta}\Delta M_t - e_t \Delta R_t \tag{14}$$

$$\Delta K_{2,t}^G = \frac{\beta}{1+\beta}\Delta M_t - \Delta K_{2,t}^E \tag{15}$$

From (14) it follows that $1+\beta$ is the money multiplier in this model. The left-hand side of (8) is the magnitude of the deficit financing required to pay for the cost of servicing the public debt and the purchase of goods and services, which is the right-hand side of (8). The operational deficit variables are d and x, the difference between them reflecting the cost of servicing the debt, as a proportion of GDP.

The effective budgetary cost of deficit financing by the Central Bank is, typically, only the resource cost of operating the Bank and printing the money. The Treasury may pay the Bank the same high interest as it does for commercial credit. Being a 'budgetary unit', however, all its profits should be returned to the government. In transition economies, some of the profits of the Central Bank may be used to subsidize some of the banks, e.g., those which fell victim of the deteriorating financial position of state enterprises or farmers. The interest rate r_1 would in this case also incorporate such hidden subsidies. This rate is still typically a small fraction of the commercial rate.

3.4 Two Types of Simulations

In version A, inflation path i_t, $t = 1, 2.....$ is assumed to be given by the policy-maker and the model may be used to compute the deficit paths for d_t and x_t. This is a situation where the policy maker has an a priori view about the speed at which he wishes to reduce the inflation rate, and all he wants to know is the size of the budget deficit in the course of time that is consistent with that view.

In version B, the policy maker has a view about the budget deficit path and seeks to discover the inflation path that would result.

	Version A inflation path given, deficit path implied	**Version B** deficit path given, inflation path implied
(6')	$p_t = (1+i_t)p_{t-1}$	$M_t = \frac{1}{1-d_t v_t}\,[M_{t-1}+e_t\Delta R_t+\Delta K^E_{2,t}]$
(7')	$M_t = p_t Y_t/v_t$	$p_t = v_t M_t/Y_t$
(8')	$r_{2,t} = i_t + \delta$	$i_t = (p_t-p_{t-1})/p_{t-1}$
(9')	$r_{1,t} = \mu r_{2,t}$	$r_{2,t} = i_t + \delta$
(10')	$\Delta K^G_{1,t} = \frac{1}{1+\beta}\Delta M_t - e_t\Delta R_t$	$r_{1,t} = \mu\, r_{2,t}$
(11')	$\Delta K^G_{2,t} = \frac{\beta}{1+\beta}\Delta M_t - \Delta K^E_{2,t}$	$\Delta K^G_{1,t} = \frac{1}{1+\beta}\Delta M_t - e_t\Delta R_t$
(12')	$d_t = (\Delta K^G_{1,t}+\Delta K^G_{2,t})/p_t Y_t$	$\Delta K^G_{2,t} = \frac{\beta}{1+\beta}\Delta M_t - \Delta K^E_{2,t}$
(13')	$x_t = d_t - \frac{r_{1,t}(K^G_{1,t-1}+K^G_{1,t})}{2p_t Y_t}$	$- \frac{r_{2,t}(K^G_{2,t-1}+K^G_{2,t})}{2p_t Y_t}$

Equations (1) to (5) are common in both versions. The forms and sequences of the remaining eight equations, (6) to (13), vary as between the version.

These particular sequences of equations make clear the causality which operates in this model.

In version A, the quantity of money supplied accommodates the given price path. This quantity poses a constraint, given changes in international reserves, on the amount of credit provided by the Central Bank to finance budget deficit. This quantity also limits, for a given amount of commercial credit to the economy, commercial financing for the budget. Available bank financing from both sources determine the size of the budget deficit.

In version B, the targeted budget deficit determines the quantity of money required and supplied, given the changes in foreign reserves and the amount of new net credit to the economy. This quantity in turn determines the price path,

as well as each of the two types of budgetary financing. The latter then determines the cost of servicing the public debt.

In both versions, interest rates are inflation led. The relatively high velocity of money circulation observed in transition economies has the effect of magnifying the inflationary impact of a given budget deficit.

3.5 Simulation Results

As mentioned already, one quarter is taken to be the time unit. The simulations run for 40 quarters, and the starting conditions chosen are broadly those pertaining to Poland in or, when appropriate, at the end of, quarter 3, 1992. The specific magnitudes of the parameters and the initial values of the variables are as follows:

$$\alpha = g = 0.008,\ \gamma = 0,\ \varepsilon = 0.002,\ \delta = 0.02,\ \mu = 0.2,\ \beta = 5/3$$

$$Y_0 = 300,\ p_0 = 1,\ M_0 = 420,\ R_0 = 7,\ e_0 = 14,$$

$$K_{1,0}^{G} = 52,\quad K_{2,0}^{G} = 30,\quad K_{2,0}^{E} = 240$$

The important parameter specification is that $\alpha = g = 0.08$. It means that both the GDP and the real credit to the economy are assumed to grow at a common and constant rate of 0.8% per quarter (3.2% per year). It is also assumed, in all simulations presented in *Figures 3.1* to *3.10* in *Appendix 2*, that the velocity of money circulation will be constant, as it apparently has been in Poland since mid-1991 (see *Figures 3.11* and *3.12* in *Appendix 2*).

In all four simulations of version A of the model, the quarterly inflation rate declines ultimately to 1%, but the starting rate varies from 7% in *Figure 3.1*, 11% in *Figure 3.2*, 16% in *Figure 3.3* to 21% in *Figure 3.4*. The initial inflation rate is thus rather high, but the targeted rate of disinflation is assumed to be fairly rapid.

The implied pattern of the deficit path is seen to be similar to the pattern of the inflation path. It is interesting that the deficit rate of 8% to 10% of GDP is consistent only with the quarterly inflation rate of some 15%. If the deficit rate is held at 10% throughout (*Figure 3.9*), the inflation rate would stabilize at about 17% per quarter (about 87% per year). This balanced inflation rate is nearly proportional to the balanced deficit rate. This result rests on the stability of the velocity of money. When the deficit rate is held at 20% of GDP, the inflation rate stabilizes at about 35% per quarter (about 232% per year) (*Figure 3.10*).

In Poland, the budget deficit of the general government already reached 5.6% of GDP in 1991 (*Table 3.1*). It was estimated that if no new fiscal and expenditure measures were taken, it would reach 8% of GDP in 1992 and about 10% in 1993. Based on the simulation results, Poland's economic authorities were advised that, again in the absence of new measures, the annual (December to December) inflation rate would progressively increase, assuming that the necessary monetary expansion by the Central Bank to finance the deficit would be forthcoming, from 45-50% in 1992 to about 50-60% in the first half of 1993 and to about 80-100% in the second half.

To maintain credibility of its macroeconomic policy, the Polish Government decided to set the size of the budget deficit in 1993 at a level which would ensure that, at least, the annual inflation rate does not increase above the 40% level. The level has thus obtained the significance of a critical policy choice.

Simulations of version B of the model proved useful in discovering this critical size of the budget deficit. The results are displayed in *Figures 3.5* to *3.8*. In all four runs the deficit rate is assumed to decline in a step-wise manner to 0%, by 1% annually, starting from a level that varies from 3% to 9% of GDP. This exercise identified the critical size of the budget deficit in Poland, in the period from quarter 4 in 1992 to quarter 4 in 1993, to be about 5% of GDP. The 'new fiscal measures' were subsequently proposed to and approved by parliament to ensure this outcome for 1993.

3.6 Theoretical Controversies

The re-emerging budget deficit problem and an on-going debate about the best ways of responding to it have rekindled the earlier controversy about the causes of recessions in transition economies.

Kornai (1993) calls the post-communist recession a "unique phenomenon: transformational recession" (page 2). He sums up the results of his research team in Hungary by saying that its six main causes "reflect the fundamental changes required in attitudes and behavior to achieve an altered economic structure" (page 2). These causes are: shift from a sellers' to a buyers' market; contraction of investment; shift in the composition of output; shift in the composition of foreign trade; disruption of coordination; and, enforcement of financial discipline. In his view: "restructuring the (post-communist) economy is not simply a Keynesian type problem, to be solved by boosting aggregate demand. It includes the Schumpeterian process of creative destruction. ... If the pace of creation is slower than the process of destruction, if new capacities satisfying new demands cannot

counterbalance the rapid liquidation of obsolete capacities, the net result is recession" (page 3).

With this diagnosis Kornai joins those economists who have argued all along that various transition related shocks, in particular price liberalization and the collapse of intra-CMEA trade, have sharply changed the product composition of demand, rendering a significant segment of the existing capacities not useful any more (Gomulka, 1989, 1991, 1992; Dąbrowski, 1992; Kastberg, 1991; Lane, 1991; Siebert, 1991). Some of the capacities may become useful later, but this restructuring would require time, investment, financial resources, and some retraining of the labor force. In the meantime the aggregate level of real demand, given free prices, falls automatically to the reduced level of real aggregate supply. Any attempt to reflate the economy, unless directed at specific sectors where there is a surplus capacity, would increase prices or imports rather than outputs.

A different view of the transformation recession, one inspired by the Keynesian-Kaleckian theory, is articulated well and in a spirited way, by Amit Bhaduri and Kazimierz Łaski (1992). They note that the 'paradox of thrift' is nowadays often forgotten and that "some multilaterate institutions recommend indiscriminately austerity, especially in government spending, both for developing countries in balance of payment difficulties and for the former command economies trying to make a transition to the market system". In their view "the economic disaster of pursuing the orthodox remedy of 'austerity only' is now far too apparent in East Europe ... By restricting demand in almost every possible way — through an extremely tight money policy, reduced government expenditure in an attempt to reduce budget deficit, and restraint on wage — these economies have been precipitated in an economic depression which can be compared only with the Great Depression of the 1930s in the capitalist world" (page 5). They continue to remind us that "several democracies could not survive that economic debacle", and warn that "... it will be unwarranted optimism to believe that all the fragile democracies of Eastern Europe can survive an economic depression of this magnitude, if it lasts much longer" and, quote: "Those who do not remember history, are condemned to repeat it" (page 5).

In a recently published assessment (Portes, 1993), Mario Nuti and Richard Portes regard the fall in output as a big puzzle for which they themselves have no explanation. However, they reject the 'J-curve hypothesis' and insist that we are not observing Schumpeterian 'creative destruction' (too little innovation, investment and competition) and, instead of a J-curve, we observe a L-curve. They also argue that policies were too tight in (former) Czechoslovakia and, initially, in Poland. But they find it difficult to explain an equally deep recession in Hungary or much deeper recessions in Bulgaria, Romania and most republics of the Former Soviet Union where policies have not been tight. (This difficulty would also be encountered by Keynesians). They appear to be in favor of modest

budget deficits but, in contrast to orthodox Keynesians, do recognize the existence of a widespread fiscal crisis and advocate strong actions to reduce large budget deficits.

In these discussions it is important not to overlook that during the Great Depression prices were falling, there were no dramatic shocks in the composition of demand nor in the institutional and ownership arrangements, and real interest rates were very high. Transition economies, apart from deep recession, experience also high inflation and low levels of savings and investment. In these circumstances the authorities should try to formulate their state budgets to be anti-inflationary, anti-recessionary, and promoting long-term development. In Poland and the other transition countries, perhaps with the exception of Hungary, the high budget deficit is the main source of high inflation. Moreover, by keeping interest rates high, the deficit discourages private investment, particularly in housing, so it is prorecessionary in this respect. It also prompts authorities to reduce government expenditure on infrastructure, research, labor retraining and other development promoting activities, rather than reduce current expenditure on public consumption.

3.7 Policy Responses

The primary purpose of fiscal policy during economic transition should therefore be, I maintain, to achieve large and enduring reduction in public dissaving, thereby controlling a major source of current inflation, reducing the interest rate, freeing the credit and saving required for enterprise sector growth, and protecting the external balance.

Given this purpose, two key questions for reform governments are the following: what specific measures should be taken in order to contain and reduce budget deficit and how to achieve parliamentary approval of the measures as well as some support by the general public. While economic and social considerations influence the answer to the first question political considerations underly the answer to the second question.

The package of policy measures designed by the Polish reformers in the later part of 1992 for implementation in 1993, represented some 6% of the GDP expected in 1993. The size of the package was the first crucial decision. This decision, as explained earlier in the paper, was motivated by the desire to keep the inflation rate below 40%, that is somewhat lower than in 1992. The second crucial decision concerned the composition of the package in terms of increased taxes and reduced expenditures. This composition was as follows (the effect of the policy measure in terms of % of GDP is given in parentheses):

Revenue to be increased by 3.2% of GDP:

(i) An increase in excise duties and the statutory turnover tax rates (1.5%);
(ii) A temporary (two-year) import surcharge of 6% (0.9%);
(iii) Freezing personal income tax brackets (0.5%);
(iv) Freezing the depreciation allowance for investments made before 1990 (0.3%).

Expenditures to be reduced by about 2.5 to 3% of GDP:

(v) Reducing the ratio of pensions to the average wage by 9% (1.5% on an annual basis, about 1% in 1993);
(vi) Reducing wage bill allocations in real terms in the budgetary sphere (0.7%);
(vii) Reducing current non-wage expenditure in the budgetary sphere (0.8%).

The package above affected everyone, but its composition was designed to distribute the pain in a manner that had a chance of being seen in parliament and by the public as fair. There was also the question of opportunity costs associated with the inflation tax, higher interest rates, and lower attractiveness of Poland to foreign investors — that could have been incurred in the absence of the package; or alternative costs if other measures were taken instead.

3.8 Concluding Remarks

In transition economies high budget deficits represent a double threat: they use scarce private savings to finance (public) consumption rather than (public or private) investment and they keep inflation and interest rates very high. They have also the ability to (re-)produce the situation of a (near) hyperinflation quite rapidly.

We have, in this paper, identified two major reasons behind the potentially large inflationary impact of a given budget deficit, both characteristic for most transition economies. They are: (1) that the deficit is financed almost exclusively by monetary expansion rather than external or internal borrowing, or the sale of state assets, and (2) that the velocity of money circulation is typically

exceptionally high, translating a given monetary expansion into an unusually large price increase.

To reduce the threat of a public finance crisis, it is important to act quickly to reduce the dependence of the revenue side on enterprise profits. However, even more important is to reduce substantially subsidies to enterprises and ensure that various indexation rules do not lead to an unsustainable increase of pensions and other social benefits in relation to wages.

The simulation results of this paper depend on a number of parameters, some of them technical, others representing policy choices. The primary aim of the paper was to show that these results and the underlying model can be a useful tool to a policy-maker who wishes to identify medium term implications of these policy choices, above all the choice of a budget deficit path, on inflation, public debt and interest rates.

Appendix 1: The Velocity of Money Circulation

The movements of this key monetary variable in Poland are shown in *Figures 3.11* and *3.12*. There are, in fact, two velocities shown in *Figure 3.11*, pertaining to two categories of money. Velocity denoted by v_1 pertains to domestic money, both currency and deposits, while v_2 is the velocity of total money, which includes in addition to domestic money, foreign currency deposits of households and enterprises held in banks operating in Poland.

To arrive at v_1 and v_2 for each month, first monthly nominal GDPs were estimated, and these were annualized by multiplying them by 12. Monthly nominal GDPs were estimated with the help of the assumption that the flow of real GDP had been constant within each year and the fact that the sum of nominal monthly GDPs for each year must equal the officially reported annual nominal GDP. The consumer price index was used as the GDP deflator.

Since January 1990 the official exchange rate is about the same as the market exchange rate, and this common rate was used to obtain the domestic value of foreign currency deposits. For the year 1989, the official exchange rate was used to evaluate only enterprise foreign deposits, while the much higher free market rate was used to value the households deposits.

The abnormally high market value of the dollar before the reform depressed velocity v_2 during that period. Velocity v_1, although not affected by this abnormality, increased sharply during the period of very high inflation (five months before and several months after the big bang of January 2, 1990). As inflation subsided, households have started to rebuild their depleted (in real terms) zloty deposits. This behavior tended to reduce the ratio of total cash to all

deposits and, consequently, also the velocity of money circulation. However, the two velocities have been fairly stable since the middle of 1991. It is this stability which underlines my assumption in simulations A and B of the velocity remaining constant in the medium-term.

Appendix 2: Simulations for Poland 1993–2002

Legend for *Figures 3.1–3.10*:

————	d_t, budget deficit (as proportion of GDP)
- - - - - - - - - -	x_t, net budget deficit (net of interest on public debt)
_ · _ · _ · _ · _ ·	i_t, inflation rate per quarter

(A) Quarterly simulations of the relationship between the inflation rate i_t and the deficit rate d_t.

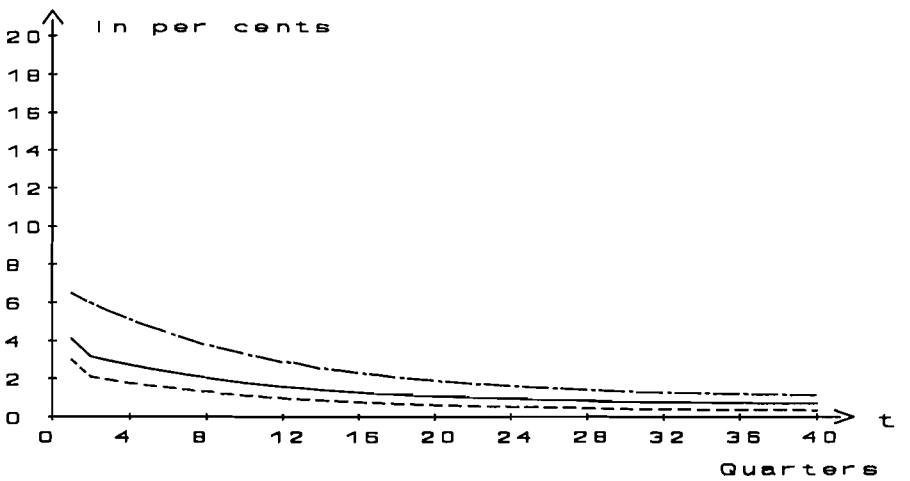

Figure 3.1 Assumed inflation path $i_t = 0.06(1.1)^{-t} + 0.01$

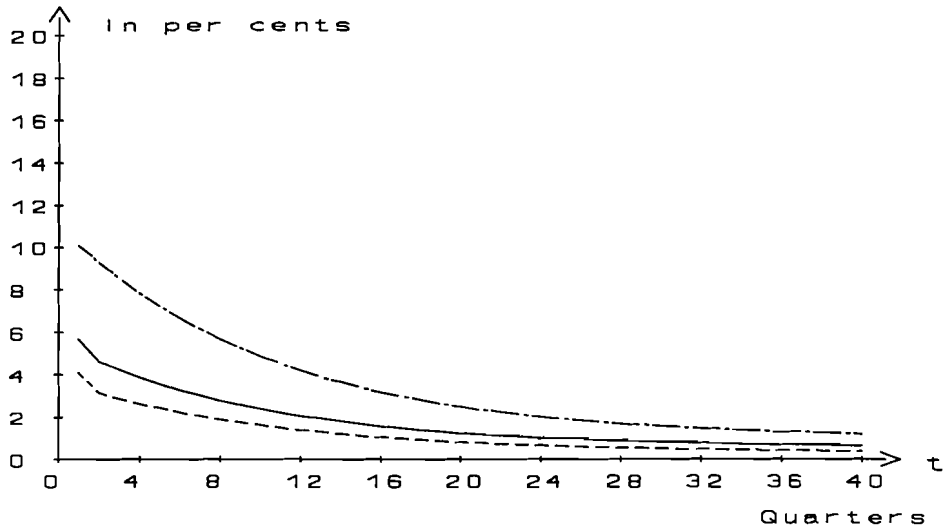

Figure 3.2 Assumed inflation path $i_t = 0.1(1.1)^{-t} + 0.01$

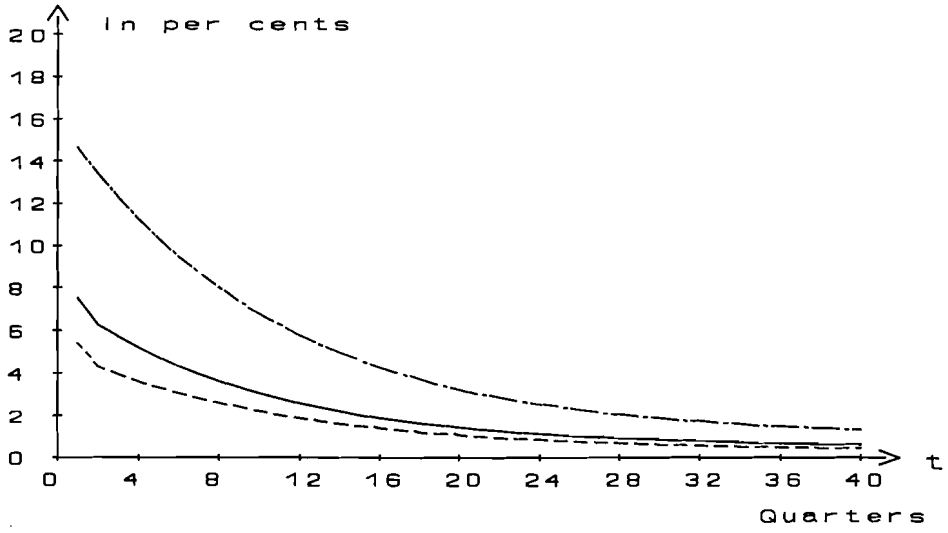

Figure 3.3 Assumed inflation path $i_t = 0.15(1.1)^{-t} + 0.01$

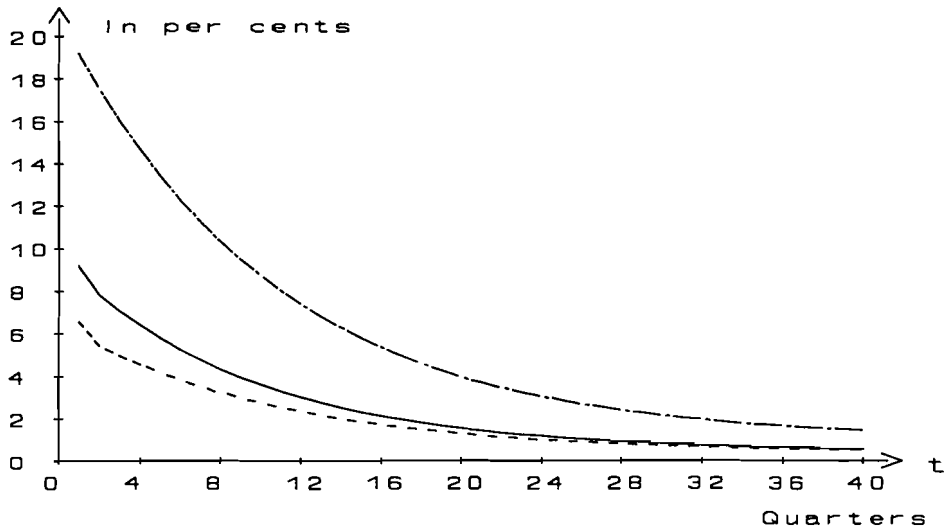

Figure 3.4 Assumed inflation path $i_t = 0.2(1.1)^{-t} + 0.01$

(B) Quarterly simulations of the impact of a given budget deficit on inflation.

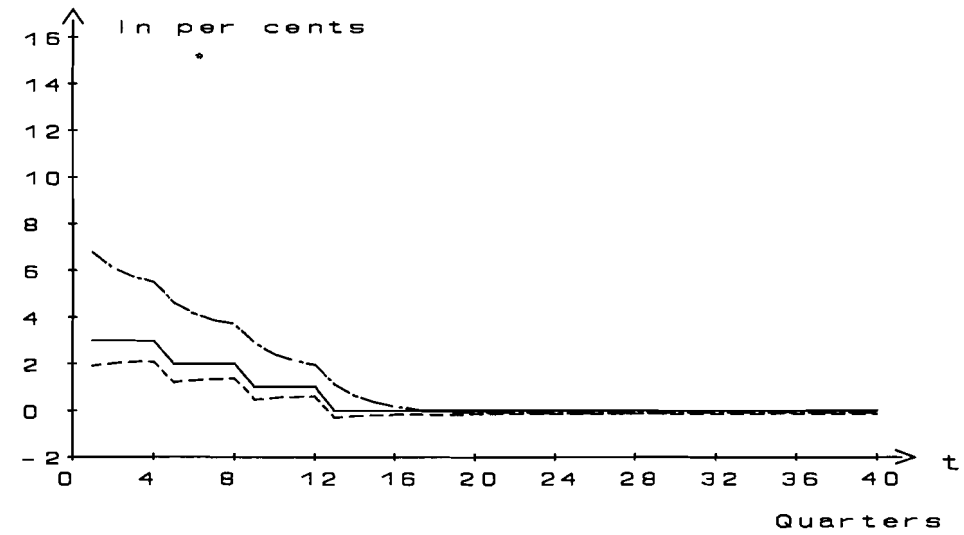

Figure 3.5 Assumed budget deficit path starting at 3% of GDP

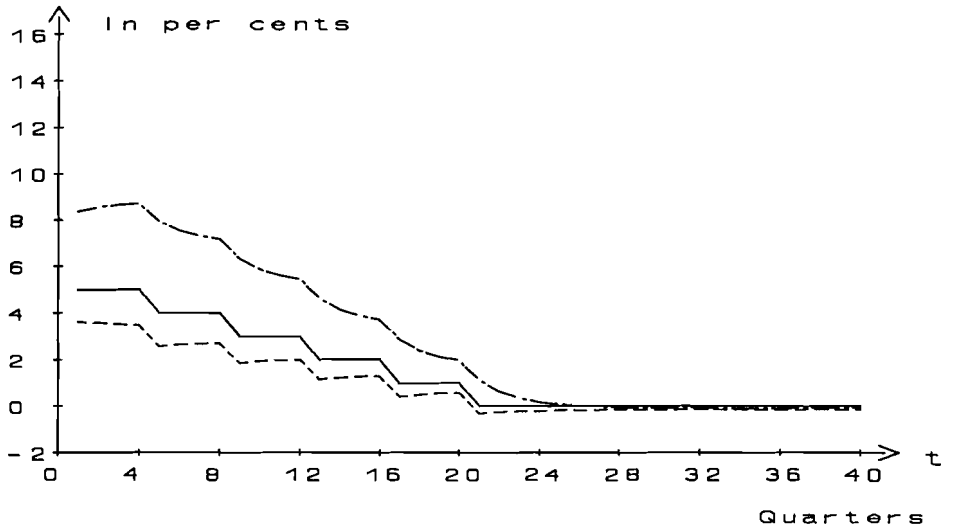

Figure 3.6 Assumed budget deficit path starting at 5% GDP

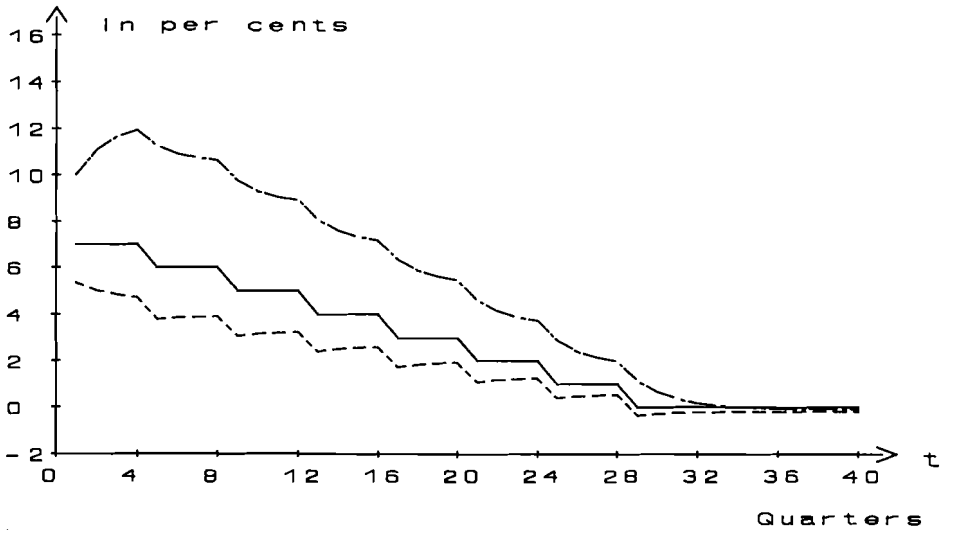

Figure 3.7 Assumed budget deficit starting at 7% GDP

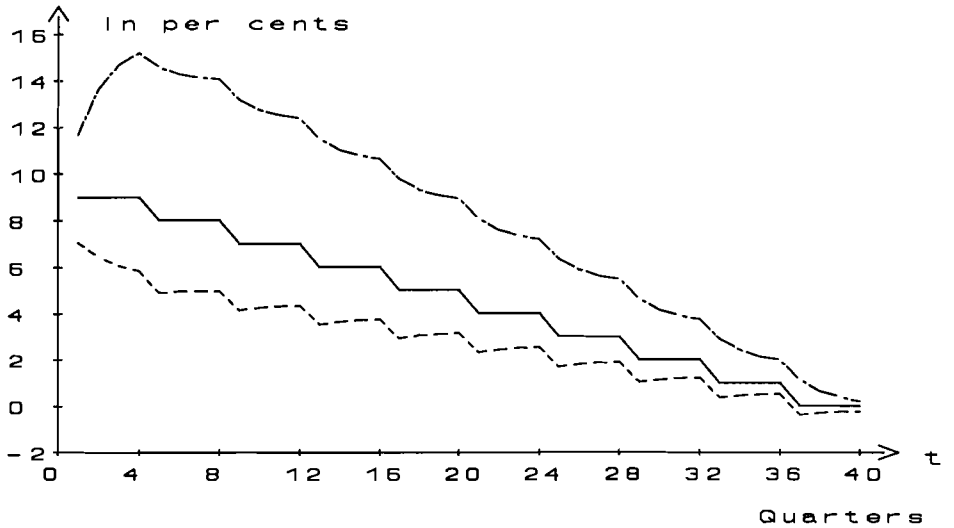

Figure 3.8 Assumed budget deficit starting at 9% GDP

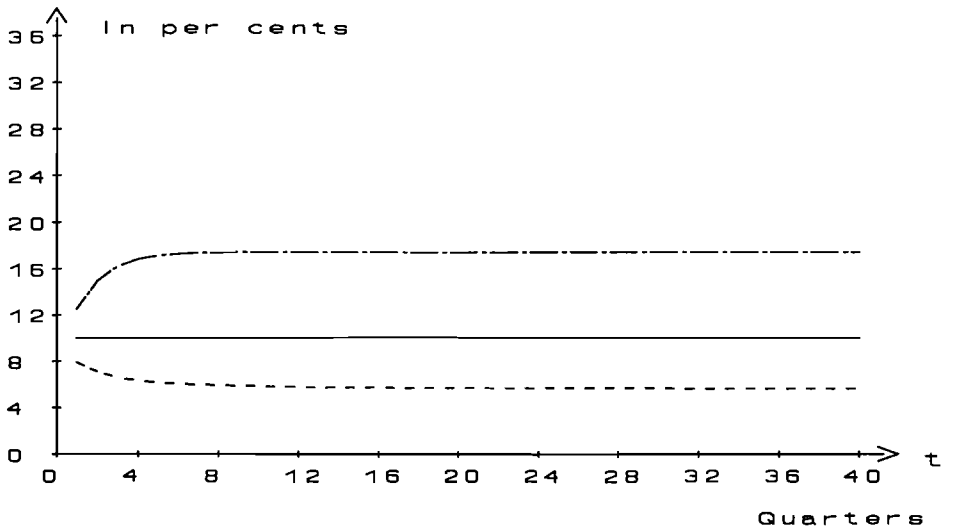

Figure 3.9 Assumed budget deficit constant at 10% GDP

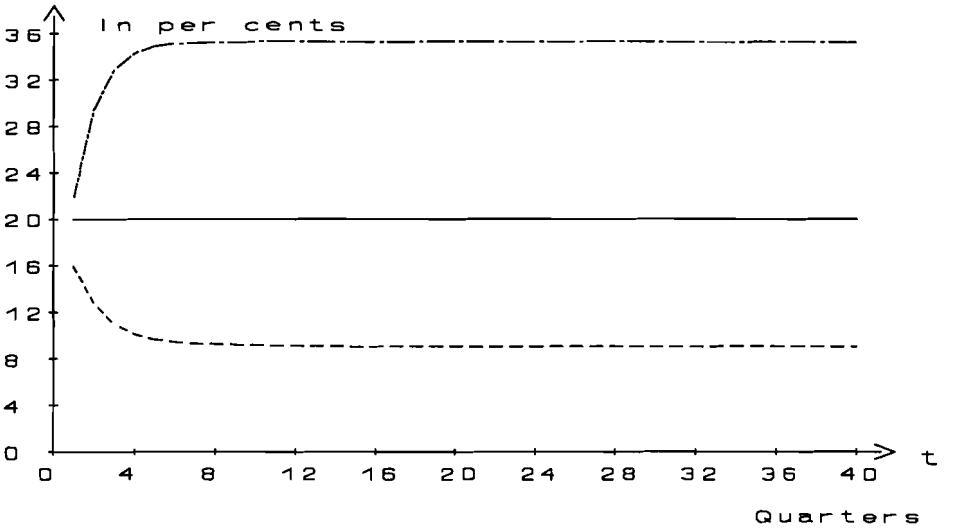

Figure 3.10 Assumed budget deficit constant at 20% GDP

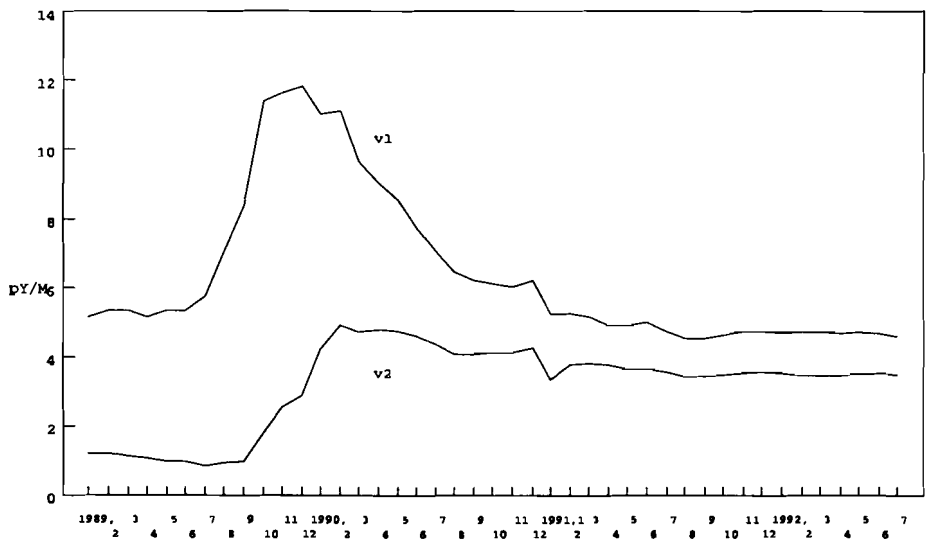

Figure 3.11 Poland's velocities of money circulation

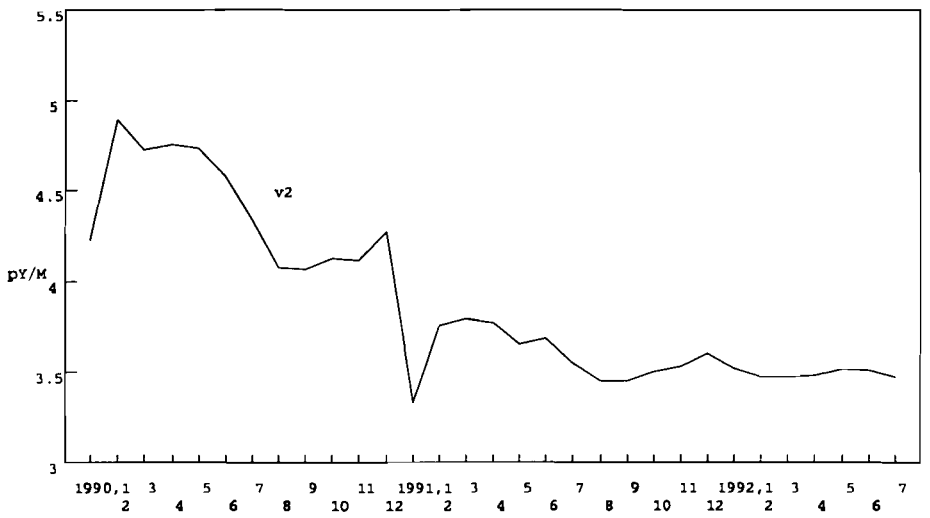

Figure 3.12 Poland's velocity of total money circulation in the post-reform period

Note to Figures 3.11 and 3.12

Figure 3.12 is an enlarged part of a section of v_2 shown in *Figure 3.11*. Both figures take into account new (lower) estimates of nominal GDP in 1991 by the Central Statistical Office and a new definition of domestic money by the Polish National Bank.

