

**CZECH UNIVERSITY OF LIFE SCIENCES  
PRAGUE**

**Faculty of Economics and Management**

**Department of Economics**



**Diploma Thesis**

**The Balance of Payments, case study of the Czech  
Republic international position and external debt**

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### **Declaration**

I declare that the thesis “The Balance of Payments, case study of the Czech Republic international position and external debt” has been completed by me, without any other outside help and only the defined sources, and study aids were used; they are cited in the thesis and provided at the end of the thesis.

Prague, the 4<sup>th</sup> April 2011

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Barbora Sýkorová

### **Acknowledgement**

I would like to express thanks to Ing. Mansoor Maitah Ph.D. et Ph.D. for being my supervisor and helping me with all the problems related to the thesis. Finally, I would like to express thanks to all others, who supported me in my studies all the time.

**Balance of Payments, case study of the Czech Republic  
international position and external debt**

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**Platební bilance České republiky – investiční pozice a  
vnější zadluženost**

**Summary:**

The diploma thesis deals with the analysis of the international investment position and external debt of the CR in the period from 2000 to 2009. The theory of the balance of payments, to which the international investment position and external debt are closely related, comes before the own analysis. It concerns the conceptual framework of the balance of payments, the explanation of the terms “the international investment position and external debt”, the uses of balance of payments and international investment position data. The own analysis is divided into the empirical and statistical part. The aim of the thesis was to consider how the important events, the integration into the EU in 2004 and the outbreak of the world economic and financial crises at the end of 2007, have influenced the balance of payments transactions and related data on the international investment position and external debt of the CR. In order to show the changes in the development of external economic and financial relations, the whole observation period was divided into three periods, 2000-2004, 2005-2007 and 2008-2009 on the basis of those events. Attention is paid mainly to those factors, which significantly affected the economic and financial transactions with abroad in each observation period. To prove that the events influenced the development of given statements, the statistical analysis was applied.

**Souhrn:**

Předložená diplomová práce se zabývá analýzou mezinárodní investiční pozice a vnější zadluženosti České republiky v období 2000-2009. Vlastní analýze předchází pasáž obsahující teorii platební bilance, s níž blíže souvisí právě mezinárodní investiční pozice a vnější zadluženost. Jde o vysvětlení koncepčního rámce platební bilance, vysvětlení pojmů mezinárodní investiční pozice a vnější zadluženosti, využití dat platební bilance a mezinárodní investiční pozice. Vlastní analýza je rozdělena na empirickou a statistickou část. Cílem práce bylo posoudit, zda a jakým způsobem se do platební bilance a s tím souvisejících dat mezinárodní investiční pozice a vnější zadluženosti ČR promítly důležité události, tedy vstup ČR do EU v roce 2004 a propuknutí světové ekonomické a finanční krize na konci roku 2007. Aby bylo možné ukázat na změny ve vývoji vnějších ekonomických a finančních vztahů, je nutné rozdělit celé sledované období do tří etap 2000-2004, 2005-2007 a 2008-2009 na základě těchto událostí. Pozornost je tu věnována především faktorům, které v jednotlivých etapách výrazným způsobem ovlivnily ekonomické a finanční transakce se zahraničím. S využitím statistické analýzy bylo možné dokázat, že jednotlivé události měly vliv na vývoj daných výkazů.

**Key words:**

Balance of payments, current account, exchange rate, external debt, financial account, financial assets, financial liabilities, foreign direct investment, gross domestic product, securities.

**Klíčová slova:**

Platební bilance, běžný účet, směnný kurz, vnější zadluženost, finanční účet, finanční aktiva, finanční pasiva, přímé zahraniční investice, hrubý domácí produkt, cenné papíry.

## Table of content

<b>Tables and charts</b> .....	<b>10</b>
<b>Abbreviations</b> .....	<b>12</b>
<b>1. Introduction</b> .....	<b>13</b>
<b>2. Objectives of thesis and methodology</b> .....	<b>14</b>
<b>3. Literature overview: the theory of the balance of payments</b> .....	<b>16</b>
<b>3.1. The balance of payments conceptual framework</b> .....	<b>16</b>
3.1.1. Classification of the balance of payments transactions .....	16
3.1.2. Methodology, construction and transactions of the balance of payments	17
3.1.3. The balance of payments accounts .....	19
3.1.4. The balance of payments identity.....	22
3.1.5. The foreign exchange rate, exchange regimes and the real exchange rate	23
3.1.6. Direct relationship between the current account and domestic national income.....	23
<b>3.2. The international investment position and external debt</b> .....	<b>24</b>
3.2.1. The international investment position.....	24
3.2.2. Classification of the international investment position.....	26
3.2.3. The relationship of the international investment position to external debt.....	28
3.2.4. Classification of the external debt .....	29
3.2.5. Investment income, rates of return, and the international investment position.....	30
<b>3.3. Uses of balance of payments and international investment position data</b>	<b>31</b>
<b>3.4. Statistical methods used</b> .....	<b>31</b>
3.4.1. The multivariate methods.....	31
3.4.1.1. Correlation analysis .....	32
3.4.1.2. Regression analysis.....	32
3.4.1.3. Trend analysis .....	33
<b>4. Balance of payments, case study of the CR international position and external debt</b> .....	<b>35</b>
<b>4.1. The analysis of the CR balance of payments, international position and external debt before the entrance to the EU (2000 – 2004)</b> .....	<b>35</b>
4.1.1. The external environment and its effect on the balance of payments .....	35

