

Inflation and price development

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Centrally planned economy

- Problem: economic balance was achieved by central plan
 - Amount of production
 - Prices
- Characteristics of CPE
 - Low economic performance
 - Ineffective exploitation of resources
 - High energy consumption
 - Equalization of earnings (not motivating but reduction on poverty)

Factors of price development

- Banking sector
 - Relation of government and CB
 - Monetary policy
- Price liberalization
- Tax development

Banking sector in Czechoslovakia

- massive nationalization + liquidation of two-tier banking sector after the communist coup 1948,
- liquidation of the central bank (Czechoslovak National Bank) – creation of the monobank (SBČS – Czechoslovak State Bank),
- SBČS was owned by the state, executing orders in the monetary area from the political centre,
- SBČS had branches in all larger communities, performing bank service,
- SBČS controlled vassal commercial banks according to the central plan.

Major tasks and issues, which had to be solved:

- **to create and implement a standard money market,**
- **to conceive a functioning standard banking system, based on non-state commercial banks and an autonomous central bank,**
- **to define the degree of the central bank's independence,**
- **to outline the main strategy of monetary policy and its objective (within the condition of the unstable economic environment: price liberalization, liberalizing foreign trade, flows of foreign capital).**

Function and position of a central bank in the economy

Central bank fulfils irreplaceable functions in modern market economy particularly in two major areas:

- monetary policy
- banking system regulation and supervision.

Importance and contents of each function depends on the degree and strength with which the government affects economic processes.

Functions of central bank

Contents and importance of central-bank's functions differ according to the type of economic policy + level of economic liberalism:

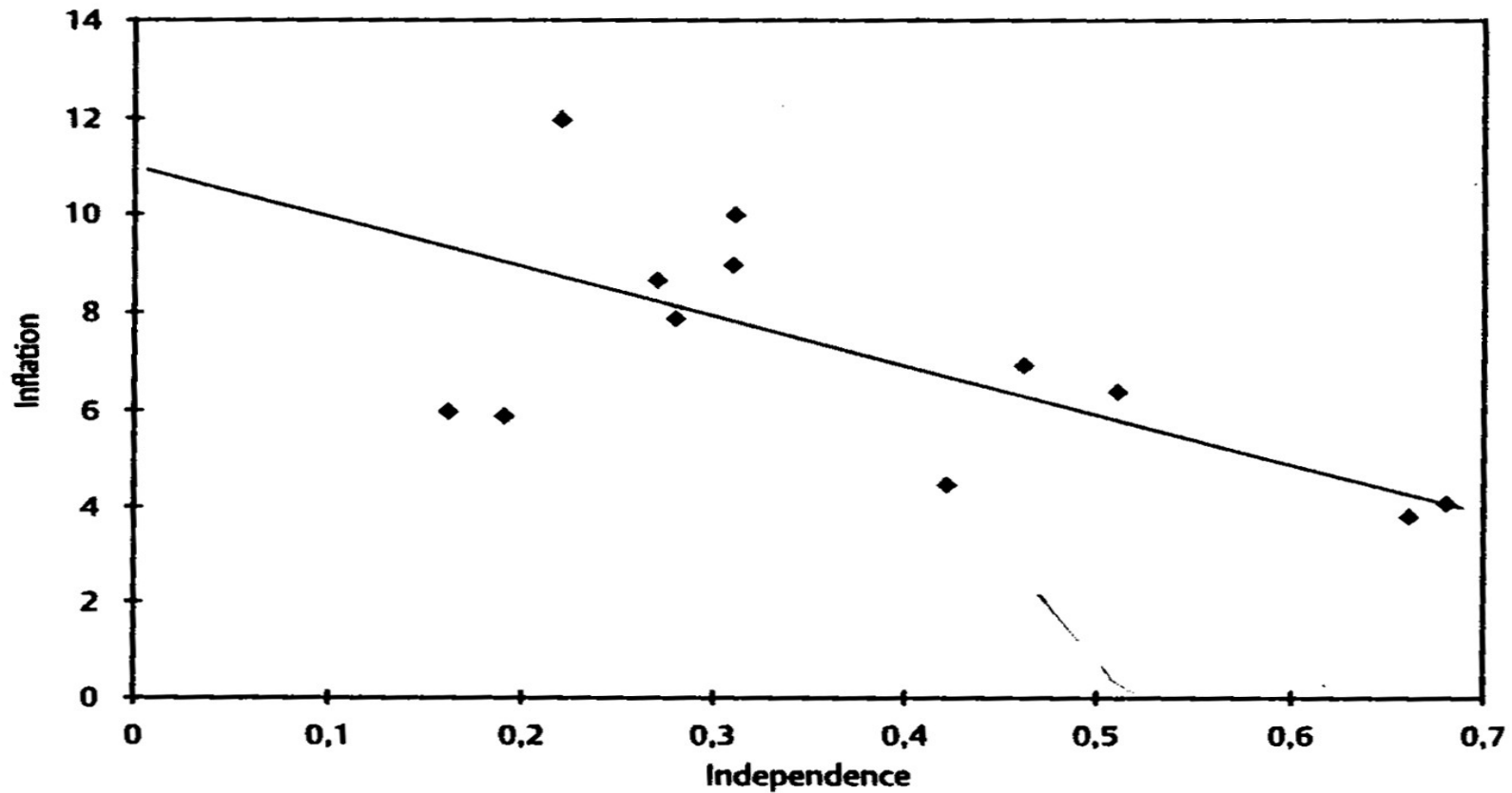
→ during the transformation the functions were gradually changing.

Relationship between the central bank and the government

- **central bank's autonomy = the degree of decision-making independence from political pressures.**
- government seeks the easiest way to finance state-budget deficit
 - the easiest way is to use inexhaustible credit capacity of the central bank
 - money supply grows with each credit provided to the government - the inflation increases as well

If the central bank is closely dependent on the government, the danger of inflation is quite high.

Long-term comparisons imply that there is a correlation between the central bank's independence and the inflation.



Development of functions and position of the Czech central bank

Mutual coordination of monetary and fiscal policies depend on two basic things :

- the level of central bank's independence
- concept of macroeconomic tasks

During the transition, both these things were developing \Rightarrow the functions and position of the central bank were changing.

Socialist monobank till 1989

- **SBČS was completely subordinated to decisions of the government and to interests of the communist political authority**
- **monetary policy was a subject of a central plan**
- **SBČS was absolutely dependent**

First stage 1990 – 1992

- **meeting basic macroeconomic objectives had an absolute priority for the government**
- **SBČS's main function was to be the state's bank and the bankers' bank**
- **SBČS was dependent both politically and economically**
- **relationship between the SBČS and the government was relatively obliging, due to a complex economic situation and personal, friendly relations**

Second stage 1993 – up to the present

- **running banking system, money market, price liberalization, and privatisation ⇒ reform of the central bank**
- **SBČS had to be split due splitting of the republic**
- **new ČNB was established as a modern central bank, totally independent from the government (Bundesbank)**
- **principal target of monetary policy – to maintain a low inflation**

Central bank's instruments and objectives

5.1 Monetary policy objectives

Principal macroeconomic objectives:

- economic growth
- employment
- low inflation
- equilibrium in the balance of trade

**Monetary policy targets monetary objective –
i. e. low inflation.**

principle:

- direct inflation targeting – based on forecasts and prognoses
- monetary targeting - central bank targets quantity of money in circulation
- interest rate targeting - central bank targets interest rate levels on the money market
- exchange-rate anchor – targeting of the fixed exchange rate

Each strategy requires some particular conditions – not all could be used during the transition.

