1. PRICES AND INFLATION

1.1. Prices in Command Economy

Command economy (=centrally planned economy) – was characteristic economic system of socialist countries. The Government made all major economic decisions. The problem was that it could hardly know the amounts and value of each commodity and the result was a shortage of some goods in demand and abundant supplies of unsaleable commodities. Under the previous regime, macroeconomic balance was achieved by direct control of the planning agencies rather than by reliance on the market or by tools of macroeconomic demand management. The plan, not the market forces, was the primary coordination mechanism of the economy. There was no adequate institutional framework within which a market economy could operate. The absence of defined property rights and enforceable contracts was most limiting. The relative prices of goods and factors of production reflected neither relative costs nor relative scarcities. The government controlled entry into most economic activities and many activities that would be regarded as socially beneficial in a market economy were illegal during central planning. The extent of private property was limited. Foreign trade was controlled by the state and therefore the efficiency enhancing impact of foreign competition was largely absent.

At the end of their existence, centrally planned economies in the Eastern Bloc were characterized by low economic performance, ineffective exploitation of resources and high-energy consumption in the sphere of production. Earnings on the labor markets in these countries were markedly equalized, which did not motivate workers to improve the working process and to increase their labor effort. On the other hand, the income equalization together with extensive social policy of the state made it possible to raise the living standards of poorer households and to significantly lower the percentage of inhabitants living in poverty. The real living standard of households at the lowest income levels was higher than that in market economies with a comparable GDP per capita. This result was achieved at the expense of strong redistribution and ranking nearly entire population among the uniform living standard of the lower middle class. This development resulted in a declared egalitarian tradition and nostalgia for the past in transformation economies.

Price system and markets were absent under classical socialism. Allocation of goods and services was done by planning administration that organized production and exchange. Enterprises were told what to produce, from whom to produce and to whom to sell. The only existing markets were shadow ones, which were illegal and operated at the margins of the system. The production structure was distorted compared to market economies. The two most important distortions were: relative overdevelopment of heavy industry and underdevelopment of services and bias toward big firms against small firms. Heavy industry was overdeveloped because of the requirements of the arms race; for example before its demise the Soviet Union was the biggest producer of steel in the world. One reason why services were underdeveloped was that, according to Marx, services were viewed as unproductive. Transforming good physically was considered to add value, but bringing it to buyer was not. The bias toward big firms was explained mostly by the fact that it was easier to plan output for a small number of large firms than for a big number of small firms and also by a desire to exploit the economies of scale. Enterprise incentives were characterized by large bonuses for fulfilment of the planned output target and smaller bonuses based on a percentage of exceeding the plan. The system led enterprises to distortion in product mix and quality so as to maximize the plan indicators. For example when glass was planned in tons, it tended to be to heavy. When the measurement of glass output switched to square meters, glass became too thin and fragile. The real puzzle of socialist economies was thus how in the absence of markets and consistent plans total chaos did not result. The process of planning was based on planning from the achieved level. The point of departure for the plan in the period t+1 would be the achieved level of the production in the period t[1].

The centrally planned economy deformed not only the foreign trade and the exchange rate regime but, in a similar way, the price structure and the overall price level. Prices on the domestic market were not determined by interaction of supply and demand but were set as a directive from the centre. This procedure brought about disequilibria on individual markets and price deformation, which reflected neither costs of firms nor consumer demand. Furthermore, owing to the isolation from the rest of the world, the prices developed independently, without regard to the world prices development. It was noticeable for example in case of the development of crude oil prices in former Czechoslovakia. As far as the aggregate price level is concerned, one of a few positive features of the former regime could be seen in a moderate or even conservative economic policy, which did not allow the emergence of significant inflationary tensions, like in Poland and Hungary as a consequence of growing public indebtedness and fast growth of wages. Owing to shortage of consumer goods on the domestic market, inflation was suppressed.

Suppressed inflation differed from open inflation in market economies by the fact that it was accompanied by market imbalances. It would have been necessary to free the prices to eliminate the imbalances, which would have, of course, transformed the suppressed inflation into the open one. Accumulation of monetary purchasing power in the hands of firms and inhabitants, not covered by consumer goods, produced a monetary overhang, which threatened to change into inflation, at the moment the state would abandon the price regulation[2].

Table 1: Growth of consumer prices in Czechoslovakia

1981	1983	1985	1986	1987	1988	1989
0,9	1,1	1,3	0,4	0,1	0,2	1,4

Source: Jonáš 1997, p. 77

1.2. Price Liberalization

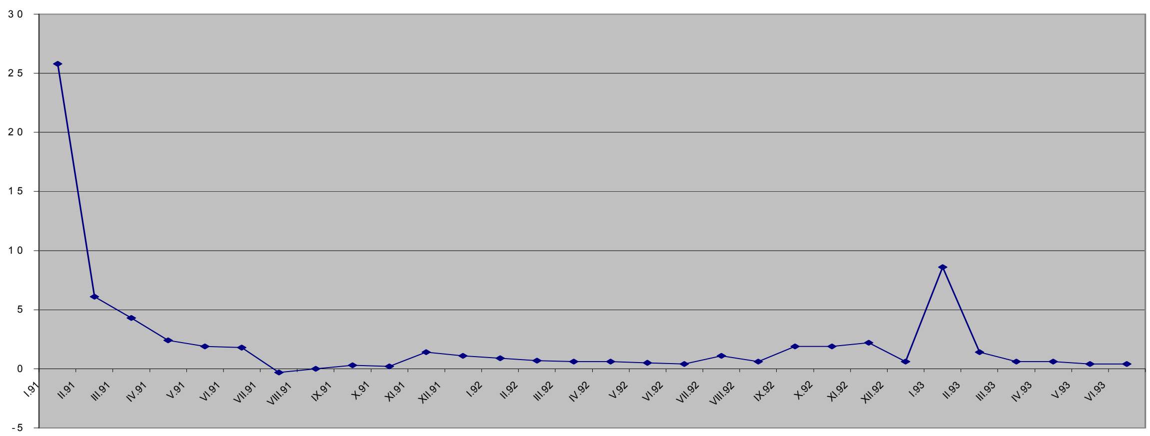
Price liberalization is a key element of transition, because it is a necessary condition for the introduction of the market mechanism. Since the objective of liberalization is to bring about a dramatic improvement in the allocation of resources, there is an important efficiency dimension to price liberalization. However there is also an important redistributive dimension that may have political economy implications, since price liberalization will in the short run create winners and losers. Both dimensions, efficiency and redistribution play a very important role. Price liberalization is essential for a market economy. Central planning failed

[1] Roland 2000, p. 6-8
[2] Holman 2000, p. 18

to allocate resources efficiently because prices failed to reflect either the cost of production or their value to consumers. Freeing up the process is the first step towards grasping the benefits of a market economy and it can occur without any steps taken towards privatisation of industry or reform of corporate governance. However, in most analyses, building a market system in the formerly centrally planned economies goes hand in hand with the privatisation of property and the free entry of firms into the market place. Private enterprise and private ownership are more likely to be compatible with the efficient operation of markets. Price liberalization can produce dramatic results. No more queues in shops and increased availability of goods, the elimination of excess demand. A further benefit of price reform is a reduction of socially wasteful activities caused by price controls. Under planning goods in demand attracted many buyers and much of the homemakers day was spent queuing for necessities. The alternative to queuing was to resort to the black market[3].

