7. CURRENCY AND BALANCE OF PAYMENTS

The source of the data presented in this chapter is the Czech National Bank. All tables where the titles of reports are given are exhaustive investigations. Otherwise, qualified estimates and calculations are used.

Notes on tables

*Table **7**-1.* ***Monetary survey***

The monetary survey is a concise balance sheet of monetary financial institutions (MFIs) providing the users with a basic overview of the position of the MFI sector vis-à-vis other resident and non-resident sectors.

The data originate from the monetary and banking statistics statements supplemented by the CNB's calculations while preparing the consolidated balance sheet of the MFI sector and compiling the monetary aggregates and counterparts. The methodology is largely harmonised with international standards (ESA95, IMF Monetary and Financial Statistics Manual, ECB Regulations and Guidelines, etc.).

As of January 2004 the whole MFI sector is covered by the data, i.e. in addition to the CNB, banks and branches of foreign banks operating in the Czech Republic also money market funds and credit unions are covered. Money market funds and credit unions were not reporting institutions, they were classified as part of the other financial intermediaries sector and they were considered to be clients of the banks prior to 2004. A grossing-up procedure is applied for credit unions, whose share in the aggregated balance sheet of the MFI sector is negligible.

Since January 2002 the monetary survey has been compiled from harmonised monetary statistics data. The fundamental statistical principles, sector definitions, instrument classification, growth rate calculation method, etc. are harmonised with European standards.

The breakdown of the items in the monetary survey:

Net external assets *– balance of financial assets and liabilities of the MFI sector vis-à-vis non-residents*

Net domestic assets *– balance of financial assets and less liquid liabilities of the MFI sector vis-à-vis other resident sectors. It corresponds to the difference between liquid liabilities and net external assets. It consists of domestic credit and other net items.*

Domestic credit *– represents funds issued by MFIs into the economy. It comprises net credit to government (including debt securities) and loans to other clients (excluding debt securities).*

Other net items *– balance of all other MFI assets and liabilities not included elsewhere. Capital and reserves, securities held and issued and other items are included in this item.*

M1 monetary aggregate (money) *– the narrowest monetary aggregate, representing the sum of highly liquid liabilities of the MFI sector vis-à-vis resident clients. It is defined as the sum of currency in circulation (i.e. money in circulation excluding cash in the tills of MFIs) and overnight deposits of clients with MFIs (i.e. demand and overnight deposits of residents other than MFIs and the government).*

M2 monetary aggregate (money supply) *– broader monetary aggregate. It consists of the highly liquid MFI liabilities comprised in M1 and other liquid MFI financial liabilities vis-à-vis resident clients.*

Quasi-money *– the difference between the monetary aggregates M2 and M1. All deposits with a maturity of over one day, i.e. deposits with agreed maturity, deposits redeemable at notice, repos and deposits of resident clients (i.e. excluding MFIs and the government) held with the institutions of the MFI sector are classified under this item.*

The sectoral breakdown in the monetary survey (based on ESA95 classification of institutional sectors and subsectors) is as follows:

Monetary financial institutions (MFI) *– comprises the CNB, i.e. S.121 central bank, and OMFIs,* *i.e. S.122 other monetary financial institutions, meaning other banks, money market funds and credit unions.*

Government *– S.13 – consists of central government, i.e. S.1311 central government, and other government, i.e. S.1313 local government and S.1314 social security funds.*

Businesses *– comprises sector S.11 non-financial corporations and other financial institutions except MFIs, i.e. S.123 other financial intermediaries, S.124 financial auxiliaries and S.125 insurance corporations and pension funds.*

Households *– consists of S.14 households and S.15 non-profit institutions serving households.*

Rest of the world *– S.2*

Calculation of growth rates

The growth rates for the reference period are calculated from the volumes of monthly financial transactions and the outstanding amounts at the beginning of each month. Monthly transactions are calculated from differences in outstanding amounts adjusted for reclassifications, other revaluations, exchange rate variations and other changes which do not arise from transactions. This data thus reflects only those changes that arise from accepting financial assets or providing financial liabilities. Reclassifications and other non-transaction corrections are introduced into the transaction statistics to preserve the comparability of the gradual monitoring results, thereby enabling calculation of the indices of expected outstanding balances of the monitored variables and determination of their growth rates.