Direct instruments

- **based on directive, administrative decisions, which commercial banks have to follow by law**
- **not rely on the money market - not require its proper functioning**
- **can become exponents of economic dictatorship**
- **their application is minimized in modern market economies**

Direct instruments can be a way of controlling monetary policy in a situation, when the money market does not work – during the economic transition.

Prudential rules

- **principal instrument of banking supervision**
- **short-term, low-interest deposits should not be used to provide long-term, high-interest loans**
- **can be focused on money market regulation: selectively set for different banks, or purposefully changed after some time**
- **result - banks can provide higher or lower volume of credit to their clients, which raise or lower quantity of money in the economy**

Loan quotas

- **the hardest directive provision**
- **maximum volume of funds, which a commercial bank can provide to one client**
- **sum of funds over a certain period to all its clients**
- **result - limited free entrepreneurial behavior of banks and strongly affected the money market and the whole economy**

Limits on interest

- **direct setting of private credits' interest rate by the central bank**
- **limited entrepreneurial freedom of both commercial banks, and their clients**
- **result - strong and quick impact on interest rates in the economy**

Gentlemen agreements

- **between the central bank and commercial banks from an urgent request to recommendation**
- **commonly used in modern market economies - fulfilling is not legally binding**
- **together with the other direct instruments form a powerful tool**

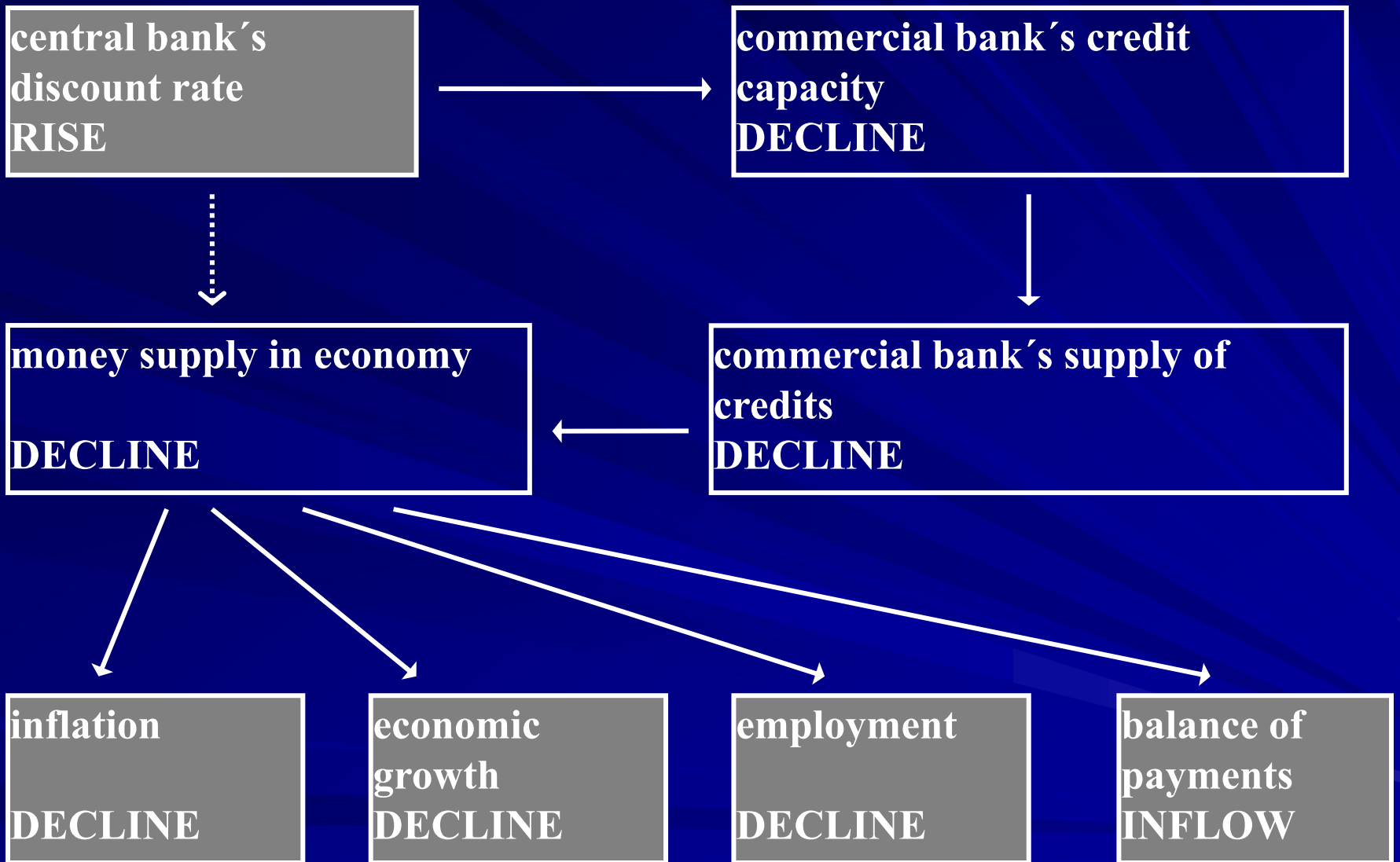
Indirect instruments

- **based on central bank's actions on the money market**
- **very well functioning money market is required**
- **using need not be successful and exactly predictable**
- **absolutely consistent with market economy: full sovereignty, free enterprise and free competition of commercial banks are ensured**

Within a developed market economy just indirect instruments can and must be used.