Source: Author's own estimates.

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Chapter 4

The Budget Reform in Czechoslovakia and the Czech Republic

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4.1 Introduction

The budget sphere in Czechoslovakia and the Czech Republic has undergone considerable changes. Its role within overall economic activities has changed radically. The purpose of this contribution is to provide an overview of both budget developments and fiscal policies in the early stages of the market transition in the Czechoslovakian Federation starting in 1990 and extending until 1993. The conclusion contains a first draft of possible lessons, that might be drawn from the budget developments during this period.

4.2 Budget Changes, 1990 to 1992

In many respects, 1990 was a preparatory year. The major reform measures were to be introduced in early 1991 and it was necessary to take various steps in advance to prepare for this situation. Basically, the preparatory steps consisted of stabilizing the macroeconomic framework while eliminating some of the already major systemic distortions. The state budget was designed to play an important role. Accordingly, some budget management defects were removed in the course of

1990: the so-called 'negative turnover tax' for food stuffs, for example, was abolished in July 1990. The simultaneous introduction of state contributions compensated the citizens for the increase in prices of basic food stuffs. The impact of this policy was, therefore, neutral for households as well as for the budget. In fact, the 1990 budget surplus was higher than expected as a consequence of positive development of key revenues with the exception of turnover tax yield. The surplus amounted to 7.4 billion CSK, which was 1.5% of the overall budget revenue.

The 1991 budget was again compiled as a restrictive and anti-inflationary one. The most important budget management measures included the unification of turnover tax rates (initially exceeding 1,500, the number of rates was reduced to four — 0%, 12%, 22%, and 32%), a decrease of the enterprise tax burden by 10 percentage points (to 55%), and the introduction of an import surcharge to protect the balance of payments and the domestic market after establishment of internal convertibility. The budget recorded a substantial surplus in the first half of the year due to the substantial increase of taxes paid by enterprises. The response of budgetary expenditures was quite noticeably delayed. At the same time, in a mid-course adjustment, turnover tax rates were lowered by approximately 10% and the import surcharge was decreased due to a positive development of the balance of payments.

Price liberalization led to a price increase by 25% in January 1991. This price jump, however, was absorbed quite quickly in the course of the year and the price level stabilized. The impact on budget revenue was strong in the first quarter but diminished during the year. Budget outlays showed the opposite development. Already in 1991, one could recognize the weakness of the Czechoslovakian Federation because both republics could have individually accommodated their expenditures to their revenues toward the end of the year. This fact finally resulted in a budget deficit of 17.5 billion CSK, or 3.5% of budgetary revenue and 1.8% of GDP. The final budget deficit in 1991 as well as the expected deficit for the following years could not have been further financed by direct central bank credit as used to be the case in the past. Then, the issues of treasury bills and state bonds were prepared to finance deficits.

The budget for 1992 was burdened by the necessity of the reimbursement of the 1991 deficit. Nevertheless, it was drawn as a balanced budget. In fact, the whole year was marked by a tendency towards negative deviations of budgetary revenues in comparison with expected ones. A great number of factors was involved, such as overestimated revenues or lower yields of the turnover tax (due to growth of the savings ratio, the shift in demand of citizens toward goods with lower rates, and an increase in tax evasion). Last, but not least, tax arrears appeared for the first time.

The Czech government adopted a number of measures (including lower levels of some expenditure than initially planned) to prevent the budget from an excessive deficit. Due to this fact, the Czech budget resulted in an apparently small deficit while the Slovakian budget reached a huge deficit.

4.3 The Fiscal Restriction

The issue whether a budget should or should not be of a restrictive nature was widely discussed since the reform started and, in some respects, continues to be a contentious issue. Under conditions of price liberalization, internal convertibility of the Czechoslovakian crown, and foreign trade liberalization, a tight fiscal policy accompanied by strict monetary policy, was the only way to enable the launch of the economic reform program. In spite of certain negative impacts of the restrictions on economic growth, this procedure was the only alternative to prevent an inflation spiral that would obviously make the implementation of reform measures more difficult. If assessed according to macroeconomic aggregates, the results of Czechoslovakian economic reform from 1990 to 1992 proved the legitimacy of this approach (see *Table 4.1*).

Table 4.1 Budget Revenue/GDP Ratio (bln. CSK)

	1989	1990	1991	1992
(A) Budget Revenue	415.4	463.1	505.5	540.0
(B) GDP	758.7	811.3	977.8	1009.4
A as a % of B	54.7	57.0	51.6	53.5

Source: Czech Ministry of Finance.

If the budget surplus were the sole factor in determining a restrictive orientation, then only 1990 was characterized by truly tight budget constraints in Czechoslovakia. Should a decrease in the expected tax revenue be identified as determinant, one can see that such a decrease did not materialize either. However, these synthetic indicators exhibit insufficient explanatory power for an economy in transition. Therefore, it is necessary to analyze both the revenue and the expenditure sides as well as the budget incidence of their changes.

4.4 State Budget Revenue Developments Between 1990 and 1992

Before 1989, state budget revenue heavily depended on levies paid by enterprises and on turnover tax; taxes paid by households represented only a small portion of budget revenue. These proportions were maintained over the entire period analyzed in spite of the fact that a process of gradual reduction of the corporate tax burden had been initiated already in 1990. A more uniform tax approach to all types of corporate tax payers was adopted simultaneously, and the weight of indirect taxation increased slightly (refer to *Table 4.2*).

The overall tax burden of households measured especially by the individual income tax remained roughly the same during the whole period (see *Table 4.3*). The changes adopted in this period were oriented toward unification of the tax treatment of similar economic activities. Major changes were postponed until the tax reform scheduled for 1993. At that time, small and medium sized businesses

Table 4.2 Budget Revenue Development (bln. CSK)

	1989	1990	1991	1992
Total Revenue	415.4	463.1	505.5	540.0
Tax Revenue	378.3	422.8	477.1	467.0
Direct Taxes	293.3	304.6	342.3	325.0
Individuals	60.7	62.9	77.1	77.0
Corporations	232.7	241.7	265.2	248.0
Indirect Taxes	85.0	118.1	134.8	142.0
Non-tax Revenue	37.1	40.3	28.5	73.0

Source: Czech Ministry of Finance.

Table 4.3 Budget Revenue Development (in %)

	1989	1990	1991	1992
Total Revenue	100.0	100.0	100.0	100.0
Tax Revenue	91.1	91.3	94.4	86.5
Direct Taxes	70.6	65.8	67.7	60.2
Individuals	14.6	13.6	15.2	14.3
Corporations	56.0	52.2	52.5	45.9
Indirect Taxes	20.5	25.5	26.7	26.3
Non-tax Revenue	8.9	8.7	5.6	13.5

Source: Czech Ministry of Finance.

were given preferential treatment in the form of lower tax rates, tax relief, and relatively high flat rate deductions of costs from the tax base.

The significant change in the share of the non-tax revenue was due mainly to additional revenue given to local budgets from various sources. This additional revenue for local budgets represented a certain compensation for some of the adverse effects of privatization and restitution of the former local property, which led to a shift of a part of the revenue from local budgets to the central budget. The lost revenue was partly compensated, for instance, from the National Property Fund (the fund collecting privatization receipts), by changes in the level of different local fees during the year.

The decline in the corporate income tax yield in 1992 reflected the decrease in economic activities in Czechoslovakia as a whole. This tendency was not already reflected in the 1991 revenues because of sharp price increases after price liberalization in January 1991. Its consequence was an increase in the profit tax revenue from corporations.

4.5 State Budget Expenditure Developments Between 1990 and 1992

Regarding the budget expenditure, there was a relatively substantial decline in transfers to enterprises especially since 1991 (see *Tables 4.4* and *4.5*). The reduction of the non-investment part of those transfers was even more acute. In this sense, the state budget unambiguously played a restrictive role. This partly corresponded to the reduction of the tax burden on enterprises, even if the dynamics of both processes were incomparable. The taxation of profits was reduced between 1989 and 1992 by some 20 percentage points. Besides the reduction of transfers to enterprises, a change of their structure was initiated. Before 1990, there were no fixed rules for corporate taxes. The corporate tax system was a nontransparent mixture of 'aid' to troubled enterprises and expropriation of profits from profitable ones. Since 1990, this approach was gradually oriented toward specifically targeted projects, especially concerning conversion of the armament industry and the compensation for negative effects of price control in the remaining spheres with regulated prices (for instance, energy, urban transportation, and rents).

The most important element of transfers to households was represented by social security benefits. These included the compensation benefits for negative turnover tax removal. Initially, compensation was given in the form of general income support, while later only selected categories of households were eligible to receive benefits. Some adjustments of the pensions and other social benefits for inflation were made in connection with the price developments. A new social

Table 4.4 Budget Expenditure Development (bln. CSK)

	1989	1990	1991	1992
Total Expenditures	414.9	455.9	515.9	551.0
Transfers to Enterprises	83.7	84.1	64.6	52.0
Investment	10.7	10.6	11.0	13.0
Non-investment	73.0	73.5	53.6	39.0
Transfers to Households	97.0	113.8	156.2	162.0
Public Consumption	234.3	258.0	295.2	337.0
Investment	33.8	36.5	45.4	47.0
Non-investment	200.5	221.5	249.7	290.0

Source: Czech Ministry of Finance.

Table 4.5 Budget Expenditure Development (in %)

	1989	1990	1991	1992
Total Expenditures	100.0	100.0	100.0	100.0
Transfers to Enterprises	20.2	18.4	12.5	9.4
Investment	2.6	2.3	2.1	2.3
Non-investment	17.6	16.1	10.4	7.1
Transfers to Households	23.4	25.0	30.3	29.4
Public Consumption	65.4	56.6	57.2	61.2
Investment	8.1	8.0	8.8	8.5
Non-investment	48.3	48.6	48.4	52.7

Source: Czech Ministry of Finance.

security item appeared in the form of unemployment benefits, which were particularly excessive in Slovakia. Gradually, active employment policies (new job creation and re-training programs) with consequent budget expenditures became more important. Considerable amounts of budget funds were allocated to create an appropriate social security net in order to avoid a profuse decline of the living standard of low-income households.

The most important part of the budget expenditure on public consumption is represented by education and health care outlays. It is necessary to remember that these services were and still are financed mainly from the budget. The role of the private sector was and, in fact, still is only a marginal one.[1] Wholesale privatization of the health care system is expected only in 1994-5.

A part of the expenditure increase revealed in *Table 4.4* is due to the price developments leading to an increase not only of material costs but also to an increase of wages which were traditionally low in these sectors. Generally, the

expenditure increase allowed for only maintenance of the real level of these public services. There were many changes in the expenditure structure in state administration. The analyzed period was marked by shifts of power from the federal authorities to those in the republics, resulting in the establishment of new ministries on the republic level. New agencies were created in accordance with the reform and transformation strategy (anti-monopolistic agencies, labor offices, tax offices, and others).

A major decline of expenditure occurred in defense. It was mostly due to a change of the political climate in Europe. In 1990-1991, the obligatory military service was shortened from two years to 18 months. By the middle of 1991, the last Soviet troops left Czechoslovakian territory. On the other hand, a decline in military expenditure led to the decline in the demand for armament industry products and to the conversion of military industry. The conversion issue was especially difficult in Slovakia where military industries were and still are more concentrated than in the Czech Republic. In addition, many changes occurred in the expenditures for internal security. The security system started the long process of readjustment and the functions of the secret police were redefined. The internal security expenditure development was forced to respond to the increase in crime which followed the opening of the borders and the liberalization of the living conditions in Czechoslovakia.

As part of the expenditures, special attention should be paid to subsidies to agriculture. For several decades, there was a tradition of agricultural production in large productive entities legally defined as agricultural cooperatives (created by force in the 1950s) or, alternatively, as state farms in Czechoslovakia. Food prices were heavily subsidized and the final losses of the producers were compensated by the budget through a number of channels. Low prices of food stuffs unavoidably led to a relatively substantial over-production and waste in food consumption under the former regime. Since 1989 and especially after prices were freed in January 1991, food consumption actually declined and, consequently, the production also. Naturally, this development had negative effects on producers. In addition, foreign trade liberalization led to an increase of imported food and food products.

The system of subsidies was shifted from a differentiated one to a system involving a more uniform approach for all producers. In 1991, two Market Intervention Funds were established in both the Czech and Slovak Republics, with a further one added at the federal level in 1992. Their main purpose was to stabilize prices of agricultural products. These Funds have made interventional purchases on domestic markets to guarantee prices of selected basic agricultural products to their producers and, on the other hand, they contribute to the stability of basic food prices for consumers by occasional sales of their accumulated stocks. The Funds play a major role in foreign trade regulation and in eliminating monopolistic practices amongst food producers.

4.6 Budget Balance, 1990 to 1992

Prior to 1989, the balance of revenues and expenditures was entirely a formal issue. The state budget development in those years should be evaluated together with the monetary policies and corporate finance development due to the presence of many transfers, open or hidden, among these three sectors. 'Flexible' changes in the enterprise tax system and replacement of budget transfers by administrative credit allocation facilitated frequent changes in the financing of budget expenditure according to immediate needs. Also, some typical budget expenditure (as, for example, financing of government credit abroad) was transferred to the banking system. By these means, it was almost always possible to reach a balanced budget or a budget surplus every year before 1989. These moves, in fact, created no major difficulties in reaching the intended targets regardless of the economic development. A formally balanced budget or surplus was traditionally a major political goal. As a result, distortions of real budget development were enormous. The overall position of the government (including the so-called state financial assets and liabilities) was distorted as well. Therefore, the development of the state financial assets and liabilities only partially reflected the budget results of recent years. Another important factor was, for instance, administrative price changes (accounted for in the state budget) and other assets and accounting operations.

Deficit financing commensurate with a market economy only began in 1991. As mentioned earlier, the general government budget showed an overall surplus of 7.1 billion CSK (0.9% of GDP) in 1990.[2] This included a remarkable central government budget surplus (a federal surplus by 4.0 billion CSK, while the Czech budget surplus was only 0.2 billion CSK and the Slovakian was in deficit by 0.4 billion CSK). The surplus of local budgets was 3.3 billion CSK. The total budget surplus was used to increase the state financial reserves.

Although still in surplus by as much as 17.7 billion CSK in the first half of 1991, the budget finished the year in a deficit position of 10.4 billion CSK or 1.1% of GDP. The separation of budget activities between the federal budget and the budgets of the two republics and the subsequent weak influence of the federal authorities on republic budget activities as well as on general budget activities as a whole played a key role in this dynamic process of budget development. The total result of the general budget was a combination of the two national budget deficits, and the federal budget and local budgets surpluses; namely, a Czech deficit of 13.6 billion CSK and a Slovak deficit of 10.3 billion CSK versus the federal surplus of 6.4 billion CSK and the local budgets surplus of 7.1 billion CSK. The federal budget surplus was used as compensation for the shortfall of some revenue in the republican budgets. By this operation, the Czech budget deficit was reduced

to 9.9 billion CSK and the Slovakian to 6.0 billion CSK. These final deficits of the republics were to be financed by issuing state bonds (prepared already in 1992).

By the end 1992, the federal budget recorded an estimated deficit of about 7 billion CSK. In addition, the federal government made the commitment to solve the liquidity issue concerning the Československá obchodní banka, the commercial bank that held external assets and liabilities of the Czechoslovakian Federation and subsequently of the two independent republics. The federal budget participated in this clean-up operation because these liquidity problems were generated by the old policies and the centralist decisions made on a non-market basis at the time when this bank was acting as an agent of the federal state.

The Czech state budget was in deficit by 1.7 billion CSK in 1992. The deficit of the Slovak Republic reached 7.9 billion CSK the same year. The surplus of the local budgets represented 8.6 billion CSK. All together, the total deficit of the Czechoslovakian general budget was 8.0 billion CSK, or 0.8% of GDP in 1992.

The net credit to government was to cover the deficit of the state budgets including the local budgets, the development of state financial assets and liabilities, and extra-budgetary funds including again local funds. This credit increased considerably from 5.9 billion CSK at the beginning of 1990 (equivalent to 1% of the domestic credit) to 40.5 billion CSK in October 1992 (4.8% of the domestic credit). As shown in *Table 4.6*, the development of the net credit to government was very irregular during this period — by the end of 1990, it already reached 54.2 billion CSK and fell, but fluctuated, thereafter.

Net credit to government was influenced by a number of factors which were not immediately connected with economic developments during the years studied in this paper; rather, these factors can be derived from the elimination of the distortions in the relationship between the government and the banking system in the previous years, and from distortions of the exchange rate. A substantial increase of net credit to government in 1990 was a result of financial operations regarding state assets and liabilities: these included the take-over of government credits abroad by the federal government, dealing with the impact of the major exchange rate changes in the economy, and the shift of foreign trade financing with countries

Table 4.6 Domestic Credit and Net Credit to Government (bln. CSK)

	1989 31 Dec	1990 31 Dec	1991 31 Dec	1992 31 Dec
(A) Domestic Credit	583.6	640.2	749.1	847.0
(B) Net Credit to GVT[1]	5.9	54.2	36.8	40.5
(B) as a % of (A)	1.0	8.5	4.9	4.8

[1] Including EC, WB, and G24 loans to government.

Source: Monetary Survey, State Bank of Czechoslovakia, Czech Ministry of Finance.

of the former CMEA from transferable rubles to hard currencies. In comparison with these operations, the result of prevailing budgets played just a minor role.

The State Bank Act, which set limits on budget deficit financing, was introduced in 1992. As of February of that year, direct credit financing of the budget deficit was prohibited by law with one exception — a technical credit to cover the time lag between expenditure payments and revenue accrual was permitted but was not to exceed 5% of the current budgetary revenue. Therefore, 1992 was the first year in which the state participated in the emerging Czechoslovakian money and capital markets. The development of the net credit to the government was no longer influenced by non-standard operations with state financial assets and liabilities. Thus, the credit reflected mostly the prevailing economic activities and the 1991 budget deficit.

State bonds were issued in the total amount of 13 billion CSK for the first time in 1992. The revenue of this issue was designed to finance the state housing under construction. From February 1992, the three finance ministries issued treasury bills on a regular basis. In all, 42 issuances of treasury bills were made during the year. The treasury bills issued ranged from 1 to 11 billion CSK and their maturity varied from 5 to 91 days. Most of the issues were placed through auctions, but nine issues were bought directly by the Central Bank at a fixed price. Compared with interest rates on inter-bank markets, the interest rates on treasury bills recorded much more variation in the course of the year — they were below as well as above the market rate which varied between 11.05% and 11.92%.

The federal and Czech treasury bills were placed without any problems; in all cases the entire volume was sold. Some problems were recorded in Slovakia by the end of the year despite the relatively high interest rate applied. These problems were caused by a lack of resources in the Slovakian commercial banks (due mainly to the lower saving rate in Slovakia) and by a lack of interest on the part of the Czech banks to invest in Slovakia. One auction had to be even canceled in Slovakia. Issues of the treasury bills in Czechoslovakia were organized under the conditions corresponding to the earliest emergence of the financial market. The number of participants was restricted; in fact, mainly commercial banks and two insurance companies took part.

A similar situation occurred when issuing the state bonds in both republics. Again, there were problems only in Slovakia. The Czech Republic issued state bonds at a nominal price of 8.7 billion CSK in two portions (in May and August) with a maturity of 2 and 3 years. The interest rate was offered at 15%. The issue was successful; the selling price for the entire issue was higher than the nominal one. The Slovak issue was divided into three portions (in May, July, and September) with a maturity of 5 years each. The interest rate was offered at 8%, but the complete issue was not sold. The revenue from these bond issues was used to finance the state housing programs in both republics.

4.7 Budget Strategy for 1993

For the first time, the budget for 1993 was prepared as a budget for the independent Czech Republic. In the process of its preparation, some 1992 data for the Czech Republic was additionally considered in order to enable a comparison with the 1993 budget. Of course, the actual merit of conducting the comparison of some data was questionable not only because the economy was engaged in a transformation process but the budget itself had undergone substantial changes. These changes also marked the 'value' of available statistical data.

In spite of a rather mild budget deficit in 1992, the Czech Republic entered 1993 with a debt that did not follow from concurrent budget management. The Czech budget 'inherited' a proportionate part of the federal budget deficit which was 9.5 billion CSK. The other part of the inherited deficit originated from the Czech Republic's obligation which followed from the consolidation of the balance of the Czechoslovakian State Bank.

The 1993 budget development was primarily influenced by the tax reform introduced in January. The changes represented a fundamental transformation of the tax system: almost all taxes were altered in some manner. The tax reform also caused a shift of the funding for health care, social care, and unemployment benefits to no longer flow directly from the budget but to be financed by special funds. Three such funds were founded — Social Care Fund, Health Care Fund, and Fund for Employment. Throughout 1993, two of these funds — Social Care Fund and Employment Fund — were still operated within the budget due to special contributions paid by employers and employees. The Health Care Fund was the only one separated from the state budget that year (see *Table 4.7*). The state budget

Table 4.7 The Overall Budget of the Czech Republic (bln. CSK)

	1992[1]	1993
Revenue	369.5	416.7
State Budget	324.2	342.2
Local Budgets	45.3	41.0
Health Insurance	—	33.5
Expenditures	375.3	416.7
State Budget	309.1	305.2
Local Budgets	66.2	58.0
Health Insurance	—	53.5
Surplus/Deficit	-5.8	0

[1] Estimates adjusted for budget structure in 1993.
Source: Czech Ministry of Finance.

continued to be involved in this Fund through contributions on behalf of people who were not employed for various reasons (women looking after small children, pensioners, jobless people, soldiers, and so on).

The estimated nominal GDP of the Czech Republic was 738.3 billion CSK in 1992 and 870.0 billion CSK by 1993. The share of budget revenue in GDP should decrease from 50.0% to 48.1%. This decrease is due to the decline of the overall tax burden. The decrease in local budgets' revenues for 1993 was due to the fact that these had received additional revenues in 1992 (see *Table 4.7*). Revenue losses were partially compensated with receipts from privatization and other additional revenues connected with new functions (for example, for the establishment of trade agencies). Local budgets received the yield from state bonds for state housing under construction.

The composition of revenue and expenditure also changed (see *Table 4.8*). Apart from the impacts of the tax reform and the establishment of the Health Care

Table 4.8 Structure of Budget Revenue and Expenditure (bln. CSK)

	1992[1]	share %	1993	share %
Total Revenue	369.5	100.0	416.7	100.0
Tax Revenue	296.6	80.3	247.4	59.4
Indirect Taxes and Tariffs	96.4	26.1	133.9	32.1
Income Taxes	131.6	35.7	104.9	25.2
Individuals	48.8	13.3	19.0	4.6
Corporations	82.8	22.4	85.9	20.6
Other Taxes	0.8	0.2	8.6	2.1
Payroll tax	67.8	18.3	—	—
Nontax Revenue	64.0	17.3	38.7	9.3
Social Security Contributions	8.9[2]	2.4	97.1	23.3
Health Insurance Contributions	—		33.5	68.0
Total Expenditure	375.3	100.0	416.7	100.0
Transfers to Households	106.6	28.4	122.8	29.5
Transfers to Enterprises	37.5	9.9	35.7	8.6
Current Exp. of Public Sector	175.3	46.6	206.5	49.6
Public Sector Investment	41.6	11.0	30.9	7.4
Government Loans	2.9	0.8	7.3	1.7
Debt Service	11.4	3.3	13.5	3.2
Deficit/Surplus	-5.8	—	0	—

[1] Estimates adjusted for budget strucuture in 1993.

[2] Only a limited number of people were obliged to pay these contributions in 1992.

Source: Czech Ministry of Finance.

Fund, a local budget reform was also introduced. Local budget revenues consisted of the yield from property tax and individual income tax, administrative and local fees, and revenue from sale and lease of local property. Earmarked subsidies included: a contribution to state administration functions carried by local governments, a compensation for local governments' social benefits, as well as specific subsidies to ensure a standard level of education and health care services throughout the country. The reasoning for general subsidies was to equalize outstanding differences in local government revenue across the country and the differences between 1992 and 1993. Local governments were obliged to utilize bank credit and bond issues.

Table 4.8 depicts the structure of budget revenue and expenditure in 1992 and 1993 — before and after the cessation of the existence of the former Czechoslovakia. Despite efforts to make the statistics fully comparable, some discrepancies still exist; the general interpretation, though, remains unaffected. The tax reform brought about an increase in the share of indirect tax due to the introduction of value-added tax (VAT). The new VAT, based on rates of 5% and 23%, extended the tax base. Apart from VAT, excise taxes on fuel, tobacco products, spirits, beer, and wine were included among the indirect taxes, too. Simultaneously, there was a decrease in the corporate income tax rate which was considered to aid corporate sector development. The reduction was also in response to the previously high tax burden on enterprises. The decrease in the share of individual income tax in total tax revenue was linked to the establishment of the Health Care Fund. Until 1992 contributions for health care were a part of the individual income tax as well as part of the corporate taxes.

Within budget expenditures, there was a further increase of transfers to households reflecting the social security benefit adjustment for inflation, amplification of the social safety net, an expected increase in unemployment, and still other aspects. Pensions and other social security benefits represent, by far, the most significant item within the group of transfers to citizens (60.3% and 21.8% respectively).

The decline in the share of transfers to enterprises corresponded to the continuing process of limiting state paternalism and the concurrent progress in privatization. On the other hand, growing outlays for private sector support were involved in these transfers: among others, these included subsidies to Českomoravská záruční a rozvojová banka (The Czech-Moravian Guarantee and Development Bank) and Exportní, garanční a pojišťovací společnost (The Institution for Export, Guarantees and Insurance). The primary objective of these two institutions was to provide the private sector with credit under more positive conditions than granted by other financial institutions, as well as to guarantee and insure credit for export.

Current public sector expenditures increased in the 1993 budget. The reason has already been mentioned — the most dynamic item was the outlay connected with the establishment of the Health Care Fund. The outlays for education were increased as well, but to a lesser extent. A part of this increase might be explained by the new system of financing health and social care in which organizations providing educational services will pay contributions to these funds for the first time in 1993. Finally, the Czech government's willingness to accept a proportionate part of the former federal government loans (in 1992 partly financed by federal financial assets) caused a direct increase of government loans.

4.7 Lessons and Conclusions

It is very likely that the Czechoslovakian budget experience, while slightly different than that of other East European countries (especially in quantitative terms such as the size of budget deficits), has numerous similar aspects. This permits lessons to be drawn and some general recommendations regarding economies in transition, particularly those still in earlier phases, to be made.

The first lesson relates to the stabilization phase of the reform. In very early stages, merciless liberalization as well as stabilization policies must be followed. Experience shows (though not only from the former ČSFR), that the budget situation tends to improve in this initial period; yet, the explanation can be only partially captured by explicit fiscal targets. The sources of this initial budget improvement were connected with the initial price escalation and the currency devaluation. The liberalization of prices (accompanied by restrictive stabilization policies) eliminated the formerly hidden monetary overhang linked to the decline of labor costs in the corporate sector (a consequence of the decline in real wages). The devaluation effected an increase of profits for exporters. Both factors led to a dramatic improvement of the financial position of enterprises with positive effects on budget revenue. This improvement, in fact, occurred at the moment of the output decline. The factors leading to this budget situation were clearly of a short-time nature. It is, therefore, extremely important to properly evaluate the size of this initial positive impulse and not to overestimate it since the latter may cause the fiscal policy reaction to be inappropriate (i.e., the output decline eliminates profitability, the gradual increase of real wages increases costs and reduces profits, etc.). The Czechoslovakian experience documented this risk in the form of a mid-course budget policy adjustment in 1991 that was probably an overcorrection and responsible for the deficit at the end of the year. In 1993, a similar mistake was already avoided.

The second lesson is that the initial restrictive orientation of fiscal policies does not necessarily extend beyond the short-term horizon and it may be even

undesirable under certain circumstances. These include the need for the policy mix of fiscal and monetary policies to be coordinated, macroeconomic stabilization policy development hand in hand with a merciless institutional (systemic) reform, focusing the core of structural transformation on the microeconomic level, and so forth. If all of these conditions are in place, it is not necessary to maintain a restrictive pace of the fiscal policy for an undetermined period, but for the initial phase only. Otherwise, there would be a strong case to believe that developing such restrictive policies would have undesirable and counter-productive consequences on output.

This said, we are convinced that the budget is not an appropriate tool of supply-side management. Therefore, abandoning the restrictive character of fiscal policies in the transition time does not imply that we advocate the concept of expansionary fiscal policy (with fiscal deficits and so on). The experience of the Czech (and Czechoslovakian) fiscal authorities reveal that the most suitable concept is that of fiscal neutrality (neutrality in terms of demand/supply management on aggregate levels, but not on the structural level). This target is not easily achieved given the fact that fundamental changes occur in the economic and fiscal framework over time (GDP/tax base declines, tax reforms with changes in the structure of taxes and the tax rates, structural changes of the expenditure side of the budget, and others).

The third lesson is that the fiscal reform itself follows a certain scenario, which is largely predetermined by the transition framework. For instance, one of the first steps is a massive reduction of government subsidies to enterprises, connected on the one hand with price liberalization and, on the other, with the gradual lowering of corporate taxes. At the same time, new items in transfers to households appear as unemployment benefits, compensation benefits to the low-income categories of people, and so forth.

The tax reform is a crucial factor of fiscal strategy. At the earliest possible occasion, it is fundamental to create a neutral tax structure that can eliminate all the distortions of the old tax system and old tax policy (i.e., individual approach to taxpayers, avoidance of inappropriate social functions of taxes, and differentiated categories of taxpayers by source of income). These changes are unavoidable and should be made with as little hesitation as possible. The accompanying fundamental change in the structure of taxes (in light of harmonization with EC standards, especially with the introduction of the VAT) can occur later since it is not really a precondition for the development of a market environment.

The fourth lesson is drawn from the solution to the puzzle of the following issues: reduction of the size of the budget (the budget/GDP ratio), maintenance of a balanced budget, continuity of the social functions of the budget, and the strategy of shifting the decisive responsibility for social welfare from the budget to individuals. A successful achievement of these multiple objectives can only be

achieved with a major reform of the social security, health and social insurance systems. This promises to be the most difficult task of fiscal authorities during the transition and is far from being successfully resolved. In an effort to increase the role of the individual decision on levels of benefits as well as decisive participation in financing the costs of those future benefits, the issue of reforming the social security, health and social insurance systems will not be successfully solved if not accompanied by efficient income policies *vis-à-vis* households.

A further related set of problems is associated with improving the efficiency of government public expenditure and consumption. In the past, a significant feature of public expenditure was a tremendous extent of budget resources, which was the function of at least two factors. The first was the anonymous nature of government money and the second consisted of technical deficiencies in the control of allocation and efficiency of public spending. Incidentally, this part of fiscal strategy in the economies in transition resemble problems of fiscal authorities in most other countries, the developed market economies included. In finding schemes to increase the efficiency, we suggest the shift from the so-called 'demand principle' of spending to one by which ministries base financing on integral medium-term programs. These programs should reflect the society's preferences for a certain period as well as contribute to more effective resource allocation and a greater effectiveness of the public sector as a whole.

The fifth lesson relates to the issue of balancing the budget. It has been argued that a balanced budget is inappropriate as soon as the stabilization issue has been properly solved and the budget should then play a more active role via deficit financing. Universal agreement is still outstanding regarding this issue, and we are not convinced that state bureaucrats are able to make better strategic structural decisions than private investors. The main concern about the hypothetical fiscal deficit lies in the difficulties associated with financing such an increasing burden and the unavoidable crowding-out effect it produces (opinions that the budget deficit has no crowding-out effect, but rather a crowding-in effect are just speculation). Furthermore, the transition countries are still not fully opened *vis-à-vis* the rest of the world, which gives them more autonomy in their decision-making (for instance, in the area of monetary policy), but also sets some limits on the use of various instruments of macroeconomic policy. This is of only minor concern as long as the country does not have to face the situation of a massive inflow of foreign capital. Fortunately, the Czech Republic is now in a situation in which such capital arrives, but at the cost of the central bank's efforts to combat the monetary risks of a suddenly increased money supply. In this context, even fiscal policy can not remain neutral since the development of the net credit to government has a tremendous effect on monetary aggregates.

The final lesson of this exposition once again encompasses a mixture of problems; including, the allocation of privatization receipts, the budget/GDP ratio,

and the domestic debt. At the beginning of the reform, it has been argued correctly that the privatization revenue should remain outside the budget. The main reason was an apprehension about adding the privatization revenue to the current budget due to the potentially counter-productive effect on fiscal restriction and the aggregate demand management. Therefore, the money was frozen on separate accounts and its use was severely limited. These symptoms implied that the main argument was a macroeconomic one. Now that stabilization has been successfully achieved, the state budget appears to be in an increasingly explicit asymmetric position. On the one hand, the capital revenue of the state is not part of the state budget and, on the other, most of the capital expenditure items are carried outside the state budget; thus, the current budget revenue is being used not only to cover the current expenditure, but also the capital one. It is consequently completely appropriate to consolidate the balance of the state budget with that of the National Property Fund (which is managing the privatization program). In proceeding in this manner, it is essential to be aware of the specific character of the privatization receipts, which are a typical capital revenue, but only temporary. Decisions concerning the use of this revenue should be of paramount importance. As a result, it would be most suitable to utilize the money, for instance, to resolve some legacy inherited from the past (distortions in balances of financial institutions, ecological damages, domestic debt service, specific projects to improve the infrastructure, and the like). Such problems are related, in one way or another, to past decisions of the formerly centrally planned state and represent possibly the last obstacle to the successful establishment of a market economy in a country in transition.