For the above-mentioned reasons, price liberalization was an absolutely inevitable prerequisite for the transition of Czechoslovak economy to the market economy. In 1990 several partial measures were taken. In the first place, subsidies of food consumer prices were removed and some administrative prices controlled by the state (such as petrol price) were adjusted. Of course, these measures were only a sort of preparation for the big one-off price liberalization. This price liberalization took place on January 1, 1991, when majority of prices were liberalized along with a prevailing part of foreign trade. As measured by the share of the total value of receipts, approximately 85% of prices were freed on this date. The state maintained price regulation of rents, transportation, electricity and several other items. Price movement of food and some other items remained temporarily under control, since it was feared that companies would misuse their monopoly positions to increase prices. Hand in hand with price liberalization, subsidies of administratively controlled prices were considerably lowered in the first half of 1991[4].

Graph 1: Change of index of consumer prices in the period 1/91 – 6/93 (monthly change %)



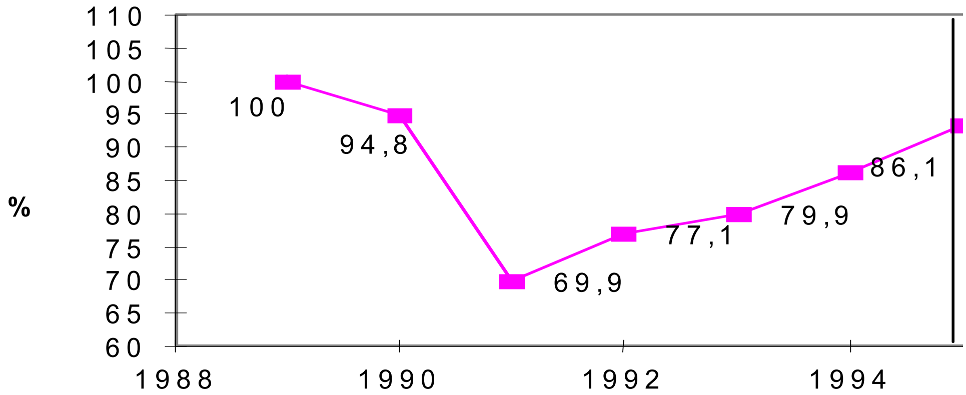
Source: ČSÚ, CPI Statistics.

Growth in prices after price liberalization can be attributed to several causes. In particular, suppressed inflation was removed, which under conditions of the command economy resulted

[3] Roland 2000, p. 131 - 133
[4] Jonáš 1997, p. 82

in forced savings, not price growth and among other causes was the above mentioned dismantling, extensive depreciation of the Czech crown's (CZK) exchange rate and last but not least rectification of deformed relative prices. Preparations for the price liberalisation were overshadowed by concerns that the one-off price jump may put into motion inflationary spiral and that could threaten the fragile macroeconomic equilibrium of the incipient transformation. Therefore a strongly restrictive economic policy was applied in 1991, which ensured that following the initial price shock in January 1991 the situation stabilised and inter-month inflation rate stood at the values not exceeding one per cent. Thanks to this fact the central bank eased its monetary policy at the beginning of 1992[5]. Rather unexpectedly, price liberalization and the following successful stabilizing policy resulted in a sharp drop in real wages, which in turn lowered the costs of domestic firms and improved their competitiveness in the world markets.

Graph 2 : Real wages 1989-1994



Source: ČSÚ

1.3. Efficiency and Redistribution Effects of Price Liberalization

In general price liberalization affects more seriously people from lower social categories, since under administered prices they had access to goods on the same basis as everyone else, and because the marginal value of their time was low the queuing system worked to their benefit. Liberalized prices confront them with a hard monetary budget constraint and cause a fall in living standards, a case of the efficiency of the market conflicting with the greater equity of nonprice allocation. As prices are decontrolled the highly concentrated structure of industry promoted under central planning becomes a problem. Because of the planners faith in scale economies production of many goods was concentrated within a few large enterprises, which under planning had little market power because both production targets and prices were centrally determined. However price liberalization gives these enterprises a high degree of market power and they will respond to their new freedom by raising prices and reducing output. Any gains in welfare from price reform must be set against the loss of consumer surplus caused by enterprises exercising monopoly power. Losses can be mitigated by antimonopoly regulation, freeing market entry for domestic competitors and opening up international trade. In cases of natural monopoly or substantial barriers to entry, regulation

[5] Jonáš 1997, s.82-84

may be the only resort. Liberalized prices will produce fewer benefits if the reform is not accompanied by the introduction of contract law with some measure of enforceability.

There also appears to have been considerable widening of income differentials and stratification in social status. For many individuals, especially those losing in relative terms, this has been hard to accept. The ability of the government to keep social peace those been a remarkable achievement. The transition to capitalism involved big changes in income distribution. Under the old system basic necessities (bread, housing, education, housing, health and social services) had been highly subsidized by the government or provided free by state enterprises to their workers. These all became relatively more expensive, the real value of wages and pensions was reduced by inflation and the value of savings was hurt. There were welfare gains from the disappearance of queuing, the improvement in quality and variety of consumer goods, which originated from the freedom to import, but enjoyment of such gains was felt mainly by people able to succeed in the market economy.

Under centrally planned economies, majority of basic necessities, such as food, housing and health care were subsidized by the state. After the withdrawal of subsidies and price liberalization, many households found themselves in a situation, in which their wages and pensions were impaired by inflation and their real purchasing power dropped. Price liberalization brought an increase in effectiveness and put an end to the excess demand and quasi-rationing distribution mechanisms. However, only that section of population, which was able to assert itself in new conditions of market economy benefited from this phenomenon. Low-income households were most affected by the price liberalization, because the former administrative system worked in their favor for two reasons. Firstly, the prices of basic necessities were kept at artificially low levels and secondly, alternative distribution systems such as queuing functioned for the benefit of the low income households, mainly due to a lower limit value of their free time. When price liberalization was implemented, these households were suddenly confronted with hard financial limits, which, in many cases, decreased their living standards. Thus economic reforms led to enhancing income and social differentiation.

Economic reforms, in their final implications, gradually suppressed the former property and income equalization and accelerated the growth of inequality in the society. This process has two dimensions. The first is a higher number of households living in poverty, which is caused by income polarization that deteriorates relative income situation in a number of low-income households. In the context of economic reforms, these processes are practically unavoidable and therefore the absolute poverty level can be eliminated only by economic growth, whose robustness varies greatly in individual countries and whose magnitude was determined by the depth of transformation fall. It must also be noted that in these cases the GDP statistics are not quite related to the attained economic level, since indicators of living standards and the GDP only poorly reflect qualitative changes and it is indisputable that they underestimate the living standards that were reached in these countries.