4.1.2.	Factors stimulating foreign direct investment in the CR .....	38
4.1.3.	The financial account and foreign direct investment.....	40
4.1.4.	Analysis of the international investment position and external debt.....	42
<b>4.2.</b>	<b>The analysis of the CR balance of payments, international position and external debt after the entrance to the EU (2005 – 2007) .....</b>	<b>51</b>
4.2.1.	External environment and its effect on the balance of payments.....	51
4.2.2.	Impacts of the EU membership on the balance of payments of the CR...	57
4.2.3.	Analysis of the international investment position and external debt.....	60
<b>4.3.</b>	<b>The analysis of the CR balance of payments, international position and external debt after the outbreak of the financial and economic crisis (2008 – 2009).....</b>	<b>66</b>
4.3.1.	External economic relations after the outbreak of the financial and economic crisis .....	66
4.3.2.	Analysis of the international investment position and external debt.....	69
<b>4.4.</b>	<b>Statistical analysis and discussion .....</b>	<b>74</b>
4.4.1.	Regression and correlation.....	74
4.4.2.	Trend analysis.....	78
<b>5.</b>	<b>Conclusions .....</b>	<b>82</b>
<b>6.</b>	<b>Bibliography.....</b>	<b>85</b>
<b>7.</b>	<b>Appendices</b>	

## Tables and charts

Table 1: Transactions of the balance of payments .....	18
Table 2: The balance of payments accounts .....	19
Table 3: Classification of the international investment position.....	27
Table 4: The external debt by debtor and creditor .....	29
Table 5: The external debt by instruments .....	30
Table 6: Calculation of the correlation coefficient between GDP and ED.....	74
Table 7: Calculation of the correlation coefficient between GDP and IIP .....	76
Chart 1: Development of the CA and FA of the BoP in 2000-2004 .....	36
Chart 2: The structure of the financial account in 2000-2004 .....	41
Chart 3: The CR's international investment position in 2000-2004.....	43
Chart 4: The international investment position by sectors in 2000-2004.....	44
Chart 5: Foreign securities held by residents as at the end of 2003 by territory.....	46
Chart 6: Development of the CR's external debt in 2000-2004.....	48
Chart 7: The average percentage share of sectors to the CR's external debt.....	49
Chart 8: The trade balance surplus since 2004.....	52
Chart 9: Development of the CA items in 2000-2007.....	53
Chart 10: Development of the BoP accounts in 2005-2007.....	55
Chart 11: Economic performance of the CR in 2000-2007 .....	58
Chart 12: The CR's international investment position in 2000-2007.....	61
Chart 13: The CR's external debt in 2000-2007 .....	61
Chart 14: Real effective exchange rate of the koruna deflated by price indices.....	63
Chart 15: The CR's external debt by sectors in 2000-2007.....	64
Chart 16: GDP growth rates in the CR in 2000-2009.....	67
Chart 17: The development of the BoP accounts from Q3 2007 to Q4 2009.....	68
Chart 18: The international investment position by sectors in 2000-2009 .....	70
Chart 19: The external debt by sectors in 2000-2009.....	70
Chart 20: The international investment position by assets and liabilities .....	71
Chart 21: The external debt by long-term and short-term .....	72
Chart 22: The ratio of the IIP to GDP.....	73
Chart 23: The ratio of the ED to GDP .....	73
Chart 24: The correlation graph and regression function $f(ED) = GDP$ .....	75
Chart 25: The relationship between GDP and ED.....	75



Chart 26: The correlation graph and regression function $f(IIP) = GDP$ .....	77
Chart 27: The relationship between GDP and IIP .....	77
Chart 28: The GDP growth rates in 2000-2009 .....	78
Chart 29: Trend function of the ED.....	79
Chart 30: Trend function of the IIP .....	80

## **Abbreviations used**

BoP	Balance of Payments
CA	Current Account
CEFTA	Central European Free Trade Agreement
CNB	Central National Bank
c.p.	current prices
CPI	Consumer Price Index
CR	Czech Republic
CSO	Czech Statistical Office
ED	External Debt
EIB	European Investment Bank
EU	European Union
FA	Financial Account
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IIP	International Investment Position
IMF	International Monetary Fund
OECD	Organisation for European Co-operation and Development
PPI	Producer Price Index
VAT	Value Added Tax
WTO	World Trade Organization

# 1. Introduction

In the last twenty years, the Czech economy went through the transformation process from the centrally-planned economy to the market economy and then to the integration into the European Union in 2004. During 2005-2007, the Czech economy went through a period of high economic performance. Unfortunately, this economic development was interrupted by the outbreak of the world economic and financial crisis in 2008. These events have influenced the extent and character of economic and financial activities between the CR and the rest of the world. All the economic transactions are systematically summarized for a specific period in the balance of payments, the main indicator of national economy. The balance of payments has been stimulating changes of Czech economy since 1989 and it has been reflecting back the results of changes in the internal economic environment. As a result, the balance of payments is the important feedback of previous macroeconomic decisions made by government authorities and its development influences decisions directed to the future. Closely related to the flow-oriented balance of payments framework is the stock-oriented international investment position and related data on the external debt. The international investment position is the balance sheet of the stock of external financial assets and liabilities. It serves to compare the investment position of the CR towards the rest of the world. The external debt is also the balance sheet, which records only the financial liabilities, which are of a debt character.

The balance of payments together with the international investment position and the external debt constitute the set of international accounts for an economy and show the internal economic situation of the CR, as well as the external economic position of the CR towards the rest of the world. They provide very valuable information for Czech government to assess the performance of Czech economy towards the rest of the world. This information is also very valuable for the CNB, corporations and commercial banks.

The analysis of the mentioned statements does not provide only characteristics of the external economic relations of a given country towards the rest of the world, but also makes possible to understand the development of international monetary system and its functional mechanism, as well as to judge and mainly compare the monetary, fiscal and exchange policies of given countries. The development of items in those statements may also considerably indicate the future development of the exchange rate. On the basis of the statistical analysis, the future development of the statements can be also predicted.

Regarding this reality, I consider studying the development tendencies of the balance of payments transactions and related data on the international investment position, external debt and other factors very interesting, challenging and useful, because these tendencies and factors influence decisions of all the sectors of an economy.

## 2. Objectives of thesis and methodology

By 1 May 2004, the CR integrated into the European Union and started to apply the EU law. At the end of September 2008, the Czech economy experienced the outbreak of the world economic and financial crisis. The objective of the diploma thesis is to analyse the development of the balance of payments transactions and related data on the international investment position and external debt of the CR in ten years period (2000-2009) based on those important events, whether they influenced their development or not. In order to point out the changes, which have occurred in the area of external economic relations after the full integration in the EU and after the outbreak of the financial and economic crisis, it is necessary to analyse the development of the statements in the previous period as well. Therefore, the whole observation period is divided into three time periods based on these events, i.e. the period before the entrance to the EU (2000-2004), then the period after the entrance to the EU (2005 – 2007) and the period after the outbreak of the economic and financial crisis (2008 – 2009). To see the changes in the financial flows and stocks with abroad, it is necessary to compare individual periods.