Notes

[1] Already in 1990, the first private schools appeared. Despite a rapid development of these activities, they remain a minority. Private schools obtain 90% of the level of subsidies allocated to public schools.

[2] The data on budget results are given according to the former Czechoslovakian (ČSFR) methodology which corresponds to the decision-making process. Thus, the results differ from the statistics of the International Monetary Fund.

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Chapter 5

Monetary Equilibrium and the Polish Economic Transformation

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5.1 Introduction

The experiences of transition economies reveal the lack of a good theoretical model regarding the role of monetary policy for the transformation from central planning to a market system. There is enough evidence that the conventional measures used to stabilize the traditional market economy are not suitable. Decades of centralized rule molded the economic systems in Central and Eastern Europe in a manner which prevents the mechanical implementation of all significant elements copied from developed Western economies. The radical transformation of a centrally planned system shaped a unique kind of an economy. However, it could not last because the deficiencies of its non-standard features lead to significant negative results.

5.2 The Structural Reasons for Hyperinflation

In order to present some features of the transition economy alluded to above, let us begin with the basic monetary equation $PQ = MV$. That the left side represents the nominal value of total production is well-known, but could be distorted if taken as an explanation of the hyperinflation mechanism. The rising price level (P) would

be the foundation for such reasoning. In transforming economies, rising prices become a built-in factor which perpetuates further increases. This factor possesses a very profound influence and is, in fact, indirectly induced by the efforts taken to rectify price distortions inherited from the past. At this stage, there does not appear to be a possibility to change relative prices by means of disinflation. Rather, a general price increase is advisable, the larger the relative price distortions, the higher should be the price increase and the longer should be the duration of this process. These are the principles of what is referred to as 'correction inflation'. In comparison to developed countries, the extent of correction inflation in transition economies is extremely high. The relationship between inflation and the dynamic price structure has become 'over-proportional'. If we take any indicator to measure the dynamics of the price structure and the rate of inflation, the relationship between these two numbers would have an exponential, rather than linear character.

In stable economies such disproportions do not exist. Therefore, one might initially be inclined to believe that the inflation in post socialist countries is only a problem of political and social deception. Of course, this is not the case and, today, no expert will make such an assumption. However, the perceived need to suppress inflation remains strong.

Forecasting inflation and attempting to explain the objective and subjective reasons for its development are very difficult tasks in East European countries. This problem is complicated and consists of many 'soft' elements so that clear presentation of price developments still have largely prophetic character. Therefore, the issue of the 'appropriate' level of inflation is still open, especially if the additional effect of relative prices 'normalization' is considered. The reaction of the economic system to changes in the general price level is not the same in every country. These differences depend on the level of internal integration in the economic system, the extent of recession, and the readiness of the society to bear the transformation burden.[1] Finally, only one conclusion remains certain: If there are fewer monetary constraints, then the pace of replacement of distortions in relative prices would speed up and if no monetary limits exist inflation would accelerate.

Due to the absence of an applicable theoretical model of financial equilibrium for this kind of economic problem area, only one solution for financial policy exists: to continue step-by-step, experience-by-experience, by trial and error to eliminate price distortions and to decrease inflation. As a consequence, maintaining strict control of the money supply is a critical task that must be undertaken in the earliest phase of stabilization. As long as relative 'price normalization' does not occur, particularly in lieu of the externalities of this process and other impacts of the transformation, the money supply should be higher than nominal GNP. This implies some changes on the left side of monetary equation.

This paper attempts to document the presence of several significant factors on the right side of this equation that call for providing additional monetary emission. These factors are associated with slowing the velocity of money, a process lasting the major part of the transformation period.

5.3 What Could Be Managed with Shock Therapy

At the beginning of the transformation process in the post-socialist countries, several crucial events occurred. The nations were on the verge of destroying an old system and creating a new one. Two decisive events were the loss of financial discipline and the wave of mistakes made in the business sector (i.e., wrong assessment of investment possibilities, neglect of the liquidity problem, and others). The main causes of these problems stemmed from the limited knowledge of market economics and a lack of training in the competitive conditions of the international marketplace.

In order to minimize the adverse impact of such events, restrictive monetary policy was implemented; however, not successfully everywhere. Particularly for countries that have progressed some distance on the path of economic reform, where stricter management of the financial system is a necessity, do some theoretical problems regarding the limits of restrictive policy become apparent and significant.

The results of restrictive monetary policy are both negative and positive and affected the economic and social dimensions. As a result, present discussions in Poland question whether the stabilization program was overambitious or not. But, it appears unwise to approach the issues from this angle. No one could arbitrarily determine the required intensity of the anti-inflation program. Even if it is too restrictive, one should consider its positive effects, like the additional, significant change in the behavior of the managers and employees.

In the economic sphere, shock therapy helps to restrain inflation, induces restructuring, and improves labor quality, but simultaneously causes a decline in the national product. The positive social aspect associated with this policy is the rapid spreading of 'economic literacy' in the society. The difficulties of participating in the operation of a market economy, such as the trouble with executing payments, teach marketing and financial principles better than it could be done in the colleges. Due to its inadequacy, this education was necessary and its results may be interpreted as a strategic resource for the future. Of course, negative aspects also arise, such as the social tensions and political anxiety caused by unemployment and decreasing standards of living. Be this as it may, the real question is concerned with the next step, which took place after shock therapy.

The Polish experiences show, that this current stage is more complicated than the previous one.

At the time when the Polish politicians decided to implement one and half years of strict monetary policy, the government did not expect such a drastic recession, enormous budget deficit, and precarious level of enterprises' profitability. As these features became stark reality, decision-makers were caught unprepared — without any counter measures on hand. The behavior of the politicians was inexcusable and could not be justified since there was a precedent for stabilization programs in recent history. The Chilean, Argentinean, and Mexican experiences show that the sequence of events taking place in Poland were inevitable. The optimistic attitude of the Polish government until the end of 1991 resulted in a surprised attitude that the budget deficit was growing, production was falling, and productivity was declining quickly. No program to combat the recession impact had been prepared. This also meant that the critical moment to break out of the recession and move to a path of economic growth was lost.

During the recession the stabilization policies primarily affected those enterprises in which the major share of production was exported. The zloty exchange rate, as the nominal anchor, was unchanged over the year, in spite of high three digit inflation at the same time. This caused an additional decrease in the competitiveness and profitability of the major part of the Polish economy. Nonetheless, this situation should not be used as an argument against shock therapy. Throughout the first phase of economic transformation even very restrictive policy, applied as the so-called shock therapy, seems to be useful. Even the extensive losses in GDP can be viewed as a necessary cost of transformation, with the benefits for the economy gained as a consequence of positive changes in economic structures and social mentality. Nevertheless, no economic shock therapy, like every kind of shock remedy, lasts longer than one to two years. But, what happens afterward?

The largest disappointment of this policy is the insufficient progress in reducing inflation and the greater than expected drop of national product. Thus, some experts are inclined to conclude that the policy was not restrictive enough - the money supply was too large and the people (employees, managers, and owners) were not active enough in adjusting their behavior in order to better adapt themselves to the new circumstances. It is, however, not the objective to pass judgment on the quality of the society as a whole. The society is, what it is.

An analysis of the efficiency of constraints on the money supply would certainly be more useful as a means to fight inflation. The issue is: how to recognize the utmost level of monetary restriction which does not generate disturbances in the financial system. If the restrictions are too severe, a drop in GDP is the direct result. This does not only imply insufficient money supply for efficient production, but also a dampening of the incentives for new development.

Such a situation primarily caused excessive caution on the part of managers — an additional factor of recession.[2] With respect to these possibilities, one can not simply infer the less money the better. In addition, the hypothesis calling for more restraint, though commonly approved, is not automatically correct either. Namely, the idea to adjust the money supply according to GDP growth does not appear to apply to the transforming economies of Eastern Europe. In this case, it may well be too restrictive.

Since Keynes' fundamental work, the velocity of money is considered as a constant in the short term. This assumption was proven to be valid when applied to conditions of established market economies which have displayed no major discontinuities in their history. But, the same assumption can be misleading in the case of economic systems undergoing rapid structural transformation, as in the former planned economies. The dynamics of money demand differs substantially when we compare stable market economies with economies in transition.

The transformation from one system to another presupposes changes in the monetary needs. A market economy needs more money than a former, centrally planned system. This is one of the fundamental differences between these systems. For the system in which one can use the administrative orders instead of financial regulation, money flows are subordinate to any kind of other regulation. The central planning authorities of economic conduct would sometimes even act against the market and actually ignore the financial status of enterprises. Finally, money was just not so important as today, when the market dominates in the economy. In the past, every activity to procure money and to ensure its stable flow in the future was, in truth, superfluous. In the shortage economy, money is not a necessary prerequisite for exchange and thus existence. In order to promote production or achieve a better position in the market, many factors other than money were determinant. It was most crucial to retain many connections to authorities, and to present and future commercial partners. Connections with bankers were not given high priority.

In Poland, current economic conditions are not satisfactory for the implementation of successful monetary policy. On the one hand, the new system requires money to meet its new needs, because the necessary restructuring can not take place without an additional stream of money. On the other hand, each addition to the money supply weakens the incentives to alter economic behavior. The difficult choice between two alternatives remains:

(i) maintain the restrictive policy to produce profitable, long term changes (restructuring, new kind of social mentality, etc.), or
(ii) stay with the moderate monetary policy to ensure the liquid circulation and build the basic institutions of the capital market into the system.

This choice is truly difficult, because in either case there will be significant losses for economic development. In an effort to avoid such losses, the 'pulsatory' strategy should be recommended as probably the most effective policy. First, shock therapy; later, thorough, long term restructuring of the financial system, and fulfilling the system's monetary needs in a step-by-step manner.

However, there is a catch. It is not possible to restrict the money supply and issue additional money at the same time. If there would be only monetary restrictions, there would be no development. If there would be only the additional flow of money, there would be no motivation for reforms. Therefore, the solution will not lie in taking every possible measure available, but rather in realizing some sequence of main tasks during transformation. In the first phase, for example, to concentrate on the fight against inflation and restructuring of the old economic principles. In the next stage, breaking out of the recession and developing the system of money and capital reserves in order to shape a new financial system. No one stage in itself is able to transform the system to the final shape. It could be done only via a long chain of different kinds of economic policy.

If the progress to reach a market economy may not be sufficient, one can repeat this sequence. However, in recognition of the actual social and political climate in post-socialist countries, the repetition of shock therapy seems to be very risky business.

5.4 New Money Needs

One can identify three types of money needs emerging during the transformation period and not present in mature, stable economies:

(1) additional transaction money for growing circulation needs;
(2) money for the expansion of capital and liquidity reserves and reduction of the portion of badly performing credits; and
(3) special support for long-term credit lines (for housing and long run investment) to overcome the payment barriers.

5.4.1 Transaction Money for Growing Circulation Needs

In classical economic theory the amount of money, which is necessary to ensure the stable circulation of goods, is directly related to the GDP. Nevertheless, as a

result of the specific structural changes occurring in the transforming nations of Eastern Europe, the objective demand for transaction money could be higher than it could be explained by the GDP fluctuations. This situation is associated with the following three basic developments:

(i) increasing number of transactions;
(ii) the rapid development of the private sector and the shadow economy; and,
(iii) the capital transactions becoming a significant part of the whole market in the economy.

The impact of privatization on money demand, caused by the rapid development of the small business sector, does not seem to be well understood. Quickly developing spontaneous private entrepreneurship in the economies of transformation, is accompanied by the reverse process with respect to the old state firm, whose activities have become limited in the wake of recession ending in the eventual demise of this ownership form. In the first stage of the reform, the past system of business connections has elapsed. Subsequently, many different, small, and previously unknown types of firms, which have limited trust to each other, are appearing. The knowledge of these new firms about new producers and merchants often appears insufficient. Nevertheless, the pattern of existing partners will change because the character of the market and the sources of goods are continually fluctuating. Today's market operations require the entrepreneurs to actively seek new partners across the country; the days when business came to the monopolistic entrepreneur are as good as over. And, to participate in conducting business with new partners, the new entrepreneurs are compelled to have significant amounts of money at their disposal. The importance of cash is growing. This, however, does not mean the velocity of money is rising. The situation is, in fact, exactly the reverse. Now the system simply absorbs more money with the result of slowing the velocity of money in circulation.

The search for evidence of this phenomena, using the theoretical-statistical instruments, needs some simplification that leaves the main subject of analysis unaffected. Let us begin by assuming that there is a standard unit of delivery in certain economic branches. The size of these units could vary for many reasons, such as transportation problems and others. On the financial side, this is represented by proper units of money which are necessary to cover the purchase of the identified commodity units — let us call them 'standard money amounts'.

In the economy, there is always some uncertainty ex-ante regarding potential deals in the future. Consequently, it is advisable for any businessman to keep a certain amount of money as a reserve for potential transactions (i.e., investment). The size of this reserve is determined by random distribution. Assuming there is

an average amount of expenditures, $E(x)$, the money reserves, (M_r), depend on the standard deviation and should amount to:

$$M_r = \delta\mu_\alpha \tag{1}$$

where: δ is the standard deviation, μ is the value of the standard distribution by a likelihood of α.

This equation implies that if risk remains at an acceptable level, minimum reserves should be no less than M_r. This, in fact, happened in practice as the trend was to take the risk of loosing money as a result of unreliable customers not paying rather than risking the chance of missing an opportunity to invest.

A further point reveals the existence of an interesting difference in the value of money reserves (related to average expenditure) between small and large firms. This difference is caused by the variability of random distribution linked to the character of both firms. The choice of the random distribution to be used is determined by the so-called 'degrees of freedom', which correspond to our term 'standard money amounts'. These are linked to the firm size. In a very large firm, the volume of 'standard money amounts' is very high. Usually if the degrees of freedom (that is, the number of 'standard money amounts') are higher than 200, one can use the Normal Distribution to calculate the money reserves.

As this will not be possible for smaller values, one should use the T-Student Distribution, in which the shape is dependent on the degrees of freedom. The lower the degrees of freedom, the higher the value of the T-Student Distribution. This may be represented as follows: assuming two levels of the degrees of freedom, i and j, and if $i < j$, then

$$\mu T_i > \mu T_j \tag{2}$$

The result is differences in necessary money reserves (M_r), even when the acceptable level of risk is the same since we apply the following function in the presence of smaller firms:

$$M_r^i = \delta\mu Tie \tag{3}$$

and the relation for the larger firms is:

$$M_r^j = \delta\mu Thou \tag{4}$$

So, finally

$$M_r^i > M_r^j \tag{5}$$

This calculation shows that the small enterprises should keep proportionally more money reserves than the large ones. Otherwise, the smaller enterprises will be more likely to face liquidity troubles than the larger. In order to avoid such difficulties, therefore, the former should keep proportionally more money reserves than the latter.

The equations depicted above show the special linkage between money demand and changes in the concentration ratio for the whole economy. If the level of concentration declines, especially as a consequence of the expansion of the number of small enterprises, the amount of transaction money must rise, *ceteris paribus.*

The additional money demand in the small business sector generated by a drop in the concentration ratio is accompanied by an additional demand for cash stemming from the emergence of the shadow economy, where cash is generally the single means of payment. Small businesses must still keep high amounts of money reserves like the agents in the shadow economy due to the uncertainty of their activities. A precise estimation of the extent of the shadow economy is difficult. Yet, if it already produced the equivalent of 10-15% of GDP in the former, well-developed planned economy, one can expect it to be twice or even more times larger under the conditions of transformation. It is a special challenge for monetary authorities because both the private and shadow sectors are developing very quickly in the transformation phase. In addition, budget constraints do not allow government the necessary flexibility to react rapidly to these new needs and to evaluate their relative importance. The state bodies responsible for tax revenue are nearly helpless: developed in the old system, in which tax collection was a very simple accounting function, these authorities can not meet their new obligations.

Another objective factor that prompts an increase of the money supply for transactions is the development of the capital market. Some transactions, belonging to this category already existed before transformation, but these are far-outweighed by today's new capital market transactions. The previous were practically limited to the sale of real estate and only occasionally to other objects, like small factories. However, after privatization the situation is changed markedly in commerce, transportation, and small business. The lack of experience, an unstable economic situation, and changes in the tax and tariff systems resulted in large movements in this segment of the capital market. The actual amount of money engaged in these operations is difficult to determine. One can only assume that the annual turnover should be comparable to the value of assets in the small business sector. Unfortunately, the studies about capital assets in small business are very poor, not only in Poland.

Only one statistic from the capital market area is well-known. This is the turnover on the Warsaw Stock Exchange and the market value of equities. By

the end of 1992, the market value of listed companies amounted 3.5 billion zloty (USD 200 million), with the turnover liquidity at approximately 0.5%. During the first quarter of 1993, the turnover rose very quickly, gaining about USD 50 million. Including the whole time of transaction and its payment, this would imply that the absorption of transaction money by the stock exchange was approximately USD 150 million — about 1% of all cash resources.[3]

5.4.2 Money for Expanding Capital and Liquidity Reserves

In the centrally planned economy, no capital reserves were necessary. It was enough to maintain only a very small amount of money to avoid troubles with a temporary lack of liquidity. Shortage of money was not the most significant problem for the enterprises, even if the liquidity problems have occurred (see above). Yet, in creating the market economy it became necessary to create the capital for the basic economic institutions. It may seem beyond the imagination of Western observers that enterprises, banks, and other economic agents could actually exist without capital, but it was the case. Nonetheless, they did require some artificial constructions on the passive side of their balance sheet, but such a formal problem did not pose a threat to their continued existence. Unfortunately, these constructions could not be transformed into real capital resources once the centrally planned system collapsed.

Previously, the state was treated as the omnipotent institution by politicians and the population and, as a result, no capital was necessary to ensure any obligation of financial bodies. Consequently, the state was responsible for control over their business and for supplying enough money to cover needs claimed by pensioners, patients in clinics, clients of the insurance firms, and so forth. All such expenditures were covered from the state or local government budgets.

The countries that have embarked on the path of market transformation should prepare many kinds of capital insurances to reduce the risk of business activity. This openness for business risk can be taken as a basic feature of the economic changes. In the emerging market economy, each institution should be ready to take some risk, otherwise no innovation can take place. This risk should be, of course, limited, but means to enable market participants to take the risk if they so desire should be guaranteed. Under the former system, the scale of risk was limited to personal responsibility. Those taking high risks were punished in the administrative way. One of the most negative features of the past methods was the lack of precise determination regarding the scale of risk permitted. This used to cause uncertainty and restricted individual activity.

The application of the market system implies releasing peoples' creativity; thus, underlying the significance of its presence. The economic units should now

act on their own responsibility and face disciplinary measures like bankruptcy in the event of failure. The state is not automatically obligated to help them in a difficult situation. Therefore, these units should develop their own safety system, which, in any case, should be based on their own capital. If this capital does not exist, the monetary policy should facilitate its creation.

The monetary outcome is controlled by the interest on credit. In the first period of transformation, these means were not sufficiently successful and credit ceilings were implemented. Consequently, enterprises are compelled to manage their affairs under the conditions of restrictive monetary policy. Yet, the very restricted credit policy implemented in Poland in 1990-1991 resulted in new problems for the next period. After a short time, the situation was reversed: the special ceilings became superfluous as the interest rates on credits offered by banks made loans much less attractive.

In the case of Poland, the final result was recession; some may initially describe it as a natural consequence of the restrictive monetary policy. Especially modern enterprises, which were built or modernized at the end of the 1980s, were compelled to pay exorbitantly high interest. Many of them fell into the credit trap. They borrowed when the credit was cheap, but were in the process of repayment when the credit became extremely expensive. It resulted in negative profitability and forced the firms to take short term credit to preserve financial liquidity.

At the beginning of 1992, some signs of economic recovery were noticeable. The strongest enterprises overcame the market crisis and many could engage in the international marketplace. The revival was primarily reserved for those enterprises equipped with modern machinery and technologies. But these firms are also carrying the largest burden of the anti-inflation policy by paying very high interests on credit. This burden was extremely large in the manufacturing industry, due to the very high capital intensity of production. By creating an additional capital cost, the extreme interests on credits affected these producers. Although these enterprises were able to expand production, the low profitability forced them to face persistent liquidity problems, which dampened the potential production expansion.

Thus, Poland was confronted with the phenomena of too much money in the banks and a too small demand for credit, partially explained by the high interest rate of about 11-12% in real terms. This situation raised the question why banks did not decrease their interest rates. The reason is very simple: they had to cover the cost of setting high interest rates to attract savings deposits and to cover losses caused by high obligatory reserves (bearing 0% interest) in the Central Bank. In addition, the cost of procuring money is very high for banks. About 50% of deposits are those of domestic citizens. In order to keep this money in the bank, banks should set the interest rate close to the level of the consumer price index (CPI). On the other hand, banks should set the interest rate for credits close to

the investment price index because the most important clients are enterprises in this case.

In Poland it is impossible to presently fulfill these two objectives due to the disparity between the consumer and investment price indices. The CPI is 10 points higher than the price index for investment goods. If bank policy would favor enterprises, the deposit interest should be drastically negative. The difference between consumer and investment prices' dynamics will probably persist throughout 1994. The main causes are the implementation of the tax and tariff reforms and shifting the tax and tariff burden to consumers. For three years, the subsidies for mostly consumer prices fell from 30% of state budget expenditures in 1989 to 5% in 1993. Subsidized prices will almost be completely phased out in the next several years.

In such a situation one might consider the possibility of a contemporary negative real interest rate for deposits. Its presence should not prove disastrous, especially if it lasted only a short time. It would, however, have little or no effect in Poland. The Polish population keeps about half of their money resources in foreign currency. If the real interest rate on zloty deposits will be very low or even negative, money will escape to the foreign currency accounts. This movement will cause a strong increase of the rate of exchange (depreciation of the zloty), and will generate an increased volatility in the foreign exchange and price indices.

A significant difference between the level of enterprise profitability and the level of real credit cost emerges as the result of restrictive monetary policy. If the former indicator amounts to about 3%, the latter was three times higher. This difference nearly prevents financing normal business activity with credit. The consequence has been a trend toward financing only the speculative ventures, but these are mostly undertaken by very small business. Yet, these small firms have too little capital and have existed for too short a time to gain the banks' trust. Finally, the businessmen capable of paying such high interest did not obtain credit as a consequence of regular, formal creditworthiness tests.

These last experiences in this area are very instructive. At the beginning of the transformation process the banks have tried to continue with the old method of credit policy. It was very simple — anyone could obtain credit because credit risk was not taken into consideration. Later, the situation was reversed. In the presence of very high interest introduced to curb inflation, few debtors actually possessed the ability to repay loans. This resulted in a considerable amount of badly performing credits, now estimated at 30% of the total amount of credit provided to the economy.[4]

It is perilous for banks to hold so many bade or non-performing credits. The problem of the imposing losses for banks becomes very significant. In such a case, the whole banking sector might soon be threatened by bankruptcy. Therefore, the state must help. Probably the efforts to solve this problem will be divided between

the state and banks. Regardless of the solution to this problem, the money supply should increase by about 2%. Only then the standard international rate of bad credits to total credits (10%) can be achieved.

The negative experiences regarding the repayment of credits has changed the attitude of banks quite markedly. Banks are now extremely cautious when giving credit, especially in the case of long term obligations. This situation affected primarily industries, which need at least a couple of years to repay outstanding debts. In order not to inhibit recovery, it might well be necessary to create a special fund of credit guarantees, probably to the amount of 0.5-1% of all credit for the commercial sector. This could be about 1-2% of the whole money supply (as of April 1993).[5]

In Poland, the banking system was very integrated for many years. Already before 1989, it was partially decentralized, but the process of equipping the banks with sufficient capital was still not completed by 1993. At the beginning of 1993, the average credibility indicator amounted to 4-5% of the banks' high risk assets. In order to attain the 'Cook Committee' recommendations, the reserve capital in the Polish banks should be doubled. It needs additional money on the order of 0.5% of GNP.[6] The process to reach the recommended value of 8% of reserve requirement will take the Polish banking system at least two years.

Even much more time will be necessary to develop the appropriate capital basis in the insurance, health and pension funds. Until today, the system of financing pensions and health is, like in the other post-socialist countries, directly linked to the state budget; as a matter of fact, it is part of it. The expenditures for health of the population are covered directly by the budget. The pension money is obtained from the obligatory liabilities related to the salaries (45% of the payroll) in enterprises. In the case of deficit or surplus, losses and profits are taken from or added to the state budget, though the latter is more than unlikely. Since the state even guarantees liquidity regarding payments capacity, the institutions mentioned above have practically no capital reserves. The state umbrella provides a high level of security for them and their clients, but also makes them inflexible and too costly.

Indeed, this system is not only characteristic of East European countries; in fact, some of its essential features are present in Western Europe as well. The continuation of full state responsibility for social insurance programs is becoming a very heavy burden for the weak budgets in post-socialists countries. At least a part of the expenditures must be covered from other sources, mostly from the individuals' incomes. In order to make the overall system acceptable for everyone, a private insurance system must be developed. The same problems and solutions pertain to the pension funds.

The new private insurance firms should collect enough capital to ensure their obligations to clients. According to the author's calculations, even if the private

insurance firms occupy only a very small part of the pension and health insurance markets, like in Germany,[7] this mixed system would need additional capital to the order of 10% of GDP to attain a proper level social security.[8]

5.4.3 Special Support for Long Term Credit

Obtaining credit is a normal part of business activity. Polish enterprises (especially the most efficient and profitable) are, however, restraining themselves when applying for money from the banks. The total demand for credit by enterprises fell 13% in terms of real volume during 1992.

In order to shed some light on these phenomena one must consider a significant event of Polish transition that is very rare when normally evaluating credit policy. Unfortunately, during the first period of rampant inflation an especially high concentration of the repayment materialized simultaneously. It increases further with rising inflation (refer to *Table 5.1*).

This table shows that in the case with higher interest and inflation rates, 82% of the whole burden of credit repayment is due within the first two years (add the

Table 5.1 Concentration of credit repayment with respect to the level of inflation

	price index: 78% (corresponding to 1990); interest rate on credit: 80%			
Years	principal payments	interest payments	total to be paid (nominal value)	total to be paid (real value)
1	0.20	0.80	1.00	0.56
2	0.20	0.64	0.84	0.26
3	0.20	0.48	0.68	0.12
4	0.20	0.32	0.52	0.05
5	0.20	0.16	0.36	0.02
total	**1.00**	**2.40**	**3.40**	**1.00**
	price index: 33% (corresponding to 1992); interest rate on credit: 40%			
1	0.20	0.40	0.60	0.45
2	0.20	0.32	0.52	0.29
3	0.20	0.24	0.44	0.19
4	0.20	0.16	0.36	0.11
5	0.20	0.08	0.28	0.07
total	**1.00**	**1.20**	**2.20**	**1.11**

value in row 1 and 2 in the last column), while in the second case with lower rates only 74% is due during the same period. In contrast, achieving a substantial profit immediately in the first period of investment is very rare for the firm, especially in industry. Therefore, taking long-term credit becomes a very doubtful solution.

This problem could be overcome in the following manner. The debtor should often take short-term credit (every year), rather than one large, long-term loan. This method allows him to pay the credit back in equal parts. Unfortunately, this is not the Salomon solution. This system results in a high level of uncertainty and is not a good idea for large investments (like building a new factory or housing construction), which should be realized in a short time and in which cases the repayment should extend over many years. In an effort to support these entrepreneurial investors some special measures should be prepared that facilitate and permit the capitalization of credit interest. The capitalization of credit interest is possible if the capitalization of deposit interest also occurred. If not, the banks lose liquidity due to the regular interest payments to depositors. Cash flow becomes negative. In order to resolve this situation, the state (Central Bank) should give the commercial banks long-term bridging credit. This will, once again, lead to an increase of the money supply.

5.5 Conclusion

This paper presents some remarks about the special money needs concerned with the specific status of an economy. This unique status refers to the period of transformation from central planning to the market economy. We attempted to reveal the special features of this period and provided some reasoning for the disappointment regarding the unsatisfactory results of monetary shock therapy as an element of the battle against inflation in Poland.

In terms of quantity theory of money, the reasons for this situation can be found on both sides of the equation $PQ = MV$. On the left side, the major cause of inflation is the process of replacing the distortions of the price structure. The more relative prices were distorted, the longer was the period of high inflation.

We also reveal special needs for additional money creation that do not exist in this form in the established market economies. These are concerned with the declining velocity of money. Its drop is caused by the needs to enlarge the amount of transactions money, to increase the required reserves ratio in the banks, and the capital basis in the emerging insurance and pensions funds. The additional money is also needed to remove some negative effects of the shock therapy; primarily, to reduce the badly performing credits and to decrease the detrimental impact of high credit interest on long term investment projects.

Notes

[1] See S. Commander: Inflation and The Transition to a Market Economy, *The World Bank Economic Revue*, No. 6/1992.

[2] See G.A. Calvo and F. Coricelli: Stagflationary Effects of Stabilization Programs in Reforming Socialist Countries, *The World Bank Economic Review*, No. 6/1992.

[3] Data from *Rzeczpospolita*, 20 April 1993, *Biuletyn Narodowego Banku Polskiego,* No. 5/93, Ceduła Warszawskiej Giełdy Papierów Wartościowych, April 1993.

[4] However, this amount was never precisely calculated. Ministry of Finance estimates it at approx. 1 bln. USD (speech of Minister Osiatyński in Parliament, *Rzeczpospolita*, April 1993).

[5] *Biuletyn Narodowego Banku Polskiego,* No. 5/93.

[6] J. Rayski and Z. Szpringer: Sytuacja finansowa banków polskich. Paper presented at the meeting of the Polish Bank Association, March 1993.

[7] In Germany, before unification private pension funds occupy 5% and health insurance 11% of the whole market.

[8] Own calculation based on data from *Rocznik Statystyczny 1992* and *Bericht der Deutschen Versicherungsaufsicht 1989.*

Part III

Exchange Rate Policy and External Pressures: Search for a Stabilizing Anchor

Chapter 6

Possibility for Using the Exchange Rate as a Nominal Anchor for the Domestic Price Level: Some Evidence from the Hungarian Case

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6.1 Introduction

This paper addresses the question whether the exchange rate of the forint can be used as a nominal anchor for the domestic price level. After a brief description of the institutional framework of exchange rate policy in Hungary and the evolution of the exchange rate of the forint during the past few years, the role of exchange rate changes in domestic inflation is examined for the period January 1990 to December 1992. An index of exchange rate expectations is constructed to study the impact of changes in exchange rate expectations on inflation. The basic conclusion is that the exchange rate, via different channels, worked as a kind of nominal anchor for the domestic price level in the period of observation.

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6.2 The Hungarian Exchange Rate Regime and Major Exchange Rate Policy Developments in Recent Years

Changes in the exchange rate of the forint *vis-à-vis* convertible currencies occur under an adjustable peg system. The rate relative to a basket of major currencies is adjusted at irregular intervals. Basically, exchange rate policy is the common responsibility of the government and the central bank where the two authorities have to reach an agreement before any adjustment to the rate can be made. The central bank has the right to autonomously adjust the rate within a band of ±5% around the rate set by the last decision it has made jointly with the government.

Since December 1991, the foreign currency basket of the forint is composed of 50% ECU and 50% USD[1] to reflect the relative importance of European currencies and the US dollar in Hungary's foreign trade (accounting for trade with developing countries and in primary products where prices are set in US dollars) as well as to reduce swings in the rates of major currencies expressed in forint due to cross rate changes in international markets. Prior to November 1991, the foreign currency basket of the forint was updated yearly and reflected the invoice currency structure of Hungarian exports and imports to the convertible currency area.

In July 1992, an interbank foreign exchange market was introduced. Domestic banks authorized to deal in foreign exchange were exempted from the obligation to render all foreign exchange balances resulting from transactions to the National Bank of Hungary and banks were also allowed to hold foreign exchange in own accounts of up to 30% of adjusted risk-bearing capital. Rates for interbank buying and selling transactions can be set within a narrow range of ±0.5% around National Bank midpoint rates. From 1 July 1992 to 1 June 1993 the width of the band was ±0.25%. The National Bank envisages to widen the band for interbank trading gradually up to ±2.25%.

Table 6.1 in the *Appendix* shows year-to-year changes in the real effective exchange rate index of the forint using different deflators. A higher value of any of the indices refers to depreciation of the forint. *Figure 6.1* depicts the yearly evolution of the real effective exchange rate index based on industrial producer price indices,[2] while *Figure 6.2* exhibits the same type of index, but together with the nominal effective exchange rate index on a monthly basis for the period January 1988 through December 1992.

The most important exchange rate policy development in the past five years was the 10% appreciation of the forint in 1991 in real effective terms as measured on the basis of producer prices of industry. This marked the increased awareness regarding the short-term anti-inflation consideration versus the short-term competitiveness consideration in Hungarian exchange rate policy.

6.3 Exchange Rate Changes and Inflation

In the context of liberalized imports (the three-year-long process of gradual liberalization of imports in Hungary was completed in 1991), prices in the vulnerable sectors and primarily in industry have tended to equalize internationally. Domestic price increases have been limited by international competition. Similarly, exchange rate movements have not only affected domestic prices on the supply side via altering the cost of imported input but also on the demand side by changing the prices of foreign goods competing with domestic products. Furthermore, the pricing behavior of domestic producers has been influenced by their expectation of future exchange rate changes. However, before we proceed to test these statements, we outline a simple model.

In order to test the role of exchange rate expectations we assume that the rate of exchange rate depreciation expected to occur over the next twelve months is a fraction of the rate of inflation expected for the same period. The expected rate of inflation is simply taken as the rate observed for the twelve-month-period ending in the current month and the 'expected depreciation/expected inflation' ratio is a simple geometric average of the ratios of actual twelve-month devaluation and inflation rates computed for the past twelve months.

Obviously, this model of exchange rate expectations is simplified. A good deal of work is still to be done on modeling a more complex behavior of forming exchange rate and inflation expectations (Takagi, 1991). However, exchange rate expectations generated by the model show a relatively strong correlation with the ratio of the black market exchange rate to the official exchange rate, which is often taken as an indicator of expected depreciation (correlation coefficient: 0.749, for illustration see *Figure 6.3*). This allows us to use the simulated time series for expected exchange rates as the explanatory variable in our hypothetical model for inflation that we will test here.