The second factor is the change in relative ranking, for a number of individuals, who enjoyed a high social and economic status as a result of their association with the ruling classes or as a result of other reasons, and now they face a sharp drop down the social ladder. From their point of view it is perceived as unjust, because they invested a considerable part of their human capital into their knowledge and skills that are now is useless. Therefore they are angry with the system that brought about this change. Especially workers in formerly privileged branches take very seriously the withdrawal of traditional perks, which they used to receive. Older generations face a fundamental change in system operation and a part of them adapt themselves only with difficulties and as a consequence, they abandon positions to younger generations. Thus young people have a unique chance to fill the vacancies and managerial posts, for which they would otherwise wait for years in stabilized societies and economies. Next generations will get into problems as well, because they will work under conditions of non-existence of classic generation substitution, since their superiors in a number of branches will be only a few of years senior and create the glass ceiling for them.

A characteristic feature of transformation is the fundamental uncertainty concerning final results and impacts of the whole process at the start of the reforms. A small possibility to influence the final impacts supports the thesis that the authors of economic policy have only a very limited control over real impacts of their reform steps. Once the measures are implemented, they start living their own lives. The question is, whether the reforms would be so readily accepted, if both politicians and electorate knew that they would lead to such dramatic changes in income and wealth distribution.

An interesting problem is posed by the question, what sort of income and property structure are the present economies heading for and where will the process of income differentiation stop. It is evident that the initial equalization is being disturbed and the degree of inequality among individuals and households is growing in all transformation countries. The question is what the target stratification in these societies is. Will it be a society with a very differentiated structure, where the workers adapted to new conditions will be sharply distinguished from those, who will find their place in the sun only at the cost of great difficulties? This hypothesis could be supported by the entry of foreign companies into the markets in transformation countries, as they partly create a syndrome of dual policy as both the working morale and salary level are concerned. These companies employ young, flexible workers with knowledge of foreign languages and information technologies and these positions are inaccessible for old types of workers.

To a large extent, this process is hindered by the present social system existing in these countries, which is a relic of the past and tends forward great redistribution. The question, which arises, is, how efficiently is it done with regard to the declared targets. The state policy of redistribution still reflects the original objective to significantly equalize incomes of individual households. Are not its effects rather counterproductive? What is the principal problem of those who are looking for their self-realization at present? The fact is that they are less adapted to new conditions, unable or not willing to acquire the habits necessary and appreciated for succeeding in market economy. How does the social system contribute to this situation? Does not it encourage the low degree of adaptability by making it possible for workers not to adapt to the changes and rather adapt to the adjustment of this system? In this respect the function of the social system can be in contradiction to its declared objectives.

Under the centrally planned economy, many people got used to a way of life involving a low degree of risk, regular income and minimum outlooks for a change both in the positive and negative sense. Economic and political transformation gave rise to fundamental changes. The state is withdrawing from the economy and is no longer able to determine the distribution of sources in society, it can only influence distribution through redistribution processes, naturally with uncertain effects. The social system is extricating itself from the labour market and the state is surrendering the omnipotent role of all people's employer and the guarantor of everything. After the fall of communism, full employment ceased to be guaranteed and also the work participation rate declined. The labour market started to be segmented and profiled.

Among the jobless appeared a segment of people who had been unemployed for a long time. Qualification requirements towards the workforce are being reassessed. The importance of education for building a professional career has been growing and individual social groups start being considerably differentiated. Incomes reflect more markedly the differences in qualifications, and the property structure in society has turned upside down.

An increasing threat of unemployment causes fear that people will lose their jobs and income and the prestige related to their position. A much tighter link between social and economic position of people catches on. Earlier, this link was disrupted by ideology that separated education, earnings and socioeconomic position. Income inequality does not arise only from newly appearing disparities in wages but also from the differences in property receipt, taxes and social benefits that greatly affect the situation. Yields and losses from transformation are shaping the structure of society, reshaping it for the future and anticipating further development.

Changes in economic and social structure of the population anticipate, to a large degree, their political attitudes. The differentiation of attitudes and of perceived social position may be even more sensitive and more relevant. The geographic and regional aspects of transformation cannot be overlooked, since entire pockets of problematic regions arise, which are with very difficult to solve and are often determined by a poorly functioning housing market and a low mobility of population, which is given partly by objective and partly by traditional reasons.

1.4. Inflation and Price Levels in 1992-2003

The year 1993 represented another inflationary jump in the Czech economy after the price liberalization in 1991, since it's beginning was marked by two events which had an essential impact on the economy in the following period. Among these events ranked monetary separation and introduction of a new taxation system. Due to the political development in Czechoslovakia at the beginning of the 1990s, the country broke up into two independent states on January 1, 1993. In the first weeks both succession states had a functioning monetary union. Its aim was to maintain tight economic relationships between both countries and to soften an expected slump in production, caused by limiting their mutual trade. Soon afterwards, however, the union proved to be unsustainable in the long term, due to the uncertainty regarding further development that led to outflow of foreign capital and thus to a rapid decrease in foreign exchange reserves. Therefore, the monetary union with Slovakia was abolished and in February 1993 monetary separation took place. Monetary separation resulted in, among others, extraordinary growth in available funds in banks.

The second principal event was the introduction of the new taxation system, whose pillar was the introduction of value added tax into the Czech economic environment. This tax replaced the cancelled turnover tax and its incorporation into prices led to a price rise in the first months of 1993. In the spring of 1993 Czech economy faced a rise in inflationary trends. In addition to the increment of available funds in banks and the impact of introducing the VAT, the wage developments became a problem as well, since wages started to grow in the first half of 1993 without being supported by productivity increases. This development boosted demand on the domestic market. The central bank reacted by tightening the existing regime. It ordered the increase of statutory reserves for large banks by 25 % and reintroduced a restrictive monetary policy focused on maintaining an acceptable inflation rate, which was linked with the effort to have a balanced state budget and a stable currency rate.

Period of Inertial inflation and Inflow of Foreign Capital

As compared to the period of 1991-1993, when price development was very dynamic and had a major share in the aggregate inflationary differential of the 1990´s, the following period was distinguished by a more moderate price growth, which, however, still created a positive differential in relation to Germany and the USA. The central bank successfully managed to soften price fluctuations caused by price liberalization, then by monetary separation and by introduction of a new taxation system. Thanks to the restrictive monetary policy the inflation rate was stabilized at the level of 1% per month. A further effort to decrease this indicator was unexpectedly difficult for several reasons. Firstly inflation expectations, which reached psychologically dangerous limit of 10 %, created a barrier for the efforts of the central bank to reduce the growth of inflation rate. These inflation expectations were incorporated in inter-company price agreements as well as in collective bargaining for wages between employers and trade unions. The second factor that made an important impact throughout the whole transformation process was the survival of considerable rigidity and structural imbalance in Czech economy even after finishing the principal transformation and during continuing structural adaptation, which prevented the flexibility of prices in the downward direction. Prices moved in one direction only – upwards. The third factor was a short-term massive inflow of foreign capital, which influenced the growth of money stock. The inflow, attracted by a high interest differential along with a long–term stable exchange rate, began to have a negative impact on the central bank's restrictive policy. In addition to these factors, the price growth was influenced in that period by a high frequency of changes of relative prices. According to Jonáš: „Owing to the long-term absence of market mechanism in transition economies, there is a higher number of adjustments of relative prices than in stabilized market economies. Under non-existence of sufficient flexibility of absolute prices of some commodities in the downward direction, the relative prices can be adjusted in case of need only by means of a different rate of growth of individual prices. The commodities, whose relative prices are to drop, simply grow more slowly than the commodities, whose relative prices are to rise. As a consequence, the inflation rate rises more than in case of adjustments of relative prices by means of a drop in some absolute prices." (Jonáš 1998, p. 733)