**Hypothesis 1:** *“The development components of the statements (BoP, IIP, ED) show the irregular fluctuations throughout the whole observation period. They differ more or less from year to year, but strongly depend on the actual economic and financial situation of the CR, which is highly influenced by the important events and the external environment.”*

**Sub-hypothesis 1:** *“The integration into the EU favourable affected the balance of payments, the IIP and ED of the CR. The world economic and financial crisis did not worsen the development tendencies of the BoP, IIP and ED of the CR significantly. It rather slowed down the development of these statements and changed their structure. The economic performance and the investment activity fell down considerably. Therefore, the ratios of external stability<sup>1</sup> worsened significantly.”*

**Hypothesis 2:** *“The strong dependence of GDP growth on the ED and on the IIP is expected. As the external debt rises, the economy tends to perform better in order to cover the debts. Higher inflow of capital, i.e. a rise in the IIP’s deficit, is related to higher economic performance. These hypothetical development tendencies should be supported by the important events.”*

Before the own analysis of the balance of payments, the international investment position and external debt of the CR, it is necessary to understand what the balance of payments, the international position and external debt really are. The theory of the balance of payments is covered in the third part of the thesis. This part is divided into

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<sup>1</sup> In the thesis, the external debt to GDP ratio and the international investment position to GDP ratio are observed.

four subparts, which are following, the balance of payments conceptual framework, the international investment position and external debt, the uses of the balance of payments and international investment position data and the statistical methods used.

Following part is the own analysis, which is divided into two sections, the empirical and statistical section. The empirical part is based on factual data. The statistical part analyzes the relationship between the external debt, the international investment position and the economic performance. Then the prediction of the IIP and ED development is also included in the statistical part. There is always a small summary or discussion added to each sub-part in the main part. Finally, there is the conclusion to the whole diploma thesis.

Besides the internet search and the collection of bibliography, other methodologies used in the thesis include the statistical and econometrics methods. Correlation, regression and trend analysis are used in the thesis. The calculations are based on the statistical theory mainly. The computations were done through the statistical formulas, matrices and the statistical applications offered in the MS Excel. All other charts and tables were created by the applications in the MS Excel.

## **3. Literature overview: the theory of the balance of payments**

### **3.1. The balance of payments conceptual framework**

The balance of payments might be defined as a systematic statement of economic activities between the residents of a (home) country and the rest of the world in a given period, usually one year. This very general definition needs to be explained and concretized, starting with the definition of the balance of payments as the systematic statement.

The balance of payments is considered the systematic statement, because it is set up on the basis of certain classification and grouping of economic transactions. *“It is the record of country’s transactions in goods, services, and assets with the rest of the world; also the record of a country’s sources (supply) and uses (demand) for foreign exchange”*(Maitah, 2009, p. 152). When we buy something from another country, we use the currency of that country to make the transaction. Foreign exchange consists of all currencies other than the domestic currency of a given country. The purpose of the balance of payments is to achieve the fast and illustrative information about the large amount of different transactions. It is structured on the basis of agreed methodology. While speaking about the classification and methodology, long-term endeavour is to achieve the standardization at wide international level. This tendency has been supporting by the International Monetary Fund (IMF) since its functioning. It may be possible to say that this intention was most partly achieved in all member countries (Sýkorová, 2009).

#### **3.1.1. Classification of the balance of payments transactions**

A country’s balance of payments does not record only its international trading, borrowing and lending, it is actually a very wide statement; it records all transactions between countries and these transactions affect the supply of or the demand for a currency in the foreign exchange markets.

##### ***Economic transactions include:***

- a) Receipt of payments from foreigners and payments to foreigners, related to the movement of goods and services (i.e. export and import of goods and services)
- b) Receipt of payments from foreigners and payments to foreigners, related to the movement of financial funds (i.e. receiving of deposits from abroad and saving of deposits abroad, or export and import of capital)
- c) Receipt of payments from foreigners and payments to foreigners, which are not related to the movement of goods and services or financial funds between countries (for example foreign aids and gifts)

- d) Changes (increase or decrease) in foreign receivables and payables, which are not accompanied by exchange payments and refunds (such as for example export and import of goods on credit, usage of credits from abroad by domestic residents, issuing credits to foreign residents).

From the paragraph mentioned above, it results that the term “the balance of payments” does not completely respond to the content, which is actually hidden behind it. Therefore, the more exact term for the balance of payments would be for example “the balance of economic transactions”. However, it was not accepted.

The balance of payments records all economic transactions, which are realized between domestic and foreign economic subjects. These subjects are called residents or non-residents of a given country. The conception of the residence status is arranged by the corresponding exchange law of each country<sup>2</sup>. Residents include individuals, corporations, government entities, and financial institutions. Other corporations or financial institutions that have branch abroad or affiliate, are then considered non-residents. However, the existence of different definitions of resident and non-resident is obvious; each country may have different limitations. It includes mainly foreign workers, diplomats, military attaché, branch offices of domestic enterprises abroad and foreign enterprises in the CR etc. These enterprises may be considered to be a resident in some country while in other a non-resident.

The balance of payments is usually prepared annually for reporting purposes. However, it is generally computed for shorter periods, i.e. quarterly or even monthly. The balance of payments is the statement, which is set up by central national banks in the most countries (Sýkorová, 2009).