Figure 6.4 shows the indices of changes in the level of producer prices in industry and of consumer prices from those of the same month one year earlier, while *Figures 6.5* and *6.6* show the index of the actual changes in the forint exchange rate relative to the foreign currency basket and the index of expected changes in the level of the forint exchange rate relative to the basket. A look at these figures suggests that the moderation of devaluations and devaluation expectations that began in early 1990 may have anchored inflation and prevented it from becoming hyperinflation in 1991. This casual observation receives some confirmation from the results of our ordinary least squares (OLS) analysis which show the devaluation expectations variable and two import price variables that directly depend on devaluations to be significant (at least at the 2.5% error level) in explaining producer price inflation (*Table 6.2*).[3]

A somewhat different picture emerges from the OLS results for consumer price inflation. In this case, the exchange rate effect seems to be carried by industrial producer prices and the prices of imported manufactures. Two other variables that are not influenced by the exchange rate, domestic credit and the dummy that stands for price reform measures, appear to explain another part of consumer price movements (*Table 6.3*).[4]

The findings reported above allow us to conclude that the exchange rate, partly via the influence of its actual behavior on expectations of future exchange rate changes, probably did function as a nominal anchor for the price level in Hungary over the observed period, although authorities have never declared that they were using the exchange rate for that purpose.

6.4 Limitations to Achieving Low Inflation with the Help of the Exchange Rate Anchor

The anchor role of the exchange rate, for which we appear to have found some evidence in the Hungarian case, obviously does not mean that any desirable low inflation rate or, *ad absurdum*, the decreasing of the price level can be achieved by an appropriate choice of the rate of currency devaluation. There is no such rule for any anchor variable.

On the contrary, international experience suggests that bringing inflation down to low levels frequently involves macroeconomic and social costs that policy-makers find not worth incurring. Given backward looking expectations, as assumed in the Hungarian case, bringing inflation down from moderate to low rates may be costly in terms of foreign exchange reserves and employment. Once authorities decide that a given moderate rate of inflation is low enough to exclude the danger of hyperinflation but simultaneously high enough to avoid the costs associated with getting inflation down to low levels, they still have the task to provide ways for economic agents to live with moderate inflation and to avoid costly forecast errors in predicting future price level and exchange rate changes. For this part of exchange rate policy, it is an explicit or implicit crawling peg type regime that may most appropriately serve those purposes (Dornbusch and Fischer, 1993).

Obviously, the crawling adjustment of the exchange rate must, from time to time, almost necessarily be supplemented by more sizeable adjustments for the following reasons. Any external shock that adversely affects the foreign currency earning capacity of the domestic economy will probably require an exchange rate adjustment in addition to the crawl.

Nonetheless, it may not be advisable to set the pace of the crawl so that it fully offsets unfavorable price differentials between home and abroad. Such a real exchange rate rule is likely to be built in inflation expectations and, thus, may be conducive to inflation getting out of control. (Montiel and Ostry, 1992). On the other hand, the allowance for some real appreciation when setting the pace of the crawl will induce companies in the vulnerable sectors to strengthen the non-price factors of their competitiveness in case the policy of (relative) exchange rate stability is credible (Marin, 1985). Also, the support of the labor unions is required so that there will be no wage increases that are not justified by a gain in productivity (Hochreiter and Knöbl, 1991). However, if productivity is not improved or a consensus with the unions is absent, an adjustment of the exchange rate supplementary to the crawl can not be avoided. Of course, in case a sizeable exchange rate adjustment becomes inevitable, restrictive monetary and fiscal policies must be in place if the inflationary impact of the exchange rate adjustment is to be alleviated and the competitiveness effect is to be maintained.

An adjustable peg type system like the one outlined above can not be called a nominal anchor if the term is reserved for exchange rates fixed in the Austrian way. But it is a nominal anchor in the sense that once appropriately chosen and credibly maintained, it is capable of stabilizing exchange rate expectations and thus, as Hungarian experience suggests, may help control inflation.

6.5 Conclusion

In this paper, the possibility for using the exchange rate of the forint as a nominal anchor for the price level was examined. OLS was used to find that the exchange rate can and, in the period of observation, probably did serve as nominal anchor though not in the most commonly used sense of the term.

Notes

[1] As of 1 August, 1993, the basket contains 50% DEM and 50% USD.

[2] The discussion regarding the type of deflator most appropriate for the real effective exchange rate index of the Forint is beyond the scope of this paper.

[3] The explanatory variables were selected with the help of tests for Wiener-Granger causality between the dependent variable and a number of plausible explanatory variables including broad money. For different possibilities concerning the choice of price level anchors see Calvo and Végh (1992). The lag structure of the explanatory variables was chosen on the basis of t-statistics.

[4] See previous footnote for explanation.

Table 6.1 Nominal and Real Effective Exchange Rate Index of the Forint, 1988–1993 (annual average for 1991 = 100)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Nominal effective exchange rate index												
1988	63.77	63.45	63.83	63.86	63.75	63.03	63.77	65.61	65.74	66.43	67.13	67.12
1989	66.35	66.24	67.21	71.75	72.33	72.09	73.00	71.84	71.43	72.17	72.52	79.70
1990	81.34	84.25	85.14	85.24	85.86	85.74	86.64	87.71	87.79	88.81	89.43	89.19
1991	99.59	102.76	100.16	98.78	98.52	96.81	96.95	97.59	98.97	99.06	105.13	107.36
1992	107.18	105.94	105.82	106.97	107.84	109.61	113.33	114.49	114.77	112.97	111.21	111.41
1993	110.00	110.46	111.79	115.95								
Real effective exchange rate												
1988	108.82	107.28	109.23	109.15	108.58	107.27	107.72	110.45	110.32	112.78	111.91	111.65
1989	107.04	106.19	106.81	113.15	113.92	112.91	112.84	110.18	109.32	110.35	110.47	121.16
1990	114.40	116.22	115.63	113.71	113.33	112.80	113.11	113.31	113.35	113.52	104.91	102.28
1991	104.69	104.20	99.36	97.76	97.20	95.18	95.60	95.36	96.75	97.52	102.97	104.28
1992	102.51	101.23	99.75	99.60	99.29	100.14	102.84	102.29	101.25	98.27	95.74	95.74
1993	92.23	92.09	92.77	95.76								

Table 6.2 An OLS-Model of Producer Price Inflation in Industry

Sample period	Explanatory variable	Estimated coefficient	T-statistic
Jan 90-Dec 92	INFLP.1	0.364	2.961
Jan 90-Dec 92	PMOIL.3	0.085	4.298
Jan 90-Dec 92	PMMANUF.4	0.163	2.034
Jan 90-Dec 92	DEVEXP	0.281	3.214

[1] Dependent variable: INFL (Producer prices)
[2] DW(1) 1.983 DW(12) 1.784 F 4,31 10.098 R Bar Sq 0.51

Table 6.3 An OLS-model of Consumer Price Inflation

Sample period	Explanatory variable	Estimated coefficient	T-statistic
Jan 90-Dec 92	INFLC.1	0.333	3.021
Jan 90-Dec 92	INFLP	0.230	3.849
Jan 90-Dec 92	PMMANUF.8	0.089	2.443
Jan 90-Dec 92	CREDIT.7	0.501	2.758
Jan 90-Dec 92	REFP	0.01	2.38

[1] Dependent variable: INFLC (Producer prices)
[2] DW(1) 2.095 DW(12) 1.437 F 5,30 12.449 R Bar Sq 0.621

Table 6.4 List of Variables

INFLP	producer prices, industry
PMOIL	prices of imported energy
PMMANUF	prices of imported manufactures
DEVEXP	constructed variable for devaluation expectations
INFLC	consumer prices
CREDIT	credit extended by the banking system to domestic agents
REFP	dummy variable for price liberalization and fiscal reform measures that have a direct inflationary impact

Note: Figures after the names of variables, separated by dots, indicate the number of lags. All variables are first one-month differences of twelve-month differences in logarithmic form.

Table 6.5 Real Effective Exchange Rate Indices of the Forint (previous year = 100)

Years	Domestic industrial sales price	Industrial unit labor cost	Consumer prices	GDP deflator
1986	110.5	113.8	112.0	117.1
1987	117.7	121.2	114.9	115.8
1988	107.6	105.1	97.7	101.1
1989	100.6	94.1	97.2	96.8
1990	98.7	97.9	95.5	98.2
1991	89.7	86.2	89.9	98.3
1992	101.1	91.0	93.2	95.3

Figure 6.1 The Real Effective Exchange Rate Index of the Forint, 1970–1991 (1973=100)

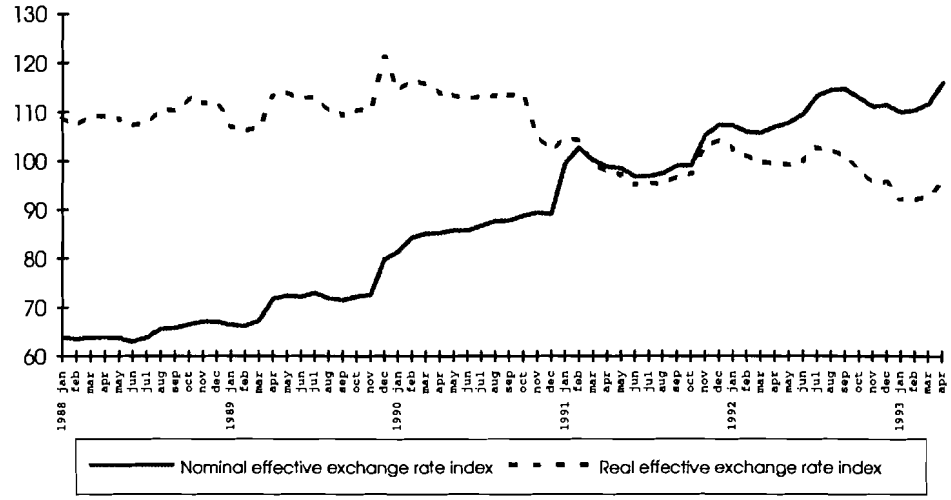

Figure 6.2 Nominal and Real Effective Exchange Rate Indices of the Forint, 1988–93

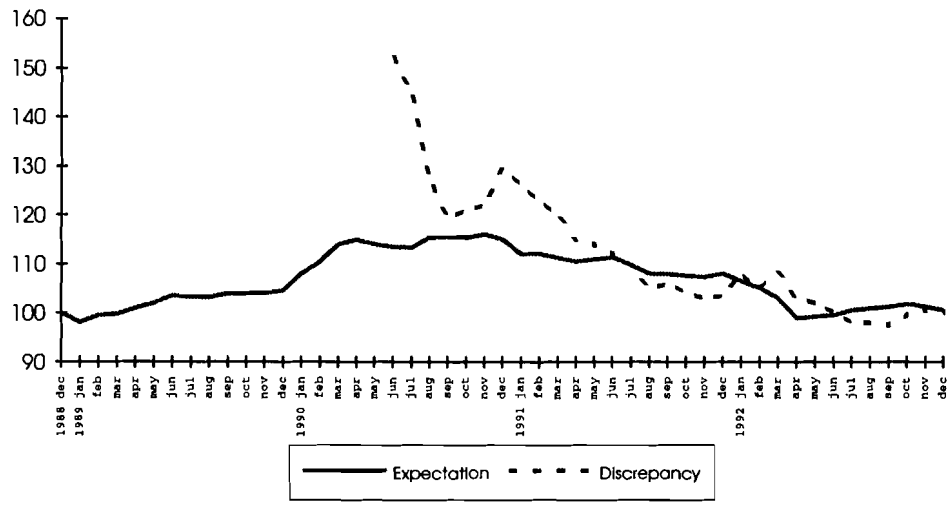

Figure 6.3 Indices of Expected Exchange Rate Changes (current month=100) and the Discrepancy between Official (=100) and Black Market Exchange Rate of the Forint

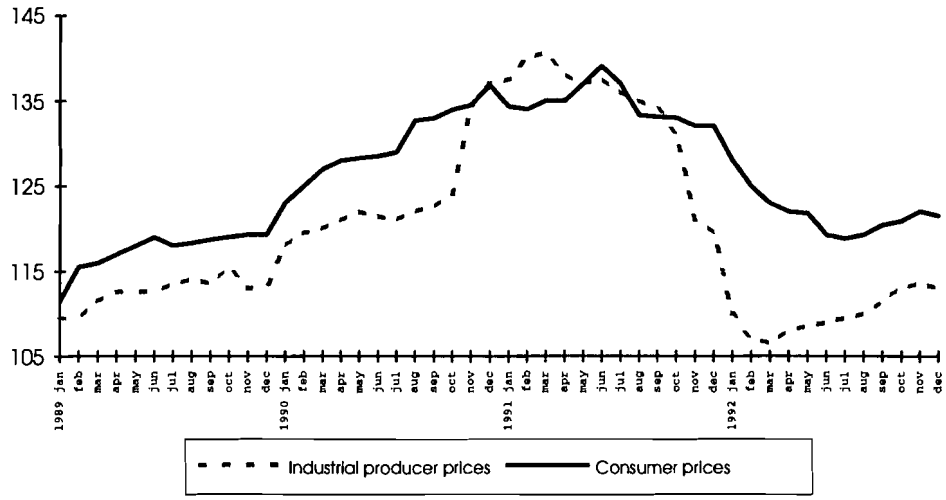

Figure 6.4 Changes in Consumer and Industrial Producer Prices (same month of previous year = 100)

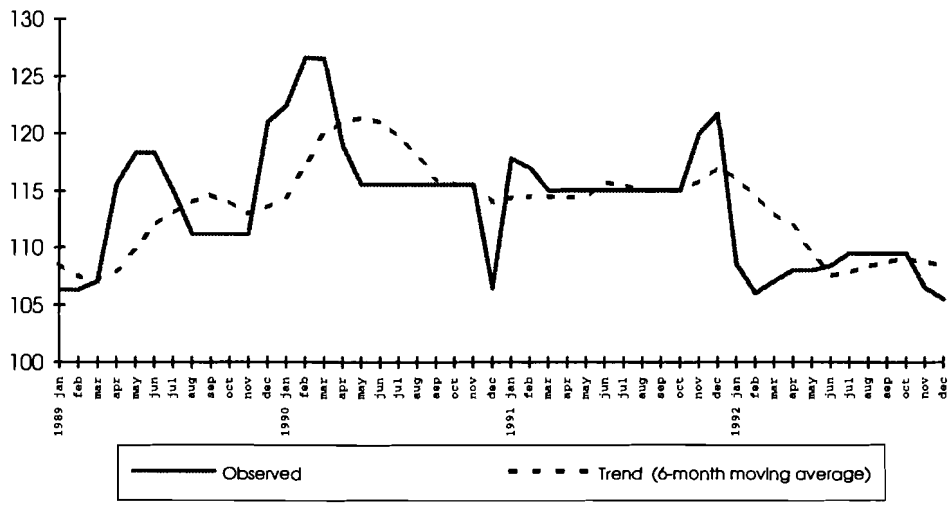

Figure 6.5 Actual Changes in the Exchange Rate of the Forint Relative to the Foreign Currency Basket

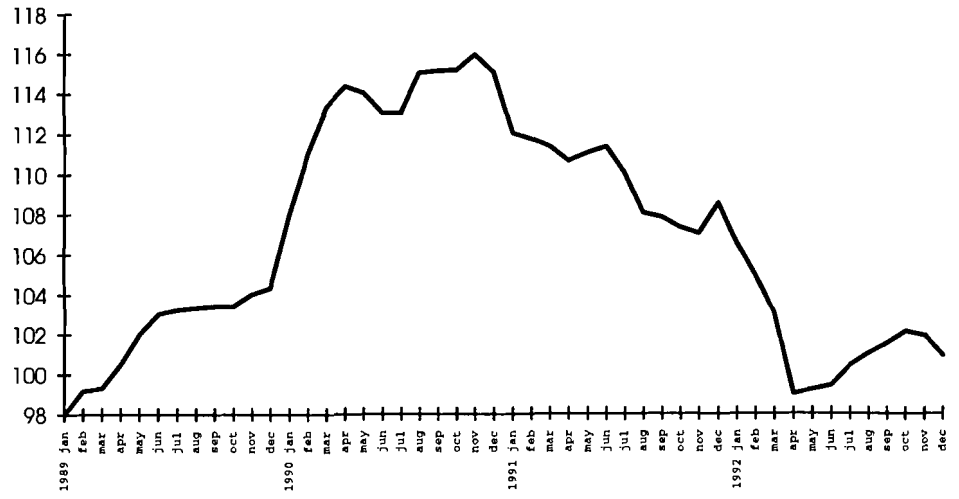

Figure 6.6 Simulation Results of Expected Changes in the Exchange Rate Relative to the Foreign Currency Basket of the Forint (same month of previous year = 100)

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Chapter 7

Stabilizing the Market? 1992 Exchange Rate Policy of the Central Bank of Russia

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7.1 Introduction

This paper is devoted to the discussion concerning the developments on the foreign exchange market in Russia during 1992. The analysis proceeds from one particular point of view: the interventionist policy by the Central Bank of Russia (CBR). Though constituting only a minor part of overall monetary policy, this interventionism has profound consequences for the whole economy. Techniques towards this end were formed in the course of 1992 and successfully applied during the spring and summer of 1993. During this period, the CBR stabilized the exchange rate utilizing mainly exchange rate policy and, thereby, significantly improved the economic environment.

In the second section of this paper, the general framework of the exchange rate market in Russia is described beginning with the introduction of the floating exchange rate regime. In the third section, different criteria are elaborated for evaluating the success of interventionist policy of an official agency; namely, the Central Bank. In the fourth section, the empirical evidence is provided and discussed. Finally, conclusions are drawn regarding the statement which is taken

for granted throughout the entire paper: namely, whether successful stabilization of the exchange rate is useful in itself.

7.2 The Russian Foreign Exchange Market in 1992

Recently, the foreign exchange regime and currency markets have undergone considerable changes which, in turn, reflected the alterations in conducting macroeconomic policy. The preconditions for introducing the floating exchange rate regime in Russia were established at the end of 1991 and the beginning of 1992.

Firstly, hard currency auctions began. These were followed by the creation of the interbank hard currencies market. However, the exchange rate regime allowed for the parallel existence of several official exchange rates applied for different types of transactions during this period, apart from the black or grey market rates. As described in various studies (see, for example, Goldberg 1992 and 1993), this system created negative incentives for exporters. Namely, (i) exporters tried to avoid repatriation of hard currency earnings; and (ii) if obliged to repatriate, they tried to exchange earnings for rubles outside the official interbank market.

As a result, currency markets remained very thin and the supply of hard currency heavily depended on sales by the Central Bank of Russia. It should be noted that the CBR advocated a rather tight monetary policy during this time. Official dollar sales (for sterilization purposes) in the interbank market constituted an important part of this policy.

Secondly, the preparations for introducing the unified exchange rate regime began to unfold during the last months of the first half of 1992. Among other implications, this has led to an increase of the official sales, which were executed clearly against the trend. The goal of the creators of Russian domestic monetary policy (including the CBR) was to make the ruble reasonably strong. The argumentation for this objective was based on several factors revealed here. During the first hard currency auctions, the exchange rate was thought to overshoot its market equilibrium target and CBR interventions were supposed to induce the rate to reflect its real purchasing power. Secondly, the would-be unified rate was thought to be used directly for investment purposes. Therefore, the starting level should have been established at the level that would not discourage foreign investors on the one hand, and simultaneously prevent the impression of a cheap sell-out of national wealth on the other. Considering these issues, it is not surprising that the official foreign exchange reserves were completely drawn down while the nominal exchange rate appreciated during the first half of 1992 (the real

exchange rate even more remarkably). This fact, in itself, called for the reversal of the official policy on the currency markets.

Almost simultaneously, numerous other prerequisites for a considerable change in the official role on the currency market were established. On 3 July 1992, the unified exchange rate regime was introduced. The unification of Russian exchange rates encompassed the merging of the rates applied for official transactions and the black market, though the latter has not ceased to exist and exerts a notable influence on the behavior of economic agents. Direct budget subsidies continued to play an important role for official transactions and, in part, substituted the formerly differentiated exchange rates for rather large segments of official traders on the foreign markets. Despite these persisting complications, the new exchange rate regime encouraged more exporters and importers to use the official market in order to arrange the necessary hard currency transactions.

According to new regulations issued on 14 June 1992, exporters were to be compensated for their obligatory hard currency surrender (which was at the level of 50% of their export earnings) with rubles at the rate fixed at hard currency auctions of the Moscow Interbank Currency Exchange (MICEX). This was substantially higher and more flexible than the official rate previously used for the said purposes. Moreover, 20% of the obligatory surrender could subsequently be sold directly at MICEX, or some other currency exchanges.[1] As a result, the supply of hard currency began to expand.

The relaxation of the stance regarding the CBR's monetary policy became obvious during the second half of 1992. Under these circumstances, the trend-reversal of official policy at the exchange market as described above became completely unreasonable and obsolete. The new goal of the CBR was to smooth the fluctuations of the exchange rate. The summarized data on the CBR's role on the exchange markets is given in *Table 7.1*. It shows that in spite of a substantial decrease in the participation of the CBR on the exchange market in the second half of 1992, its influence remained rather important.

In an economy with established competition, working arbitrage, and nearly perfect foresight of all economic agents, it is difficult to find any worthy justification for an active role of the Central Bank. Economic agents would have a clear perspective of the long-term exchange rate trend under such circumstances. The actual exchange rates would be pegged to this long-term exchange rate via the mechanism of the international interest rate differentials. Any attempt of an official agency to break the trend which does not emerge from a change in fundamentals would create a vast field for profit-raising, and would be offset by the matching funds. Yet, when the arbitrage is limited (both on the inter-country and interregional scale), foresight cannot develop and cannot be based on a long-term trend. As a result, spot exchange rate movements can acquire a momentum of their own. These may be very extreme, and cause distorted signals for the

Table 7.1 CBR interventions at the Moscow Interbank and St. Petersburg Currency Exchanges, 1992

	Ex.rate RUB/USD	Hard Currency Sales (mln. USD)	CBR's Sales (mln.USD)	% of Total Sales	Comm. banks & their clients' sales (mln.USD)	CBR's Hard Currency Purchases (mln.USD)
January	204.32	18.38	0.92	5.01	17.46	–
February	175.76	33.25	11.09	33.35	22.16	–
March	152.77	98.90	68.74	69.50	30.16	–
April	152.78	46.93	22.33	47.58	24.60	–
May	122.33	100.42	39.86	39.69	60.56	–
June	125.26	308.92	224.29	72.60	84.63	–
July	143.45	255.08	131.80	51.67	123.28	–
Jan–July[1]		861.88	499.03	57.90	362.85	–
August	169.66	269.38	70.00	25.99	199.38	17.00
September	226.00	466.21	178.99	38.39	287.22	27.00
October	353.39	421.76	149.94	35.55	271.82	13.00
November	427.02	369.95	119.72	32.36	250.23	7.71
December	414.73	473.22	38.19	8.07	435.03	222.70
Aug–Dec.		2000.52	556.84	27.83	1443.68	287.41
Total		**2862.40**	**1055.87**	**36.89**	**1806.53**	**287.40**

[1] January–July figure is given to underline the change in the CBR's policy which became obvious with the change in leadership of the Bank in late July 1992.
Source: Kommersant-Weekly, No. 5, February 1–7, 1993, p. 10.

allocation of resources, discourage investment, and undermine general economic activity.

If the Russian situation during 1992–1993 is to be understood, it is necessary to outline the set of circumstances that justified a more active role of the Central Bank in the currency market than would otherwise be within the traditional floating-rate mechanism.

Firstly, political considerations play a very important role in the activities of economic agents. These are not only traditional consequences of the generally unstable Russian political environment which, obviously, exerts pressure on the domestic exchange market and constantly induces capital flight. The whole arrangement (according to which the official rate is established at the level fixed

arrangement (according to which the official rate is established at the level fixed in sessions of the MICEX twice a week) is seen as the only, or at least the most significant, reason for rapid depreciation of the national currency by the influential group of politicians. The voices calling for the establishment of a fixed official exchange rate and the introduction of 100% obligatory surrender are prominent enough to cause speculative bubbles at the exchanges. The consequence has been very limited activity on the futures market. The average value of monthly futures contracts is approximately 0.5-0.6 million USD.[2] Moreover, this market is notably thinner than that of the spot rate. Forward rates have reflected the expected rate of ruble depreciation including high risk premiums. This fact combined with an obviously inadequate supply of rubles caused so-called overshooting of forward rates in comparison to the actual spot rate for the same periods for all of 1992. As a result, traders preferred to use the spot rate rather than forward, increasing demand and uncertainty due to the seasonal character of import contracts.

Secondly, the prevailing business practices and regulations in force during 1992 were frequently insufficiently coordinated to have a stabilizing effect on the exchange market. For example, according to the Decree on Obligatory Surrender alluded to earlier, 30% of an enterprise's export earnings were to be sold directly to the CBR within 14 days after receipt of payment. In addition, another 20% of export earnings had to be sold on the exchange market. However, no exact timing for these sales were defined.[3] As a result, enterprises retained earnings until the moment when balances had to be closed for reporting and tax purposes. Therefore, the supply of hard currency funds steadily rose as the end of a financial quarter or the year-end neared and radically fell during the intermediate period.

The Decree No. 205 of the Council of Ministers, issued 6 March 1993, introduced limits on open positions of banks. This measure was envisaged to have a negative side effect, provoking additional pressure on the spot market. In order to avoid the risk of reporting only losses, banks had to be rather short and, thus, increased the volatility of the spot market. However, the introduction of explicit limits on open positions produced an overall stabilizing effect in the course of 1993, mainly because of the steady increase in the supply of hard currency at the exchanges.

Thirdly, the influence of such built-in regulators of the exchange rate as the feedback between the exchange rate and current account performance remain unclear. If some kind of lag in the reaction of the current account to movements of the exchange rate exists (like the J-curve effect), the supply of the offsetting funds on the exchange market may become too slow to smooth the fluctuations automatically. In Russia, the J-curve effects have been extremely significant. Partially, this can be explained by statistical problems: exports are under-invoiced for the simple reason that there are no clearly defined borders, apart from the lack of functioning custom controls. The J-curve effects with respect to the Russian

economy may originate from the territorial spread of the market, from the limited and hampered arbitrage, and, finally, from slow price adjustment.

These three factors should facilitate a better understanding for an active market role of the Central Bank in Russia. Of course, the efficiency of its activity will depend on the particular set of circumstances under which Central Bank operations and intervention occurs. In the following part of the paper, several criteria are suggested that can assist in judging whether the CBR's activity during 1992 corresponded to the target of attempting to 'stabilize the market'. This target was explicitly proclaimed only in the second half of the year.

7.3 Evaluating Central Bank Interventions: The Criteria

In order to assess the success of central bank activity in the exchange market some criterion should be clearly defined. In Milton Friedman's work (1953) on floating exchange rate, the so-called 'profitability criterion' is defined in the following way:

> "In any event, it would do little harm for a government agency to speculate in the exchange market provided it held to the objective of smoothing out temporary fluctuations and not interfering with fundamental adjustments. And there should be a simple criterion of success — whether the agency makes or loses money."

This idea can be demonstrated with the help of the simple diagram presented in *Figure 7.1*. Time is depicted along the X-axis. Under the assumption of a uniform spread of the interventions over the periods in question, this axis may be interpreted also as a quantity axis (t, q). The vertical axis depicts the exchange rate (p).

During the period shown in the left part of the diagram, the national currency is considered to be 'too heavy'. The central bank buys dollars, for example, and these purchases push the exchange rate to the level showed on the diagram in the form of a flatter curve. The area A (vertical lines) may be interpreted as the amount of the domestic currency spent to support the dollar. The shaded area, C, depicts the profit made by buying dollars below the reference (long term equilibrium) level X_0.

In the right half of the diagram, the situation has been reversed. The domestic currency undershoots. This results in official dollar sales, and the amount of national currency purchased is shown by area B (horizontal lines). The shaded area, D, reflects the profit made by selling dollars above the equilibrium level. As long as area B is larger than area A, the official agency finishes with profit in terms of the national currency. This is an example of stabilizing and profitable

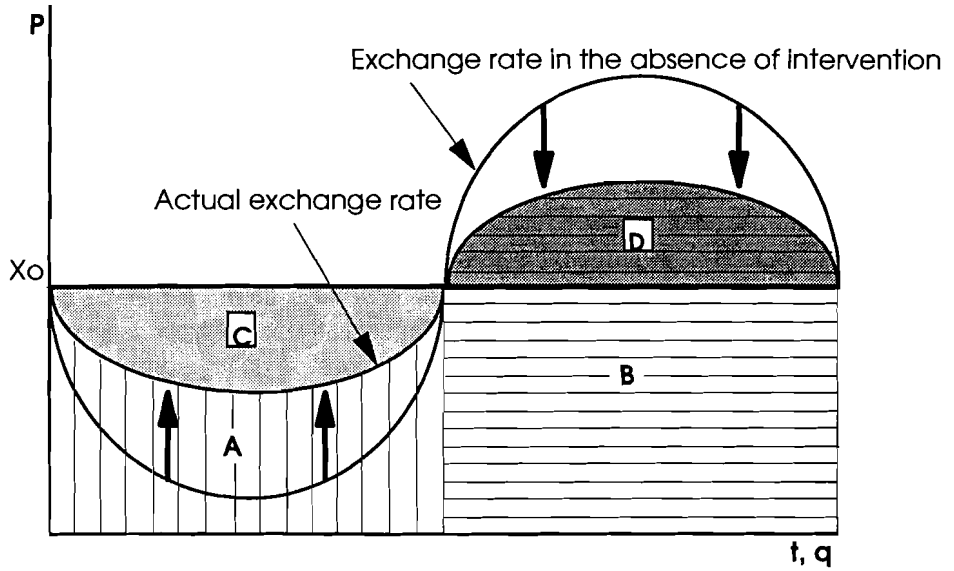

Figure 7.1 Interventions and Exchange Rates

intervention. However, some serious problems with the practical applicability of this criterion are shown in Mayer and Taguchi (1983). In short, these are:

1. Under specific conditions, unprofitable intervention may have a stabilizing effect. For example, it may be the case when the official agency intervenes in the right direction, but excessively.
2. In order to obtain meaningful results some kind of equilibrium level (level X_0 in our diagram) should be used as a benchmark. The attempt to assess results (the reference point being the actual exchange rate differing from this level) may produce the same problem as discussed above: the case of unprofitable but stabilizing intervention. This problem may be avoided if the intervention is closed, or in other words, when the amounts of foreign currency sold and purchased during the period is equal.
3. The assessment of results of interventions may become ambiguous when the equilibrium level is not static, but is subject to some kind of a trend. Once again, unprofitable intervention may have a stabilizing effect. Moreover, the assessment would depend on what has taken place first: sales or purchases of the foreign currency. By incorporating the implicit assumption of the interest rate differential, an amendment of the criterion would give results only under the specific set of circumstances, when

> "...the nominal interest differential is equal to the path of the equilibrium exchange rate. Conversely, it can be seen, that if the interest differential is no longer equal to the exchange rate trend... commercial profits or losses will still be measured correctly, but they can no longer serve as a reliable indicator of the stabilizing impact of official intervention" (Mayer and Taguchi, 1983, p. 16-17).

Generally speaking, if judged on the basis of the profitability criterion, the stabilizing interventions would be rejected in most cases. In this sense, the criterion is definitely negatively-biased. Mayer and Taguchi advised to drop the profitability criterion and substitute it with the more direct approach disregarding interest rate differentials; thus, shifting from the use of the profitability criterion to another method. This should allow measuring whether the interventions, which occurred at a particular point in time, tended to push the actual exchange rate to the then prevailing equilibrium level, or not. The most important advantages of the alternatively suggested criterion are: (i) the opportunity to disregard interest rate differentials, and (ii) the possibility to avoid a dependence of the whole computation on the single (equilibrium) exchange rate level. The latter is even more significant as it facilitates the consideration of shifts in the trend of the equilibrium exchange rate. However, a serious difficulty with this approach lies in the search for the equilibrium rate. Mayer and Taguchi suggested to use some long-term moving average of the actual exchange rate as its proxy.

This paper is based on the method elaborated by Mayer and Taguchi in spite of its shortcomings admitted by the authors themselves. There are some additional limitations concerning the use of this method with respect to the particular case of the CBR's interventions. The choice of a moving average for the actual exchange rate can be only arbitrary with respect to the number of points taken into consideration when the equilibrium exchange rate is computed. The less points considered, the less likely the result would look like any kind of equilibrium rate. However, increasing the number of points raises a further problem. The more time between points, the earlier the influence on the level of the equilibrium rate. This feature may be disturbing when breaks in trends are under consideration. Consequently, weighted averages should be used, but even this would not clear the method of negative or positive bias (which depends on the general direction of the trend).

Another problem is linked to the actual practice of interventions made by the CBR. These are taking place during the sessions of the MICEX in Moscow (also at St. Petersburg Currency Exchange during the second half of 1992).[4] Currency exchanges in Russia work in the following way. Member banks of the particular exchange (approximately 90 banks are members of the MICEX) bid at each session under the directions given by their clients during the period preceding the session.

The aggregate data on supply and demand is at the CBR's disposal before the session. However, the banks may withdraw some of their bids during the sessions. As a result, the starting supply and demand bears the influence of the longer-term trends and expectations of the economic agents. However, interventionist policy seriously depends on interaction of supply and demand during each session.

It follows, that the results of the study may be only approximate, either with respect to the actual way of using the Mayer and Taguchi method, or with respect to any cross-country, or cross-time comparisons.

7.4 Evidence of CBR Intervention Policy

As in Mayer and Taguchi's paper, this study uses three versions of the same method for the data on the CBR's interventions during 1992.

The first version measures, in a simple way, the divergence of the actual exchange rate from the moving average. The weighted moving average was constructed on the basis of the data for 10 successive session days. Intervention was considered to be stabilizing if it succeeded to push the actual rate towards the equilibrium rate, and vice versa. The ratio of stabilizing and destabilizing interventions was computed on the basis of dollar amounts used for interventions, as well as on the basis of the number of cases when intervention was 'OK', or was not 'OK' (ordinary criterion).

The second version considers the fact that the intervention seems to be more justified if it occurs when the divergence of the spot exchange rate from the equilibrium exchange rate is more significant. The 'weighted equilibrium' criterion was again computed as the ratio of 'good' interventions to 'bad' ones. In this case, however, both alternatives were represented by the product of the dollar amount of intervention and the divergence of the actual exchange rate from the moving average, expressed as a natural logarithm. The second criterion partially compensates for an arbitrary choice of the equilibrium exchange rate, because only significantly 'out of line' (divergent) levels of the actual exchange rate actually influence the ratio.

The third version utilizes the approach of "leaning against the wind" (LAW), suggested by Mayer and Taguchi. The LAW is based on the following consideration: as the behavior of the market participants acquires considerable inertia, it may be advisable for the central bank to start to 'brake' this inertia before it has resulted in violent deviation from the equilibrium exchange rate. In order to take account of this consideration, the LAW criterion distinguishes between two types of exchange rate zones.