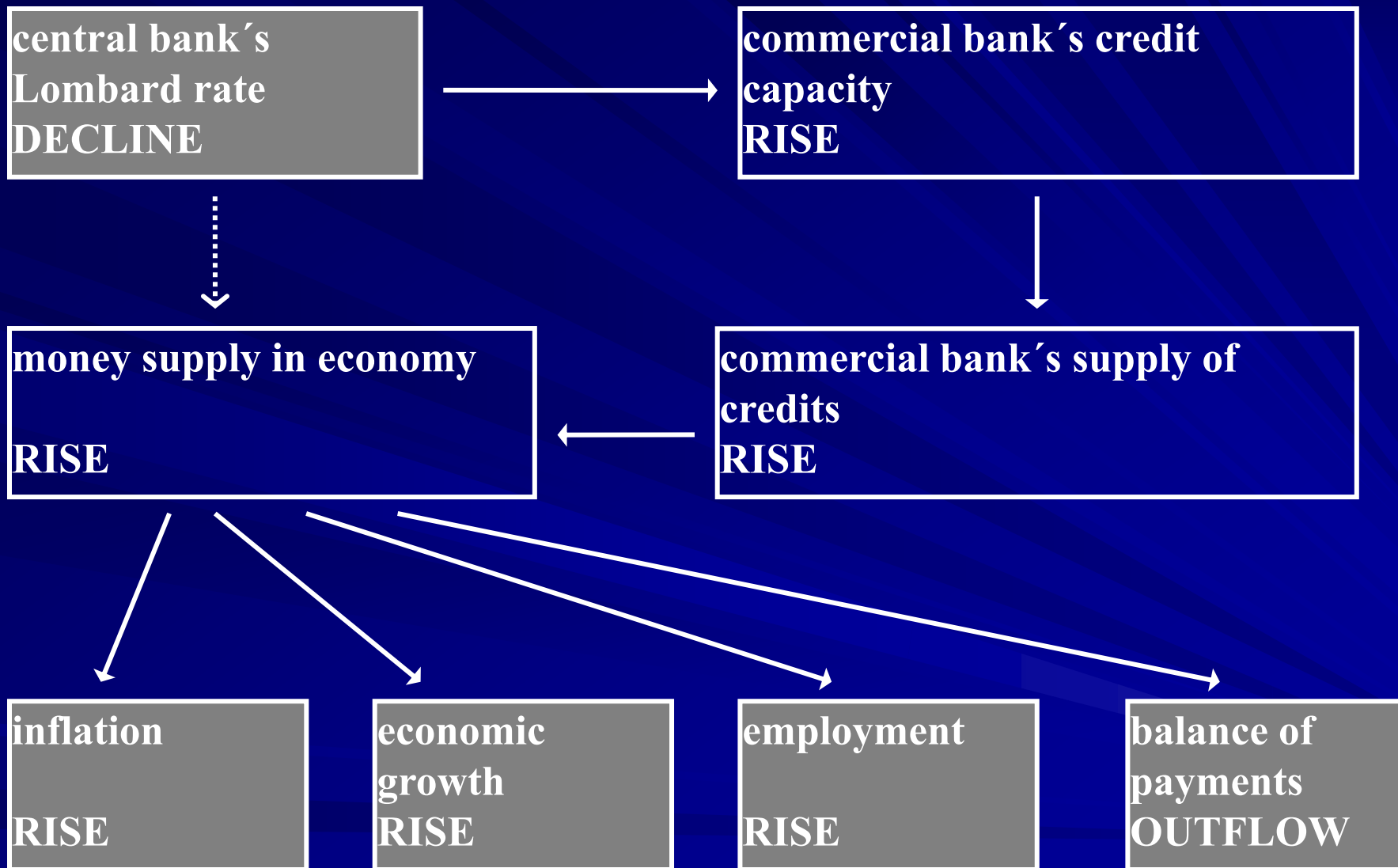
Discount rate

- **the principal rate of interest of the central bank**
- **the price of money charged by the central bank to commercial banks on loans**
- **related to the central bank's functions a bankers' bank, and a lender of last resort**
- **great signalling importance**



Lombard rate

- **the rate of „Lombard credit“**
- **central bank provides credit to commercial banks against collateralised security (i.e. state bonds)**
- **common source of commercial banks' funds**
- **related to the central bank's functions a bankers' bank**

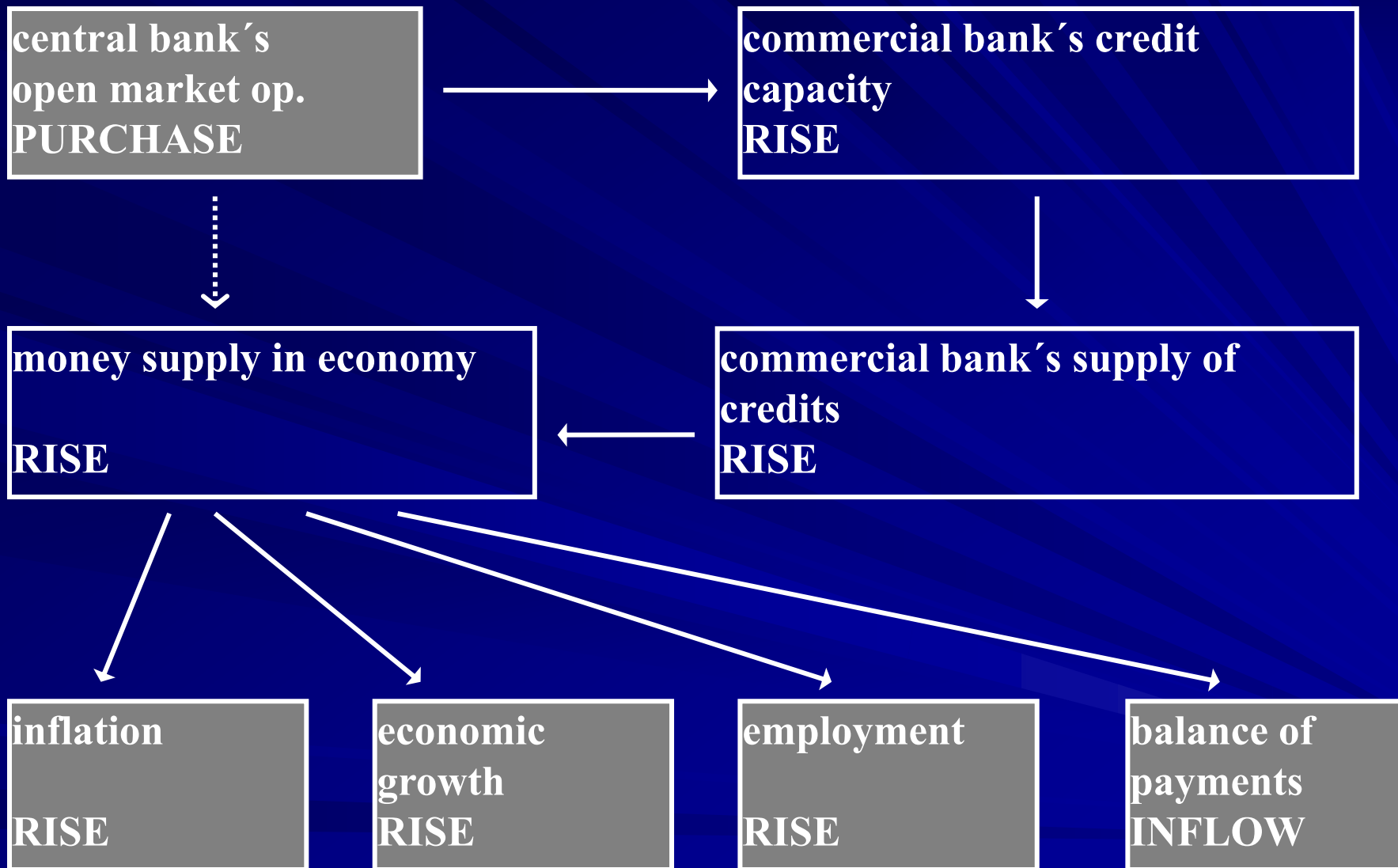


Repo rate

- **central bank purchases state bonds to commercial banks with the obligation of repurchas at a specific time with the interest - repo rate**
 - **central bank provides commercial banks with sufficient liquidity**
 - **very efficient and operational for regulating market interest rates**
- **effect of change in the repo rate is similar to that of change in the discount or Lombard rates**