### **3.1.2. Methodology, construction and transactions of the balance of payments**

The basic methodological principle, which effects the construction of the balance of payments, is *the system of double-entry bookkeeping* of each economic transaction. It means that each transaction is represented by two entries with equal values. Once, it is recorded as a credit item (with a sign +) and once as a debit item (with a sign -). Each transaction is recorded as a credit or debit item according to if a given transaction influences supply of exchange or demand for exchange in the internal exchange market. Credit transactions are those transactions, which influence a supply of foreign exchange, respectively it leads to decrease of our foreign receivables, eventually increase of our foreign payables. On the contrary, debit transactions are those transactions, which influence a demand for foreign exchange in the internal exchange market, respectively it results in increase of our foreign receivables, eventually decrease of our foreign payables.

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<sup>2</sup>Zákon č. 219/1995 Sb., Devizový zákon; translated by Barbora Sýkorová

*Receipt transactions*, i.e. supply of exchange, include exports of goods and services, import of income, transfers and capital inflows. The Central National Bank may also affect supply of exchange in the reason, when it sells foreign currency from its own exchange reserves in the exchange market. Oppositely, *payments transactions*, i.e. demand for exchange include imports of goods and services, exports of incomes, transfers and capital. As before, the Central National Bank may affect demand for exchange by buying foreign currency in the exchange market. Credits give rise to payments inward to the country and debits give rise to payments outward from the country.

**Table 1: Transactions of the balance of payments**

<b>Credits</b>	<b>Debits</b>
Export of goods	Import of goods
Export of services	Import of services
Import of incomes	Export of incomes
Import of transfers	Export of transfers
Import of capital	Export of capital
Decrease of exchange reserves	Increase of exchange reserves

Source: Maitah, 2009, p. 153-154

The construction of the balance of payments is also influenced by the resources, movement and processing of information for its composition. The balance of payments is composed on the basis of information, which all economic subjects transfer to the Central National Bank, when they enter in any foreign trade relations. These economic subjects are mainly importing and exporting firms, commercial banks, other financial non-bank institutions, travel offices, hotels etc. In some cases, only estimations are taken into account, for example data about revenues and expenses from tourist trade, revenues and expenses related to working camps of our habitants abroad and foreigners employed in the CR.

The way of recording economic transactions of a given country compared to abroad can be different. Each country has got its own methodology of construction of the balance of payments, which is always subordinated to the purpose, for which this statement stands. If it is supposed to serve for analytical purposes, the balance of payments is composed in more detailed structure. These types of balances can have even more than 100 items and serve as a basis for macroeconomic decisions at the government and ministration level. If it is supposed to serve for informative purposes, then transactions are aggregated into larger groups and this type of balance usually consists of less than 20 items (Sýkorová, 2009).

All member countries of the International Monetary Fund (IMF) compose the balance of payments according to the same methodology. This procedure enables to compare balances of payments in time as well as between countries. Even though the unified methodology is used, some differences in the balance of payments may appear, it depends on a given country and it usually reflects specificities of a country.



### 3.1.3. The balance of payments accounts

In spite of existence of different methodologies of compositions of the balance of payments, the structure is always the same and consists of the current account, the capital account, the financial account and the official account (change in exchange reserves). The basic scheme of the structure of the balance of payments is shown in the following table.

**Table 2: The balance of payments accounts**

	Credit (+)	Debit (-)
<b>A. Current Account</b>		
<i>I. Trade balance (exports - imports)</i>		
<i>II. Balance of services (transports, tourism, other services...)</i>		
<i>III. Income balance (dividends, interest, royalties, coupon, profits...)</i>		
<i>IV. Current transfers (legacy, donations, alimony, international aid, remittances...)</i>		
<b>B. Capital Account (transfer of capital due to migration, debt pardons...)</b>		
<b>C. Financial Account</b>		
<i>I. Foreign direct investment (above 30% of ownership)</i>		
<i>II. Portfolio investment (less than 30% of ownership)</i>		
<i>III. Financial derivatives</i>		
<i>IV. Other investment</i>		
<b>D. Net Errors and Omissions</b>		
<b>E. Official Account Change in exchange reserves (the sign minus is an increase)</b>		

Source: Maitah, 2009, p. 154

$$A + B + C + D + E = 0$$

**The current account** has got four parts. It includes trade balance, balance of services, income balance and current transfers.

*The trade balance* records movement of goods, which is divided according to the commodity groups. In developed industrial countries, four traditional groups are distinguished, i.e. raw materials, industrial consumer goods, agricultural products and

means of production. From time point of view, movement of goods can be recorded in the balance of payments in the time of its frontier crossing or on the day, when exporter transfers its property to importer. From cost point of view, it is necessary to avoid any rise of statistical duplicities in the form of double recording of services in cost of goods and in the item of services at the same time. This problem touches mainly traffic services, storage and insurance expenses. As a result, costs of supplier customs frontier are used, these costs do not cover expenses mentioned above, which are related to movement of goods abroad.

*The balance of services* records various services of trade or non-trade character. It includes mainly traffic, insurance, banking services, tourist trade and also revenues and expenses connected with diplomatic and military representation.

*The income balance* records transactions, which most often react on previous long or short-term movement of capital, which is recorded in the financial account. Import of incomes consists of income interests, dividends, rents and profits earned from foreign direct investment. On the contrary, export of incomes represents adequate expenses related to foreign investment in domestic economy. Besides this, profits connected with the arbitrary operations of exchange and gold are also recorded in the income balance. Also incomes of our citizens working abroad and foreigners working in our country are found in the income balance.

Last part of the current account record *the current transfers*. These transfers are one-way payments to or from abroad, which do not lead to creation of foreign receivables and payables of a given country. They are private (gifts, legacy, alimony, and dues from private means to foreign organizations and institutions and others) or government (pensions, dues from the state budget to international organizations, foreign aids and others).

According to new methodology of the International Monetary Fund from 1993<sup>3</sup>, transfers of capital character were set off from the current transfers. Capital transfers are then recorded in a separate part of the balance of payments, which is called **the capital account**. Besides capital transfers related to migration of habitants, debt pardons and proprietary laws to basic means, the capital account also includes transfers of non-productive non-financial tangible assets (i.e. lands for administration offices, underground wealth) and intangible laws (patents, authorship rights and so on).

Other part of the balance of payments is **the financial account**, offering more detailed information about capital flows. The financial account records movement of foreign direct investment, portfolio investment, financial derivatives and other investments.