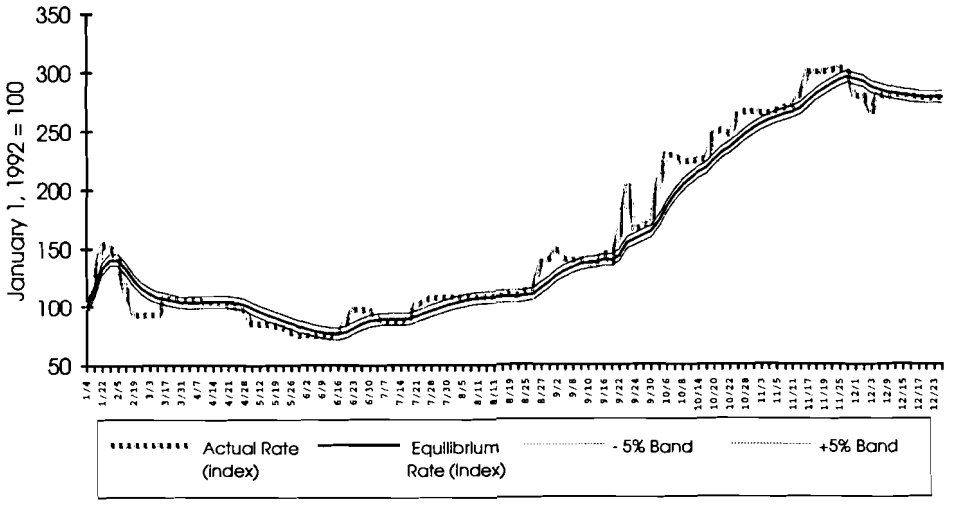

Figure 7.2 MICEX and St-Petersburg Currency Exchanges, 1992

> "Firstly, a band around the hypothetical equilibrium rate within which the stabilizing impact of intervention is judged according to the LAW criterion. And, secondly, the exchange rate zones outside this band, where official intervention is evaluated in terms of its impact in pushing the exchange rate towards, or away from, its equilibrium level" (Mayer and Taguchi, 1983, p. 26).

In this paper, the stable band of -5% to +5% around the equilibrium level is used. The actual exchange rate, equilibrium exchange rate, and the LAW-band are shown in *Figure 7.2*. It depicts the dynamics of the MICEX (Moscow) and St. Petersburg currency exchanges during 1992. Notice the relative stability of the exchange rate for the first half of the year and the dramatic depreciation of the ruble beginning at the end of August 1992.

The summary of the use of different criteria regarding the CBR's intervention policy is given in *Table 7.2*. The data presented in this table suggests three conclusions:

1. On the whole, 'stabilizing' interventions exceeded 'destabilizing' ones during 1992.
2. During the first as well as the second half of the year, objectives of interventionist policies were achieved by policy-makers. The divergence of the actual rate index from the equilibrium rate is illustrated together with the

Table 7.2 Ratios of 'stabilizing' to 'destabilizing' interventions

	Unweighted, intervention amounts	Unweighted, number of cases	Weighted	LAW
1992	2.54	1.68	1.88	8.37
Jan–July	1.09	0.85	0.77	4.27
Aug–Dec	5.45	3.13	4.13	18.13

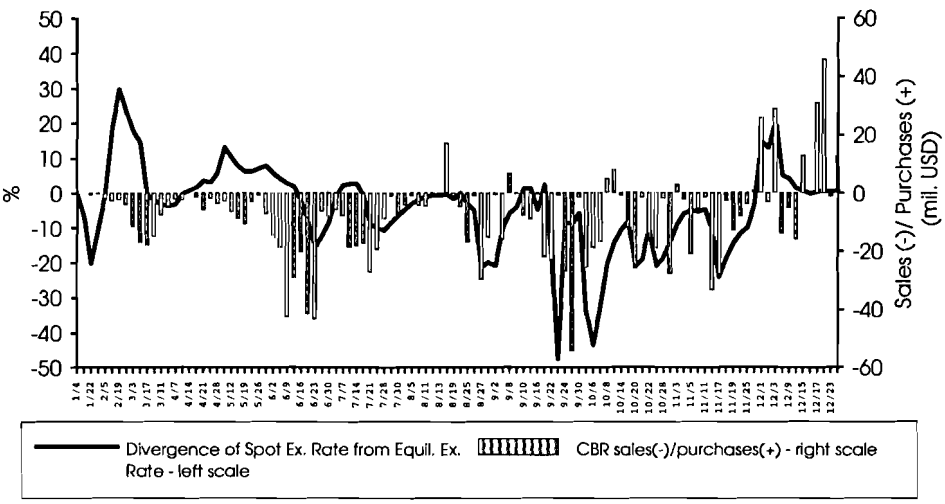

Figure 7.3 Divergence of Spot Exchange Rate from Equilibrium Exchange Rate, 1992

instances and magnitudes of intervention in *Figure 7.3*. At least two criteria suggest that the policy was 'successfully destabilizing' during the first half of 1992, in the sense that it corresponded to its goal to push the actual rate towards the predetermined level no matter how the market reacted (two ratios in *Table 7.2* are less than one, and another is only slightly higher). Throughout the last 6 months of 1992, the CBR was trying to smooth the variations of the exchange rate around the long term-level. As all four criteria show, 'stabilizing' interventions significantly outnumbered those with a 'destabilizing' effect (ratios in *Table 7.2* are mostly positive and greater than one).

3. The LAW criterion has been revealed as giving too optimistic an impression of CBR policy for the second half of the year. The problem with it may be attributed to the choice of the LAW-band width. It is advisable, that the future application of the LAW criterion is amended in a manner such that only those interventions inside the LAW-band should be judged according to the LAW criterion, which occur immediately after the rate has entered the band from outside. All others should be regarded according to ordinary criterion.

7.5 'Stabilizing the Market' Goal Revisited

As suggested by Goldberg, some evidence should be sought in order to support the idea expressed above; namely, whether variations in the exchange rate actually influenced the behavior of any agent in the Russian economy. In this sense, the CBR policy of 'smoothing out' the exchange rate variations could be judged as reasonable and justified. It is very likely, that available macroeconomic data would not be sufficient for a comprehensive evaluation. The average ratio of foreign trade operations in the balances of industrial enterprises was traditionally rather low in Russia. The deterioration of PPP during 1992 decreased the relevance of macroeconomic data even more. Therefore, the idea outlined in this paper can be applied for a rather limited segment of the economy, most likely for net importers.

However, it is necessary to consider the following peculiarities of hard currency regulations and business practices in Russia. The majority of Russian exporters demand hard currency for import needs. They have had to sell 20% of their export earnings through currency exchanges, but there is nothing forbidding them to buy the same amount of hard currency at the very same bids. As a result, the free 'residue' of hard currency supply at each session (and, especially, in the long run) is severely limited. So, the foreign exchange supply provided by the CBR (and its variations) will be crucial for examining whether the Central Bank policy influences economic fundamentals and not the actual exchange rate fluctuations.

Moreover, the actual exchange rate may not play the role indicated above for part of the importers (of food, spare parts, and many other commodities) because they enjoy preferential treatment in explicit or implicit terms. For example, easy access to cheap credit may have the same effect as the subsidized exchange rate. As a result, these importers may hold the demand at practically any level of the exchange rate. Therefore, there are not many economic agents for whom fluctuations of the actual rate may alter long-run behavior. These are net importers generally from the non-state, non-industrial sector (who have no state support) and speculators. The data on economic activity of these two groups, alas, is very difficult to specify and trace.

7.6 Conclusions

Since the second half of 1992, the CBR has seriously decreased its participation in the foreign exchange market. The Central Bank officially declared that the major goal of its interventionist policy is to smooth the fluctuations of the exchange rate. The data supplied in this paper and the fact that foreign exchange reserves of the CBR accumulated during the period studied, reveal that the objectives of the CBR's policy were realized.

Notes

[1] According to the Letter of the CBR No. 41 of 28/06/93, the whole amount of the obligatory sales should be sold directly to one of the hard currency exchanges.
[2] Kommersant-Weekly, No.7, February 15–21, 1993, p. 12.
[3] According to the Letter of the CBR, quoted in the previous footnote, the sales to one of the exchanges should have been executed during the 14 days period.
[4] The CBR participated on up to six exchanges by the fall of 1993.

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Chapter 8

Exchange Rate Regime in the Transition Period

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8.1 Introduction

In early 1990, at the start of the Czechoslovakian transition, three principal questions related to the exchange rate emerged:

- What could and should be the role of exchange rate?
- What level of the exchange rate should be adopted? and,
- What type of exchange rate regime should be maintained?

These questions had to be addressed in an ex-ante manner. The transition also implied a discontinuity in the sphere of exchange rate policy. The trends and data from past developments could not provide a rational benchmark or, at least, could not be referred to in unqualified terms. While discussing the potential options of exchange rate policies, it was evident that their role would be, particularly in the initial phase, constrained by the inherited distortions from the centrally planned economy 'episode'. Nonetheless, an early opening of the small Czechoslovakian economy was considered crucial for the progress and ultimate success of the entire transition.

Already in 1993, the processes materialized and the experience accumulated to form the basis for the discussion of exchange rate issues. These developments facilitate an analysis in positive terms, and not only in normative ones.

With the benefit of hindsight, this paper examines the issues of the exchange rate's role in the course of the transition in former Czechoslovakia. In the first part, concepts and initial aims of exchange rate policies are contrasted with the results and lessons learned. On this basis, some conclusions for exchange rate policies in the Czech Republic[1] are drawn in the second part of the paper.

8.2 Sources of Insight into the Role of the Exchange Rate

Although neither theoretical reasoning nor experience from elsewhere in the world economy provided ready-made solutions for the selection of exchange rate regimes in the transition economies, both of these sources of insight proved relevant and useful for the policies and concepts adopted. While the theoretical approaches (particularly regarding optimal currency area and optimal exchange rate regimes[2]) provided desirable criteria, arguments, and organizational framework for the discussion, the lessons learned from postwar developments pointed to the importance of the international environment and the specific conditions of individual countries. Their properties co-determined the ratio of advantages and disadvantages as well as costs and benefits of exchange rate regime options.

In the transition economies, unlike in other parts of the world economy, the institutional and economic environment undergoes rapid and wide-ranging changes, though with different speed across individual countries. This is their specific, distinguishing feature. As a result, the real contents and impacts of various exchange rate regime options and concepts may differ widely in the successive periods. The rationale and goals of a nominal exchange rate anchor, for example, may be quite different in the initial stabilization stage compared to the follow-up stages.

8.2.1 Development Stages in the Transition

Based on past experience, three stages are distinguished within the transition process:

(i) *Transition in a narrow sense:* Includes macroeconomic stabilization, price, foreign trade and foreign exchange liberalization and deregulation, the

initiation of institutional, systemic and legal changes to create a market economy framework, based especially on the privatization program launched;

(ii) *Adjustment and consolidation period:* After the institutions and the rules of the new system have been introduced, the newly created market institutions and agents must undergo learning and adjustment processes. The resulting resource reallocation and income redistribution is intermediated through progressing factor markets: in particular, labor, money, capital, and foreign exchange markets; and,

(iii) *Period of 'normality':* The transition economy has already achieved the character of a 'normal' European market economy. The ensuing economic trends and policy issues now primarily result from the 'standard' market economy functions and processes, and not from the legacy of the centrally planned economy.

Though the given stages cannot be separated by a clear-cut dividing line and the mentioned processes inevitably overlap, their identification, which highlights the substance of each period, provides useful organizing criteria. By historical coincidence, the dividing line between the first and second stages approximately coincides with the split of former Czechoslovakia into two separate states, the Czech and Slovak republics.

The previous period, extending for three years from the Velvet revolution of November 1989 until the end of 1992, was dominated by macroeconomic stabilization and liberalization in both the domestic and external spheres and by the initiation of an extensive privatization process. An asymmetry between the macroeconomic and microeconomic dimensions of the transition was symptomatic for this stage. Although they were initiated during this time, most institutional and ownership changes were yet to be made effective and consolidated. Macroeconomic measures, including exchange rate policies, consequently lacked adequate microfoundations.

A restrictive stance with respect to macroeconomic policies coupled with a number of external shocks resulted in a severe, unexpectedly deep recession in the stabilization stage. The subsequent period of adjustment and consolidation, on the other hand, should create conditions for economic recovery and positive growth rates. The aspired effects of privatization, of increasing inflow of foreign investment, and the formation of new market institutions and agents are expected to contribute to this goal.

8.3 Exchange Rate Policies and Developments in 1990–92

At the beginning of Czechoslovakian economic transition, the issues concerning the exchange rate level and exchange rate regime were closely linked with the policies on currency convertibility. While there was a fairly general consensus about its desirability, views differed widely as to what type and degree of convertibility and, particularly, when it should be introduced: should at least a limited type be introduced at the beginning of the transition process (to follow, among others, the Polish approach) or should it be conceived only as an element in a longer-term gradual adjustment (the concept followed in Western Europe in the 1950s)?

8.3.1 Pros and Cons of Early Convertibility

Czechoslovakian authorities opted for simultaneous liberalization in both the domestic and external spheres, including the move to so-called internal convertibility for registered businesses on current account items.[3] These measures were implemented as a concerted package at the beginning of January 1991.[4]

Opponents of the reform claimed that such a rapid introduction of convertibility and liberalization of foreign trade, requiring a large devaluation, would be premature, inflationary, and too costly. The alternative option was to give domestic liberalization priority and proceed with loosening regulations in the external sphere in only a step-by-step fashion within a time horizon of a few years. While both options evidently had their particular benefits and costs, the early move to currency convertibility, however limited, seemed to be a necessary component of the chosen policy package given the transition strategy and prevailing initial conditions. The benefits of hindsight disclose that the introduction of internal currency convertibility proved to be a success. The regime has been maintained without any serious tensions and even further extended within a relatively short time.

The commitment to early convertibility required that it be credible and that the conditions for its sustainability would likely to be met. On the microeconomic level, a satisfactory standard of financial discipline was especially required. On the macroeconomic level, aggregate demand had to be under control and a reasonable balance in foreign exchange payments secured, at least in the medium term (the flow issue), as well as a sufficient level of reserves (the stock issue). The main procedure to achieve these goals was seen in the implementation of the

government's stabilization program based on the restrictive stance of macroeconomic policies.

However, under the given conditions, a number of serious constraints were faced:

(i) Stabilization policies had to be applied mostly within the inherited institutional framework in an almost entirely 'socialized' economy. The responsiveness of traditional state enterprises to restrictive fiscal, monetary, and credit policies was hardly predictable, but it had to be assumed as relatively low; and
(ii) The economic policy calibration and targeting had to cope with the discontinuities of previous trends and with a rather high degree of uncertainty regarding current economic development. This uncertainty was due to both the legacy of the past as well as to a number of contemporary external shocks coinciding with fundamental institutional changes initiated domestically.

Based on the resolution to cope with these limitations, the authorities attempted to adjust their policies accordingly and focused their efforts in the following three main areas:

(i) Linking the instruments of traditional stabilization policies (fiscal, monetary, and credit) in a pragmatic way with the instruments of wage and incomes policies (i.e., with the elements of so-called heterodox approach);
(ii) Opting for a more restrictive policy stance and for an 'overshooting' devaluation of the domestic currency than seemed warranted by the relatively stable macroeconomic situation of Czechoslovakia; and
(iii) Undertaking efforts to increase the volume of foreign exchange reserves.[5]

As a result, securing the necessary conditions for the sustainability of currency convertibility, however limited, implied considerable costs from the very beginning of the transition. However, the issue of convertibility was closely intertwined with the entire concept of the specifically selected transition strategy and, therefore, the incurred costs were not just the function of early convertibility, but of the given type of transition program as a whole.

8.3.2 The Choice of an Exchange Rate Regime

A competitive exchange rate is the major determining factor for a sustainable balance-of-payments development. Given the wide range of uncertainties faced at the beginning of the transition, both domestic and external, the selection of an

exchange rate level and an exchange rate regime was far from being an unambiguous and non-controversial issue.

In order to avoid some uncertainties involved, the floating exchange rate option was repeatedly suggested, at least to facilitate the initial setting of market-like values. Nevertheless, the potential merits of such a solution seemed severely constrained in the environment of the transition economies: in particular, due to the existence of rather thin currency markets, lack of fully functioning foreign exchange market institutions, and absence of forward foreign exchange markets and of short term arbitrage and speculative flows which, under certain conditions, could work towards stabilizing the exchange rate (Williamson, 1991). Consequently, the extent of misalignments and exchange rate volatility was likely to be much greater than in consolidated market economies. And, even in those stabilized economies with experience with a floating exchange rate regime, results were all too often not particularly encouraging. The instability of this key price would also undermine the main aim of currency convertibility: to discipline domestic agents and to promote adjustment of domestic relative prices.

If the monetary authorities tried to intervene to dampen the exchange rate volatility, for instance, if the resulting solution would be a kind of managed or dirty float, the crucial issue would immediately re-assert itself: how to identify the desired exchange rate levels which should be defended?

Czechoslovakia opted for a fixed exchange rate regime with the aim of using the nominal exchange rate as an instrument of macroeconomic stabilization — as a nominal anchor of the stabilization process. This approach followed similar examples applied elsewhere in stabilization programs utilizing the fact that the exchange rate is a special 'macroeconomic' price with a potential impact across the entire national economy.[6] Despite embarking on the strategy of a 'nominal exchange rate anchor', the Czechoslovakian authorities did not commit themselves to any pre-announced period of keeping the exchange rate unaffected. Given the extent of uncertainties, shocks, discontinuities, and initiated changes, including institutional ones, it appeared unrealistic to attempt to fix an irrevocable rate at that time and to make it reasonably sustainable for a pre-determined period.

Such a solution was, in a sense, a compromise; a combination of the elements of the stabilized 'norm' and the flexibility of possible adjustment. However, just because of the lack of any ex-ante determined commitment and/or the rule for parity changes, this compromise could not aspire to create the credibility of the adopted exchange rate. Since the very beginning of the transition, Czechoslovakian authorities, particularly the Central Bank, sought to make only realistic commitments and to avoid, as far as possible, any breakdown and retreat. Again, hindsight shows that such an approach proved to be rewarding. Developing exchange rate policies as 'credible' under the given conditions actually required

a certain sense of potential revocability of the given rate; that is, to postpone 'earning' its credibility to a later stage.

The Czechoslovakian koruna (CSK) has been pegged to a basket of five currencies since the beginning of January 1991. This peg has remained virtually untouched.[7] The changes only reflected the shifts in cross-rates of basket currencies. The same policy of nominal exchange rate stability was followed by the Czech authorities after the split of the federal republic and the separation of the Czech and Slovak koruna at the beginning of 1993. The stabilized level of the CSK's and later the CZK's nominal exchange rate distinguishes their developments from Poland's zloty and Hungary's forint. Both Hungary and Poland have been adjusting nominal exchange rates to restore their competitive levels given a substantial inflation differential.

In Poland, the extensively devalued nominal exchange rate (by 31.6% against the peg) introduced along with the zloty's internal convertibility at the beginning of the Polish stabilization program in January 1990, survived unchanged until May 1991, despite 250% inflation in 1990. In May 1991 the zloty was devalued by 14.4%, in February 1992 by 12% and again in August 1993 by 8%. In addition, the crawling peg system was introduced in October 1991, implying continuous pre-announced depreciation of the zloty *vis-à-vis* convertible currencies: each banking day the value of the basket was increased by 9 zlotys, and presently by 15 zlotys.

In a less inflationary environment, the Hungarian authorities corrected the ensuing price level differential via repeated but relatively small discrete devaluations of the forint. In 1991, the forint was devalued twice against its currency basket, by 15% and 5.8%; in 1992 on three occasions, but each time by only less than 2% (1.9%, 1.6%, 1.9% respectively); and, finally, four times in 1993 by a total of 10.1%, including a 3% drop in July. In 1991, the policy intentionally did not correct for the entire inflation differential allowing thus for real appreciation of the forint with the aim to promote gradual competitive adjustment of Hungarian firms. In 1992, the official policy evidently returned to a stabilized real exchange rate target.

8.3.3 The Underlying Factors of the CSK Exchange Rate Developments in 1990–1992

Given all the upheavals of the first stage of transition, the unchanged nominal exchange rate of the former Czechoslovakian koruna and now of the Czech koruna since the end of 1990 raises several questions: What are the reasons behind this stability? Is the given nominal exchange rate likely to remain unchanged also in the next stage of transition, or is the move to a further devaluation only delayed,

compared to the Polish and Hungarian experience? Under which conditions would it be justified to continue maintaining an unchanged nominal rate?

8.3.3.1 Balance of Payments Developments

After a sharp deterioration in 1990, the current account balance in convertible currencies recovered and registered significant surpluses both in 1991 and 1992. Two main tendencies were surfacing in the period under consideration (see *Table 8.1*); firstly, the role of trade in invisibles (i.e., services) has substantially increased in the current account compared to the past when merchandise trade flows were dominant. The growing services balance surplus was solely responsible for (in particular, receipts from transport services and tourism) covering the increasing trade deficit; and, secondly, the capital account revealed that the increased inflow of long term capital (direct foreign investment (DFI) and foreign loans, mostly by international organizations) was just matched by the outflow of short term capital.

On the whole, balance of payments proved to be more favorable than expected in the years 1991 and 1992. In 1991, a current account surplus of USD 0.3 billion was achieved instead of an envisaged deficit of USD 2.5 billion, as estimated by

Table 8.1 Balance of Payments in Convertible Currencies 1989-92 (in million USD)

	1989	1990	1991	1992
Current account	439	-1105	356	226
Trade balance	419	-785	-447	-1576
Service balance	218	37	827	1652
Income balance	-163	-316	-65	9
Transfers	-35	-40	42	140
Capital account	326	326	47	41
Direct foreign investment	256	181	592	1055
Portfolio investment	–	–	–	-43
Other long term capital	-53	718	1732	471
Short term capital	123	-573	-2277	-1443
Errors and omissions	-197	-324	494	-386
Changes in reserves (increase = -)	-569	1102	-898	120

Source: Czech National Bank

Table 8.2 Balance of Payments Developments in 1992 (in million USD)

	1-6	1-9	1-11	1-12
Current account	826	895	687	226
Trade balance	188	-441	-790	-1576
Service balance	433	1128	1329	1652
Income balance	111	58	-22	9
Transfers	93	150	170	140
Capital account	-54	-259	155	41
Direct foreign investment	443	968	995	1055
Portfolio investment	–	1	–	-43
Other long term capital	520	658	673	471
Short term capital	-1021	-1887	-1517	-1443
Errors and omissions	28	73	-556	-386
Changes in reserves (increase = -)	-800	-709	-286	120

Source: Czech National Bank

both government and IMF experts.[8] In 1992, an initially predicted deficit of USD 0.6 billion was revised at mid-year to an expected surplus of USD 1 to 1.2 billion (the surplus effectively achieved in the first half of the year amounted to USD 0.8 billion). However, the end-year result was much more modest, due to the abrupt deterioration of the trade balance in the fourth quarter, especially in December 1992. The data on balance of payments in the second half of 1992 (*Table 8.2*) portray these developments.

The increasing trade deficit may point to a gradual loss of competitiveness, caused by the growing disparity in 'fundamentals'. The abrupt deterioration of the trade balance experienced in December 1992 (the trade deficit doubled in the course of one month) also seemed to suggest the impact of biased expectations on the part of both domestic and foreign subjects. Among the reasons were the forthcoming split of the federal state, uncertainties concerning the future currency arrangements between the newly created political entities, potential devaluations and/or retreat to trade restrictions, and the extensive tax reform introduced at the beginning 1993.[9]

Turning now to the capital account, the inflow of DFI almost doubled in 1992 compared to 1991, steadily increasing throughout the whole year. Short-term capital outflow already started in 1990 and attained a substantial dimension in terms of the small Czechoslovakian economy in 1991 (compare data in *Table 8.1*). The existing positive interest rate differential between Czechoslovakia and foreign

markets was evidently outweighed by the uncertainties and risks perceived during the transition, including exchange rate risks. However, short-term capital outflow partly reversed towards the end of 1992 when the uncertainties and biased expectations culminated.

8.3.3.2 Changed Institutional Setting and Exchange Rate Level

Despite its formal existence, the exchange rate was only of minor relevance under the traditional centrally planned economic framework, which persisted until the end of the 1980s in Czechoslovakia. While pegged to the basket described earlier since 1979, the 'official' exchange rate was maintained as unchanged throughout the 1980s despite its increasing overvaluation. On the other hand, various black and parallel market rates, operating outside the legal framework, provided a distorted evaluation of the currency as well, inevitably depressing its value to an unrealistic level. Though more relevant and realistic, the 'implied' exchange ratios and various coefficients used domestically for trade and non-trade flows were widely dispersed between official and parallel market rates.

Only as late as 1990 were steps towards the unification of existing diversified exchange ratios initiated by eliminating the duality of the so-called commercial and non-commercial rates at the beginning of the year and phasing out a special tourist rate at the end of that year. However, this unification could only effectively materialize provided a proper exchange rate level was introduced. The requirements associated with the scheduled general liberalization and opening of the economy called for an initial undervaluation of the exchange rate compared to what could be defined as the 'fundamental equilibrium exchange rate'. The controversial issue was by how much to deviate and, consequently, by how much to devalue? The policy objective was to avoid both an unnecessarily large undervaluation, which would imply inflationary cost-push pressures and mitigate the desirable disciplining function of external competition, and overvaluation, which would result in unsustainable balance-of-payments deficits undermining the very existence of currency convertibility and the active liberalization program.

A wide range of values was proposed: from CSK 16 per USD, which was close to the former 'commercial rate', up to 35-40 CSK per USD, which approached the marginal and parallel market ratios. Czechoslovakia finally started its stabilization and liberalization program at an exchange rate of CSK 28 per USD. Though it could be argued that the former exchange ratios, including the so-called commercial rate, hardly represented the *de facto* exchange rate since the resulting depreciation of the CSK was substantial: from CSK 14.29 per USD at the end of December 1989 to CSK 28 per USD on December 28, 1990. The option adopted

by the authorities was thus closer to the existing marginal and parallel market rates. As a result, the depreciation appeared to overshoot an ex-ante acceptable target.

The adopted exchange rate was the outcome of three successive devaluations of the CSK *vis-à-vis* convertible currencies in the course of 1990: the CSK was devalued by 16.6% on January 8, by 55.3% on October 15, and by 15.98% on December 28, 1990. The first two devaluations represented more-or-less only administrative corrections of the existing exchange ratios rather than proper devaluations since they were implemented as isolated acts without accompanying price liberalization. Thus, the impact was limited. The second devaluation (of October 15) was originally scheduled for the beginning of 1991 as a component of the liberalization package, which also implied phasing out the so-called foreign exchange retention quotas. As a preannounced policy, the devaluation became the object of much public debate and also gave enterprises and households the opportunity to react accordingly. Imports dramatically increased in the second half of 1990, simultaneous with growing pressure on the liquidity of the banking sector and on foreign exchange reserves. In addition, a substantial share of foreign investors recalled their deposits from Czechoslovakian banks despite the official support from abroad to the reform program of the new, non-communist Czechoslovakian government. Therefore, the second devaluation was thus an 'unplanned' act implemented under distress, with the aim to reverse the depletion of foreign exchange reserves.

These developments reminded authorities about the role of expectations and represented a harsh lesson from their own conduct and policies. However, the resulting tensions also prompted them to err in overshooting the undervaluation rather than the other way around. Consequently, the third of the successive devaluations followed, finally fixing the exchange rate at CSK 28 per USD.

8.3.3.3 Exchange Rate and the Developments of 'Fundamentals'

In order to identify underlying trends affecting the exchange rate of the CSK in the first, stabilization stage of the transition, calculations were made to assess the developments of:

- purchasing power parity (PPP);
- parallel market rates (PMR);
- nominal effective exchange rate (NEER);
- real effective exchange rates (REER), based both on consumer price indexes (CPI) and producer price indexes (PPI); and
- unit labor costs in industry (ULC).[10]

Purchasing Power Parity Developments

A common feature of the former centrally planned economies was a wide gap between domestic and external purchasing power of their currencies, significantly wider than in comparable market economies (see Summers and Heston, 1988).

The devaluations introduced at the start of the Czechoslovakian economic transition in 1990 widened this gap still further. At that time, most expert studies identified the PPP rate in the range of CSK 7-8 per USD. Using the mid-point of the interval (i.e., 7.50 CSK/USD) as a benchmark, the resulting trends in the PPP rate are presented in *Figure 8.1* (for data see *Table 8.3*). The registered decrease in the implied purchasing power of the CSK with respect to USD from CSK 7.50 in January 1990, to CSK 13.39 in December 1992 reflects Czechoslovakia's inflation differential as measured by CPIs.

As follows from data in *Table 8.3*, the ratio between exchange rate and PPP rate, amounting to 2.17 in January 1990, reached a high at the end of 1990 after the devaluations and in expectation of a sweeping liberalization of domestic prices. Thereafter, it decreased only gradually from the record level of 2.89 in December 1990 to 2.13 two years later. Thus, the December 1992 figure almost matched the initial level of January 1990. A study by PlanEcon (PlanEcon Report 16-17,18, 1992) assessed the PPP rate of the CSK even more favorably: 6.20 CSK/USD in

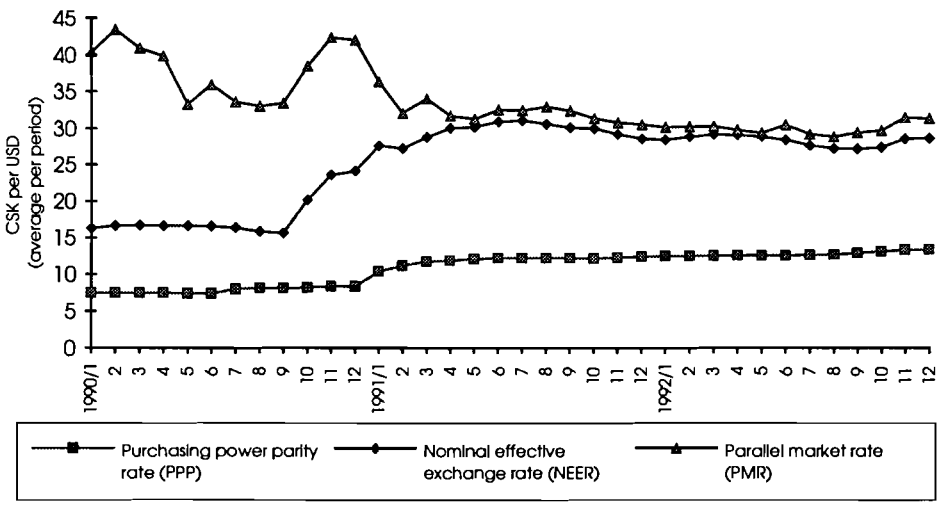

Figure 8.1 Official Exchange Rate, Parallel Market Rate, and Purchasing Power Parity of CSK

Table 8.3 Nominal Effective Exchange Rate, Purchasing Power Parity and Parallel Market Rate of CSK in 1989–1992 (CSK per USD, average per period)

	1	2	3	4	5
1989	7.50	15.05	42.39	2.01	2.82
1990/1	7.50	16.29	40.39	2.17	2.48
2	7.49	16.6	43.46	2.22	2.62
3	7.48	16.72	40.88	2.24	2.44
4	7.48	16.67	39.81	2.23	2.39
5	7.46	16.64	33.20	2.23	2.00
6	7.45	16.58	35.88	2.22	2.16
7	8.01	16.37	33.55	2.04	2.05
8	8.17	15.89	32.99	1.95	2.08
9	8.18	15.71	33.42	1.92	2.13
10	8.21	20.18	38.52	2.46	1.91
11	8.38	23.63	42.45	2.82	1.80
12	8.38	24.19	42.10	2.89	1.74
1991/1	10.48	27.65	36.34	2.64	1.31
2	11.19	27.24	32.04	2.43	1.18
3	11.74	28.74	33.93	2.45	1.18
4	11.91	29.94	31.60	2.51	1.06
5	12.13	30.12	31.18	2.48	1.04
6	12.27	30.89	32.45	2.52	1.05
7	12.22	31.00	32.37	2.54	1.04
8	12.21	30.53	32.85	2.50	1.08
9	12.21	30.03	32.30	2.46	1.08
10	12.17	29.89	31.27	2.46	1.05
11	12.31	29.15	30.74	2.37	1.05
12	12.44	28.55	30.44	2.29	1.07
1992/1	12.53	28.36	30.12	2.26	1.06
2	12.53	28.78	30.19	2.30	1.05
3	12.53	29.16	30.21	2.33	1.04
4	12.56	29.06	29.76	2.31	1.02
5	12.57	28.84	29.37	2.29	1.02
6	12.57	28.42	30.44	2.26	1.07
7	12.66	27.61	29.16	2.18	1.06
8	12.70	27.25	28.79	2.15	1.06
9	12.90	27.18	29.36	2.11	1.08
10	13.12	27.38	29.61	2.09	1.08
11	13.32	28.54	31.40	2.14	1.10
12	13.43	28.60	31.30	2.13	1.09

Note: 1 = Purchasing power parity rate (PPP), 2 = Nominal effective exchange rate (NEER), 3 = Parallel market rate (PMR), 4 = NEER/PPP (2:1), 5 = PMR/NEER (3:2).

January 1990 and 10.30 CSK/USD in May 1992. While deviating at the initial level, the rate of change coincides with our estimates.

Unlike in the Czechoslovakian case, the exchange rate/PPP rate ratio decreased significantly in both Poland and Hungary. In January 1990, the level dropped from 3.88 in Poland and 2.15 in Hungary to 1.70 and 1.68 respectively by May 1992. Comparing these findings, one might conclude that the CSK remained undervalued based on the PPP criterion.

Parallel Market Rate

Contrary to PPP developments, the initial wide spread between parallel market and official exchange rates of the CSK (coefficient of almost 3 in 1989 and 2.5 in January 1990) was virtually eliminated since April-May 1991 after successful introduction of internal currency convertibility (compare *Figure 8.1* and *Table 8.3*). The remaining spread was, as a rule, only marginal — as low as 2% in the first half of 1992. However, it did widen again to as much as 6-8% by the end of the year due to the re-appearing uncertainties associated with the forthcoming split of Czechoslovakia.

Real Effective Exchange Rates

The International Monetary Fund (IMF) regularly calculates and publishes real effective exchange rate (REER) indices only for Hungary and Poland. Our own calculations were made for Czechoslovakia and, therefore, cannot be considered strictly comparable with the IMF figures. Although the concept of real effective exchange rate itself is unambiguous there is a number of methodological and technical issues that may qualify the results and their interpretation when REER is defined as a nominal effective exchange rate index adjusted for relative movements in national price (or cost) indicators of the home country and its partner (or competitor) countries. Without engaging to deeply in their discussion,[11] some notes specifying the approach adopted in the calculations of the CSK REERs presented in this paper (see *Table 8.4* and *Figure 8.2*) are necessary and described below.

(a) REER appreciation and depreciation.