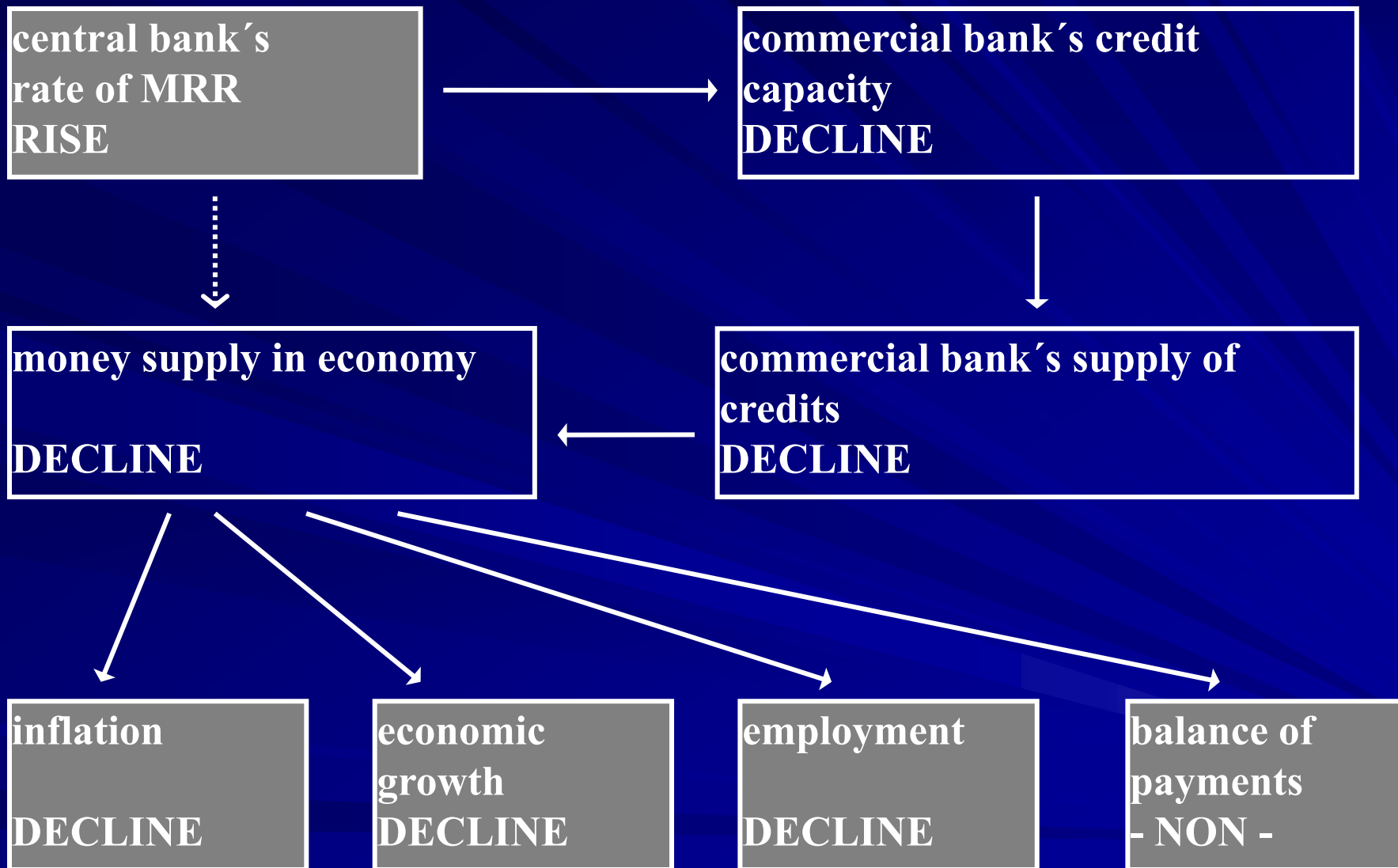
Open market operations

- **purchasing and selling of state bonds by the central bank on the money market**
- **raise or lower the money supply directly**
- **central bank has to keep the securities in its portfolio**
- **standard financial market + a sufficient volume of adequate securities are requested**



Minimum reserves requirement

- **percentage from clients' deposits - commercial banks have to keep it at central bank's account**
- **management of liquidity in commercial banks with the aim to provide security and functioning of the banking system**
- **long-term stability and a low level in developed market economies**
- **frequent changes during transition + gradual lowering to the level common in market economies**



Use of monetary policy instruments

Stage of the SBČS

1989 - 1992

no money market + no competition in the banking system =
the SBČS used mostly direct instruments:

- **limits on interest**
- **loan quotas**
- **„re-financing credits“ - non-standard loans to help to big state-owned banks**
- **minimum reserves requirement**

Stage of the ČNB

from 1993

standard central bank + standard money market = the ČNB
used standard, indirect instruments:

- **repo rate - two-week repo tender is announced daily**
- **discount rate - overnight deposit at the ČNB**
- **Lombard rate - marginal lending facility from the ČNB**
- **open market operations - fine-tuning interventions on money market or foreign exchange market**
- **minimum reserves requirement – a "cushion" ensuring the smooth functioning of the banking system**

Price developement

- Stormy price development at the begining of inflation
- Increasing inflation differential
 - 1991-2000: inflation in CR nine times higher than in Germany
- 1991-1993: Price liberalization, currency separation, new tax system
- 1994-2001: demand growth, deregulation
 - 1994-1997: inertial inflation
 - Since 1998: desinflation process

Monetary policy strategy in Czechoslovakia / Czech Republic

Conception of monetary policy objective

Clear targeting of low inflation was not possible at the beginning of the transition:

1. money market did not exist
2. extensive price liberalisation was on process

Objective was changing during the transition according to the needs and possibilities of the economy.