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<sup>3</sup> In 1993, the methodology of the balance of payments of the IMF was specified, in order to correspond to the methodology of the System of national accounts. In practice, it has been used since 1995.

The criterion for submission of capital flows into *foreign direct investment* is certain level of ownership control of the enterprise, which would reflect the interest of the owner in long-term active directing of the enterprise. In theory, it should be at least 51 % of ownership. In reality, required portion of ownership is far lower, usually above 30% of ownership, but it may differ from country to country. In the case of the CR, only 10% of ownership is required according to the valid exchange law. It can concern purchase of stocks, real investment, or reinvestment of profit<sup>4</sup>.

Movement of *portfolio investment* is also recorded in the financial account. Portfolio investment includes purchase of all bonds and those stocks, which do not satisfy condition for submission in foreign direct investment; it is usually less than 30% of ownership. From economic point of view, its movement is motivated by completely different factors than it is in the case of foreign direct investment. The effort of these investors is to gain profit from movement of costs of securities and movement of exchange rates.

In the 70's and 80's of last century, thanks to the instability of financial markets, caused by increase of volatility in interest rates, rates of stocks and bonds and exchange rates, risks for all subjects of financial markets significantly increased. The result of an effort of searching possibilities, how to prevent increased risks was high development of new instruments, for which the term of *financial derivatives* was introduced. These trades, realized with foreign subjects, are recorded in the financial account.

Movement of long-term (over one year) and short-term (less than one year) capital is recorded in the item of *other investment*. Government credits and long-term private trade credits are included in the long-term capital. There are also recorded some capital transactions of Central National Banks, which are not recorded in the item of exchange reserves. Short-term capital is moving from one country to another usually in the form of private capital, and that is mainly private banking capital in the form of saving and withdrawing of deposits, purchase and sale of short-term securities, purchase and sale of exchange, offering and paying loans while exporting and importing of goods and services and so on.

The last part of the balance of payments is created by **the account of exchange reserves**. Exchange reserves include exchange assets in the form of free exchangeable foreign currencies and reserves of gold, which are in holding of the Central National Bank. Exchange assets are usually in the form of deposits in the current and time accounts in first-class foreign banks, and then include high liquid government foreign bonds, which are widely traded in World markets, and reserves of foreign currencies. While speaking about the performance of objectives of the Central National Bank in the area of ensuring external exchange stability, exchange assets are the most important and also quantitatively most significant item of the exchange reserves. Usage of gold for

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<sup>4</sup> Zákon č. 219/1995 Sb., Devizový zákon, § 1 odstavec k.; translated by Barbora Sýkorová

payment of foreign payables is very complicated, mainly because of significant fluctuation of costs of gold in World markets.

Operations with exchange reserves create the compensative item, whose aim is to make the balance of payments in balance. The change of exchange reserves usually responds to the surplus (or the deficit) from transactions in the current and capital account. The surplus results in its increase and on the contrary the deficit in its decrease. In the balance of payments, increase of reserves appears with the sign minus so that in the debit side and decrease of reserves has the sign plus and is recorded in the credit side. In the first case, increase of reserves, the Central National Bank influences demand for exchange in the exchange market. In the second case, decrease of reserves, the Central National Bank influences supply of exchange.

The last part of the balance of payments is **the account of errors and omissions**. This item is closely related to the method of construction of the balance of payments and reflects the reality, that not all transactions are properly recorded. Problems are placed mainly in the methodology of calculating amounts of transactions, then in “leakages” of less important transactions and the time discrepancy in entry of certain transaction in the credit and debit side of the balance of payments.

The account of errors and omissions is understood as the balance item, because it enables to prevent occurrence of certain methodological shortcomings in construction of the balance of payments and achieve the formal balance in the way, that the sum of debit items equals the sum of credit items. In this sense, the balance of payments is always balanced. However, this formal equality does not say anything about by which way the balance was achieved and which consequences it will have for other internal economic development of a country and for development of its foreign relations (Sýkorová, 2009).

### 3.1.4. The balance of payments identity

When the balance of payments accounts are recorded correctly then the combined balance of the current account (CA), the financial account (FA), and the reserves account (RA) must be zero. It means that  $CA + FA + RA = 0$ . The balance of payments identity (BOPI) must always hold. Therefore, the BOPI equation indicates that a country can run the balance of payments surplus or deficit by increasing or decreasing its official reserves (Maitah, 2009, p. 156). To make it clear, I will use an example. Under *the fixed exchange rate regime*, countries maintain official reserves, i.e. central national banks may intervene, when it is needed. For example, when a country runs a deficit on the overall balance, i.e. when  $CA + FA$  is negative; the central bank of a country can supply foreign exchanges out of its reserve holding to cover the deficit in the overall balance. If the exchange rate is fixed, and there is the balance of payments deficit, outflows are greater than inflows and supply of CZK is greater than demand for CZK. But the problem is, if the deficit persists, the central national bank will eventually run out of its reserves. Under *the pure flexible exchange rate regime*, central national banks will not intervene in the foreign exchange markets; they do not

maintain official reserves. As a result, the overall balance must necessarily balance, i.e.  $CA = -FA$ .

I consider very important to point out, that the balance of payments must be always formally balanced and that is ensured by the change of exchange reserves. So when it is talked about balances of the balance of payments, it is necessary to specify, which type of transaction is recorded in order to find out an appropriate balance. By the “surplus” respectively “deficit” in the overall balance, it is usually understood the sum of the CA and the FA without balancing by exchange reserves. In this context, it is convenient to introduce other two terms – the balance and the equilibrium of the balance of payments. In the case, when the overall balance shows zero, it means, that there was not any change in exchange reserves in a given period, the balance of payments is balanced. In the case, when the overall balance converges to zero in a given period, the balance of payments is in equilibrium.

### **3.1.5. The foreign exchange rate, exchange regimes and the real exchange rate**

*The foreign exchange rate* is the price at which one currency exchanges for another. The market in which the currency of one country is exchanged for the currency of another is called *the foreign exchange market*. Thanks to movements of exchange rates, currency can either depreciate or appreciate. Currency depreciation is the fall in the value of the currency in terms of another currency. On the contrary, currency appreciation is the rise in value of the currency in terms of another currency.