Method of calculation

1. The month-on-month percentage change a_t^M *for month t is calculated as:*

(a) $$a_t^M = \left(F_t^M \big/ L_{t-1} \right) \times 100$$

2. The annual growth rate for month t, i.e. the change for the last 12 months ending with month t, is calculated as the product of the twelve coefficients for each previous month. The calculation of the annual growth rate from the month-on-month growth rates thus enables transaction changes and non-transaction effects in the individual months to be taken into account:

(b) $$a_t = \left[\prod_{i=0}^{11} \left(1 + F_{t-i}^M \big/ L_{t-1-i} \right) - 1 \right] \times 100$$

where

F_t^M *– transactions in month t*

$F_t^M = (L_t - L_{t-1}) - C_t^M - E_t^M - V_t^M$

and

L_t *– outstanding amount at the end of month t*

C_t^M *– reclassifications in month t*

E_t^M *– exchange rate variations in month t*

V_t^M *– valuation changes in month t*

The growth rates for other reference periods are derived from formula (b).

Table ***7****-2.* ***Monetary base***

The monetary base (reserve money) includes currency and reserves held by commercial banks on accounts with the central bank. These items together constitute the ***use of the monetary base****. The monetary base expresses the central bank's relations with other sectors of the economy. The counterparts of the monetary base are therefore the external sector, the government sector, the banking sector and the* *private sector. These factors affecting the monetary base are referred to as the* ***sources of the monetary base****.*

The external sector *represents the balance of short-term and long-term assets and liabilities of the central bank vis-à-vis non-residents in the domestic currency and in foreign currencies. This item also includes the foreign exchange position vis-à-vis residents (domestic banks).*

The government sector *expresses the difference between the assets and liabilities of the central bank vis-à-vis the government sector.*

Claims on non-bank entities *represent the claims of the central bank on different non-bank entities. These include banks without licenses,* Česká konsolidační agentura, Česká finanční *and other organisations.*

Other net assets *include various items, for example the central bank's own funds, tangible and intangible property, claims on commercial banks by virtue of drawing currency in circulation, other deposits of commercial banks with the central bank, other non-government deposits and non-government securities and participations, etc.*

The volume of sterilisation *expresses the volume of CNB bills held by commercial banks, non-bank entities and the Ministry of Finance.*

Stand-by facilities *include overnight lending and deposit facilities, which enable to manage the daily reserve position of banks so that an optimum balance on the payment system account is maintained.*

– *Lombard repo (lending facility): a repo operation serving to provide liquidity to commercial banks. On granting the credit, 100% coverage by securities, as a rule Treasury bills and CNB bills, is required. Interest on the credit is calculated at the Lombard rate. The minimum volume is not stipulated.*

– *O/N deposit (deposit facility): commercial banks have a possibility to deposit their free funds with the central bank. The deposit is not secured and is remunerated at the discount rate. The stipulated minimum volume is CZK 10 million.*

Other operations *include other operations used by the central bank in relation to commercial banks.*

Short-term liquidity credit *represents short-term refinancing credit that was used in the past. This type of credit is not used presently.*

Currency *represents a liability of the central bank by virtue of issued banknotes and coins held by banks and the non-bank public.*

Reserves of banks *include required minimum reserves and excess reserves on accounts with the central bank:*

– *The required minimum reserves are the funds which banks are obliged to maintain on their accounts with the central bank. The prescribed volume amounts to 2% of banks' primary liabilities with a maturity of up to 2 years in Czech and foreign currencies. The required minimum reserves used to be maintained in two-week cycles, which were replaced by one-month cycles as of 24 January 2002. The interest on these reserves is calculated at the valid repo rate.*

– *The excess reserves represent the difference between the prescribed and actual volumes of the required minimum reserves.*

Tables ***7****-3. and* ***7****-4.* ***Client loans granted by commercial banks, total: by purpose, sector and activity***

A survey of the balances and structure of loans granted to clients and the bank's receivables from clients (including bank overdrafts and debit balances on clients' current accounts), broken down according to the principles of categorisation of receivables to standard, watch, substandard, doubtful and loss, by contractual maturity (up to 1 year, over 1 year and up to 5 years, over 5 years), by currency (CZK and foreign currencies included in the CNB's foreign exchange fixing as well as other currencies), by economic subsector of the clients-debtors, by economic activities classification of the clients-debtors and by loan purpose.

Data File VST (CNB) 1-12: Monthly statement of client loans and receivables.