Fixed exchange rate – 1989 - 1996

- **the monetary policy's target was not a certain rate of inflation**
 - **prevent of price shock at the beginning of the liberalization**
 - **exchange rate of the Czechoslovak koruna was fixed - anchored in the composite of west-European currencies and the US dollar**
- ⇒ **strategy proved successful, the inflation stabilized rather quickly and fell to the level of 10% p.a.**

Controlling the quantity of money –

1993 - 1996

- **the Act of ČNB changed the objective: “to maintain stability of currency“**
 - **external stability related to exchange rate stability**
 - **internal stability related to price level stability**
- ⇒ **it failed to decrease the inflation rate to the EU average level**
- ⇒ **quantity of money wasn't maintained on the planned level due foreign capital inflows**

Direct inflation targeting - from 1998

- **under the pressure of foreign capital outflow the fixed rate was left in May 1997**
 - **the concept of nominal anchor had to be abandoned**
 - **targeting of quantity of money was not very successful so far**
- ⇒ **The ČNB specified short-term and medium-term stages, during which it tried to squeeze the inflation within the set limits.**

the first targets:

Target month	Target level	Set in
December 1998	5.5% – 6.5%	December 1997
December 1999	4% – 5%	November 1998
December 2000	3.5% – 5.5%	December 1997
December 2001	2% – 4%	April 2000
December 2005	1% – 3%	April 1999

Net inflation

Problem:

in 1998, more than 18% of goods and services had administratively regulated or controlled prices

- inflation target was related to net inflation = movement of prices of the goods and services, whose prices were set freely by the free market
- the ČNB was not responsible for the inflation caused by a government's decision to raise some regulated prices
- the ČNB was responsible only for the inflation caused by market forces

calculation of the net inflation

A. Items with maximum prices		Constant weight in %
a) set by the Ministry of Finance of the Czech Republic		
net rent for rental flats		1,6531
electricity		2,5249
gas		0,9589
medicine and health care output		0,6734
passenger railway transport		0,2081
telecommunication services – telephone		0,7605
b) set by local authorities		
municipal public transport		0,7716
parking services		0,0171
taxi services		0,0295

B. Items with prices regulated on and cost-plus basis

water and sewerage	0,9867
heating for households	3,0174
bus transport	0,6899
postal services	0,1163
telegraph	0,0121
propane-butane gas	0,1464
household waste disposal	0,2744
housing-related services for rental flats	0,2495
housing-related services for co-operative flats	0,1131
supplementary educational services (student fares)	0,1785

C. Fees	
health insurance	3,4783
mandatory insurance of motor vehicles	0,4099
motor vehicle owner registration	0,0196
radio and TV fees	0,8155
signature authentication	0,0629
divorce application fee	0,0154
dog ownership fee	0,0247
postal order C	0,0354
building permit issuance	0,0808
Total	18,3239

Headline inflation

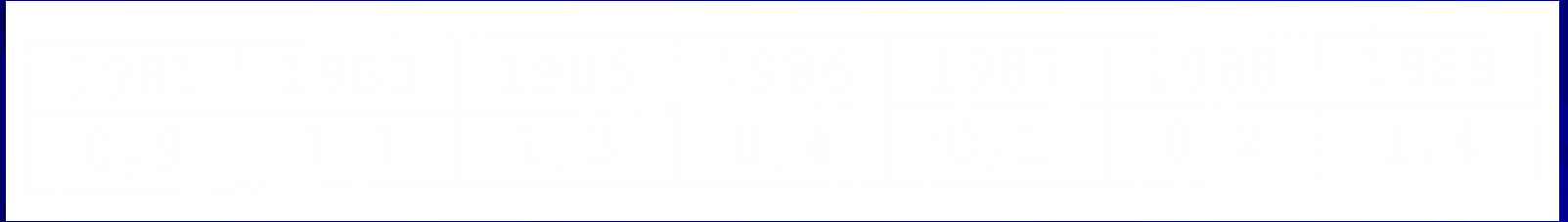
Starting from 2002, the ČNB switched to direct targeting of headline inflation:

- the rate of inflation dropped significantly
- progress in price liberalization
- the headline inflation has a higher informative value

Prices in CPE

- Deformation of price levels
- Domestic prices set directly from centre
- Because of low interaction with the rest of the world – different price development
 - Crude oil
- Conservative monetary policy
 - Low inflation X high inflation in PL and HU

Inflation rates in socialistic Czechoslovakia



Price liberalization

- Key element of transition
 - Necessary condition for the introduction of the market mechanism
 - During CPE prices did not reflect the cost of production nor value to the consumers
- Liberalization = change of relative price = improvement in resources allocation
- Also redistribution = winners and losers

Price liberalization

- Several partial measures during 1990
 - Removing the subsidies for food
 - Petrol prices
- Big one-off liberalization – 1.1.1991
 - Result: cca 80% of prices were free
 - Some prices administratively set or controled
 - Subsidies gradually reduced

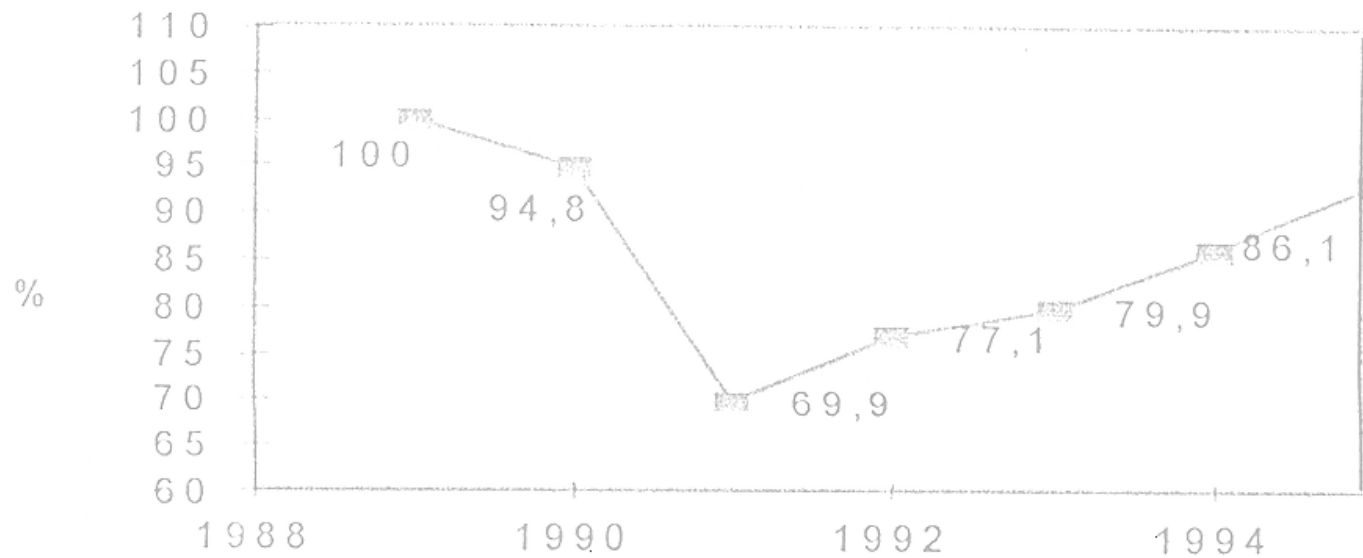
Results of liberalization

- No more queues in shop
- Increased availability of goods
- Increased efficiency
- Reduction of social wasteful activities
- Drop in real wages
 - Improvement of competitiveness of firms
 - Harmful mainly for low-income households
 - Some privileged classes dropped in social status and income
- Increasing earning differential