Three foreign exchange rate regimes are distinguished. Fixed exchange rate regime and flexible exchange rate regime were already explained (in the previous part 3.5.). The last one is called *floating, or market-determined, exchange rate regime*. Floating exchange rates are exchange rates determined by the unregulated forces of supply and demand. Its movements have significant impacts on imports, exports, and movement of capital between countries.

*The real exchange rate* can be defined as a given basket of goods, which can be bought for a certain price abroad, in proportion to a basket of goods, which can be bought for the same price in the CR. Real exchange rate is:  $R = E \cdot PF/P$ , where E is nominal exchange rate, P is price level of domestic good and PF is price level of foreign good. The lower the real exchange rate, the less expensive are domestic goods relative to foreign goods. Decrease in R means currency appreciation. On the basis of the law of one price, *the Purchasing Power Parity* was introduced to the international market. PPP holds that prices of identical goods should be the same in all countries, differing only by the cost of transportation and any import duties (Maitah, 2009, p. 160-161).

### **3.1.6. Direct relationship between the current account and domestic national income**

As it was already mentioned, the current account provides information on the balance of consumption, saving, investment and government taxes and spending. If the

current account shows surplus, it means, that a given country purchase less than it earns. Therefore, it means that there is a direct relationship between the current account and domestic national income. It is necessary to recognize *the basic macroeconomic equality*:  $GDP = Y = C + I + G + X - M$ , where Y is national income, C is consumption spending, I is investment spending on plant, equipment, G is government spending on goods and services, X represents exports (credit items in the CA), and M represents imports (debit items in the CA). We can get an equation:  $Y - (C + I + G) = (X - M)$ , where the left side represents national income less spending and the right side is the CA balance (Maitah, 2009, p. 157).

**Gross Domestic Product (GDP)** is the indicator of the economic performance. “GDP is defined as the sum of the total final production of material and immaterial products and services, produced in the area of the given country, on the sector level in the frame of the given sector in the area of the given country, during the given time period, and that without regard to the ownership of production factors by the citizens of the given country or by any other subjects”<sup>5</sup>.

Other approach to show the relationship is that national income can be written as:  $Y = C + S + T$ , where S is private saving and T represents taxes. So that we can obtain the equation:  $C + I + G + (X - M) = C + S + T$  and then we can rearrange it to other equation:  $(X - M) = S + (T - G) - I$ , where S is private savings and (T - G) is public savings. This equation shows that the CA depends on private and public saving (Maitah, 2009, p. 157). The CA can be either positive or negative depending on how much a country saves compared to how much it invest. By now, the theory of the balance of payments should be understood and the practical part follows (Sýkorová, 2009).

## 3.2. The international investment position and external debt

Closely related to the flow-oriented balance of payments framework is the stock-oriented international investment position. **The international investment position and derived external debt** are supplementary statements to the balance of payments. They represent the relationship of an economy towards the rest of the world.

### 3.2.1. The international investment position

*The international investment position* is the balance sheet of the stock of external financial assets and liabilities compiled at a specific date such as year end. The financial items that constitute the international investment position consist of claims on non-residents, liabilities to non-residents, monetary gold, and SDRs (Special Drawing Rights; allocated by the IMF; it represent a claim to foreign currencies for which it can be exchanged in times of need). By convention, land and other immovable tangibles,

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<sup>5</sup> GDP definition provided by the Ministry of Finance of the CR.

non-financial assets, are treated as the property of economic entities of the economies in which the immovable tangibles are located. As a result, a non-resident owner has a financial claim on that non-financial asset, whose ownership is attributed to the resident entity, rather than the ownership of the actual non-financial asset. Together, the net international investment position (the stock of external financial assets minus the stock of external financial liabilities) and an economy's stock of non-financial assets composes the net worth of that economy. The international investment position has a close relationship with the *investment income* component of the BOP *current account* and the BOP *financial account*. Factors accounting for the year on year change in the position include transactions (flows) with the individual components, obviously, then valuation changes - price changes, exchange rate changes, and other adjustments (for example changes resulting from allocation/cancellation in SDRs and gold monetization/demonetization, reclassifications from portfolio to direct investment, unilateral cancellation of debt by a creditor, and expropriations). By contrast, balance of payments accounts reflect only transactions. In principle, all external financial assets and liabilities should be measured at current market prices as of the beginning/end of a specific period (IMF, Manual, 1993, p. 104).

The net international investment position of an economy is used to analyze developments and trends in the performance of an economy vis-à-vis the rest of the world as of a specific date. The net position shows whether an economy is a *net creditor* or *net debtor*, according to algebraic sign. A debtor nation is a country that has borrowed more than it has lent to the rest of the world during its entire history. While a creditor nation is a country that during its entire history has invested more in the rest of the world than it has been invested in that country by other countries.

Definition of the investment position provided by the CNB is as follows: ***The investment position of the Czech Republic*** vis-à-vis non-residents is a survey of the positions of financial assets and liabilities of all sectors of the domestic economy (the Government sector, the banking sector including the CNB and the corporate sector) in relation to the non-residents of the Czech Republic as at a certain date (as at the last day of the reporting period). The investment position corresponds in the structure of the individual items to the financial account and to the change in the position of foreign exchange reserves of the CNB in the balance of payments. The data of the investment position are monitored on the gross-principle, i.e. financial assets and liabilities for the individual items are monitored separately. The difference between financial assets and liabilities represents the resulting balance of the investment position. Its value (positive or negative) determines the net financial relation of the country, or rather of the sectors of the economy, towards non-residents (the position of a creditor or of a debtor). The positions of assets and liabilities of the investment position reported as at a certain date are influenced by the transactions implemented in the previous periods and recorded in

the balance of payments and other influences ensuing above all from the exchange rate and price fluctuations”<sup>6</sup>.