A country's exchange rate is considered to appreciate in real effective terms if: the devaluation (depreciation) of its nominal exchange rate is less than its relative inflation; or if the revaluation (appreciation) of its nominal exchange rate is less

Table 8.4 Effective Exchange Rates, 0.65 DEM + 0.35 USD per CSK (Indices, January 1990 = 100)

	1	2	3	4	5	6	7
1990/1	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2	96.8	100.2	100.4	100.0	99.8	96.6	97.4
3	96.9	100.4	100.6	100.0	99.8	96.7	97.2
4	96.9	100.6	100.8	100.0	99.9	96.7	97.2
5	96.7	100.5	101.0	100.0	100.2	96.3	96.9
6	97.3	100.8	101.3	100.0	100.1	96.8	97.5
7	97.1	108.5	101.4	100.0	100.2	103.9	97.7
8	97.0	111.3	101.9	100.0	101.3	105.8	97.3
9	97.0	112.2	102.5	100.0	102.2	106.1	96.8
10	74.3	113.4	103.2	100.0	103.4	81.6	73.5
11	62.2	115.7	103.1	109.9	103.0	69.8	68.3
12	60.9	115.7	103.2	115.8	102.3	68.3	70.9
1991/1	53.7	145.6	103.8	143.6	103.0	75.3	76.9
2	53.6	155.6	104.0	171.3	102.3	80.2	92.6
3	53.8	163.4	104.0	170.9	101.7	84.5	91.8
4	54.2	166.3	104.4	175.9	101.9	86.3	93.6
5	54.2	169.6	104.5	178.9	102.0	88.0	95.0
6	54.4	172.6	105.2	177.5	102.1	89.2	93.6
7	54.4	172.7	105.9	176.7	102.5	88.7	92.6
8	54.2	172.9	105.9	177.4	102.6	88.4	93.3
9	54.0	173.3	106.2	176.8	102.7	88.1	93.1
10	54.0	173.2	106.5	176.8	102.9	87.8	93.0
11	53.7	175.8	106.9	178.3	102.9	88.4	94.2
12	53.6	177.8	107.0	179.3	102.6	89.0	95.4
1992/1	53.9	179.5	107.3	181.1	102.6	90.2	96.9
2	54.3	180.4	107.8	184.5	102.9	90.8	98.5
3	54.4	181.1	108.2	184.6	103.2	91.0	98.1
4	54.5	181.9	108.5	185.6	103.4	91.4	98.7
5	54.3	182.6	108.9	187.6	103.9	91.0	99.2
6	53.9	183.2	109.2	188.7	104.2	90.5	99.4
7	53.2	184.7	109.2	189.9	104.2	90.0	99.9
8	52.9	185.7	109.5	189.9	104.0	89.8	99.9
9	52.9	189.1	109.8	190.5	104.1	91.1	100.2
10	53.1	193.0	110.2	192.1	104.2	93.1	101.1
11	53.8	196.6	110.6	193.9	104.1	95.7	102.1
12	53.7	198.3	110.6	194.4	103.8	96.2	102.3

Note: 1 = NEER, 2 = CPI Czechoslovakia, 3 = CPI basket currency countries, 4 = WPI Czechoslovakia, 5 = WPI basket currency countries, 6 = REER (consumer prices), 7 = REER (wholesale prices).

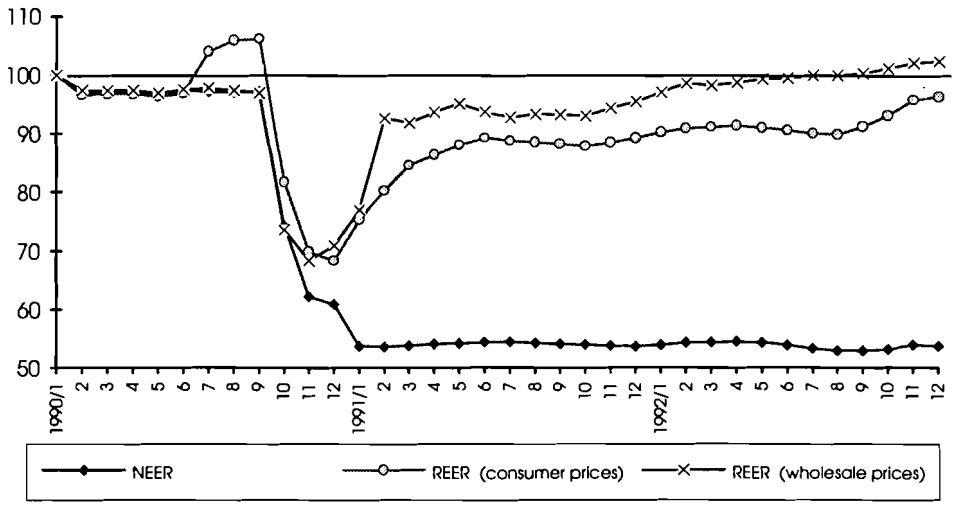

Figure 8.2 Nominal and Real Effective Exchange Rates

than its relative deflation compared to the (weighted) average of its partner countries. In the type of formula adopted here, real appreciation of the domestic currency materializes when the index value is above 100 (or, in relative terms, when its value increases) and vice-versa for real depreciation.

(b) The choice of partner countries and of the weighting criterion for the selected currencies.

The calculations presented in *Figure 8.2* and *Table 8.4* are based on the composition and weights of the basket to which the CZK has been pegged since May 2, 1993 (DEM 65% and USD 35%). Just for comparison, parallel calculations were also made adopting composition and weights of the basket as valid for the CSK peg in 1992; namely, USD 49.07%, DEM 36.15%, ATS 8.07%, CHF 3.79%, and FRF 2.92%. In principle, the resulting trends of both versions coincided: after a substantial real depreciation of the CSK in the fourth quarter of 1990, a reversal recurred in January 1991. Since then, the CSK was gradually appreciating in real terms throughout 1991 and 1992, until at the end of 1992 it virtually reverted to the ratios of early 1990; that is, to the situation at the start of the Czechoslovakian economic transition. Nevertheless, the shift in the basket's composition (particularly in the relative weights of DEM and USD) affected the data as expressed by the deviations of 9% to 10%.

Comparing the December 1992 figures, the REER index based on the CPI was 96% and on the PPI 102% in the first option (as presented in *Table 8.4*), while 102% and 107% respectively in the second option. This comparison shows the sensitivity of the REER's calculations depending on the choice of the basket and points to the necessity for caution in discussing and interpreting the obtained figures.

(c) Options in price (cost) indices.

Calculations of REERs presented in this paper are based on both CPI and PPI indices as quoted in the international financial statistics (IFS).[12] An alternative basis for the calculation could be various selected cost indicators, such as relative labor costs.

The price data for Czechoslovakia was not, however, entirely comparable to that from the basket market economies in the period under consideration. In the years 1990-92, the entire institutional framework of price setting changed in Czechoslovakia. In 1990, most prices were still regulated. One year later, at the beginning of 1991, approximately 87% of consumer prices had been effectively liberalized. As a consequence, both the comparability with prices from countries in the currency basket as well as consistency in time series were subject to qualifications.

(d) Choice of the base period.

Although the choice of the base period for REER evidently affects the results, its criteria are far from being clear-cut even in stabilized market economies. In principle, the base period should represent an interval of time in which the current exchange rate closely corresponded to its 'equilibrium value'. Such an approach is, however, hardly relevant for the former centrally planned economies in the initial stage of their transition.

Instead, January 1990 was selected as the base period for REER and other calculations in this paper due to its quality as the starting point of the Czechoslovakian transition (even though the main liberalization and stabilization measures were taken only one year later). Thus, the reservation made above with respect to price consistency applies here as well. Despite the limitations and possible errors involved, the REER indexes provide an insight into the underlying trends of exchange rate developments.

In 1990, both the NEER and REERs largely developed in a parallel way; depreciating only modestly in the first nine months (REER based on CPI even started to appreciate in the third quarter of 1990), while a rather sharp depreciation materialized in the fourth quarter (compare *Table 8.4* and *Figure 8.2*). Since the

start of 1991, the trends of NEER and REER of the CSK deviated. While the NEER remained almost stable for two years, the calculated REER indicates gradual but persistent appreciation. The REER based on CPI appreciated by 41% and that based on PPI by more than 44% in the period from December 1990 to December 1992. According to standard reasoning, this implied a corresponding loss in relative competitiveness. Nevertheless, the REER values at the end of 1992 just about matched the initial levels of January 1990, considered as the base period.

Unlike the CSK, both the Hungarian forint and especially the Polish zloty appreciated considerably in the period examined. Parallel calculations for the time from January 1990 to May 1992 showed appreciation by 140% of the zloty and 32% of the forint. The divergent trends in the REERs across the three reforming countries were linked to the differences in their inflation records and nominal exchange rate adjustments.

Inflation Differential

The inflation record of former Czechoslovakia was relatively favorable in terms of the transition economies (see *Table 8.5*). Apart from the price outburst following the sweeping price liberalization in January 1991, inflation has remained well under control throughout the entire period. Nonetheless, the inflation rate (partially fuelled by various institutional changes and shocks) considerably surpassed the average of the EC and OECD members (compare *Table 8.6*).

Table 8.5 Consumer Prices in Czechoslovakia, Hungary and Poland in 1986–92 (average annual percentage changes over the previous year)

	1986	1987	1988	1989	1990	1991	1992
Czechoslovakia	0.5	0.1	0.2	1.4	10.0	57.9	10.3
Hungary	5.3	8.6	15.5	17.0	28.9	35.0	23.0
Poland	17.7	25.0	60.0	251.0	586.0	70.0	40.0

Source: Monthly Statistical Bulletin, Federal Statistical Office, Prague, ČSFR, International Financial Statistics, Federal Statistical Office, Prague, ČSFR.

Unit Labor Costs in Czechoslovakian Industry

The data which approximates the changes in unit labor costs (*ULC*) in Czechoslovakian industry reveal a dramatic decrease in the first half of 1991

Table 8.6 Inflation Differential with Respect to Market Economies[1] (CPI, 1985 = 100)

	1990	1991	1992
Czechoslovakia	112.3	177.2	195.6
Austria	111.3	115.0	119.7
France	116.5	120.2	123.2
Germany	107.0	110.7	115.1
Switzerland	113.2	119.8	124.7
USA	120.7	125.6	129.2
OECD	124.1	130.5	136.1
EC	123.4	129.7	135.3

[1] Czechoslovakia compared to its 'currency basket' countries and to OECD and EC averages.
Sources: OECD Main Economic Indicators, International Financial Statistics, Czech National Bank.

(associated with a 24% drop in real wages in 1991), followed by a gradual recovery in the course of which the January 1990 level was finally regained towards the end of 1992 (compare *Table 8.1A* and *Figure 8.1A* in the *Appendix*). Accordingly, unit labor costs in industrial branches did not exceed their value at the start of the transition within the first three years of reform. It goes to follow that income and wage increases were evidently not the major causes of the inflationary pressures.

The formula used to calculate *ULC* (see Estrin *et al.*, 1992) was as follows:

$$ULC = (W/P) / (Y/L)$$

where: W = wages in industry
P = producer prices
Y = output in industry
L = employment in industry

and: W/P denotes real product wage
Y/L denotes labor productivity

The developments of *ULC* in Czechoslovakian industry as well as that of its two components are summarized in *Table 8.7*. In 1991, the large fall of real product wage outweighed the parallel decline in labor productivity resulting in a 20% decrease in *ULC* compared to 1990. In 1992, unlike the previous year, a further decrease in labor productivity (though relatively modest) reinforced the impact of the real product wage increase. As a result, *ULC* started to grow again since 1992.

Table 8.7 Unit Labor Costs, Real Product Wage, and Labor Productivity (January 1990 = 100)

	ULC	W/P	Y/L
1990	94.7	99.9	99.6
1991	75.8	69.2	86.6
1992	84.5	75.5	84.2
Annual Changes in %			
1991/90	-20.2%	-30.7%	-13.1%
1992/91	12.2%	9.1%	-2.8%

Source: Monthly Statistical Bulletin, Federal Statistical Office.

8.3.4 Conclusions on the Developments in the Stabilization Stage

Summarizing the evidence presented, the conclusions which can be drawn on the underlying trends of the exchange rate developments in 1990-92 are as follows:

(i) At the end of 1992 the competitive edge of the devaluations introduced in 1990 appeared to be eroded. In broad terms, the values of the underlying ratios, as revealed by the REER and other indicators reverted to a level comparable to the situation at the start of the Czechoslovakian transition.

(ii) A more favorable inflation record in Czechoslovakia than Hungary and Poland throughout the period under consideration was the major factor facilitating maintenance of an unchanged nominal exchange rate of the CSK and CZK since the beginning of 1991.

(iii) Notwithstanding this comparative advantage in terms of the transition economies, increases in the price level were distinctly higher than in developed market economies, even though the 'culprits' were also institutional and administrative changes and not only the 'core' inflationary factors alone.

(iv) The above-mentioned disparity in inflation rates *vis-à-vis* partner market economies continued to persist in 1993. While the Czech government's and Central Bank's targets were 15-16%, a likely outcome is in the range of 16-18%. The significant deterioration compared to 1992 results (10.3% year average and 11.5% December to December) is mostly caused by institutional changes, in particular by the shift to a VAT regime at the beginning of 1993 and by some further administered adjustments to still regulated energy prices.

(v) Unlike Hungary and Poland,[13] unit labor costs in former Czechoslovakia did not exceed the initial pre-transition level in the course of the examined period. The wage developments, therefore, should not have been made responsible for price increases. However, the remarkable downward wage flexibility of 1991 (real wages decreased by 24%) was unique and viable only once under the specific conditions at the beginning of the transition.

(vi) Despite relatively higher domestic price increases compared to the main trading partners from 1990 to 1992, the implied exchange rate/PPP ratio of the CSK remained well above the order of 2; thus, significantly higher than in comparable transitional countries. This may be interpreted as a continued undervaluation of the CSK in comparative terms (but only according to this criterion).

(vii) Given that the 'positive' inflation differential *vis-à-vis* partner market economies persists (reflecting also increasing pressure from current wage 'recovery') and assuming an unchanged value of the nominal exchange rate of the CZK, the trend towards REER's appreciation is bound to continue, if not to accelerate in 1993. Although later than in Poland and Hungary, the Czech Republic is bound to face the issues concerning which exchange rate policies (or what changes) to adopt in order to cope with the challenges of competitiveness in the world markets and balancing foreign exchange accounts in the medium term.

8.4 Choosing the Exchange Rate Regime Appropriate for the Present Stage of Transition

Though at a differentiated speed across individual countries, the institutional and economic environment of the transition economies have undergone sweeping changes. This is their specific feature compared to the other parts of the world economy. With respect to the exchange rate, both the conditions for and impact of alternative exchange rate regimes differ in each transition stage and, accordingly, also the ways and means of defending the particular exchange rate. This provides the rationale for discussing them in terms of individual transition stages.

8.4.1 Changed Environment

In the case of former Czechoslovakia, the shift of the core of transition from macroeconomic to microeconomic dimensions, from the dominance of stabilization

and liberalization to structural and institutional adjustment and consolidation, more or less coincided with the founding of the Czech Republic at the beginning of 1993. In the substantially changed environment, conditions and goals were comparable with the situation at the start of the transition and the issue of a proper exchange rate regime is faced anew: should the choice be in favor of a fixed rate and, if yes, under which assumptions? What other alternatives might be reasonable?

The relevant features of the present 'adjustment and consolidation' stage, separating it both from the previous as well as the following stages, are summarized as follows:

(1) shifting the main thrust of the policies from macroeconomic to microeconomic and institutional fields;
(2) progress in not only small scale but also large scale privatization in both production and financial sectors;
(3) educational phase for newly established market agents and institutions of the factor markets, including stock exchange, interbank money and foreign exchange markets;
(4) relaxation of the previously restrictive stance regarding macroeconomic policies and the gradual shift to a 'neutral type' combined with some selective measures to support economic recovery and especially oriented to the newly emerging private sector and small businesses; and
(5) an extended regime of currency convertibility compared to the initial concept, but still keeping capital flows mostly regulated. The Czech koruna continues to be an internationally non-traded currency.

As identified in section 3, the competitive edge resulting from the devaluations introduced in Czechoslovakia in 1990 was mostly eroded by the end of 1992 due to the 'positive' inflation differential *vis-à-vis* partner market economies and the resulting real exchange rate appreciation in the previous stabilization period. Consequently, the challenging issue facing policy-makers is: what type of exchange rate policies and of exchange rate regime would correspond best to securing balanced foreign exchange accounts in the medium run (i.e., not only temporary, short-term), given the conditions and requirements of the present stage?

8.4.2 Should the Exchange Rate 'Lead' or 'Follow'?

In principle, the competitive level of an exchange rate can be restored in two ways: (i) modification of the nominal exchange rate, or (ii) adjustment of domestic variables. If the real exchange rate's appreciation persists beyond certain limits, policy-makers have little choice than to resort to the first alternative in one form

or another. On the other hand, provided a satisfactory degree of flexibility and adjustment of domestic variables is achieved (the second option), the unchanged nominal exchange rate can remain competitive due to the stable or even depreciating real exchange rate.

These alternatives reflect two different approaches to the exchange rate's role. According to arguments put forward by Corden (1991), the exchange rate either follows other policies and price and wage setting, or leads them. The first alternative, on the other hand, implies that the nominal exchange rate adjusts or is adjusted to the changing conditions in the course of time to attain real objectives, in particular balanced foreign exchange flows (referred to as the 'real targets' approach in Corden's terminology). Therefore, this alternative assumes nominal exchange rate flexibility. The second option, in which the exchange rate rather leads than follows, is the case of the 'nominal anchor approach'; namely, the fixed exchange rate is pegged to a stable major currency or a basket.

The transition economies appear to be a clear case for at least some degree of nominal exchange rate flexibility; that is, the exchange rate should rather follow and not lead. The arguments for this option are based on the specific features and conditions of these nations, such as:

(i) Apart from the exogenous shocks, the transition process implies turbulent domestic developments. The by-product of necessary adjustment and restructuring is a higher level of inflation compared to the partner countries and, consequently, the persistent trend of real exchange rate appreciation;
(ii) Transition economies do not have enough funds and means to defend fixed exchange rates against short term pressures and, at the same time, lack the reputation for monetary stability as well as the institutional infrastructure for efficient defence of the exchange rate; and
(iii) If not credible, the costs of maintaining fixed exchange rates would be excessively high (involving, for instance, the necessity of high real interest rates).

These and other features motivated many observers to argue for some form of exchange rate flexibility in the transition economies.[14] Schmieding (1992) claims that a 'flexible exchange rate' corresponds to the transformation. Nuti (1991) as well as Fry and Nuti (1992) suggest a real exchange rate anchor as the proper concept for the transition economies. Reality seems to correspond with this reasoning. Among the countries of Central and Eastern Europe, only Poland,[15] former Czechoslovakia and recently Estonia resorted to the fixed exchange rate option based on the concept of 'nominal anchoring' in the initial stage of their transition. The other countries opted for the managed float regime (including

Bulgaria, Slovenia, Russia, Latvia, Lithuania) or for the adjustable (or crawling) peg (Hungary, former Yugoslavia).

8.4.3 The Case for a Fixed Exchange Rate

There is no reason to disqualify *a priori* the fixed rate option for a transition economy. Country-specific conditions and, as stated in our earlier discussion, the specific features of individual transition stages can substantially modify the ratio of likely costs and benefits for any particular country and/or stage. Initially, a clear distinction should be made between irrevocably (genuinely) fixed and adjustably pegged exchange rates (Willett *et al.*, 1992). Given the extent of adjustment, uncertainties and shocks involved in the transition, it would be unrealistic to fix an equilibrium rate over the long term and to attempt to make it sustainable without inflicting unbearable costs on the economy once such a commitment has been made.

In former Czechoslovakia, the authorities did not commit themselves to any pre-announced period of keeping the exchange rate unaffected despite progressing along the path of the strategy of a nominal exchange rate anchor. Nevertheless, the exchange rate of the Czechoslovak and now Czech koruna has been consistently stable for almost three years. At the start of the transition the main arguments for giving preference to the fixed exchange rate option included its disinflation impact, disciplining effects on the economic agents, and its role as a stabilized point of reference in the environment of general 'chaos' after sweeping price and foreign trade liberalization. Though to a modified degree of importance, these arguments continue to appear fully relevant at present and include the following key issues.

(i) The information advantage of a stable nominal exchange rate continues to hold in the Czech conditions. Given the complete shake-up of the previous cost, profitability and price ratios coupled with the parallel, extensive reallocation of resources, the nominal exchange rate (a 'macroeconomic price' relevant across the whole national economy) can best assist the process of adjustment if a 'correct' signal exists that is simultaneously stabilizing and transparent. Under the prevailing conditions, volatile exchange rate fluctuations are likely to obscure other price signals and distort decisions and expectations. This argument is similar to that of Friedman on establishing and especially extracting the information on relative prices in the conditions of volatile inflation. "The broadcast about relative prices is, as it were, being jammed by the noise coming from the inflation broadcast" (Friedman, 1976, p. 20).

(ii) The inflation record of former Czechoslovakia proved better than that of other transition countries. The recent Bank for International Settlements' Report

states, "The Czech and Slovak Republics maintained remarkable macroeconomic stability last year... To a large extent this stability must be ascribed to the fixed exchange rate policy, which contained inflationary pressures despite a relaxation of macroeconomic policies" (BIS, 63rd Annual Report, Basel, June 1993).

Despite relatively favorable results, the inflation rate in the stabilization period exceeded the average level in Western market economies. Should it be decreased to a comparable level, a further substantial advance in disinflation would be necessary. Such a goal is set for 1994, in which the annual rate of inflation (i.e., not only the 'core' inflation), should be decreased to the one digit level. This target appears even more demanding considering that the current stage is a period of extensive restructuring at the enterprise level and anticipated macroeconomic recovery. The continued stabilization effect of the unchanged nominal exchange rate would be, therefore, a considerable contribution to the disinflation efforts.

(iii) The traditional arguments in favor of the nominal exchange rate option refer to its potential disciplining effects on economic agents, firms, households as well as trade unions and government authorities. Compared to the other instruments, the comparative advantage of the nominal exchange rate is given by its transparency and unified norm for all open sectors and activities.

Though claimed to have a potentially significant effect, the real disciplining impact of the exchange rate might be only modest in the initial transition stage. After the devaluations of 1990, the existing gap between the current exchange rate and PPP widened further, securing a substantial competitive margin for most domestic producers.[16] The determination of the authorities to maintain the existing nominal rate was not seriously tested in light of the favorable balance of payments developments. Yet, the situation has been gradually changing due to the consistent appreciation of the real exchange rate. The nominal exchange rate increasingly asserts itself as an effective cost limit in the enterprise sphere. As a consequence, the disciplining role of the exchange rate could become a major factor of structural adjustment and of gains in competitiveness under the conditions of the current stage of transition. This assumes a firm determination on the part of the authorities to adhere to the policies of the fixed exchange rate, as well as master difficult situations and send clear signals to the economic agents, guiding their expectations.

The medium term developments of the real exchange rate are instrumental in determining the potential of fixed exchange rate policy. Sustaining the fixed rate option may prove viable provided the existing inflation differential with respect to partner countries could be further substantially narrowed and possibly decreased to zero in the medium term. Experience shows that the nominal exchange rate can be maintained, even as the real rate appreciates, provided counterbalancing effects

of the improved non-price factors of competition. Especially these effects are anticipated results of the hard currency policy. The Austrian example is encouraging. "Austria has increased her real market share in the OECD area from 0.9% in 1970 to 1.08% in 1980. This 20% increase in Austrian market share took place despite a 18% revaluation of the real exchange rate of the schilling *vis-à-vis* her trading partners in the same period" (Marin, 1985, p. 479).

The key causal variables conditioning the outcome in the long run are the changes in productivity ratios compared to partner countries. If sufficiently favorable, both nominal and real wages may rise and the profit ratio is maintained without undermining price stability and, consequently, without causing an appreciation of the real exchange rate. Such a constellation materialized in postwar Germany, for example, with the resulting real depreciation of the DEM.

The Czech economy faces the challenge of possibly exploiting the advantage of starting at a rather low level (productivity in manufacturing branches was estimated at 30% to 40% of the German level before the start of the transition) to advance relatively rapidly in the catch-up phase. As the potential compared to the past certainly increased (especially due to the impact of privatization and foreign direct investments), the issue becomes choosing the exchange rate strategy that would prove to be more rewarding in mobilizing this potential: the fixed rate option or the options based on the alteration of the nominal exchange rate?

The common arguments against nominal exchange rate anchoring point to unfavorable allocative effects of the implied real exchange rate appreciation. The resulting profit squeeze in the open branches (in the so-called exposed sectors) makes export activities less attractive and, consequently, also the export related investment. As a result, the resources tend to flow to homeward-oriented activities (sheltered sectors) resulting in an unfavorable impact on both foreign exchange balance and productivity growth in the longer run.

The arguments in favor of using the exchange rate as the nominal anchor cite the exchange rate induced improvements in cost and price competitiveness as well as in developing non-price factors of competitiveness. While a devaluation-type approach tends to provide additional advantages to low-value-added products, the nominal exchange rate anchor extends pressure to increase product quality, to move to higher-value-added products, and to introduce improved production and organization techniques. Consequently, dynamic, innovative producers are favored in such a situation. Precisely these issues are of key importance in the current Czech conditions: to reverse the past trends of regressing specialization and to support the upward movements of value-added tendency in both production and export patterns.

The microeconomic and structural advantages of the fixed nominal exchange rate policy must be, however, compared with the macroeconomic constraints and

costs implied. Therefore, several assumptions are required to make the nominal exchange rate anchoring both rational and sustainable. These include:

(i) Productivity gains are mostly long-run issues, so other factors must be available to take up the slack in the short to medium term; and
(ii) Once the exchange rate is abandoned as an instrument of adaptation, the domestic adjustment mechanism must be flexible. This refers, in particular, to wage and income developments, where the institutional pre-requisites for a hard currency option are vital. If normal profit margins are to be maintained, the real wage compensation must be limited by the growth of labor productivity and trade unions must adhere to this rule.[17] To be more precise, when identifying the leeway for wage increases to be cost neutral, the changes in the terms of trade and in the cost of capital should be accounted for.[18]

So, the hard currency policy cannot be reasonably resorted to under just any conditions and at any time. This leads to the next controversial issue facing the policy-makers; namely, how far to defend the existing exchange rate, in response to which signals, and in which conditions it would be warranted to change the regime to avoid persisting overvaluation and the resulting crisis and breakdown? Furthermore, the need to determine how to identify an overvalued exchange rate will be essential for dealing with potential problems in a timely fashion.

The concepts of fundamental equilibrium exchange rate (Williamson, 1991) and of equilibrium real exchange rate (Edwards, 1991) were defined as reconciling internal and external balance in the medium run. Nevertheless, the issue of their operational identification remains. According to Williamson, at least a safely sustainable deficit on the current account in the medium run is required. Edwards, on the other hand, suggests that the discounted value of current account balances should tend to zero. There are, however, different types of current account imbalances: those that are benign (resulting from a temporary trade shock) and those reflecting persistent distortions and unsustainable accumulation of foreign liabilities, such as undesirable current account imbalances. Hence, not only the 'order' but also the sources of the deficit and their impact are relevant and should be scrutinized accordingly. Temporary causes should be distinguished from persistent ones, and cyclical from structural ones.

The medium term deficits on the current account have not been confined to only developing and transition countries. Almost all developed market economies experienced them – and not just as sporadic exceptions, but for whole periods at times. In the developed world, these deficits became especially widespread in the early 1970s due to oil shocks. Since 1980, the cumulative current account of the

OECD countries has been persistently in deficit (though in relative terms this deficit was less than 1% of their GDP).

In the conditions characteristic of the transition economies, the current account results are interrelated with the stage of a particular nation's development along the path of transformation and their respective economic reform strategies. Parallel to export-led and import-led growth, two such alternative strategies have been discussed for the conditions of the transition economies: namely, current account surplus and current account deficit.

(1) Policy of current account surplus: This approach departs from the assumption that the increases in domestic demand are necessarily constrained, particularly in the initial stages of the transition, implying greater importance for growing foreign demand. Therefore, a sufficiently competitive exchange rate must be maintained throughout the period to secure trade and the current account surplus. The chain of reasoning is as follows: more exports than imports imply a higher demand for domestic products and services, higher investment, and, in the Keynesian tradition, higher domestic savings. A self-sustained export-led recovery can thus follow, based in principle on domestic resources (Herr *et al.*, 1991). This rationale is based on two facts:

   (i) Export surplus implies strengthening of the domestic currency and sends positive signals to the investors, and
   (ii) Lessons from elsewhere point to the importance of domestic savings as the basis for successful development.

(2) Policy of current account deficit: not only tolerable, but also reasonable for a recovery period in the transition economies.

   The reasoning for this statement is founded on the belief that the capital shortage is the major development constraint in the transition economies. The current account deficit implies, by definition, the use of foreign savings. This should alleviate the domestic constraints and enhance the country's development potential. Provided that the current account deficits are covered by capital inflows, the transition economies also benefit from the inflows of know-how, technologies, and management capacities that accompany capital flows, in particular foreign direct investment.

   From the static point of view, the current account deficit strategy rather depresses than increases demand for domestic products and services. However, in a dynamic setting, the increased domestic potential due to the use of foreign savings can be expected to generate a higher level of economic activity, investment, and savings as well as exports than would be otherwise achievable over the course of time. Of course, the extent of the current account deficit

must remain under control to avoid crises of confidence. The deficit can be considered sustainable if, for example, the dynamics of exports increase, implying an expansion of the share in world markets.

In the former Czechoslovakia, the current account was in surplus since the beginning of the transition and the same trend is asserting itself in the present development of the Czech Republic. In accordance with the above discussion, even a likely shift to a current account deficit in the next period should not be, however, *a priori* taken for a compelling signal to substitute the fixed exchange rate regime.

8.5 Conclusion

However demanding and even unrealistic the fixed exchange rate regime may appear for the conditions of the transition, its benefits and costs vary for individual countries and stages of transition. It may prove both rational and feasible in two opposite cases:

(i) For only a relatively short time span in order to initiate the disinflation process in a country with a very high inflation rate, or
(ii) In a country with a low inflation record.

The Czech Republic appears to qualify for the latter case and may be well on its way to economic recovery despite initial skeptism regarding the choice of a fixed exchange rate regime for the transition period.

There are, however, relevant lessons from the experience of open market economies which should be duly accounted for:

(i) It takes time to build up the credibility of the fixed exchange rate strategy, and it must be 'earned' (Hochreiter and Knöbl, 1991), and
(ii) As far as the capital flows remain mostly regulated, the complicating role of interest rate parity and in particular of speculative capital flows remains less important. The recent turmoil on European currency markets should underline the warning against any premature liberalization of the capital account. It appears necessary to pass the tests and the learning process under the conditions in which only the current account's fundamentals matter.

Appendix

Table 8.1A Change of Unit Labor Cost in Czechoslovakian Industry, 1990–1992 (Jan. 1990 = 100)

	Actual	Quadratic Regression
1990/1	100.0	103.6
2	96.7	100.8
3	97.9	98.2
4	95.2	95.8
5	92.0	93.5
6	85.5	91.4
7	115.1	89.4
8	94.3	87.5
9	88.5	85.8
10	84.8	84.2
11	86.0	82.8
12	92.9	81.6
1991/1	69.5	80.4
2	59.4	79.5
3	72.3	78.6
4	62.5	77.9
5	68.4	77.4
6	76.9	77.0
7	84.4	76.8
8	77.5	76.7
9	79.3	76.7
10	71.1	76.9
11	81.7	77.2
12	106.2	77.7
1992/1	88.8	78.4
2	69.7	79.1
3	84.8	80.1
4	72.6	81.1
5	83.6	82.4
6	80.4	83.7
7	93.3	85.2
8	86.1	86.9
9	78.1	88.7
10	74.7	90.6
11	88.0	92.7
12	113.4	95.0

Note: 1 = NEER, 2 = CPI Czechoslovakia, 3 = CPI basket currency countries, 4 = WPI Czechoslovakia, 5 = WPI basket currency countries, 6 = REER (consumer prices), 7 = REER (wholesale prices).

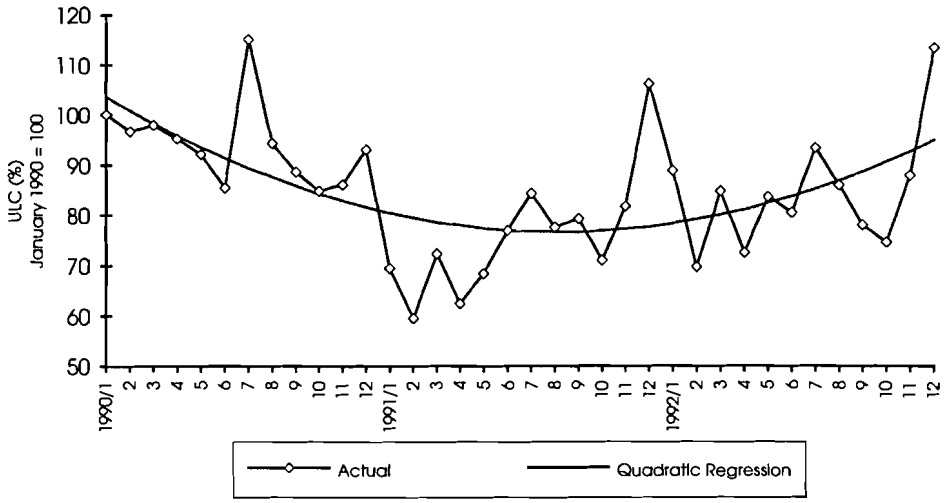

Figure 8.1A Unit Labor Costs (ULC) in Industrial Branches of Former ČSFR, 1990–1992

Notes

[1] As of the beginning of 1993, Czechoslovakia ceased to exist as a federal state. Its successors are two separate political entities, the Czech and Slovak republics which form a special type of customs union. Their inherited common currency could survive, however, only the first month of the existence of the new states.

[2] Developing from the contributions by Mundell (1961) and McKinnon (1964). For a recent discussion see Wihlborg and Willett (1991).

[3] This regime secured free and unlimited access to foreign exchange for import purposes, while the proceeds from exports should be transferred to the authorized banks at the current rate of exchange. The scheme was in 1992 extended to non-registered businesses as well and further liberalized, providing also for the possibility of hedging against currency risks. However, the convertibility regime has not been yet officially extended for tourist purposes. Citizens have the right to maintain private foreign exchange accounts, but they are entitled to buy only a limited amount of foreign exchange per year at the current rate of exchange. For 1992 and 1993, this amount was set at the equivalent of CSK 7,500, i.e., about USD 270 at the present exchange rate.

[4] The radical changes implemented in Czechoslovakia were not, however, significantly ahead of the existing "state of affairs" in Hungary. Unlike Czechoslovakia, Hungarian reform was characterized by a number of successive steps towards import and

domestic price liberalization in the course of time accompanied by elements of *de facto* forint convertibility, though not officially declared.