CPI monthly development



Real wage development 89-94



Zdroj: ČSÚ

Inflation 1992-1993

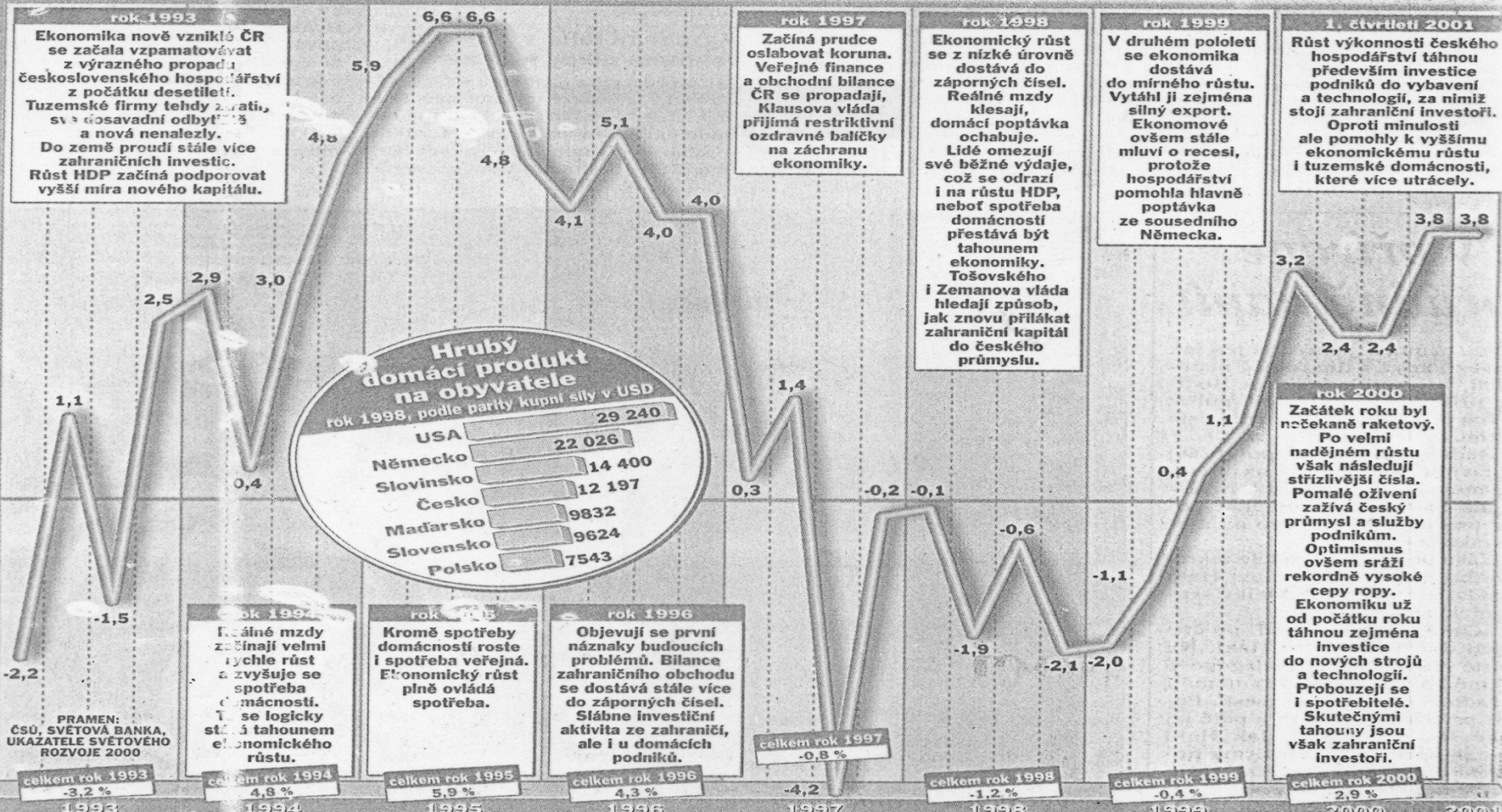
- Forced savings from CPE – increased consumption – demand growth – price increase
- 1993 – split of Czechoslovakie
 - another inflation jump
 - New tax system
 - Introduction of VAT (previously turnover tax)
 - Growth of wages supported by growth of productivity = boost of demand
- Monetary restriction – aim acceptable inflation and stable ER

Year-to-year change of domestic demand and GDP (%)



GDP development

Jak se vyvíjel hrubý domácí produkt České republiky v procentech



Inflation after 1993

■ Low dynamic of changes

- Inflation still higher than in developed countries (1% per month)
- Inflation differential

■ Further lowering unsuccessful

- Expectations (collective bargaining)
- Downward price rigidity
- Short-term inflow of foreign capital
 - More money in economy – against restrictive MP

Inflation differential



Cumulative increase of consumer prices

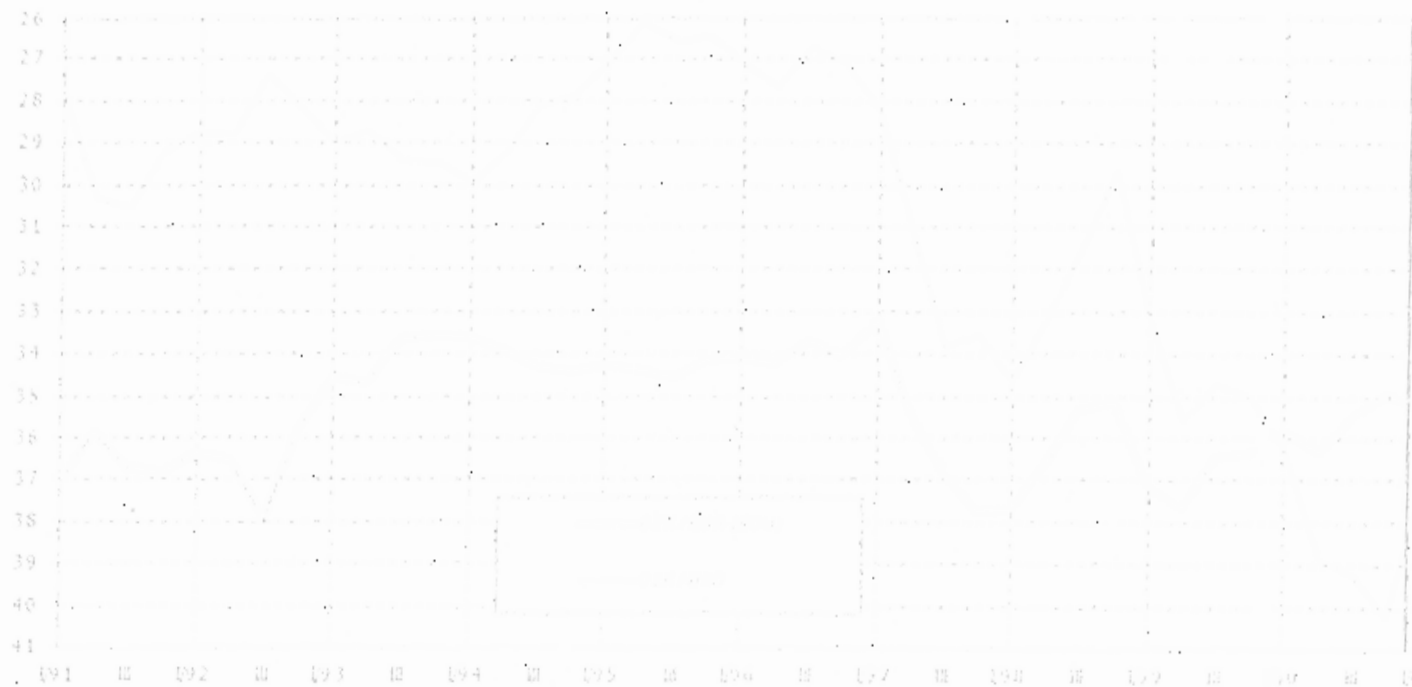
CR										
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
100.0	106.6	120.9	128.6	138.0	146.9	156.2	167.0	179.2	192.9	208.8
SRN										
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
100.0	101.2	102.6	112.1	113.4	117.8	120.7	123.8	127.9	131.3	126.0
USA										
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
100.0	104.2	107.4	110.5	113.4	116.3	119.1	122.1	125.1	128.1	131.7