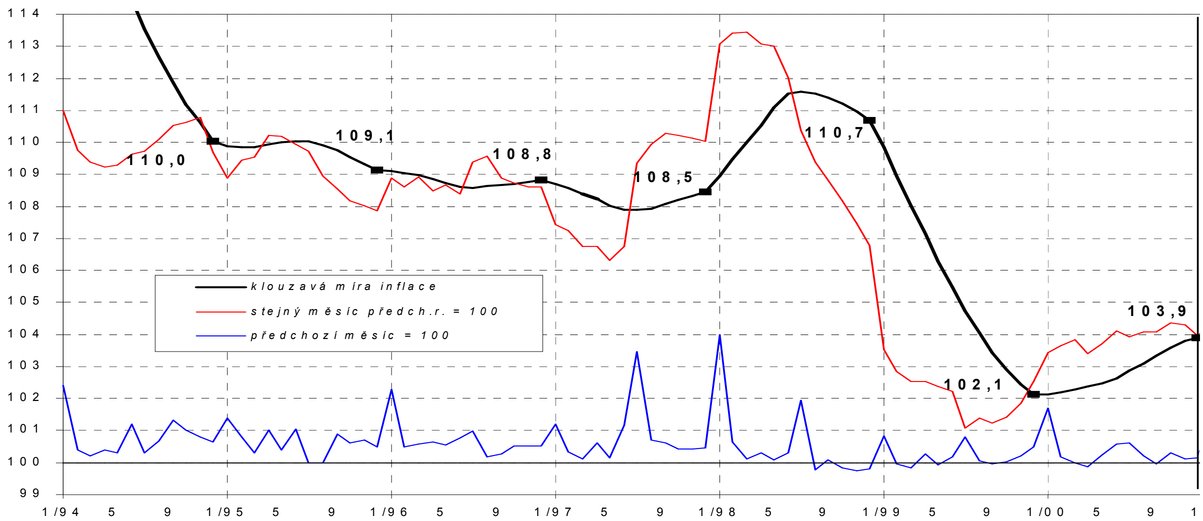
Monetary Crisis in 1997

Imbalances, which had been present latently in Czech economy for a longer time, became more apparent in the first months of 1997. The growth of domestic demand exceeded the growth rate of the GNP. As a consequence, the deficits of the current account on the balance of payments current account were on the rise. The deficits were financed by an increasing inflow of foreign capital that exploited the positive interest differential in combination with stability of the nominal rate. A part of the influx was formed by a short-time speculative capital. In May 1997 the crisis culminated, since foreign investors lost confidence in adequacy of the Czech crown's (CZK) exchange rate. In spite of the correction of economic policy by the government and rising of interest rates by the central bank, there was an outflow of capital and a strong pressure was exerted on the fluctuation band of the CZK. Therefore the Czech National Bank (CNB) cancelled the fluctuation band of the CZK on May 27, 1997 and switched to the floating rate. Price development was strongly influenced by the crisis. In the first five months of 1997 the value of the consumer price index slumped to 6,3 % in May. The development was mainly due to the effect of a strong appreciation of the CZK at the beginning of the year and to a fast decline in growth of money supply. A lower extent of administrative adjustments of some prices (consumer taxes, some deregulations) and overall slowing down of economic growth had a favourable effect as well. However, after that the effect of CZK devaluation following a monetary attack started to be fully felt, as the price of imported goods rose and July's high price deregulations of rents, energies and heat supply contributed to an increase in inflation rate.

Sharp Decline in Inflation Rate

After adapting the floating rate of the CZK, the central bank's monetary policy lost an important tool for stabilizing inflation. Monetary aggregate M2 was no longer a reliable measure of efficiency of the impact of monetary policy on price development. On that account the central bank decided at the end of 1997 to abandon this target and to switch to the system of inflation targeting. Shortly after introducing inflation targeting, the process of disinflation started to assert itself very distinctly. The process began in the second quarter of 1998 and finished in August of 1999. The development was characterized by a sharp drop in all price indexes. Some of them even acquired negative values. It was caused by an incipient recession, which penetrated the Czech Republic, and by slackening of world demand, a drop in import prices and a significant reduction of deregulations.

Graph 3: Czech consumer prices 1994-2000



Source: Macroeconomic prediction of MF CR. www.mfcr.cz

Conclusions

Cumulative growth of aggregate price level, measured by the consumer price index was nine times higher in the Czech Republic than in Germany in the period of 1991-2000. A considerable part of this growth was brought about by individual non-monetary measures, which changed the price level by jumps. From 1991 to 1993 the price movements were primarily influenced by price liberalization, separation of common currency and introduction of a new taxation system. In the period of 1994-2001 the price development was more fluent without a pronounced price growth. In spite of that it was very markedly affected by one-off price growths, resulting from deregulations. During this period the following inflationary factors appeared to be decisive: a) inertial inflation in 1994-1997, when inflation expectations of individual subjects in Czech economy were fixed at the psychologically dangerous limit of 10% and created a barrier for the effort of the central bank to decrease the inflation rate; b) currency crisis in 1997, when after freeing the CZK rate in May 1997 it was partly depreciated and the prices of imported goods rose, thus pushing the falling inflation rate upwards; c) inflation targeting, which started to be used by the Czech National Bank from the beginning of 1998. Shortly after its implementation, the process of disinflation started to be felt very strongly. This development was caused by an incipient recession in the Czech Republic, by slackening of world demand, dropping of import prices and by limiting deregulations. The unexpected development resulted also from the fact that the central bank systematically undershot its monetary targets. The factor, which throughout the whole transformation period accelerated the inflation rate in the ČR over the levels usual in developed countries, was a higher frequency of changes in relative prices. This factor, which can be observed in all transformation economies, is due to inherited deformations and a large volume of institutional changes that trigger a need for more frequent price changes. Due to non-elasticity of prices in the downward direction, the higher frequency of changes was reflected in a higher rate of inflation.

1.5.Inflation differential

Table 2: The change of consumer prices yearly change in %)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ČR	**56.6**	**12,7**	**18,2**	**9,7**	**7,9**	**8,6**	**10,0**	**6,8**	**2,5**	**4,0**
SRN	3,5	4,0	4,1	3,0	1,8	1,4	1,8	0,5	1,2	2,2
USA	4,2	3,0	3,0	2,6	2,5	3,3	1,7	1,6	2,7	3,4

Source: ČNB, Inflation Report

Table 3: Cumulative change of consumer prices, begining of the period

CR

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
100,0	156,6	176,5	208,6	228,9	246,9	268,2	295,0	315,0	322,9	**335,8**

SRN

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
100,0	103,5	107,6	112,1	115,4	117,5	119,1	121,3	121,9	123,4	**126,1**

USA

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
100,0	104,2	107,3	110,5	113,4	116,3	120,1	122,1	124,1	127,4	**131,7**