[5] In improving the initial unsatisfactory situation in foreign exchange reserves, substantial support has been provided by international institutions, particularly the IMF and the EC.

[6] In 1990, an attempt was made to use money supply (the volume of bank credits) as a nominal anchor. Given the transition conditions, with too many fluctuations and discontinuities, such a type of anchor could not prove satisfactory.

[7] Both the composition of the basket and the relative weights of individual currencies were, however, revised on an annual basis. The respective shares in 1991 were as follows: DEM 45.52%, USD 31.34%, ATS 12.35%, CHF 6.55%, GBP 4.24%. The revised composition of 1992: USD 49.07%, DEM 36.15%, ATS 8.07%, CHF 3.79%, FRF 2.92%. As of May 2, 1993 the basket of the Czech koruna (CZK) is confined to only DEM and USD, with the weights 65% and 35% respectively.

[8] This substantial forecasting error had its origin in the estimates of the real figures, for GDP and wages in particular. While the government's prediction amounted to a 5-6% drop of GDP in 1991, the actual fall was 15%; i.e., 3 times worse than expected. Consequently, the substantial deviations in the actual developments of the current account and of GDP from their forecasted values were evidently interrelated: the deeper fall of GDP was 'counterbalanced' by the higher current account surplus.

[9] It included the change to VAT and introduction of unified income-tax regime.

[10] All the data and calculations presented below should be, however, taken only as illustrative for the existing trends. Particular caution is, of course, necessary in interpreting and comparing the purchasing power parity data. The qualifications referred to in standard market economies are even more relevant to the case of the transition economies.

[11] The related issues for the conditions of the transition economies are elaborated in Oblath, 1992.

[12] PPI for Czechoslovakia refers only to industrial products.

[13] For their developments see "Central European Currencies in 1993" by Morgan, 1993.

[14] The negative consequences of the currency overvaluation, experienced especially in several countries of Latin America in the 1970s and early 1980s, also prompted the warnings against such mismanagement in the transition economies (Williamson, 1991).

[15] In the Polish case, the fixed exchange rate regime was, however, only a very transitional solution. It was introduced as part of the shock-therapy type stabilization program of 1990 aimed at radical disinflation. Therefore, its existence was ex-ante linked only to this specific period. This regime, maintained from January 1990 to May 1991 (in reality longer than initially intended, which was criticized by some observers as an outright policy mistake, for example, see Rosati, 1992), was subsequently substituted by more flexible arrangements. After May 1991, Poland moved first to a managed (adjustable) peg and since October 1991 to a crawling peg, and finally in February 1992 to a 'dirty crawl', introducing a new devaluation in addition to the applied crawling rule.

[16] However, this impact widely varied across individual branches and firms due to the legacy of the past. Most firms in the electronic industry, for example, found themselves non-competitive even with the devalued exchange rate.

[17] One of the basic reasons behind the remarkable success of the Austrian hard currency policy lay in the support from the trade unions and the resulting wage self-restraint (Flanagan *et al.*, 1983).

[18] The relevant experience in social corporatism and in voluntary incomes policies in a number of small European economies is discussed in Pekkarinen *et al.* (1992).

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Part IV

Microeconomic Issues in Stabilization Policies

Chapter 9

Microeconomic Preconditions for Macroeconomic (In)Stability: The Case of the Ukraine

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9.1 Introduction

The microeconomic issues of stabilization policies in the economies in transition acquire greater relevance once the overall macroeconomic situation and, more specifically, the inflation rate and financial system become more stable. Such a suggestion is based on two major preconditions.

The first of these preconditions relates to the necessity of creating structural conditions for microeconomic optimization. In the former Soviet Union, the so-called national economic complex was structured and developed as a single system and the optimization criteria were derived from national economic efficiency. In reality this was only quasi-efficiency due to the impact of over-centralized distribution of resources (mainly in physical terms), centrally fixed prices, evaluating the results of enterprises' activities as a percentage of plan fulfillment (formal relation number), and absence of real budget constraints for investments and costs. As a result, the macroeconomic quasi-equilibrium did not infer economic reality because of depressed demand, insufficient supply, constantly growing deficit of resources, hidden inflation, and concealed unemployment.

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The single centralized economy could not really account for microeconomic efficiency. The constant losses of some industrial branches and enterprises were covered by budget financing or through different means of redistribution of enterprises' profits. Thus, there was insufficient economic incentives to lower costs, effectively utilize resources and better satisfy customers. At the same time the single economy was diversified in a specific centrally planned way, with extensive specialization and directly managed inter-enterprise relations. The price liberalization and market forces applied to such a structure have destroyed or completely changed the existing ties between enterprises. The persisting inertia of the former structure have created inflexibility to changing demand, self-crediting of enterprises, as well as maintenance of unprofitable ones. Under such conditions, declining output has actually become attractive for various enterprises from the economic point of view. The possibilities for development and modernization are still insufficient in the Ukraine due to the macroeconomic situation — especially the high inflation and interest rates.

The second precondition are well-designed microeconomic policies, which secure flexibility in response to market forces and enterprises' incentives to effectively utilize resources. The growing importance of microeconomic policies has become a priority, as stressed by the Ukrainian Prime Minister Kuchma in 1993. He disclosed that detailed analysis of the industrial output decline in the Ukraine has revealed that 35% of the decline was caused by macroeconomic factors, such as: disrupting inter-enterprises links, inefficient financial transactions, and so forth. The remaining 65% of the decline was caused by the lack of effective management, poor technological discipline, monopolistic egoism, and other factors on the enterprise level.[1]

The limitations of strong microeconomic policies are caused by instability characteristic of the economy in transition and related changes and adjustments of economic and especially macroeconomic regulations. These economies in transition are dominated by at least five groups of factors, including:

- continuous economic crisis and weak recovery prospects;
- changing institutional structure and governmental regulations;
- economic liberalization and emergence of market forces;
- economic restructuring and modernization; and,
- market reorientation towards foreign markets and growing integration into the world economy.

Each country in transition possesses its own policy precipitated by a specific combination of these factors and its own concept of economic reforms. Therefore, the transformation style and the type of economy in transition must be studied on the

basis of both concepts of the economic transformation or transitional development theory, and as an analysis of key trends. The application of such an approach to the experience of the Ukraine also shows the necessity of comparative analysis with both East European countries and new independent states (NIS) of the former Soviet Union. In the latter case, the political, national, cultural, and regional problems specifically influenced economic reforms and created remarkable trends.

The macroeconomic instability in the Ukraine is a result of the interaction of a variety of these factors, so that the movement towards a consolidated situation presents a complicated problem. The macroeconomic policy tends to be based only on monetary approaches rather than on the creation of macroeconomic preconditions of microeconomic policies. At the same time, microeconomic processes are mainly a reflection of the inertia of economic structures and incentives, which are naturally only in a process of adjusting to new market conditions and forces.

Solely monetary oriented policy decisions could not be effective from the point of view of a policy background because of the lack of an appropriate and competitive market structure. However, strict monetary policy is simultaneously required to achieve financial stabilization and creation of a functioning monetary system. As a consequence, it seems that microeconomic policies in transitional economies must be based on the principles of supply-side economics. High inflation, steep economic decline, and shortages of basic industrial and agricultural products would be long-lasting without economic incentives for effective utilization and distribution of resources. The problem is that price liberalization in the absence of effective microeconomic policies will lead to the conservation of stagflation or hyperinflation. Also, the transition from centralized to market distribution of resources would increase production and efficiency if:

- the emerging of markets would be structured and based on processes of corporatization and privatization as the fundamental institutional changes required to create the desired market structure, environment, and incentives; and,
- the microeconomic policies are based on enforcement of incentives for increasing supply and quality of products and more effective resource utilization.

In terms of short and long-term microeconomic policies, the combination of microeconomic stabilization and market structure optimization must be achieved.

9.2 Market Emergence: Impact of Soviet Disintegration, Price and Trade Liberalization

Following the Russian lead, January 1992 marked the beginning of the period in which price liberalization followed by liberalization of foreign trade, a poorly managed ruble-based monetary system, defection of some new independent countries from the ruble zone, inefficient financial control, and soft budget constraints described the situation facing members of the former Soviet Union, including the Ukraine. In this upheaval, the former directly managed system of supply was replaced by a transitional quasi-market with three main segments:

1. the market of domestic products sold for Ukrainian karbovanets (UAK) — transitional currency;
2. the post-Soviet market relations and trade with Russia and other newly independent states with payments in rubles; and,
3. the foreign trade market with payments reoriented on a hard currency basis.

These segments have different structures and dynamics of development. The market for domestic products has become more price elastic in the areas of consumer goods and food. In 1993, state contracts were still significant for a large part of industrial commodities and direct state regulation of prices in the energy sector and for some basic industrial goods has persisted. Indirect state control exists via regulation and taxation of the profitability rate of enterprises, as well as subsidizing some products such as, coal, milk, and bread. This type of regulation is mainly considered protective, but has influenced incentives to which firms are exposed. For example, for industries with long production cycles regulated profitability at 25% of the costs was less than the monthly average inflation rate, estimated at 30–50% for 1993.

At the same time, several factors have obstructed the movement to market equilibrium. First of all, the energy price explosion became a main determinant of inflation. During 1992, crude oil prices increased an estimated 300 times, and wholesale prices in the energy sector as much as 237 times (all in nominal terms).[2] The continued increase of oil and gas prices was to reflect the rise to the eventual world level. At the beginning of 1993, the Ukraine was buying Russian oil at approximately 75–80% and Russian gas at 60–70% of the world price (in Russian ruble equivalent). Even decreasing the supply of crude oil from Russia could not prevent the Ukraine's trade deficit, the permanent high demand for rubles, and their steady appreciation with respect to Ukrainian karbovanets.

The shortage of oil itself prompts inflation, causing output decline and stagflation. In the short-term perspective, the forecasted decrease of Russian oil produc-

tion will result in continued economic decline and threaten economic reforms in the Ukraine. The uncertainty regarding the oil supply has forced Ukrainian producers to cut off production in various branches. Price increases of oil products to the world level during 1993 and 1994 makes many Ukrainian goods uncompetitive due to the high energy intensity of production processes and technologies.[3] The precarious energy situation must be resolved by saving energy based on modernization of industry and agriculture and altering the structure of the economy. The investments necessary to achieve these targets, however, are very limited because of the severe budget deficit, extremely high interest rates, and the ominous inter-enterprise arrears. This situation has consequently interfered with changes in inter-enterprise relations corresponding to the unfolding market systems within the former Soviet Union.

A consistently high rate of inflation has influenced the supply/demand ratio, the criteria of microeconomic efficiency, and the structure of production. The contraction of demand due to financial limitations have not stimulated producers in some cases, but forced them to decrease output to the lowest possible level. Cost-push inflation has fostered the producers' inflationary expectations and stimulated them to overcalculate the cost of current production by at least the level of expected inflation. At the same time, the government has attempted to regulate the profit rate and the margin between wholesale and consumers prices. Such attempts perhaps will improve the monetary situation, but will not stimulate producers to increase supply.

9.3 NIS Trade: Microeconomic Effects

The Ukrainian trade within of the former Soviet Union is experiencing three main problems: disintegration, structural changes, and diversification of prices and currencies.

Disintegration was caused mainly by political reasons. The majority of NIS have presumably overestimated the economic difficulties connected with their sovereignty and self-management — a natural reaction in the wake of the crash of the former overcentralized system. After the collapse of the single Soviet market, NIS have initiated protection of own markets with regulations, restrictions, and licensing. The tendency for economic autarky is slowly but surely giving way to the realistic estimation of trade preferences and prospects.

The disintegration of the former centralized Soviet Union has created specific problems with market performance. The general inelasticity of supply on the domestic market was negatively influenced by the loss of traditional markets within the

Table 9.1 Exchange Rate of Ukrainian Karbovanets to Russian Ruble (Selected Dates)

Date	National Bank of Ukraine Exchange Rate	Commercial Banks Average Rate of Exchange (non-cash)
17 November 1992	1.45	1.55
24–26 November 1992	1.45	1.7
8–10 December 1992	1.5	1.77
24–25 December 1992	1.54	2.3
19–21 January 1993	1.64	2.3
2 February 1993	1.64	3.5
27 February 1993	1.74	4.0
31 March 1993	2.8	3.5

Source: Uryadovy Courier, November 1992–April 1993.

former Soviet Union and Eastern Europe. Substantial market segments previously classified as domestic, became foreign or quasi-foreign and were accompanied by many of the unfavorable elements of foreign trade, such as barriers to entry. The marginal costs of retaining or, in fact, re-entering such traditional markets often exceed the margin profits. The immediate or even long-term substitution of domestic production for goods formerly imported from the NIS is not feasible in many cases. Furthermore, the distortions of relative prices has been accentuated by exchange rate problems, and inter-enterprise arrears across new borders; the latter generally being considered as semi-governmental debts. The reconstellation of markets — disintegration/re-establishment, as well as world market reorientation — have a crucial impact on enterprise behavior. Thus, the fluctuating market segmentation could be considered as a special problem for the Ukraine and other NIS countries.

The economic impacts of disintegration have been evaluated mainly with respect to the effects on changes in terms of trade and enterprises' optimization. The Ukraine has a positive trend in terms of trade with the world market because of the gap in domestic and international trade prices. For example, the domestic price for coal (in USD equivalent) was estimated as only 16–25% of the international market price and 28–30% for steel in 1993: the situation in other sectors was more or less similar. Energy was an exception since prices moved more rapidly to world levels. Such correlation would be maintained during the time of high inflation because cost and domestic prices grow comparatively slower than the inflation rate, resulting in a depreciation of the Ukrainian currency.

The changes in the exchange rate of Ukrainian karbovanets (UAK) to the Russian ruble (RBL) are unpredictable and have been periodically erratic, mainly

due to a large supply of money to the market as a result of credit emission or substantial increase in demand for rubles. The exchange rate of UAK to the ruble was announced officially in mid-November 1992. However, as a consequence of an earlier decision of the Central Bank of Russia to freeze money transactions between Russian and Ukrainian enterprises since 1 July 1992, the 'black market' exchange rate grew rapidly between July and November 1992 due to the high demand for rubles by Ukrainian enterprises and companies with bank accounts in Moscow, as well as the high risk of such semi-legal transactions. According to unofficial sources, the 'payments' for such transactions rose from 1% to 15% in cash.

Such an unmanaged establishment of UAK/ruble exchange rate have had some important consequences for enterprises:

1. During 1992–1993, the supply of many products and raw materials from Russia to the Ukraine and also in the reverse direction have been suspended or, in numerous cases, completely stopped.
2. The bilateral debt between enterprises grew rapidly, so that domestic enterprise arrears are multiplied by cross-border enterprise arrears.
3. The debt of Ukrainian enterprises to those in Russia was essentially covered until March 1993. At the same time, Russian enterprise debt to the Ukraine continued to grow because of continued supply of commodities without payment guarantees. Such a phenomenon could be considered as a combination of self-crediting of Ukrainian enterprises and inertia of long-lasting supplier ties.
4. The internal variability throughout the ruble zone, different rates of exchange, and difficulties of transferring money to other republics had a depressive influence on inter-enterprise turnover and caused both output decline and autarky. Our currencies, with parallel connection to ruble zone, imply instability in financial infrastructure.
5. The enterprises and banks have started to use the semi-covered forward rate of exchange which is up to 30% higher than the officially announced rate in order to hedge against risks arising due to difficulties associated with money transactions and inflation.

In summary, the monetary and banking situation stimulated enterprises not to increase production and to decrease the number of customers, tending to exclude primarily those from NIS.

Economic dependence on Russia due to rapid growth of oil and gas prices has become a major factor influencing Ukrainian economic prospects — either slow stabilization or continuing destabilization. Another move of oil and gas prices towards the world level will cause a further deterioration of the economic situation

in the Ukraine. The energy factor will increase the trade balance deficit with Russia, the domestic inflation rate, costs of production, and, finally, a greater decline in output and incomes. Thus, the unpredictable energy situation is now the major factor of macro- and microeconomic instability. In order to avoid a full-fledged subsequent energy crisis, time and investment is required to diversify the oil and gas supply, modernize the economy to promote lower energy consumption, and overcome the total dependence on a single source and type of energy supply.

The existing political instability in Russia can not be overcome soon because of complicated and multifaceted processes regarding the distribution of powers and their foreseen decentralization. The political frustration in Russia will produce unpredictable stresses for the Ukrainian economy. Generally speaking, the Ukrainian economy will eventually become more dependent on exogenous factors as, for instance, relations with other NIS and the world economy.

9.4 The World Market: Microeconomic Impacts

The total trade turnover with non-NIS in 1992 was worth 5,981.9 million USD (exports of 3,840.2 mln. USD and imports of 2,141.7 mln. USD). While the majority of exports went to China (679.7 mln. USD), Czechoslovakia (421.3 mln. USD), Turkey (323.1 mln. USD), and Italy (282.3 mln. USD), the major imports were from Germany (246.6 mln. USD), Italy (217.9 mln. USD), Czechoslovakia (198.2 mln. USD), and South Korea (194.8 mln. USD). The share of barter trade was 37.2% in export and 28.8% in import. The geographical distribution of total non-NIS trade in 1992 was as follows: Europe (43.7%), of which Italy (6.8%), Germany (6.3%); Asia (32%), of which China (15.5%), Turkey (6.4%); Africa (1.8%); South/North America (2.5%); Baltic States (20%), of which Latvia (11.2%).[4]

During 1992, credit agreements for a total of 1.9 billion USD were signed with the governments of Germany, Canada, and the USA. At the end of 1992, already 650 joint ventures were operating in the Ukraine and their share in export was 5.7%. As many as 3,340 cases of foreign investment were registered for a total amount of approximately 900 million USD.[5]

After officially leaving the ruble zone, the exchange rate of UAK to USD was determined on the basis of cross-rates between the currency rates of ruble to USD and ruble to UAK. The lack of rubles and domestic currency reserves in the Ukraine allowed the UAK rate to fall dramatically. The most substantial drop in the rate was just immediately after official introduction of Ukrainian karbovanets in mid-November 1992: the rate fell to 50% of its initially quoted value. Subsequently, the Governmental decree on currency regulation was introduced at the end of March

1993, obliging exporters sell to 50% of foreign currency revenues on the currency exchange causing a further drop in the exchange rate.

Trade with non-NIS countries and the dramatic change in the exchange rate relative to USD substantially influenced enterprises, managerial behavior, and microeconomic optimization for the following reasons:

1. The difference between domestic and world prices stimulated enterprises to increase exports.
2. The export structure, in which more than 90% are raw materials, fertilizers, metals and other basic products, was not conducive to economic growth.
3. The export revenues of enterprises were not effectively used for investments and innovation. At the same time, the supply of imported consumer goods forced inflation to rise. For some products such as cigarettes, liquors, coffee, tea, and electronics, the high quality import products are 'price leaders'.
4. Domestic producers of electronics, TV sets, computers, and machinery were no longer competitive and struggled to survive.
5. The industries, agriculture, and services, which had imported much equipment, raw materials, and spare parts, were faced with currency limitations and have been collapsing. For example, the city transportation is worsening because local authorities have no money to buy Czech trams and trolleys and Hungarian buses or spare parts for them.
6. Some industries, for example, TV sets, electronics, and machinery, have maintained a high level of cooperation with NIS and others. The rule to sell 50% of currency revenues was also applied to the Russian ruble. This severed cooperation and tended to cause further industrial decline.
7. The declining exchange rate has increased the cost of production and propagated inflation.
8. The imported equipment recalculated in UAK but based on the high exchange rate of the USD could have rapidly increased the enterprises' capital. In such cases, the cost of existing and newly imported equipment became mutually incomparable, the high price raising depreciation cost and the general cost level while decreasing labor productivity and profitability of enterprises.
9. The decision-making concerning currency investment credits have been made on the basis of old, Soviet-style, production-oriented approaches, without adequate market research and project management. Thus, the repayment of investment credits has been increasingly considered in mainly a formal sense and, while it has already contributed to the worsening of the contemporary problem of payment balance for the time being, it may generate inflationary pressures in the future.

Price dumping by exporters, the large share of barter trade in total trade, the overpayments for imported equipment, and other forms of 'destructive' incentives for export-import activities of enterprises continued in the Ukraine throughout the first quarter of 1993. In Russia, the package of governmental tariff and non-tariff regulation of foreign trade was implemented at the beginning of 1993, which more effectively stimulated the drive for export efficiency and assured the financial interests of the state.

It becomes obvious that the effort needed to achieve microeconomic optimization must now be based on institutional changes. Ownership must be restructured in order to constitute a new market structure; a type of market environment for the enterprises that is conducive to competition. Unfortunately, the institutional changes in the Ukrainian economy have been insufficient and contradictory. For example:

- The anti-monopoly law was adopted and the anti-monopoly committee subordinate to the Ukrainian Parliament was established but, in reality, anti-monopoly regulation could not be considered visible or effective for the implementation of reforms. The government has used the level of profitability of monopolies as the indicator for monopolistic activities;
- In January 1993, the Ukrainian government adopted a decree on renewing the right of the ministries to operate as owner of state assets and state companies' property. At the same time, enterprises lost the right to be co-founder of joint-stock companies, joint ventures, or to establish affiliated companies. Such rights were transferred to the ministries and the State Property Fund;
- The right to make decisions regarding the leasing of the enterprise funds was transferred from the employees unions to the State Property Fund;
- In 1993, the corporatization started leading to large-scale privatization.

As a consequence of the last points, all general managers of enterprises were subsequently dependent on personal contracts with ministries, and their wages will eventually depend on a fixed sum plus some bonus upon fulfillment of the planned results for output, profitability, and utilization of funds. In addition, managers' decision-making became limited in different ways. For example, in order to travel abroad, the responsible minister must have written permission from the Cabinet of Ministers, and the enterprise general manager — managers faced even more strict and complicated regulations.

The restoration of former (ministerial) branches of managerial hierarchy has protected government property from utilization for private interests, as it was officially explained. Yet, this is severely limiting the change of enterprise structure

and micro-based optimal institutional changes. In combination with other regulations, such attempts could not permit financial divorce of enterprises from the state in order to create real economic responsibility of enterprises, and to adjust their interests to market oriented incentives.

The relatively slow institutional changes and the postponement of small privatization and large privatization have not created necessary preconditions for strengthening enterprise budgets. The periodical credit emission for covering inter-enterprise debt simply promoted continued existence of ineffective enterprises, did not limit price growth, and did not induce cost reduction. The move to more actively begin bankruptcy procedures combined with faster privatization, could have initiated the movement toward strengthening enterprises' budgets. Without these measures, one could not expect some turning point in enterprises incentives for cost efficiency and real competition.

9.5 Summary

1. Macroeconomic instability — high inflation, high interest rates — in combination with changes in legislation and taxation have not yet created preconditions for microeconomic optimization in the Ukrainian transformation.
2. The inertia of production/distribution decision-making of enterprises' managers, an unstable economic and legal environment, soft budgets of enterprises, and their self-crediting limited enterprise adjustment to the emerging market signals.
3. The economic reforms in the Ukraine and its economy were considerably vulnerable to external factors such as oil and gas supply/prices, trade and payment balance with NIS countries, and the decrease of the Ukrainian currency exchange rate to the Russian ruble.
4. The adjustment to market signals has been complicated for Ukrainian enterprises because of different trends in three market areas: domestic market, NIS market, and world market. The main problems are derived from different comparative advantages and competition in each market area, different trends in rates of exchange, and differences in tariff and non-tariff regulations. Consequently, the enterprises' behavior has been distorted in different markets.
5. The disintegration of the former Soviet Union, the unstable regulations of trade between NIS countries, and the continued interdependence of enterprises as a result of the former system of cooperation and specialization for maximizing benefits for the single economy have accentuated economic difficulties caused by severing economic ties. At the same time, those conditions resulted in

autarky and protectionism, influencing a combination of regional and structural changes in some cases.

6. The negative payment balance of the Ukraine in trade with Russia and various exchange rates to the Russian ruble originating from different states of the former Soviet Union (FSU) could not stimulate enterprises to increase trade with NIS. So, that the free trade zone would be the most suitable market model for the FSU and a common reserve currency is necessary.
7. The future of economic relations in the Ukraine and other NIS countries depend on the advance of economic reforms in Russia. The political struggle in Russia could lead to growing dependence and uncertainty in relations between states and enterprises.
8. The institutional changes for micro-based optimization are undertaken more slowly in the Ukraine than in Russia. Administrative control over enterprises' property, limits to leasing enterprises, and halting corporatization and privatization are the main obstacles for strengthening enterprise budgets and the emergence of market-oriented incentives and decision-making.

Notes

[1] Uryadovy Courier, 10 April 1993.
[2] Uryadovy Courier, 21 January 1993.
[3] Estimated supply should have reached 30–37 million tons. (Uryadovy Courier, 21 January 1993.) The forecasted decline of oil output in Russia during 1993–1995 would cause a contraction of the supply from Russia and necessitate increased oil purchases from the world market. The related expenditures in terms of world prices would be an estimated 5 billion USD annually. In comparison, Ukrainian export revenues in hard currency was only 3.8 billion USD in 1992.
[4] Ministry of Statistics of Ukraine; data from January to September 1992.
[5] Uryadovy Courier, 21 January 1993.

Chapter 10

Product Slump in Czechoslovakia: Several Heterodox Remarks

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10.1 Features of the Czechoslovakian Recession in 1991–1992

After embarking on the process of transition to a market economy on 1 January 1991, the macroeconomic development of the Czechoslovakian economy was characterized by a deep two-digit recession. Real GDP decreased by 15.9% during 1991 compared with the 1990 while the real net material product decreased in the same period by 19.2%.[1] The level of officially registered unemployment also increased rapidly.[2] Although the recession continued in 1992, the decline was no longer so rapid and some signs of macroeconomic stabilization or even slight revival in the economy were observed. Unfortunately, these signs represented only a temporary break before a new decrease of both Czech and Slovak economies in 1993. In 1992, real GDP decreased by about 8.7% (compared with the previous year).[3] For basic data concerning the development of Czechoslovakian output and unemployment in the years 1990 to 1992 see *Tables 10.1* and *10.3* in the *Appendix*.[4]

Regarding to the individual components of aggregate demand in 1991, real investment, real personal consumption and real exports decreased substantially, as well as real incomes and real retail sales. However, despite the extensive contraction of aggregate demand in real terms, it definitely cannot be considered

as the sole cause of the Czechoslovakian recession. The nominal indicators for 1991 present a very different picture: increases in every case. The annual rate of inflation (the annual increase of the level of the consumer prices at the end of the year) was 53.6% (see *Table 10.2* in the *Appendix*). Thus, a good portion of the causes for the contemporary recession must be on the supply side of the economy, and due to the present contraction of the aggregate supply we should rather speak about a slumpflation or a stagflation in Czechoslovakia than about recession in the traditional sense (i.e., a product slump caused by a decrease of aggregate demand; for a detailed discussion of this issue see section 10.3.1 and Mertlík (1993). The nature of the recessional development in Czechoslovakia throughout 1992 reflected the most important features from the preceding year.

The purpose of this paper is to present several explanations for the economic decline in former Czechoslovakia. In addition to conventional macroeconomic explanations, we focus on alternative microeconomic-based factors.

10.2 The Conventional Explanations of the Causes of the Czechoslovakian Recession

The sources of the Czechoslovakian recession during 1991 and 1992 have been widely discussed. The conventional domestic interpretations of these phenomena describe the recession as a result of the dramatic restrictive policies of the government, of the collapse of the former COMECON market, the sales crisis on Western markets (as a result of the contemporary world recession),[5] and the necessary adaptive restructuring of the supply side of the Czechoslovakian economy to meet the preferences of the buyers after the liberalization of foreign trade and the hardening of budget constraints. All these explanations are at least to some extent correct; of course, some more than others. All in all, though, these reasons still do not seem sufficient in the quantitative sense: could the combination of these phenomena indeed be the cause of such a deep and rapid recession, particularly as illustrated in some indicators not previously used in recent Czechoslovakian history?[6]

The role of the government's restrictive macroeconomic policies in the decrease of Czechoslovakian output seems limited since the analysis of the monetary policy in 1991 does not account for this factor as restrictive. However, this should not necessarily imply that such policy should mechanically cause an expansion of the aggregate demand.

10.2.1 Fiscal Policy

Considering fiscal policy objectives, the budget surplus planned by the government for 1991 was not reached. Instead, the result was a budget deficit of 10.4 billion Czechoslovakian koruna (CSK), which represents 2.0% of nominal public expenditure and 1.1% of nominal GDP. But nominal public expenditure increased by only 12.0% in 1991 in comparison with the previous year, which means that the ratio of nominal public expenditure to nominal GDP decreased from 56.2% in 1990 to 52.2% in 1991 (see *Table 10.1* in the *Appendix*). Simultaneously a slight decrease of the level of taxation (differentiated decrease of both corporate profit tax rates and turnover tax rates) was realized.[7]

If one accepts a simplified assumption that the potential real GDP was constant during such a short one year period, then one must also assume an increase of the potential nominal GDP by about 50% to 55% due to the growth of the rate of inflation. These assumptions allow us to conclude that the cyclically adjusted deficit built-in into the construction of the 1991 budget was lower than in the previous year. Therefore, the budget was constructed as a restrictive one in real terms since the increase of nominal public expenditure by 12.0% is significantly lower than the assumed increase of the potential nominal GDP (and it actually represents a decrease of real public expenditure by 21.8%).

A slightly different picture of the fiscal policy for 1991 may be obtained if the sector of state-owned enterprises (SOEs) is included in the public sector and their budgets into the system of public budgets. According to rough estimates of the Czechoslovakian State Bank (SBČS) and Czechoslovakian academia, the insolvency of SOEs reached about 150 to 180 billion CSK at the end of 1991 (and about 200 billion CSK by June 1992, (see Šulc, 1992)), which represents an increase of approximately 100 to 150 billion CSK since its initial level of about 30 to 50 billion CSK at the end of December 1990. This constitutes an increase of about 100% to 500% during 1991 (or by about 150 to 170 billion CSK, i.e., 300% to 566.7% until mid-1992).[8] As SOEs still represent a part of the public sector, the increase of the insolvency of SOEs may well be interpreted as a hidden deficit of the system of public budgets. If this was accepted, then the officially stated budget deficit of 10.4 billion CSK is a considerable understatement, and the formerly presented conclusion about the restrictive character of the 1991 budget should be made on a different quantitative level. The 1991 nominal public expenditures including these hidden 100 to 150 billion CSK would rise to a level exceeding the 1990 nominal public expenditures (including hidden expenditures of 30 to 50 billion CSK on the same principle) by between 20% and 35%: that means, by 20 to 35 percentage points less than is the assumed 1991 50% to 55% increase of the potential nominal GDP.

The monetary effect of the phenomena of insolvency and subsequent mutual indebtedness of enterprises is also important. These processes undoubtedly represent a hidden money issue that is completely beyond the control of the Central Bank. Thus, the phenomena of insolvency and mutual indebtedness of Czechoslovakian enterprises form a specific connecting link between the fiscal and monetary spheres of the economy.

10.2.2 Monetary Policy

The government's effort to provide a restrictive monetary policy during 1991 was definitely unsuccessful in terms of the quantitative theory of money. According to the SBČS, the M2 aggregate increased by about 25.2% during 1991.[9] This, no doubt, would imply a monetary expansion. If we put the relative changes of P and Q as:

$$\frac{P_{1991}}{P_{1990}} = 1.536 \tag{1}$$

and

$$\frac{Q_{1991}}{Q_{1990}} = 0.841 \tag{2}$$

(refer to *Tables 10.1* and *10.2* in the *Appendix* for data on annual inflation and real GDP), and the relative change of M as:

$$\frac{M_{1991}}{M_{1990}} = 1.252 \tag{3}$$

into a slightly modified Fisher equation, such as:

$$\frac{P_{1991}}{P_{1990}} \cdot \frac{Q_{1991}}{Q_{1990}} = \frac{M_{1991}}{M_{1990}} \cdot \frac{V_{1991}}{V_{1990}} \tag{4}$$

we obtain

$$1.536 \cdot 0.841 = 1.252 \cdot \frac{V_{1991}}{V_{1990}}$$

which simplifies to

$$1.292 = 1.252 \cdot \frac{V_{1991}}{V_{1990}}$$

and finally results in:

$$\frac{V_{1991}}{V_{1990}} = 1.032 \qquad (5)$$

No official data about the change of the velocity of money are available in Czechoslovakia. We can only assume its decrease due to the significant increase of savings during 1991 compared with 1990 when the increase of savings was almost negligible (see *Table 10.1* in the *Appendix*).[10] But such an assumption is very weak since there are many more important, unknown factors determining the velocity of money. Therefore, it is difficult to correctly interpret the figure of 1.032 that is the result of V_{1991}/V_{1990} from our Fisher equation (4) as a yearly relative change of the velocity of the money supply. The result should rather be a figure representing the yearly relative change of the velocity of money and the simultaneous yearly relative change of the hidden money issue stemming from the mutual trade crediting of SOEs discussed at the end of section 10.3.1. Separating the influence of these two phenomena in the process of determining the value of our V_{1991}/V_{1990}, and to reasonably estimate their relative weights seems almost unresolvable. However, the discrepancy of 4 percentage points between the values of

$$\frac{P_{1991} \cdot Q_{1991}}{P_{1990} \cdot Q_{1990}} = 1.292 \qquad \text{and} \qquad \frac{M_{1991}}{M_{1990}} = 1.252$$

resulting in the 3.2% increase of the value of our 'velocity' V_{1991} in comparison with its value V_{1990}, can be intuitively well imputed to the phenomenon of the hidden money issue — if we account for the sharp increase of the level of the insolvency of SOEs during 1991.

Another question to address is the impact of the growth of the money supply — especially of long-term deposits and foreign currency deposits — on the behavior of the economic agents and on the development of aggregate demand. Let it be emphasized, once again, that there do exist other factors and facts complicating the original picture of monetary expansion. These include the level of interest rates, the structure of issued bank credits, and the access of different sectors and agents in the economy to these credits.

First, we must realize that the high nominal commercial interest rates (between 13% and 24%) had a nearly prohibitive impact, particularly for the emerging and small private sector. This prohibitive impact of the high nominal interest rates was significantly reinforced by two other phenomena: by short time allowances of generally all bank credits to the private sector (the commercial banks provided mostly only two- and/or three-year credits) and by the very conservative risk-averse behavior of banks. The banks were generally interested in the property guarantees and particularly in real estate holdings of their clients only, paying attention to the feasibility of the entrepreneurial projects of clients only if the property guarantees appeared to be satisfactory. As a consequence of the concurrence of all of these facts, the access of the private sector to bank credits was highly limited.