V průběhu tabulky jsou viditelné velmi podobné namíry inflace spotřebitelských cen v ČR, SRN a USA. Je zřejmé z nich vlivy vnějších cen v ČR v podobě důležitých komodit – zejména ropy – cenového růstu v SRN a v důsledku cenového růstu v USA. Tento rozdíl má do značné míry přivodit skutečnost, že vliv spotřebitelských cen v ČR v devadesátých letech byl rozdílný od situace v SRN a USA vzhledem k tomu, že také nemohly být takovéto mimořádné a vzhledem k jednorázovému výskytu, zejména podpora cenového růstu.

Monetary crisis - 1997

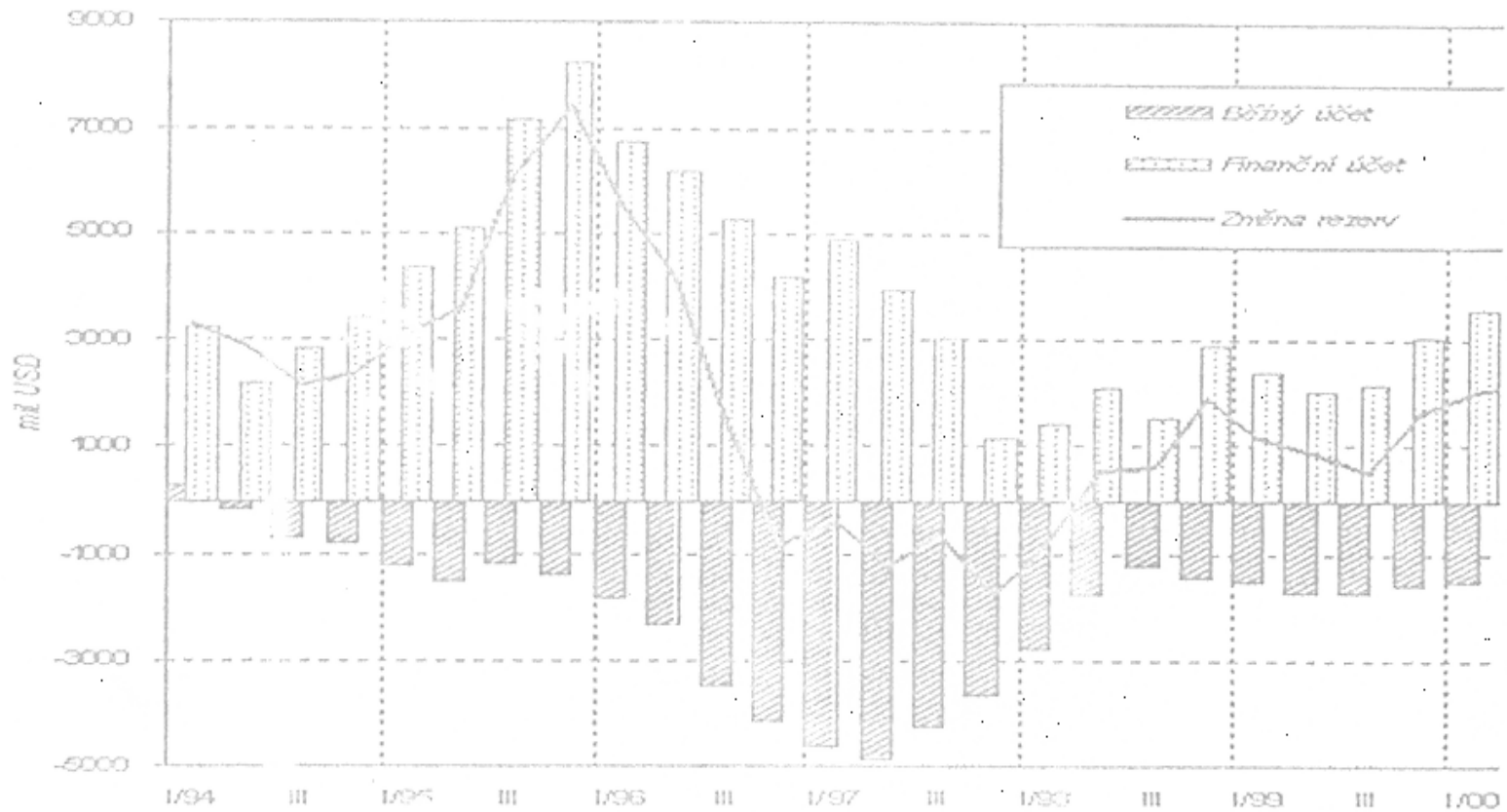
- Growth of demand higher than growth of GDP
 - Deficit of CA
 - Financed by inflow of „hot-money“
 - 1997: lost confidence in fixed ER
- Decrease of inflation in first months
 - Economic slowdown
 - But increase of import prices
 - Increase of energy prices