Source: Table 2

3. EXCHANGE RATE POLICY (Martin Kvizda, Zdeněk Tomeš)

3.1. Theory of Balance of Payments and Exchange Rate

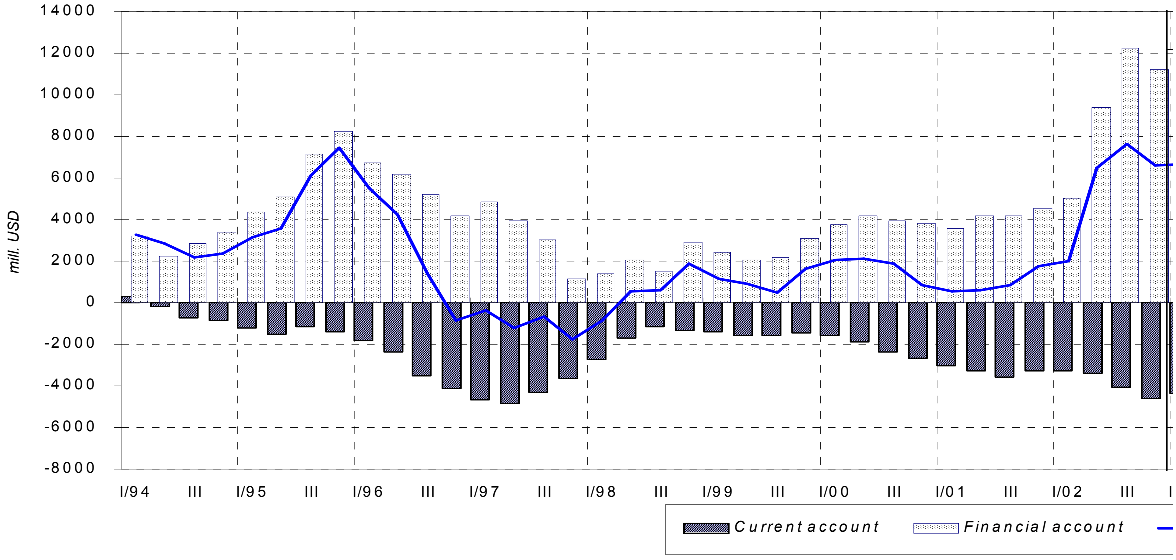
In general, the balance of payments is understood as a review of all flows of money in and out of an economy in a certain period, usually a year. National total payments to abroad must be equal to the total payments received from other countries.

Czech balance of payments´ structure:
credits = (+) receipts from other countries → inflow of a foreign currency
debits = (-) Czech payments to other countries → outflow of a foreign currency

CREDITS	DEBITS
Current account	
Exports of goods	**Imports of goods**
Exports of services	**Imports of services**
Income from assets abroad	**Income from foreign investments**
Current transfers to the economy	**Current transfers to abroad**
Financial account	
Direct investments to the economy	**Direct investments abroad**
Portfolio investments to the economy	**Portfolio investments abroad**
Foreign exchange reserves (decline)	**Foreign exchange reserves (increase)**
Errors and omissions	**Errors and omissions**
BALANCE	
Σ credits =	**Σ debits**

A deficit in the trade balance may be counterbalanced by a surplus in the service account or by high capital inflow as was the case in the Czech Republic in 1994 and 1995. The main question is if such an imbalance is a problem for an economy. Many countries function very well with huge surpluses or deficits on current accounts. Many developing countries try to stimulate their economies by imports of technologies hoping that the increased investment will pay in the future.

Graph 4: Balance of Payments; moving sum of latest 4 quarters in USD



Source: Macroeconomic prediction of MF CR. www.mfcr.cz

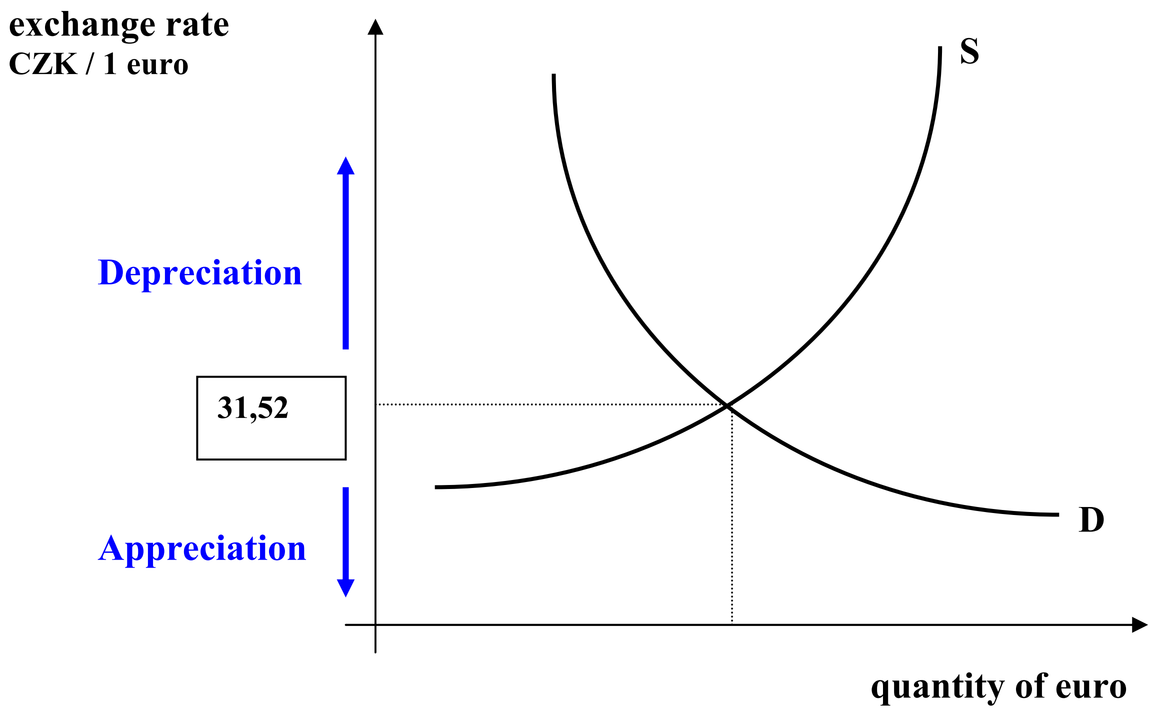
External balance is attained when a country's current account is neither so deeply in deficit that the country may be unable to repay its foreign debts in future nor so strongly in surplus that foreigners are put in that position. A country that is committed to fix its exchange rate against a foreign currency may, for example, well adopt a different definition of external balance than one whose currency floats. In practice neither of these definitions captures the full range of potential policy concerns. The example of such development could be seen in CR during monetary crisis. The imbalances in Czech economy were growing for three years. It is true that part of increased imports went to firms and was in fact technology import so this gave hopes to ideas that in the near future the current account trend could be reversed as increased investment would lead to higher export dynamics. But then came a crisis. The main problem was with financing of current account deficit. But unlike contemporary situation, the main source of capital account surpluses weren't long-term money as for example foreign direct investments but mainly portfolio capital and hot money. Hot money is a term used for speculative financial capital deposited on a short-term basis, which is attracted to the country by high interest rates. As bad news from economy, such as bank crushes and corruptions scandals grew, the foreign investors started to be nervous. And when financial crisis on East Asia begun, the situation started to be serious. Growing distrust of emerging markets led to huge capital outflow from Czech economy. There were no more hot money to finance big trade deficit and the fixed Czech crown exchange rate was under strong depreciation pressure. After the crisis the Czech Republic left the risk zone of extremely high current account deficit for the GDP ratios.