Tables ***7****-5. and* ***7****-6.* ***Client deposits accepted by commercial banks, total: by sector, activity and duration***

A survey of the amounts and structure of total deposits and other loans accepted from clients (including general government), broken down by agreed duration of the deposit or maturity of the accepted loan, by economic characteristics of the client (economic sector and economic activities) and by type of deposit product.

Data File VST (CNB) 11-12: Monthly statement of deposits and loans from clients.

Table ***7****-7.* ***Average interbank offered rates (annual averages)***

PRIBOR *(Prague Interbank Offered Rates) are reference interest rates on the interbank deposit market calculated on the basis of quotations of selected banks (hereinafter „reference banks"). The interest rates are fixed by the CNB daily at 11.00 a.m. Quotation means publication of an orientation price at which banks are willing to sell deposits in a standard volume to a standard counterparty.*

The CNB defines the maturities for which PRIBOR rates are set, the algorithm for their calculation, the reference bank structure, the standard counterparties, the standard volumes and the method of publishing quotations.

PRIBOR rates are set for the following maturities: overnight, 1 and 2 weeks, and 1, 2, 3, 6, 9 and 12 months. They are calculated from the reference banks' quotations on the interbank deposit market in the following manner:

- *if more than five reference banks quote an interest rate for a certain maturity, the highest quotation (or one of the highest quotations) and the lowest quotation (or one of the lowest quotations) are eliminated and the PRIBOR is calculated from the remaining quotations as the arithmetic mean rounded to two decimal places;*
- *if four or five reference banks quote an interest rate for a certain maturity, the PRIBOR is calculated from all quotations as an arithmetic mean rounded to two decimal places;*
- *if less than four reference banks quote an interest rate for a certain maturity, the PRIBOR is not set.*

PRIBOR rates are published daily by the CNB in Hospodářské noviny *and through the Reuters, Telerate and Bloomberg agencies. The number and structure of the reference banks are given in the notes appended to each table of historical PRIBOR rates.*

Table ***7****-8.* ***Repo rate, Discount rate, Lombard rate***

The main monetary policy instrument takes the form of ***repo*** *tenders. The CNB accepts excess liquidity from banks and in return transfers eligible securities to them as collateral. The two parties agree to reverse the transaction at a future point in time, when the CNB as borrower repays the principal of the loan plus interest and the creditor bank returns the collateral to the CNB. The basic duration of these operations is 14 days, although repos with shorter maturities are executed from time to time depending on the forecasts of banking sector liquidity. Owing to the systemic liquidity surplus in the Czech banking sector, repo tenders are currently used exclusively for absorbing liquidity.*

The CNB conducts variable rate tenders, which means that the declared repo rate serves as the maximum limit rate at which banks' bids can be satisfied in the tender. The bids are settled using the American auction procedure, i.e. those with the lowest interest rate are satisfied as having priority and those with successively higher rates are accepted until the total predicted liquidity surplus for the day is exhausted. If the volume ordered by the banks exceeds the predicted surplus, the CNB either completely refuses the bids at the highest rate or reduces them pro rata. Repo tenders are usually announced every business day at around 9.30 a.m. Banks may submit their bids – i.e. the amounts of money and the interest rates at which they want to enter into transactions with the CNB – within a prescribed time. The minimum acceptable volume is CZK 300 million. Bids exceeding the minimum must be expressed as multiples of CZK 100 million.

*The **Discount rate** is a key CNB rate. Up to 30 September 1997, the CNB provided acceptance credits to banks at this rate. Since 1998, when these credits were abolished, the discount rate has been used for deposit facilities. These are non-collateralised overnight deposits with the CNB that any Czech bank may place before the end of the business day. The minimum amount is CZK 10 million.*

*The **Lombard rate** is the rate at which the CNB grants Lombard credit. Lombard credit is granted against a pledge of selected securities included in the „List of securities accepted by the CNB as collateral for Lombard credit".*

*Tables **7**-9. and **7**-10. **Average interest rates on CZK client loans and deposits***

Average interest rates applied by banks on CZK-denominated deposits and loans vis-à-vis clients. The rates are calculated as weighted average where the weights are the volumes in the respective deposit and loan categories.

The methodology was harmonised with the requirements of Regulation ECB/2001/18 in 2004. Since then the interest rates have been reported as annualised agreed rates instead of nominal agreed rates.