Nominal exchange rate

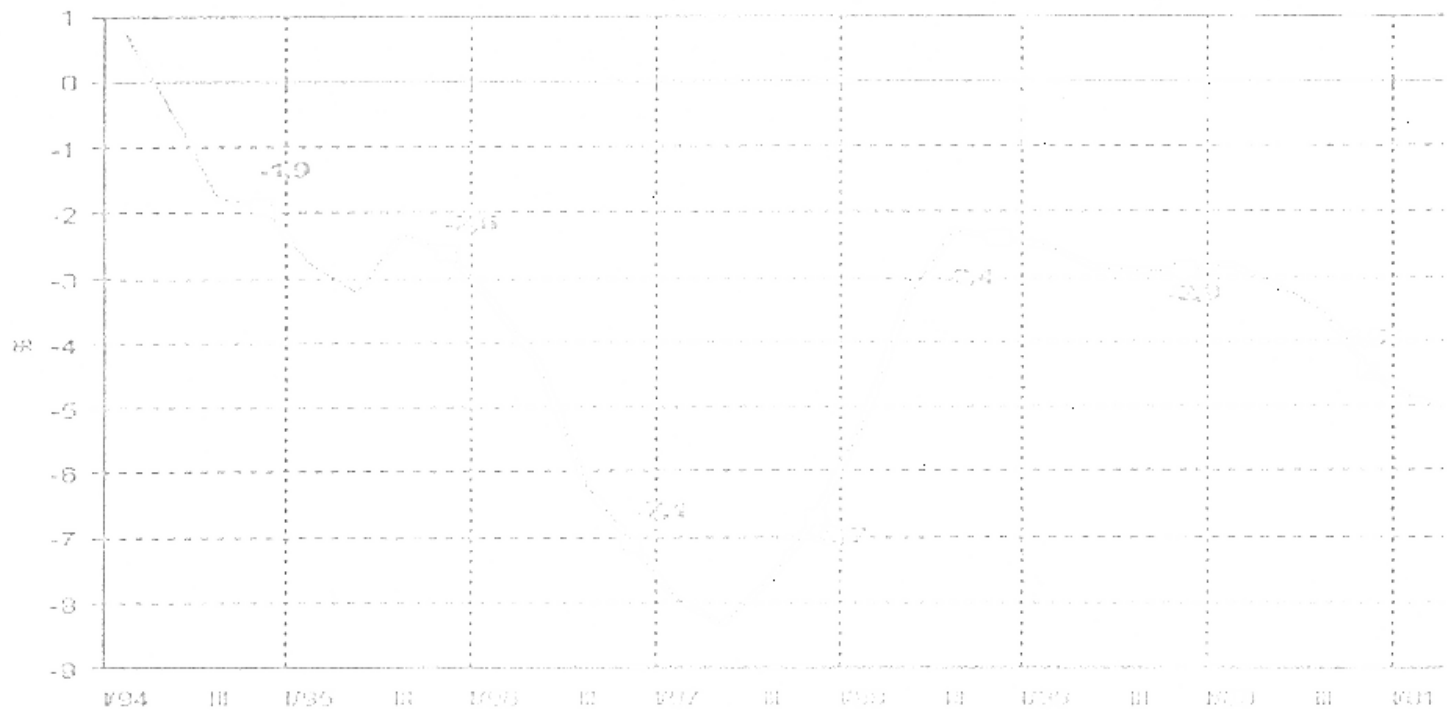


Zdroj: MF ČR: Makroekonomická predikce ČR, www.mfer.cz

Balance of payments



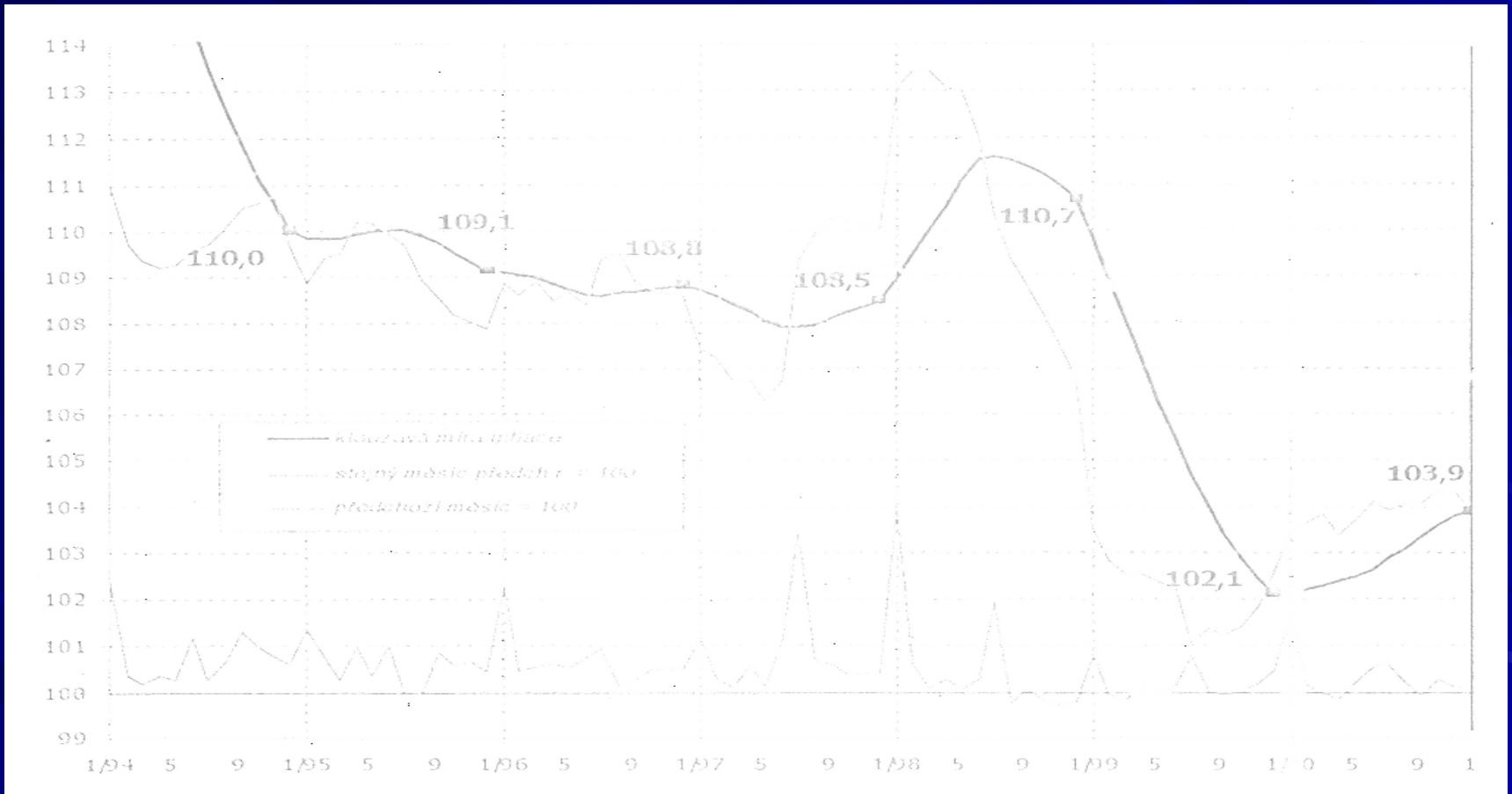
Current account of BP/GDP (%)



Drop of inflation

- Change of monetary strategy
 - Inflation targeting
- Economic slowdown
- Slowing down deregulation
- Drop of import prices
- Strong decrease of inflation

Consumer prices 1994-2000



■ This is the end...