Exchange rate is the amount of one currency that must be paid to obtain 1 unit of another currency. Determinants of the exchange rate:

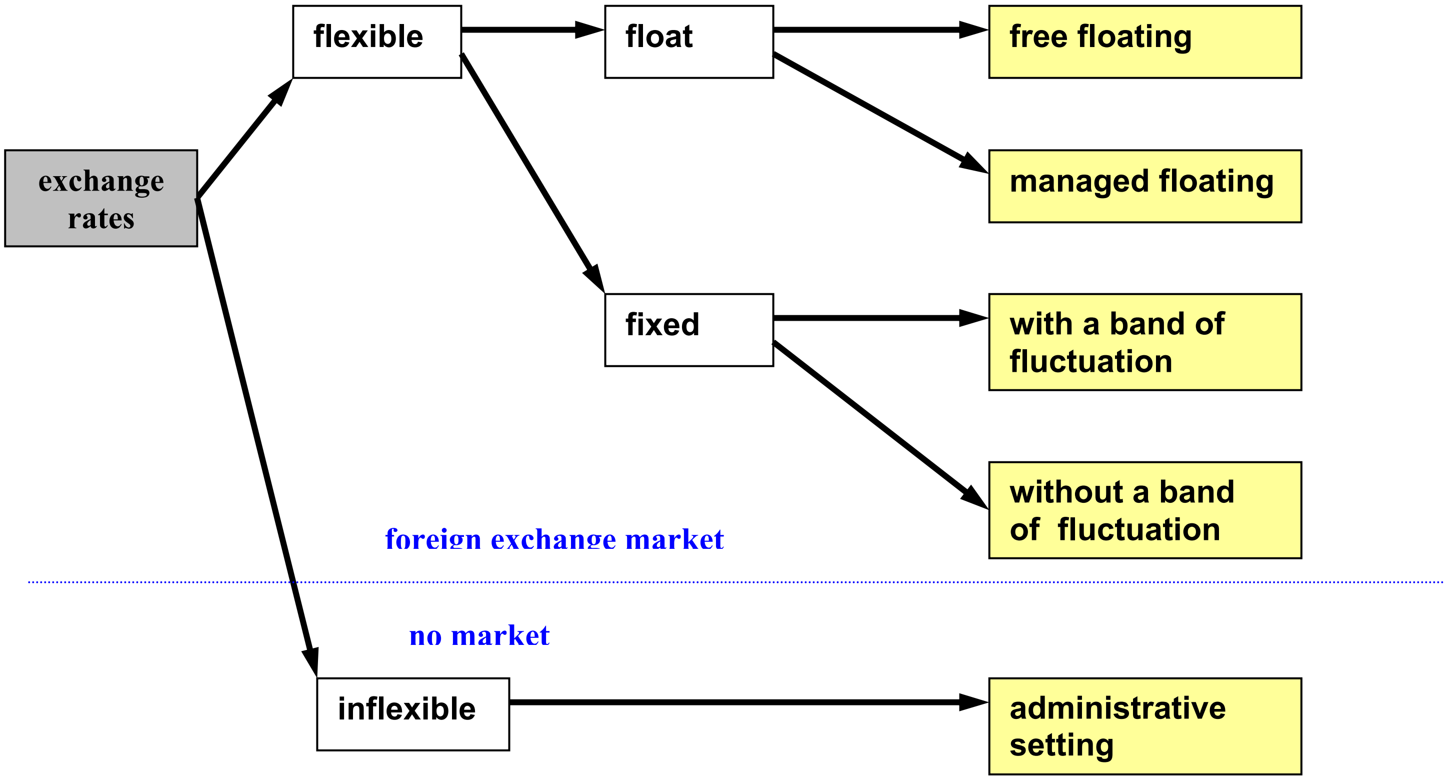
Demand ⇒ increase → increase of the ER = depreciation
decline → decline of the ER = appreciation

Supply ⇒ increase → decline of the ER = appreciation
decline → increase of the ER = depreciation

Graph 5: Determination of exchange rate



Classification of exchange rate arrangements



3.2. Exchange Rate System in CPE

Nominal Currency Rate in the 1945-1990 Period

Czechoslovakia became a founding member of the IMF in 1945 and from November 1., 1945 it officially set the exchange rate of the crown against the dollar at the level of 50 CZK/USD, as based on the gold standard. The currency reform from 1953 was carried out in the price ratio of 5:1. The currency rate however was converted at the ratio of 6,94:1 to the level of 7,20 CZK/USD[6]. As compared with the original currency rate, the real value of the crown was strongly appreciated. The official rate remained practically unchanged until the end of 1988. Besides the official rate there existed a relatively complex system of various coefficients, which created a number of different rates to support or discourage a certain type of transactions, according to the need of the central plan. Functions of currency rate were restrained in the command economy and its level had a small impact on the decision-making of domestic economic subjects. A characteristic feature of the centrally planned economy was the existence of the black market, which substituted non-existing market mechanisms and created space for arbitrage. Beginnings of a new arrangement in the area of currency rate can be seen in 1989, when foreign currency auctions were introduced. Exporters could freely offer

[6] Source: (Frait 1996, s.163)

a part of their foreign exchange receipts to the interested subjects from other firms. The price of foreign exchange on this market was disproportionately high owing to a limited offer.
An urgent need to reform the non-effective economy emerged along with the change of political regime. The strategy of economic reform was based on internal and external liberalization accompanied by the effort to stabilize the macroeconomic situation. One of the tasks awaiting national economists in the country was the liberalization of foreign trade and opening up of the economy to the surrounding world, which was unthinkable without deep changes in currency rate.

Opinions on the optimum variant of the regime and setting of the currency rate varied widely with respect to the analyzed deformations taken over from the centrally planned economy. It was then obvious that the existing official rate would have to be depreciated before starting any economic reforms. However, it was not clear how much to depreciate. Implementation of economic reforms including liberalization of price and foreign trade as well as introducing the internal convertibility of the crown was planned to start on 1st January 1991. A considerable uncertainty prevailed in both political and economic circles about the consequences of the measures on the economy. The principal risk was posed by the possibility that the initial level of currency rate will not be sustained, which would have a negative impact on macroeconomic stability. Fathers of the economic reform were especially afraid of the following:

- Risks of growth in demand for imports motivated in inhabitants by "hunger" for foreign consumer goods.
- Lack of foreign exchange reserves in the central bank and a low credibility of economic measures of the government and the central bank, which made the Czechoslovak crown an easy target for speculative demand.
- Underdeveloped markets in Czechoslovak economy and the monopolistic structure of foreign trade companies, when it was not clear, whether they would be able to react to significant changes in foreign trade and currency rate.

That is why it was decided to carry out considerable depreciation of the Czechoslovak crown when deciding about the level of the foreign exchange rate to discourage the demand for foreign goods and secure the equilibrium of the current account of balance of payments, even at the price that such exchange rate will be much undervalued against the purchasing power parity. An opinion prevailed that it is better to make a mistake in the direction of more undervalued rate rather than to allow overvaluation and subsequent devaluation. Such a rate should have become a brake which was to relieve inflationary pressures in economy due to stabilization of import prices. Since the price stabilization via/through the currency rate was limited only to tradable items, it was decided to combine the policy of the fixed currency rate with a restrictive currency and fiscal policy[7].