The outstanding amounts are defined as outstanding balances of deposits accepted and loans granted by the bank at the time of reporting, broken down by original agreed maturity. Statistics relating to new business have been launched. New business includes all new agreements between bank and client in the reference period, broken down by original interest rate fixation period, i.e. a period at the start of the contract during which the interest rate cannot be changed.

New business is equal to outstanding amounts in the following types of categories: overnight deposits, deposits redeemable at notice and overdrafts.

The source of the data are the interest rate statistics statements submitted by banks to the Czech National Bank.

*Table **7**-11. **Banking sector network***

The data are taken from Report E (CNB) 5-04, Statement on the organisational structure and qualifying holdings of the bank. Financial institutions are divided into groups according to the ratio of paid-up domestic and foreign capital.

*Table **7**-12. **Balance of payments***

The balance of payments records economic transactions with other countries (i.e. between residents and non-residents) during a certain period. The basic structure of the balance of payments, using the IMF Balance of Payments Manual (5th edition, 1993), consists of the current, capital and financial accounts and the change in reserves.

*The **current account** records flows of goods (exports and imports) and services (credits and debits in transport services, travel and other commercial and non-commercial services), income on capital, investment and labour (interest, dividends, reinvested earnings, wages) and compensating items for real financial resources granted or obtained without countervalue (current transfers such as gifts, alimony, pension, foreign aid, contributions, etc.).*

*The **capital account** comprises capital transfers relating to migration, debt forgiveness, ownership rights to fixed assets (investment grants), and transfers of non-produced non-financial tangible assets (e.g. purchase or sale of land by embassies) and intangible assets (patents, licences, copyrights, etc.).*

*The **financial account** includes transactions connected with the creation, dissolution and change of ownership of financial assets and liabilities of the government, banks, the corporate sector and other entities vis-à-vis other countries. It provides information on financial (capital) flows, broken down into direct investment (equity capital and reinvested earnings, other capital), portfolio investment (equity and debt securities), financial derivatives and other investment broken down by maturity (long-term and short-term)* *and basic sector (CNB, commercial banks, government and other sectors), which includes supplier and bank credits, loans, deposits, subscriptions to international non-monetary organisations, etc.*

***The change in reserves** shows the foreign asset transactions of the central bank. International reserves constitute foreign assets held by the central bank which may be easily mobilised as a source of direct financing of a payments imbalance and of indirect regulation of such an imbalance through interventions on the foreign exchange market.*

***Errors and omissions** are a correction item between the resulting balance on the current, capital and financial accounts on the one hand and the change in reserves on the other; they represent the balance of unidentified flows in the current, capital and financial accounts.*

The sources used for compiling the balance of payments include the statistics of external trade in goods and services (CZSO), reporting data from banks and non-banks, information from administrative sources from central authorities and other institutions, and the CNB's own calculations.

*Tables **7**-13. and **7**-14. **Foreign direct investment in the Czech Republic (territorial and sectoral breakdown)***

The data on foreign direct investment are based on reports from non-banks in compliance with a reporting duty pursuant to the Foreign Exchange Act. Other sources of information include reports from banks, Ministry of Finance reports on foreign payments, stock exchange information, the commercial bulletin and the press.

The reported data show the inflow of foreign direct investment into equity capital including reinvested earnings in the given year, as well as credit relations with direct investors.

In compliance with the IMF definition, a foreign direct investment is a share acquired by a foreign investor in a Czech enterprise representing 10% or more of the equity capital or voting rights, conditional on the investor having a lasting interest in the enterprise and participation in its management.

*Table **7**-15. **International investment position***

The international investment position provides a survey of the overall composition of the financial assets and liabilities of the government, the banking sector (the CNB and commercial banks), the corporate sector and other non-banks vis-à-vis foreign countries (non-residents) as of a certain date.

By structure, the investment position corresponds to the financial account of the balance of payments; for assets and liabilities, it is broken down into direct investment (equity and other capital), portfolio investment (equity and debt securities), financial derivatives and other long-term and short-term investment by basic sector. The CNB's reserves are listed separately on the asset side. Reserve gold is valued at USD 42.22 per Troy ounce up to 31 December 1999 (as is gold in the possession of commercial banks) and at market price from 2000 onwards.