### **3.2.2. Classification of the international investment position**

The basic division of the international investment position (IIP) is between assets and liabilities and the difference between the two represents the net position. The first IIP sub-classification is fully consistent with the balance of payments financial account and is by function. Assets are divided into *direct investment*, *portfolio investment*, *financial derivatives*, *other investment*, and *reserve assets*; liabilities are divided in the same way, with exception of reserve assets. Then *direct investment* is subdivided into equity capital and other capital (intercompany debt). Claims on and liabilities to affiliated enterprises are recorded separately. *Portfolio investment* is basically divided by instrument, i.e. into equity securities and debt securities, and secondarily by appropriate sectors. Other investment is classified the same way as portfolio investment, primarily by instrument, i.e. long-term and short-term, and secondarily by sectors. Trade credits, loans, deposits, money market instruments, and other assets and liabilities (i.e. for example capital subscriptions to international, non-monetary organizations) are recorded in the item of other investment. *Reserve assets* consist of gold, SDR, reserve position in the Fund, foreign exchange, and other reserve assets (CNB, International Investment Position). The standard components of the international investment position are provided in the following table.

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<sup>6</sup> The definition of the IIP provided by the CNB; [http://www.cnb.cz/en/calendar/czech-republic-international-investment-position-and-external-debt/2010-09-29\\_16.html](http://www.cnb.cz/en/calendar/czech-republic-international-investment-position-and-external-debt/2010-09-29_16.html)



**Table 3: Classification of the international investment position**

	Year/quarter
<b>ASSETS</b>	
<b>Direct investment abroad</b>	
Equity capital	
Other capital	
<b>Portfolio investment</b>	
Equity securities	
Debt securities	
<b>Financial derivatives</b>	
<b>Other investment</b>	
Long-term	
CNB	
Commercial banks	
Government	
Other sectors	
Short-term	
CNB	
Commercial banks	
gold and foreign exchange	
Government	
Other sectors	
<b>Reserves</b>	
Gold	
SDR	
Reserve position in the Fund	
Foreign exchange	
Other reserve assets	
<b>LIABILITIES</b>	
<b>Direct investment in the Czech Republic</b>	
Equity capital	
Other capital	
<b>Portfolio investment</b>	
Equity securities	
Debt securities	
<b>Financial derivatives</b>	
<b>Other investment</b>	
Long-term	
CNB	
Commercial banks	
Government	

Other sectors	
Short-term	
CNB	
Commercial banks	
Government	
Other sectors	
<b>NET INVESTMENT POSITION</b>	

Source: CNB; [http://www.cnb.cz/en/statistics/bop\\_stat/investment\\_position/index.html](http://www.cnb.cz/en/statistics/bop_stat/investment_position/index.html)

### 3.2.3. The relationship of the international investment position to external debt

The international investment position is used as the indicator of the performance of an economy compared to the rest of the world as of a specific date. The net position shows what an economy owns in relation to what it owes. According to algebraic sign, sometimes the labels *net creditor* or net debtor are used to illustrate the net investment position. But sometimes, it is not really appropriate to use those labels. For some purposes, it is more relevant to view only the non-equity components of the position as debt; it means all components recorded as liabilities. Equity securities, direct investment equity capital, reinvested earnings, and ownership interests are not included (IMF, Manual, 1993, p. 106). This view is actually consistent with the core definition of **gross external debt** provided by the IMF, World Bank, OECD, and Bank for International Settlements: “Gross external debt, at any given time, is the outstanding amount of those current, and not contingent liabilities owed to non-residents by residents of an economy that require payment(s) either of principal and/or interest by the debtor at some point(s) in the future”.<sup>7</sup>

Definition of the foreign indebtedness provided by the CNB is as follows: “The data on **foreign indebtedness** of the Czech Republic form a part of the survey of the investment position. Foreign indebtedness of the Czech Republic is defined as a survey of financial liabilities of the sectors of the domestic economy vis-à-vis non-residents of the CR, which are of debt character (i.e. liabilities with contractually determined maturity for which a yield in the form of interest belongs to the creditor). Foreign indebtedness does not include the positions of investments into equity securities, i.e. direct investments - owners’ capital, portfolio investments - equity securities and ownership interests. The positions of the individual debt liabilities correspond, just as in the case of the investment position, to the respective transactions with debt financial liabilities in the balance of payments financial account”<sup>8</sup>.

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<sup>7</sup>The definition of gross external debt provided by the international institutions; <http://stats.oecd.org/glossary/detail.asp?ID=924>

<sup>8</sup> The definition of the external debt provided by the CNB; [http://www.cnb.cz/en/calendar/czech-republic-international-investment-position-and-external-debt/2010-09-29\\_16.html](http://www.cnb.cz/en/calendar/czech-republic-international-investment-position-and-external-debt/2010-09-29_16.html)

### 3.2.4. Classification of the external debt

The external debt has two types of classification schemes. The first structure is the external debt by debtor and creditor. The primary classification is by *long-term and short-term debt in convertible currencies*. The sum of both represents the total external debt. The second classification scheme is the external debt by instruments. The primary classification is by sectors of an economy, i.e. *government, CNB, commercial banks, other sectors, and direct investment – intercompany lending*. The first sub-classification is then by short-term and long-term instruments (CNB, External debt). The classification schemes are provided in the following tables.

**Table 4: The external debt by debtor and creditor**

	Year/quarter
<b>DEBT IN CONVERTIBLE CURRENCIES of which</b>	
<b>Long-term</b>	
<i>by debtor</i>	
CNB	
Commercial banks	
Government	
Other sectors	
<i>by creditor</i>	
Foreign banks	
Government institutions	
Multilateral institutions	
Suppliers and direct investors	
Other investors	
<b>Short-term</b>	
<i>by debtor</i>	
CNB	
Commercial banks	
Government	
Other sectors	
<i>by creditor</i>	
Foreign banks	
Government institutions	
Multilateral institutions	
Suppliers and direct investors	
Other investors	
<b>TOTAL EXTERNAL DEBT of which</b>	
<b>Long-term</b>	
<b>Short-term</b>	