Therefore it was decided to significantly weaken the CZK currency rate before starting economic reforms. The Czechoslovak crown was devalued three times in the course of 1990 against convertible currencies: on 8th January by 16,6 %, on 15 th October by 55,3% and on 28th December by 16 %. While at the end of 1989 the rate was 14,29 crowns against the dollar, a year later it stood at 28 crowns against the dollar[8]. The rate for commercial and non-

[7] For more details see (Dědek 2000; s. 38-40); (Jonáš 1997; s. 181-187).
[8] Source: ČNB; for more detailed analysis see (Durčáková 2000; pp. 314-317), (Jonáš 1997, p. 184-189) or (Bulíř 1993 pp. 182-183).

commercial payments was unified already at the beginning of 1990. Internal convertibility of the crown was introduced on 1st January 1991 and the difference between the official (trading) rate and unofficial rate quickly disappeared after several months.

Table 4: Multiply exchange rate CZK/USD; year 1990

	31.12.89	31.3.90	30.6.90	30.9.90	31.12.90
obchodní	14,29	16,81	16,51	15,71	28,00
aukční	114,35	59,15	39,36	31,04	39,40
turist.	-	39,96	27,85	26,49	28,00
černý	43,48	41,49	35,57	33,56	45,65

Source: Bulíř 1993

Currency rate at the outset of transformation

Nominal currency rate was set as fixed after marked depreciations from the year 1990. The choice of a fixed regime resulted from the effort to provide a nominal anchor in economy, i.e. to stabilize the currency rate amongst the dynamic changes of most macroeconomic aggregates and thus to stabilize import prices as well - not to lose control over the development of economic situation. The currency rate was not fixed against one currency but against a currency basket of five countries, which had a majority share in Czechoslovak foreign trade. The currency rate fixation against a basket of five currencies had been used since 1981. However, it did not have a major importance until 1990. In 1993 the basket was reduced from five to two currencies, mainly because of simplifying the calculations and a low relevance of the other three currencies. At the same time the CZK markedly strengthened its link to the DEM. The rate was originally set as absolutely fixed against a basket of five currencies, a narrow oscillation band of +/- 0,5% for the movement of exchange rate was determined in September 1992.

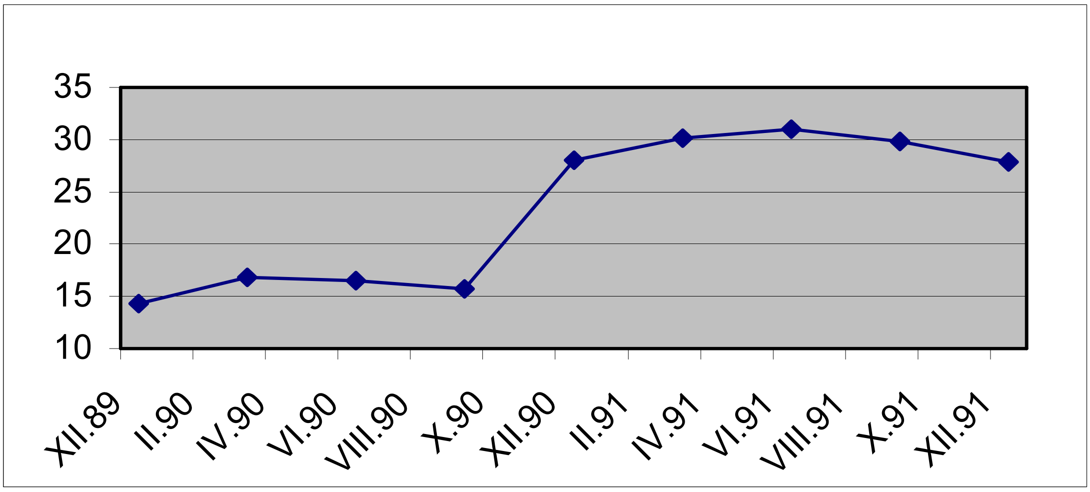
Table 5: The structure of currency basket (%)

28.12.1990	USD 31,34	DEM 45,52	ATS 12,35	CHF 6,55	GBP 4,24
2.1.1992	USD 49,07	DEM 36,15	ATS 8,07	CHF 3,79	FRF 2,92
3.5.1993	USD 35,00	DEM 65,00	- -	- -	- -

Source: Frait 1996, s. 59

Launching of economic reforms at the outset of 1991 was a tough loading test for the newly set currency rate. A large price jump in the first months of 1991 contributed to pressures for its maintaining. Thanks to the restrictive macroeconomic policy, however, it was possible to quickly stabilize the price growth. A fast decline in inflation rate and a growth in foreign exchange reserves contributed to the renewal of trust in the crown and the pressure on it was soon relieved. It was reflected in a rapid narrowing of the gap between the parallel and official rate of the crown, which practically disappeared in the course of 1991[9].

Graph 6: Exchange rate CZK/USD 1990-1991



Source: Bulíř 1993; ČNB, Exchange rate archive; www.cnb.cz

In the second half of 1991 and in 1992 the situation was stabilized in connection with a rapid drop in inflation and the central bank could even slightly ease its tightly restrictive policy. The next critical moment came at the beginning of 1993, when the events linked with splitting of the Federation were reflected in the development of currency rate. Both succession states came into existence with common currency. That state, however, was not trustworthy enough for international financial markets and led to a sharp decline in foreign exchange reserves and higher pressures on the exchange rate during January of 1993. However, after a successful monetary separation in February 1993 the trust in Czech currency was rapidly restored.

Strengthening Inflow of Foreign Capital

Economic policy of the government and the central bank succeeded in meeting their target of sustaining the fixed currency rate of the koruna against convertible currencies in the first years of transformation in spite of the fundamental transformation changes that altered the basic character of Czechoslovak/Czech economy. The fixed currency rate was maintained despite the fact that the economy faced two deep price shocks in 1991 (price liberalization) and 1993 (implementation of a new tax system), which really appreciated the Czech crown and gave rise to depreciation expectations and pressures. The restrictive monetary policy, which was applied to suppress inflation and maintain the exchange rate pushed the inflation rate to single-digit values in the course of 1993. Due to the shortage of domestic capital, higher inflation rate and restrictive monetary policy, the domestic nominal interest rates were higher than the foreign nominal interest rates. The interest rates differential began to attract higher and higher volumes of foreign capital thanks to the stable nominal exchange rate, and the stabilization of overall economic situation. The movement became apparent in the

[9] (Jonáš 1997, s. 188)

economy at the beginning of transformation, but it accelerated along with gradual liberalization of transactions on the capital account of balance of payments. The inflow of capital from abroad acquired more important dimensions from the second half of 1993 and culminated in 1995. In 1994 the ratio of net inflow made 8,5% of the GDP, and it culminated in 1995 when it peaked at 16,6%[10]. The inflow led to appreciation tendencies and simultaneously limited implementation of monetary policy, because sterilization of the inflow led to increasing money stock. It became clear that the trend towards interest rate parity grew stronger and that the existing state was not sustainable in the long run. Hence the Czech National Bank widened the oscillation band around the central parity from +/- 0,5% to +/- 7,5% on 28th February 1996. The aim of this measure was to increase the currency risk for speculative capital. Widening the oscillation band more or less put a stop to the stage of the fixed currency rate and the rate of the crown showed characteristics of controlled floating. Subsequently a partial outflow of capital occurred in reaction to the move. However, the inflow was restored again soon.