Some SBČS estimates reveal that about 16% of new bank credits issued by Czechoslovakian commercial banks went to the private sector in 1991. But an important part of this money — about 20% — was designated for purchases of businesses, i.e., more or less real estate, in the auctions of the Small and Large Privatization Programs and, therefore, did not represent real investment. The objective of such transactions was to shift the state property to private owners and not to finance reconstruction and/or development of these businesses. This fact has an important monetary (and macroeconomic) impact: the money for the Small and Large Privatization auctions, in fact, did not form a part of the aggregate demand. The money was shifted (via paying in the auctions) to one of the National Property Funds (Czech or Slovak), where it was essentially frozen and did not dissolve back into the economy for at least 1991 and 1992. The budgetary use of funds acquired via privatization started to a broader extent only in 1993; for 1994, however, the revenues of the Czech budget explicitly presumes a subsidy of 18 billion Czech crowns from the National Property Fund.

Secondly, the importance of the shadow creation of deposit money via the behavior of SOEs must be re-emphasized. Their mutual crediting and resulting mutual indebtedness tolerated by the government actually constituted an important part of aggregated demand, contrary to the former case of the Small and Large Privatization credits. Therefore, the real budget constraint in the state-owned sector was, in fact, much softer than that in the private sector. The evil of the prevalently soft budget constraint with respect to SOEs inherited from the centrally planned economy (CPE) had continued in 1991 and is continuing now, too, even if formally the share of the state-owned sector in the newly created bank credits was relatively smaller than in the past. SBČS estimates suggest that the figure lies close to 60%, while the output of the state-owned sector was still estimated to be more than 90% of the Czechoslovakian real GDP at the end of 1991 and still about 80% at the end of 1992.

Thus, we may conclude that a very important feature of the actual Czechoslovakian monetary policy in 1991 was its selective impact on the economy,

unfortunately and paradoxically negatively influencing particularly the development of the private sector and the level of real investment in this sector. The original picture of a pure monetary expansion has vanished and we may finish our reflection of the development of the monetary sphere of the Czechoslovakian economy with labelling the actually performed monetary policy as an ambiguous one, with some expansive, and some other restrictive moments.

10.3 Alternative Explanations for the Recession

Increasing costs (caused both by the devaluation of the CSK and by the increase of nominal wages, rents, interest rates, and prices of energy sources, raw materials, and agricultural products), monopolistic/oligopolistic behavior of SOEs after the price liberalization, and the impact of institutional change (mainly privatization) are sometimes, but much less frequently, also discussed as the sources of the Czechoslovakian recession in 1991 and 1992. Just as the decrease of real aggregate demand had several reasons (we observed decreases of all its components, i.e., private consumption, private investment, public expenditures and exports), the decrease of the aggregate supply can also be explained as a more complex phenomenon. Besides monopolization and increasing input costs, we may distinguish at least two other important factors determining the decrease of the aggregate supply. One might refer to them as the loss of governmental control over the state-owned sector of the economy and the 'privatization agony'. All these developments contributed to the Czechoslovakian recession of 1991.

10.3.1 Monopolization

The industrial structure of the Czechoslovakian economy cannot be compared with anything known from the developed capitalist countries. According to the International Standard Industrial Classification (ISIC), more than 50% of Czechoslovakian industries were perfect monopolies, i.e., only one firm per sector, before the start of the economic transition in 1991. And, in most other industries, only two or three firms were involved (Zemplinerová, 1989). Thus, the total number of all enterprises including cooperatives and a few private firms hardly exceeded 2,500 in 1990. This enormous level of industrial concentration was overwhelmingly an artificial, administered one: many of the big enterprises could be easily divided in several parts due to the absence of tighter, real economic relations between their plants. Unfortunately, nothing like this was done during 1990, and the starting point of the transition — when market liberalization was

introduced on 1 January 1991 — was undertaken under the conditions of the former communist, centrally planned monopolistic structure and institutional background, including the ownership relations (property rights).

This enormous degree of monopolization significantly affected ČSFR economic development after starting the reform. The nature and the role of monopolies in CPE went far beyond their importance in a capitalist economy. A monopoly was a crucial point in the structure of the performance of a CPE. It had a determining significance for the economy's functioning and character. The very substance of the monopoly, i.e., the relation between agents based on the redistribution of their incomes in favor of one of them and at the expense of another, represented one of the most important — or perhaps the most important — channel of distribution in a CPE. The nature of the specific monopolies under the centrally planned system was based on its institutional organization. The monopoly position of firms belonged not only to the largest but, in principal, to all firms in the economy. Such was the case since the whole economic system of central planning was based on power relations and on distribution of power (Hrnčíř 1990; Klaus and Tříska 1988; Mlčoch 1992; Rusmich 1987; Rusmich 1988). This entire complex system of inequalities of agents was not at all broken in the transition process — rather, it was enforced. This situation, which may appear strange for an observer not well acquainted with the logic of the functioning of a CPE, is quite natural if we realize that the process of marketization of the economy also implies the existence of the process of transforming the monopoly relations into a legal, institutionalized structure while the monetization of the economy simultaneously achieves a more 'traditional' manifestation of monopoly power — through monopoly prices and profits. The post-1990 ČSFR inherited the specific monopolies of a CPE, which have been best equipped to now start to live their new life in the liberalized markets — charging monopoly mark-ups and limiting production.

The monopolistic structure of the economy results in numerous serious consequences analyzed by economic theory, especially by the Marxist, Institutionalist, and Post-Keynesian schools; the most important contribution probably made by Michal Kalecki and his followers. One of the most popular among these consequences is price rigidity, which is the result of the typical behavior of the monopolist and/or oligopolist firms based on their price-setting, i.e., on administering of prices of their commodities produced. The monopolists (oligopolists) administer their prices according to their average variable costs or, in other words, their prime costs, to which they add a mark-up covering their average fixed costs also known as their overheads and their net profit. The volume of profit is then the manifestation of the degree of monopoly of their position in the industry or on the market in general. These prices, labelled by Kalecki as cost-determined prices, show a tendency towards rigidity because the prime costs

are constant for a standard operated capacity range in the short run. On the contrary, the monopolists (oligopolists) answer by setting new higher prices to any significant growth of the prime costs. Hence, a constant tendency to cost-push inflation is present in any monopolistic economy in the long run. As regards to the change in demand, the monopolists (oligopolists) usually do not react with a change in prices but by changing the quantities of the production supplied. Therefore, their individual supply curves are more or less absolutely price elastic; namely, they are parallels with the axes of quantities of output in standard supply/demand graphs.

The result of the monopolistic-type firm behavior in an economy with a high level of monopolization is the fact that its aggregate supply curve is also highly price elastic and hence flat. This has other serious consequences that manifest themselves particularly in the context of the diminishing aggregate demand.

After the liberalization of prices and cancellation of the former command-allocative coordinating mechanism of central planning, the need for setting the 'proper' or 'right' level of mark-ups emerged as very urgent for the enterprises. This was not only due to their need to manifest the degree of the monopoly of their positions, but also due to the simple fact that the mark-ups inherited from the system of central price-setting were extremely low, not covering the distribution costs, the costs of the risk of marketing the products, and so forth. This objective need to overcome the factual undervaluation of goods connected with the monopoly power and monopolistic behavior formerly created a significant supply-side inflationary push. I suggest that these phenomena occurred in the first six months of 1991 after the price liberalization: According to my explanation for this period, Czechoslovakian firms went through the *tâtonnement* process of finding the appropriate initial mark-ups satisfying their income and accumulation (or growth) needs by setting their individual equilibrium states, as well as creating some Labinian market equilibrium situations in their respective industries.

If we put the observable tendency of growth and later stabilization of prices of non-food-stuff goods in the Czechoslovakian economy during 1991 together with its typical monopolistic structure, then the cost-push inflationary character of economic development after the liberalization of markets in January 1991 should not be a surprise. In the Czechoslovakian case of 1991, the empirical evidence confirms the conclusions of the economic theory once again. Thus, we have actually experienced almost a textbook example of stagflation during these months; namely, a macroeconomic situation when the price level is growing and the output is falling as a consequence of the decline of aggregate supply (for a detailed macroeconomic analysis of the price level development of the Czechoslovakian economy during 1991 see Mertlík 1993).

10.3.2 Institutional Changes

The process of institutional changes belongs to the most important sources of the disturbance on the supply side and, hence, of the decrease of GDP and gross industrial output in the Czechoslovakian economy within the period of economic transformation since November 1989. The most notable area of institutional changes in this context is definitely privatization, but other meaningful institutional changes preceding or parallelling privatization also had played a significant role. For instance, the loss of state control over the economy (particularly, but not only, over the state-owned sector) before the start of privatization is also a factor with inomissible relevance for explaining the contemporary Czechoslovakian economic recession.

10.3.2.1 The Loss of State Control

Before the privatization process began, the crucial event was the abolition of the 'leading role' of the Communist Party and the disestablishment of the State Planning Commission. Both these institutions, the network of the District Committees of the Communist Party with their industrial divisions and secretaries for industry as well as the State Planning Commission, played a key role in the process of governmental control and supervision of SOEs. The concentration of government policies during the first two years of the transformation (1990 and 1991) was generally oriented more towards destruction of the old system than towards construction of a new one. Consequently, space opened for the widely scattered practice of the so-called 'spontaneous privatization' in the area of ownership of assets and other property rights.

A typical phenomenon observed in this context was that managers of SOEs were establishing their own private firms and organizing contracts between these and their SOEs. The prices at which these contracts had been negotiated were, of course, significantly advantageous for their private firms — they were using 'transfer prices': high (overvalued) prices for deliveries of goods and services from their private firms to their SOEs and low (undervalued) prices for deliveries of goods and services in the reverse direction. Thus, with the help of these 'transfer prices' the assets of the state-owned sector were invisibly shifted into the hands of the managers and their families and friends — the owners of the respective private firms. This 'spontaneous privatization', usually organized in much more sophisticated forms than described here, consequently also lead to the reduction of the output of the state-owned sector, both actual and statistical, and consequently to the decrease of (at least) the statistically displayed GDP. A sophisticated analytical description of these processes of 'spontaneous privatization' can be found

in the recent paper by Mlčoch (1993): he describes typical models of microeconomic behavior within the state-owned sector during the pre-privatization period. He calls them "Twins, Leeches, Vegetative survival, Faithful custodians and Guided bankruptcy". Further, he describes typical privatization strategies of management of various firms and investment privatization funds and relates them to his analytical framework of pre-privatization models mentioned above. Among his many original results in this field, perhaps the model named 'survival by the grace of banks' is most interesting. It offers an analytical tool for explaining deep internal microeconomic causes of the growth of insolvency and mutual indebtedness of (former) SOEs, showing that the survival of (former) SOEs is in common interest of both (former) SOEs and banks due to the costs of a growing insolvency burden. The core of Mlčoch's contribution in this paper, however, is in his evolutionary approach: he describes the privatization process in (former) Czechoslovakia like an adaptive process in which control groups of (former) SOEs restructured themselves, keeping the corporate governance in their hands and transforming their past semi-formal and informal quasi-ownership entitlements into formal property rights.

Another important feature of the informal institutional change in the course of the transformation process in countries undergoing the transition to a market economy (and namely in the period preceding privatization, but it refers also to the privatization period itself) was analyzed by McDermott (1993). He studied the organizational structure of pre-1989 Czechoslovakian industry with its system of industrial associations (so-called VHJs) that operated like almost autarkist bodies with only negligible mutual trade (this phenomenon is an important component of Rusmich's concept of the 'internal disintegration' of CPEs, see Rusmich 1992). Although VHJs were disestablished and their managements no longer exist after 1989 (only few of them were transformed into holding companies in the corporatization process closely preceding privatization), their relations of cooperation have persisted: the decisive volumes of commodity exchange flows within the economy have not changed. Moreover, the mutual indebtedness and insolvency of firms is mostly a result of mutual crediting of firms formerly belonging to the same VHJ. At least before the bankruptcy law came in power in April 1993, firms coming from the same VHJ also successfully collaborated in guided misuse of the legal institute of 'secondary insolvency':[11] they intentionally and in mutual agreement did not pay each other for their mutual deliveries of goods and services. These practices kept sales, 'profits' and wages on appropriate levels. As a by-product of these operations, their secondary insolvency was growing rapidly but their primary insolvency remained unchanged — so there was no threat of liquidation from the government. Moreover, their formally displayed economic results might have been even splendid and looking attractive, especially for voucher holders, for example.

All these negative phenomena of the pre-privatization period seem closely connected with the 'in-between' pre-privatization situation of uncontrolled spontaneous development taking place still within the former property rights structure. In this structure income incentives necessarily lead not to competitive market-type behavior but to specific rent-seeking behavior unacceptable from the point of view of public morale. The deep and radical uncertainty connected with this situation generated only short-term behavioral patterns of economic agents.

10.3.2.2 Privatization

The behavior of SOEs and their managements in the course of the privatization process was directly affected by the preceding pre-privatization period. The process of privatization itself had also created a situation of uncertainty in which the short-term goals of the management seemed to be the only rational ones. The managers were uncertain regarding preservation of their enterprises and their positions after privatization; on the other hand, they had an extraordinary chance to participate significantly in the distribution of national assets. This challenge led to several models of activities, both formal and informal, and seems to be the key determinant of the managers' behavior in the situation of privatization expectations, and subsequently of the performance of their SOEs.

The core of this behavior was the way in which the management of SOEs developed privatization projects for their enterprises. In the case of smaller enterprises, they often recommended to sell their enterprise — or one or more of its parts, the efficient 'raisins' — according to the respective section of the Large Privatization Act into hands of a 'formerly appointed owner', which usually was their own private firm or some foreign firm. Alternatively, the managers chose the method 'all for vouchers', believing in the possibility of a manager or employee buy-out of their enterprise for investment vouchers in the voucher privatization (usually with help of their own investment privatization fund (IPF) established especially for this purpose). In yet another possibility, typically in the case of large enterprises, the management simply believed in decisive managerial control over 'their' firm against weak and badly informed institutional voucher holders (investment privatization funds). In all these three cases, managers were interested in the market value of their SOE: they needed to have it as low as possible. In the first case, to save their own capital, in the second case, to save the capital of their foreign partner and this way to secure a high commission from such a contract (and perhaps also their positions in the management of the enterprise after privatization), and, in the third case to be able to obtain the controlling packet of the shares of their enterprise for vouchers which they had collected. In each case,

the managers had the same opportunities to diminish the market value of their SOE and to manifest its inefficiency; that means, to reduce its output, employment, profit, and so on. In the case of the 'all for vouchers' method, it was also very important to convince the general public about the inefficiency of the enterprise, so that the public would not be interested in the shares and would not order them, allowing managers to easily, safely and inexpensively procure these shares in the respective wave of privatization. This specific behavior of the management of SOEs that were subject to the privatization process according to the Large Scale Privatization Act represents another important source of the decrease of the output of the state-owned sector, and thus of GDP. In an attempt to label this specific and historically unprecedent situation, some Czechoslovakian economists (and recently even some government ministers) speak about the 'privatization agony' of the state-owned sector or of the whole Czechoslovakian economy.

For a recent empirical analysis of privatization projects and of behavior of different agents involved in the privatization process in the Czech Republic (including the Ministry for Administration of the National Property and its Privatization of the Czech Republic — MANPP), see the empirical and descriptive paper by Čapek and Buchtíková (1993). They analyzed the first wave of the Large Privatization in the Czech Republic according to the structure of submitted, approved and rejected privatization projects. The authors discovered important facts about revealed preferences of management of SOEs and of other interest groups presenting the privatization projects, and also about revealed preferences of MANPP demonstrated in its approval or rejection of submitted projects (including distribution of preferences according to size, industry, profitability, and export performance of SOEs). In addition, Čapek and Buchtíková articulated a hypotheses identifying industrial coalitions formed in the course of Large Privatization. Perhaps the most striking result of this research, however, is the discovery of a shocking similarity of the privatization procedures — based on individual privatization projects and their following consideration in the 'economic center' — to the traditional procedures of central planning. In both cases, the managers as controllers of information are the strong party in the negotiations; the ability of the 'economic center' to influence the results of privatization of each particular part of state property is limited (similarly as was its ability to influence enterprise plans before 1989) simply because the 'center' more or less knows about each SOE only what its management allows or wants the 'center' to know. Basically, MANPP could approve only what management of SOEs were suggesting. Consequently, the traditional principal-agent problem of central planning (mighty enterprises versus helpless government) was repeated once again.

10.4 A Light at the End of the Tunnel?

The Czechoslovakian government repeatedly ensured the public that the principal way to remove all major internal causes of the recession, to terminate the 'privatization agony', and consequently embark on a path of economic growth based on healthy roots is to complete privatization in as rapid a pace as possible. However, many Czechoslovakian economists are much less optimistic in evaluating the feasibility of the fast privatization policy *à la Tchéque*, particularly using the outspoken voucher method in the context of the desirable economic revival. The following lists and explains several reasons for such doubts.

(i) *Monopolization:* In the first privatization wave of the Large Privatization process an important part of the Czechoslovakian national wealth was privatized via the voucher method. Actually, it was more than 299 billion CSK (about USD 11 billion) of book value of property, which represents about 1/4 to 1/3 of the total value of assets selected for privatization in Czechoslovakia (the government intended to transfer between 70% and 80% of the assets of SOEs into private hands in this fast pace). From these 299 billion CSK of assets (in book value), the decisive majority is to come under the control of IPFs.

These IPFs, special mutual funds established by banks, consultant firms and private capital companies, collected investment vouchers from the public and used them in the respective privatization wave of the Large Privatization for purchasing shares of SOEs. According to the current legislation, one IPF can control not more than 20% of shares of one enterprise. In the first privatization wave these IPFs collected over 72.1% of all issued investment points, and the distribution of these points among the 436 existing IPFs is very disproportional: for example, the 13 largest IPFs had collected 56.4% of all issued investment points, and the 14 largest IPFs 'bought' 26.4% of the book value of all enterprises privatized in the first wave. Preliminary data on distribution of investment points among IPFs after registration of about 75% of the total amount of investment points collected by IPFs in the Center for Voucher Privatization of the Federal Ministry of Finance are shown in *Table 10.4* of the *Appendix*.

A reinforcement of the monopolistic/oligopolistic structure of the Czechoslovakian economy can be expected because of the enormous concentration of ownership in the hands of a small number of the IPFs that remind us now of large holding companies rather than mutual funds. We can expect agreements on prices, market shares, price leadership, and all other

typical elements of the monopolistic/oligopolistic behavior. Some first manifestations of such a behavior can be observed already.

(ii) *Disinvestment:* The management bodies of the IPFs have contracts according to which they receive their remuneration as some percentage share of the total book value of shares of enterprises under control of their IPFs. Very probably, some of the IPFs' managements will follow a short-run strategy to earn the highest possible remuneration in the first years and then to exit. This means that they will be interested in the financial growth of their IPFs rather than in the growth of enterprises under their control, and, thus, in financial investment of dividends drawn from 'their' enterprises rather than in direct productive re-investment of profits in these enterprises. For this reason, the IPF managers may draw as much of the profits from 'their' enterprises to their IPFs as possible in order to maximize their assets, and thus to maximize their remuneration. Hence, the significance of a firm's long term future will be far less important.

(iii) *Stock Market Collapse:* The campaign of some of the IPFs was based on the public promise that they will buy their shares back from the public after one year for at least ten (or even fifteen) times the price that shareholders expended to obtain their investment vouchers subsequently allocated to the respective IPF. For example, if someone allocated all his investment vouchers (i.e., 1,000 investment points) to such fund, he or she was promised to get at least 10,350 CSK after one year since the administrative fee for the voucher stamp, voucher book, and registration was 1,035 CSK altogether. This may become the crucial failure of the whole voucher privatization project and its implementation, as during the next two years the key economic problem of such IPFs will be their shortage of liquidity. In order to meet all their liabilities (to fulfill the promises of the back buy-out of their own shares particularly, but also to pay their debt services to banks — many of the biggest IPFs are heavily indebted, not least due to the enormous costs of their massive advertising campaigns), the IPFs will have to sell part of the shares they control. This situation can create an important surplus of stock on the emerging domestic capital market. The low domestic demand for shares will then cause a significant fall in the market prices of shares. The behavior of many households may be similar — as new shareholders many households may prefer liquidity, and thus they may try to sell their shares immediately after they will receive them.

The low level of prices on the stock exchange naturally will not support the revival of the economy. Whether this expectation of the stock market collapse will prove to be true or false is uncertain. Yet, in any case, it seems

inevitable that the banks (as creditors) control over the IPFs will grow — and consequently over the enterprises under their control. But will Czech and Slovak banks prove to be the 'right' owners?

(iv) *Continuing the 'Privatization Agony':* Finally, the very purpose of privatization was to solve the problem of 'absentee ownership' inherited from the centrally planned economy and thus to solve one of the sources of the 'privatization agony'. The government intended to find a tangible owner for any part of the so far anonymous state-owned property. The ownership control of enterprises was believed to be a key prerequisite of their efficient economic performance. The voucher privatization, however, seems to lead to results very distant from this officially declared neo-liberal target in most cases. The new owners are mostly institutional owners (IPFs and banks) without appropriate managing, controlling and supervising powers. They hold large property (up to 20% in several tens or even hundreds of enterprises) but with only limited qualified professional skills and capacity. And, like in the model of central planning, they suffer from a lack of information — the information monopoly is on the side of enterprises' managements. In this situation, the 'unity of interests' of enterprises (their managements) and of IPFs and/or banks as owners is a necessary precondition of their desired efficient operation. On the other hand, under any collision or contradiction of interests of owners and managers the principal-agent problem arises; and, in the Czech and/or Slovak specific situation of legal and moral gaps (not to mention low financial discipline, monopolistic commodity markets, and a very weak and insignificant stock market), it may have a destructive effect. The chaotic result may prolong at least some features of the period of 'privatization agony' for the recently privatized SOEs, a situation when enterprises are without any effective control of their owners. Hence, the voucher privatization may result in a large-scale and considerably long-run 'institutionalization' of absentee ownership.

10.5 Some Lessons from the Czechoslovakian Case

The Czechoslovakian experience with the behavior of economic agents in the course of the privatization process and in the pre-privatization period and its negative macroeconomic and societal effects suggest several general hints or policy recommendations for future large-scale privatizers.

First of all, the *institutional preparation* of the privatization process — as detailed as possible — seems to be a factor of crucial importance. All methods to diminish uncertainty, increase transparency and possibilities of democratic public

control over the privatization process, and to avoid or limit any non-governance situation, are welcomed. Consistency of legislation and minimization of possible legislative gaps also belong to this point. Rules must be clear, strict and unchangeable, and all agents have to be aware of it.

Secondly, *be as fast as possible but not at any expense.* A time-consuming detailed and complex preparation saves time and costs during the actual privatization procedure.

Thirdly, proper *macroeconomic stabilization* of the economy (stable economic environment) plays an important role in creating a financial discipline in the enterprise sphere. The soft budget constraint situation for SOEs (including that created spontaneously by mutual crediting and insolvency) should be eliminated before the start of privatization.

Fourthly, *beware of monopolies.* Deconcentration of industries (particularly those oriented to the domestic market) based on re-organization of large administratively concentrated SOEs should necessarily precede the privatization process. Mere change from state monopolies to private ones brings only bitter fruits.

Fifthly, *space for adaptation* for inefficient enterprises is essential. Only the market can select winners and losers, but a firm may become a winner only if it has a real chance to restructure. Thus, a special time-constrained and precisely defined economic regime of the transitional period seems to be a necessary prerequisite for the feasibility of the healthy future economic growth based on prosperity of former SOEs.

Last but not least, a *supply-side industrial policy* based on support of genuine entrepreneurship (not on conservation of the old industrial structure) may be very helpful. The slogan of support for nests of high performance is utmost relevant in the transformation period.

Another important question is the general design of a large-scale privatization program. In this context, the Czech and Slovak experiences with the free distribution of assets reveal that negative outcomes like non-transparent concentration of property rights in the hand of banks, zero (or perhaps rather negative) financial returns of the budget, or zero capital inflow into voucher privatized enterprises will probably be more significant than the most important positive feature of the method of free distribution — its speed.

Appendix

Table 10.1 Selected Macroeconomic Indicators

Indicator	Nominal			Real		
	1990	1991	Change (%)	1990	1991	Change (%)
GDP	811.3	977.8	20.5	727.0	611.4	-15.9
NMP	669.9	828.1	23.6	567.8	458.8	-19.2
Savings of Households[1]	280.6	331.6	18.2	251.4	207.4	-15.9
Increase of Savings[2]	1.2	51.0	4150.0	1.1	31.9	3172.7
Investment	204.5	217.1	6.2	202.1	135.7[4]	-35.2
Personal Consumption	383.0	390.1	1.8	334.8	228.1	-32.8
Public Expenditures	455.9	510.7	12.0	408.5[4]	319.3[4]	-21.8
Export	215.3	321.2	49.2	192.9[4]	200.8[4]	-16.5
Personal Incomes	519.4	576.8	11.0	465.4[4]	360.7[4]	-22.5
Retail Sales	381.2	372.8	-2.2	341.6[4]	233.1[4]	-31.8
Gross Industrial Output	1025.0[3]	1155.8[3]	12.8	918.5[3]	722.7[3]	-21.3
Gross Construction Output	151.0	156.6	3.7	135.3[4]	97.9[4]	-27.6

[1] end of the year
[2] absolute annual change of [1]
[3] own calculations from real indicators in 1989 prices
[4] own calculations from nominal indicators
Sources: Statistický bulletin FSÚ, 1992, No. 1, 11; Statistická ročenka ČSFR 1992; State Bank of Czechoslovakia Annual Report 1991; The SBČS Report for the 1st Half of the Year 1992; Own calculations.

Table 10.2 Price Levels in the End of the Year, Annual Change (%)

	1991	1992
Consumer Prices	53.6	11.5
Industrial Prices	54.8	8.4
Construction Works Prices	47.6	7.3

Source: Statistické přehledy, 1993, No. 1, 2.

Table 10.3 Rate of Unemployment*

Month	1990	1991	1992
January	–	1.5	7.1
February	0.1	1.9	6.9
March	0.1	2.3	6.5
April	0.1	2.8	6.0
May	0.1	3.2	5.6
June	0.2	3.8	5.5
July	0.3	4.6	5.4
August	0.4	5.1	5.3
September	0.6	5.6	5.2
October	0.8	6.0	5.1
November	0.9	6.3	5.0
December	1.0	6.6	–

* End of the month

Source: Statistické přehledy, No. 3, 1992, No. 1, 1993.

Table 10.4 Investment Points Concentration in IPFs

Size of IPF (in mill of investment points)	Number of IPFs	% of All Investment Points
200 - 1000	6	27.3
99 - 200	5	6.8
50 - 99	3	2.0
10 - 50	44	11.6
5 - 10	44	3.5
1 - 5	105	3.1
0.5 - 1	53	0.4
0.1 - 0.5	101	0.3
0.01 - 0.1	67	0.04
0.0 - 0.01	8	0.0006

Sources: Centre for Voucher Privatization of the Federal Ministry of Finance; Own calculations.

Notes

[1] The Czech Bureau of Statistics still works with the system of the balance of the national economy (the soviet-type system of statistical representation). This system produces the indicator of net material product (NMP) and other indicators of the NMP-type such as the gross material product and so on. The GDP data quoted here and in *Table 1* of the *Appendix* represent only official qualified estimates of the Federal Bureau of Statistics and/or of the Czech Bureau of Statistics, not exact indicators produced by a system of national accounting.

[2] The unemployment rate in Czechoslovakia is calculated as the ratio of the number of unemployed divided by the number of all population in the 'productive age', i.e., between 15-60 years. If measured in the standard way (i.e., number of unemployed divided by the size of the labor force) the figure would be about 2-3 percentage points higher according to the estimate of the Czechoslovakian government.

[3] According to the estimate of Vladimír Nachtigal from the Institute of Economics of the Czech National Bank, Prague (Hájek, *et al.*, 1993). The official estimates of the Federal Bureau of Statistics and/or of the Czech Bureau of Statistics for 1992 were not available at the time of writing this paper.

[4] Unfortunately, no relevant macroeconomic indicators of the former Czechoslovakia were published for 1992, and probably never will be, due to the cessation of the ČSFR. The Federal Bureau of Statistics ended its existence in December 1992 too early to produce final 1992 data and the Czech Bureau of Statistics produces data for the Czech Republic only (and similarly the Bureau of Statistics of the Slovak Republic only for Slovakia). Thus, I limit my analytical focus (covering all of Czechoslovakia) to the development of 1991.

[5] According to the calculations of the ČSFR Federal Bureau of Statistics, Czechoslovakian exports decreased by 16.5% in real terms during 1991 compared with 1990. During the same period, the share of exports to developed market economies in the total nominal export had increased, i.e., from 46.7% (FRG including GDR) to 51.9%), while the share of exports to centrally planned economies and transitory economies decreased from 49.0% (GDR included) to 39.3% and the share of exports to less developed economies remained essentially unchanged.

[6] During the Great Depression from 1930 to 1934, Czechoslovakia experienced a drop in GDP by more than 20% and in real industrial output by more than 40% (according to post-war estimates), but such a rapid slump in one year, as in 1991, was never previously recorded.

[7] For a detailed discussion of the budget development in former Czechoslovakia and in the Czech Republic, see the contribution of Pavel Štěpánek in this volume.

[8] This insolvency of SOEs is probably the most dangerous time-bomb in the Czechoslovakian economy, and in the process of its uncontrolled cancer-like or rather AIDS-like proliferation it now increasingly affects also the newly growing private sector since trading with SOEs is inevitable for private enterprises in many cases). More new enterprises, both private and state-owned, are now being drawn into this disaster every day, and no one knows how this process will end. If the bankruptcy

act was actually applied by the courts, 80% of Czechoslovakian SOEs should be immediately closed (Šulc, 1992) — at the moment the state-owned sector as a whole still produces roughly about 80% of GDP.

[9] Without foreign currency deposits. The M2 aggregate including foreign currency deposits even increased by 27.3%. In order to obtain this figure, the value of the respective V_{1991}/V_{1990} would be 1.015 and the difference between the values of

$$\frac{P_{1991} \cdot Q_{1991}}{P_{1990} \cdot Q_{1990}} = 1.292 \quad \text{and} \quad \frac{M_{1991}}{M_{1990}} = 1.273$$

would represent about 2 percentage points.

[10] The marginal propensity to save in 1991 was 88.8%, while nominal personal incomes increased by 11.0% and nominal savings of households increased by 18.2% in comparison with 1990. The marginal propensity to save in 1990 was 3.3% due to the increase of nominal personal incomes by 7.5% and an increase of nominal savings of households by 0.4% compared with 1989. At the end of 1989, the level of nominal personal incomes reached 483.0 billion CSK and the level of nominal savings of households reached 279.4 billion CSK.

[11] Secondary insolvency is defined as insolvency resulting from the inability of the customer to pay outstanding bills. Goods delivered to the customer according to his order but not paid are considered as sold. 'Profit' from such 'sale' is accounted for as a real profit from a real sale when the customer pays the bill. The institutional roots of the insolvency problem inherent in valid Czechoslovakian accounting regulations are obvious. Primary insolvency is defined as insolvency resulting from the external inefficiency of the firm, i.e., from its inability to sell its production on the market. The Ministry of Industry and Trade and the Ministry of Economy are allowed to close an insolvent firm (to force its liquidation) only when the cause of its payments difficulties is primary, not secondary, insolvency.

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Appendix A

Program for the Workshop on Macroeconomic Stabilization of Economies in Transition

Hotel President
Prague, Czech Republic
22–24 April 1993

Thursday, 22 April

12:30 REGISTRATION
13:00 *Lunch*
14:00 OPENING REMARKS

TOPIC 1: Price Liberalization in a Post-Socialist Economy: The Impact on Macroeconomic Stability
Chairman: Miroslav Hrnčíř

- MACROECONOMIC STABILIZATION IN CZECHOSLOVAKIA: COST AND BENEFITS* by Jan Klacek
  Comments by Wim Swaan, Ján Foltín and Jeremy Carter
- PRICE LIBERALIZATION IN ROMANIA by Ioan Buda
  Comments by Karel Kouba and Alma Kanani

* The corresponding paper in this conference volume was written by I. Šujan and M. Šujanová.

TOPIC 2: The Role of Monetary, Fiscal, and Wage Policies in Stabilizing the Economies

- BUDGET DEFICIT AND INFLATION IN TRANSITION ECONOMIES: THE CASE OF POLAND by Stanislaw Gomulka
  Comments by Werner Riecke and Mario Nuti

18:45 *Close of Session*
19:00 Social event

Friday, 23 April

- SOLVING PROBLEMS OF THE STATE OWNED ENTERPRISES; UNCOLLECTIBLE CREDITS AND THE CLEANING UP OF THE COMMERCIAL BANKS PORTFOLIO AS A MACROSTABILIZATION CRITERION IN THE TRANSITION TO A MARKET ECONOMY by Nadezda Sandolova
  Comments by Aurel Berea and Marek Dabrowski
- THE BUDGET REFORM IN CZECHOSLOVAKIA AND IN THE CZECH REPUBLIC by Pavel Štěpánek
  Comments by Gorazd Nikič and Karol Lutkowski
- MONETARY EQUILIBRIUM IN THE ECONOMICS TRANSFORMATION: THE POLISH CASE by Andrzej Sopočko
  Comments by Andrei Illarionov, Stefan Sotirov and Grant Kirkpatrick
- *Press Conference*

13:30 *End of Press Conference and Lunch*
14:30 *Workshop Reconvenes*

TOPIC 3: Exchange Rate Policy and External Pressures: Search for a Stabilizing Anchor
Chairman: Stanislaw Golmulka

- THE POSSIBILITY FOR USING THE EXCHANGE RATE AS A NOMINAL ANCHOR FOR THE DOMESTIC PRICE LEVEL — SOME EVIDENCE FROM THE HUNGARIAN CASE by Artur Szentgyörgyvári
  Comments by Andrzej Topinski and Štefan Adamec
- STABILIZING THE MARKET? 1992 EXCHANGE RATE POLICY OF THE CENTRAL BANK OF THE RUSSIAN FEDERATION by Andrei Kovalev
  Comments by Peter Havlik and Anton Pashov

- EXCHANGE RATE AND THE TRANSITION: THE CASE OF THE CZECH REPUBLIC
  by Miroslav Hrnčíř
  Comments by Jan Stanovsky and Anila Bashllari

19:30 *Close of Session*

Saturday, 24 April

09:00 *Workshop Reconvenes*

TOPIC 4: Macroeconomic Preconditions for Macroeconomic (In)Stability
Chairman: Grant Kirkpatrick

- MICROECONOMIC PRECONDITIONS FOR MACROECONOMIC (IN)STABILITY
  by Vladimir Shevchenko
  Comments by Elena Dumitrescu and Jean-Louis Brillet
- PRODUCT SLUMP IN CZECHO-SLOVAKIA: A CRITICAL OVERVIEW
  by Pavel Mertlík
  Comments by Zvonimir Baletič and Jenö Koltay
- FREE DISTRIBUTION SCHEMES IN EAST EUROPEAN PRIVATIZATION
  by Iván Major
  Comment by Daneš Brzica
- Country Presentation — Albania by Alma Kanani

13:30 *End of the Workshop, Lunch*

Appendix B

Final List of Participants for the Workshop on Macroeconomic Stabilization of Economies in Transition

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22–24 April 1993

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