The difference between total assets and liabilities (the net investment position) represents the net relationship vis-à-vis foreign countries (creditor or debtor position). In addition to transactions undertaken in previous periods and recorded in the balance of payments, the stock of assets and liabilities recorded as of a certain date in the investment position reflects exchange rate and other (e.g. price) influences.

The sources used for compiling the investment position include bank and non-bank reporting data and other supplementary information from the banking and corporate sectors and from the central authorities.

*Table **7**-16. **External debt of the Czech Republic***

External debt constitutes the stock of financial liabilities (with fixed maturity date) of the government, the banking sector (the CNB and commercial banks), the corporate sector and other non-banks vis-à-vis foreign countries (non-residents), i.e. the value of amounts drawn (by contractual agreement) and outstanding (owed) as of a certain date. It does not include equity investment, i.e. direct investment (equity capital) and portfolio investment (equity securities).

The sources used for compiling the external debt figures include bank and non-bank reporting data and other supplementary information from the banking and corporate sectors and from the central authorities.

*Table **7**-17. **International reserves***

International reserves consist of short-term (liquid) foreign assets held by the Czech National Bank and denominated in convertible currencies (deposits with foreign banks, credit extended, the stock of securities, foreign exchange and gold, special drawing rights and the reserve position in the IMF) that may be used to finance and regulate a balance of payments disequilibrium.

The source used to calculate the reserves is the CNB balance sheet.

*Table **7**-18. **Nominal and real CZK effective exchange rate indices***

The nominal effective exchange rate of the koruna (NEER) expressed as an index shows the appreciation (index above 100) or depreciation (index below 100) of the national currency towards the basket of selected currencies for a given period against the base period (year 2005). The most widespread method of weighted geometric average of nominal exchange rates was used, taking into account the weights of total exports and imports of the Czech Republic's largest trading partners. These countries account for approximately 90% of the Czech Republic's foreign trade. Apart from euro area countries, represented by a single weight and the EUR exchange rate, these countries are Russia, Poland, United Kingdom, USA, Japan, Hungary, Switzerland, Sweden, Denmark and China. The weights were calculated in two alternatives. Alternative I – used by the International Monetary Fund – comprises the entire trade turnover of the Czech Republic. Alternative II – used by the European Central Bank – comprises only four commodity groups (SITC groups 5–8) of the Czech Republic's foreign trade.

Data source: CNB exchange rate list, CZSO publications on the Czech Republic's foreign trade.

The real effective exchange rate of the koruna (REER) is one of the indicators of the country's international competitiveness and is generally understood to mean various levels of relative prices or costs expressed in a certain currency. In this respect, REER values above 100 signify a downward trend in the country's competitiveness relative to the base period, whereas an REER below 100 means rising competitiveness of the country relative to the base period (year 2005).

Among the various methods used to calculate the REER, the weighted geometric average of the ratio of the nominal exchange rate index to the price differential is the most widely used, with the weights given by the shares of the nation's largest trading partners in trade turnover.

The real effective exchange rate of the koruna comprises the consumer prices and industrial producer prices of 10 countries outside the euro area plus all euro area countries. Euro area countries are treated as a single currency and cost area in the calculations. The number of euro area countries corresponds to the current situation. The structure of the countries and their weights are identical to those used to calculate the nominal effective exchange rate of the koruna. In the first alternative, the weights relate to the overall trade turnover, whereas in the second alternative the weights relate only to the turnover in SITC groups 5–8.

Data sources: Price indices from ECB statistics, nominal exchange rate indices from CNB calculations.

Formula for calculating the real effective exchange rate:

$$\mathrm{REER}_{\mathrm{t}} = 100 \times \prod_{i=1}^{n} \left(\frac{S_{it}^{*}}{P_{it}^{*}} \right)^{w_i^{*}}$$

where S_{it}^{*} - *basic index for the domestic currency vs. the currency of the i-th trading partner in period t*

P_{it}^{*} - *ratio of the basic price index of the i-th trading partner in period t to the*

Czech basic price index in period t; the base year is the same as the base year used for calculating S_i^*

w_i^* - *normalised weights of the currency of the i-th trading partner*

Table ***7****-19.* ***Exchange rates of major currencies***

The average annual exchange rates of convertible currencies against the koruna are calculated from the daily fixings in the exchange rate list issued by the CNB.

* * *

More detailed surveys and current data on monetary statistics and balance of payments statistics can be found on the CNB website at:

– http://www.cnb.cz/en/index.html