Monetary crisis from 1997

The inflow of foreign capital to Czech economy in the mid-nineties had also a reversed side, which was financing the deficit of the current account of balance of payments. The deficit emerged as a consequence of a higher growth in domestic demand over domestic supply. The difference between them was covered by export from abroad. The deficit was growing in the period of 1994-1996 and at the beginning of 1997 it exceeded the limit of eight per cent. Such a high deficit of the current account of balance of payments caused substantiated worries. As bad news from economy became more frequent (problems of banks and investment funds, difficult enforcement of law, stalemate election results[11]), there was a higher risk of emergence of depreciation expectations and a rapid outflow of short-term speculation capital, which would result in depreciation together with the effect of self-fulfilling expectations.

Table č. 6. Deficits of trade balance (in % HDP)

I.95	II. 95	III. 95	IV. 95	I.96	II. 96	III. 96	IV. 96	I.97	II. 97
-2,8	-3,2	-2,3	-2,7	-3,3	-4,3	-6,3	-7,4	-8,3	-8,2

Source: ČSÚ, ČNB

Monetary policy commenced to be overloaded in the situation of fixed currency rate and more and more liberalized flow of capital. Even though restrictions were tightened since the half of 1996, original causes of imbalance had not been solved and deficits on the current account of balance of payments kept increasing. Currency and banking crisis in some east Asian countries and a subsequent departure of investors from risky areas functioned as a triggering mechanism of the crisis. On May 15, 1997 the Czech crown got under a strong pressure of stabilizing speculation. During that day the crown weakened sharply and despite massive intervention by the CNB, the pressure continued even in the next days. The central bank was gradually losing control over development of the situation and expectations of depreciation controlled the market. The outflow of capital changed into flight of capital. On

[10] Source: (Dědek 2000, s. 30)
[11] see (Dědek 2000 s. 48-49)

May 26, 1997 the CNB decided, after consultations with the government, to free fluctuation bands and choose the free-floating system. It declared officially that it would go on to use the controlled floating system with orientation on the rate of the Czech crown pegged against the DEM[12]. The period after freeing the currency rate was distinguished by an increased nervousness. It was not clear, how large the resulting depreciation would be and there was a threat of marked and sharp currency depreciation with negative impacts on economic stability and efficiency. This danger was successfully eliminated and the exchange rate depreciation was not that dramatic, as it did not reach the level of ten per cent.

Graph 7: CZK/DEM in 1997

Source: ČNB, Exchange rate archive; www.cnb.cz

Development of Currency Rate after the Crisis

The first consequence of freeing the currency rate in the spring of 1997 was its weakening, which continued in 1998. The uncertainty linked with freeing of the exchange rate, which was intensified by a global crisis on world markets, contributed to an increased volatility of currency rate. Nevertheless, after the situation calmed down, in the period of 1999-2000 the fluctuation of the CZK's exchange rate declined. After the crisis the nominal exchange rate of the CZK underwent a different development against the DEM and the USD. While against the DEM the currency rate continued its original trend of a long-term stability with smaller fluctuations, against the USD it was significantly nominally depreciated. The causes of this phenomenon lie outside Czech economic environment and outside the reach of Czech monetary policy, since after orientation of our exchange rate policy on the euro, the currency rate of the CZK against the USD was influenced chiefly by the exchange rate of DEM/USD.

Conclusion

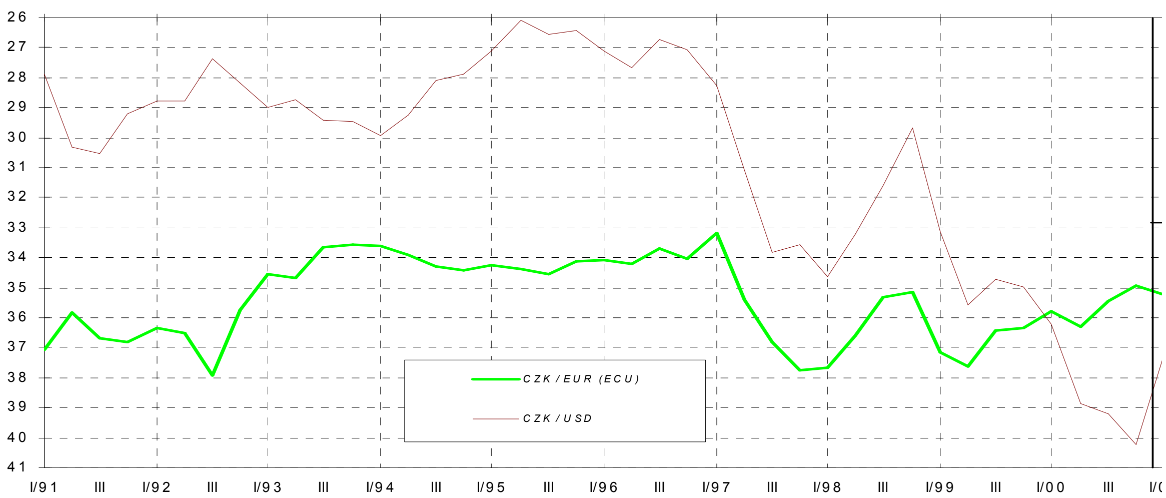
If the whole period of 1991-2000 is summarized from the point of view of the development of the nominal rate of the Czech crown, then the most important factor is a stable development of the nominal currency rate. As it is evident from the above shown tables, the CZK exchange

[12] For detailed description of monetary cisis see (Dědek 2000) or (Jonáš 2001)

rate was more stable against the DEM than against the USD. This was caused by a higher share of the DEM in the original currency basket (up to 1997) and also by the fact that the CNB, even in the period of the floating exchange rate, declared its favor of controlled floating oriented in particular to the DEM.

3.3. Exchange Rate Development

Graph 8: Nominal exchange rate; quaterly average



Source: MF ČR: Macroeconomic prediction ČR,

Table 7: Nominal exchange rate CZK/DEM, start of the period

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
18,32	18,35	17,88	17,32	18,04	18,57	17,60	19,24	18,01	18,46	17,90

Source: ČNB, Exchange rates; archive; www.cnb.cz

Table 8: Nominal exchange rate CZK/USD, start of the period

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
27,73	27,84	28,91	30,03	27,94	26,59	27,34	34,44	30,17	35,82	37,62

Source: ČNB, Exchange rates; archive; www.cnb.cz

Table 9: Index of nominal exchange rate CZK; start of the period

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
CZK/DEM	100	100,2	97,6	94,5	98,5	101,4	96,1	105,0	98,3	100,8	97,7
CZK/USD	100	100,4	104,3	108,3	100,8	95,9	98,6	124,2	108,8	129,2	135,7

Source: Tables 7,8.

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