**Table 5: The external debt by instruments<sup>9</sup>**

<i>Money market instruments</i>	
<i>Bonds and notes</i>	
<i>Loans</i>	
<i>Deposits</i>	
<i>Trade credits</i>	
<i>Other liabilities</i>	
<i>Intercompany FDI loans</i>	
<b>TOTAL EXTERNAL DEBT</b>	

Source: CNB; [http://www.cnb.cz/en/statistics/bop\\_stat/external\\_debt/index.html](http://www.cnb.cz/en/statistics/bop_stat/external_debt/index.html)

### **3.2.5. Investment income, rates of return, and the international investment position**

There is an important relationship between the international investment position and the investment income component of the current account. The connections between net investment income and the net position are complex and show the consistent classification of transactions and stocks. Therefore, for analytical purposes these two sets of statistics are very often presented as an integrated set of accounts. The investment income component measures the income accumulating on an economy's external financial assets and liabilities. The relationship between stocks and income is described in terms of yields, which can be determined by expressing income as a percentage of the average stock of investment to which this income relates. The higher the yields, the greater the rate of return on investment made. The yields are affected by many factors, including the profitability of the enterprise in which an investment is made, the riskiness of the investment, the level of interest rate relating to the currency in which an investment is denoted, the changes in the market value of the investment, or the changes in the income acquiring on the investment. As a result, the rate of return may change over the period of time, or remain the same in the case of no changes in anything.

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<sup>9</sup> The division is by the sectors of an economy, then by long-term and short-term instruments. The table consists only of the division by instruments in order to make it easier. The instruments are the same for each sector of an economy, except intercompany FDI lending (only for other sectors).

### **3.3. Uses of balance of payments and international investment position data**

Balance of payments and international investment position data are the most important for national and international policy formulation. These data represent external aspects, such as payments imbalances and inward and outward foreign investment, which are crucial for economic and other policy decisions in the extremely increasing interdependent world economy. Besides this basic purpose, data are also used for analytical studies; i.e. to determine the causes of payments imbalances and the necessity for implementing adjustment measures; relationships between merchandise trade and direct investment; aspects of international trade in services; international banking flows and stocks; asset securitization and principal market developments; external debt problems, income payments, and growth; and links between exchange rates and current account and financial account flows. Additionally, external data along with other necessary variables are utilized for projections of future development of balance of payments and its possible effects on the external economic relations (IMF, Manual, 1993, p. 4-5).

To summarize the key role, the balance of payments transactions and international investment position constitute the set of international accounts for an economy and their data are crucial for the compilation of data for various components of the national accounts (e.g., production accounts, income accounts, capital and financial accounts, and the related measurement of national wealth).

### **3.4. Statistical methods used**

#### **3.4.1. The multivariate methods**

The multivariate statistical analyses are used in the areas of technological, economic, demographic, and sociological character, where the aim is to study the relationship between two or more variables. In the statistical part of this diploma thesis, the relationship between two variables is studied only.

If the behaviour of two variables demonstrates some common features, some similarities, three types of relationship are recognized and they are as follows:

- *dependence* (casual relationship of the two), in case, behaviour of one variable is the cause of behaviour of the other variable
- *coincidence*, in case, two variables are affected by some common background
- *independence*, in case, the similarity is caused by a chance, there is no reasonable explanation for it.

The multivariate statistical methods serve to find out what type of relationship between variables exists, to identify the casual factors (important events, economic performance and others) and to measure the dependence/independence of variables. Consequently, a model of the relationship can be designed. On the basis of the designed model, the behaviour of the dependent variable can be predicted.

### 3.4.1.1. Correlation analysis

In the real life, more statistical characters are studied simultaneously and besides its properties, the direction and strength of their relationship is analysed. The correlation analysis is the statistical method used for the observation of the tightness of those characters (variables).

The *coefficient of correlation* is defined as follows (Linda, 2000):

$$r_{X,Y} = \frac{\overline{cov}(X,Y)}{\sqrt{S_X^2 \cdot S_Y^2}}; R_{X,Y} \in \langle -1, 1 \rangle, \text{ where,}$$

$$\overline{cov}(X,Y) = \frac{1}{n} \sum_{i=1}^n (X_i - \bar{x}) \cdot (Y_i - \bar{y})$$

$$S_X^2 = \overline{cov}(X,Y).$$

The *coefficient of determination* is the squared coefficient of correlation and looks as follows:  $r_{X,Y}^2; r_{X,Y}^2 \in \langle 0, 1 \rangle$ .

There are two possibilities of the computation, the non-matrix and the matrix computational procedure. The non-matrix procedure, i.e. the procedure where the statistical formulas are used, are introduced in the following part. In the thesis, both computational procedures with a help of the MS Office statistical application are used.

### 3.4.1.2. Regression analysis

The regression analysis is used to observe the dependence/independence of two or more variables. It is the complex of the statistical methods and approaches to estimate values of the variable (explained variable, also called endogenous, or dependent variable) corresponding to the given values of the explanatory variable (also called exogenous or independent variable).

The elementary instrument for description of a bivariate relationship (a relationship of two variables) is a continuous function of one independent variable, so-called the *regression function*.

After an analysis, a looser or tighter relationship of the  $Y = f(X)$ , where, Y...the dependent variable (regressand, explained variable), which is affected by X...the independent variable (regressor, explanatory variable), which acts as the affecting factor.

The regression function is then used as the model of relationship and serves to obtain average values of the y variable given values of the x variable. Then it can be used for estimations and prediction of behaviour of the dependent variable.

Economic variables generally depend on many factors. But, in the regression analysis, only the factors, which are possible to measure, are taken into account. In case of only one factor, the *simple regression* is applied.

In the thesis, the *linear regression model* is used. The graph of this model is the straight line:

$$y = \alpha + \beta x, \text{ where } \alpha, \beta \text{ are the parameters.}$$

The dotted estimations a, b of the parameters are calculated by the ordinary least square method is used for the parameters estimation. The necessary condition for likeness of the regression line, i.e. the capability to model the average behaviour of the regressand, is the least squares condition,

$$\min S = \min \sum_{i=1}^n (y_i - \hat{y})^2,$$

requesting that sum of squared deviations of the actual y values from the estimated  $\hat{y}$  values be minimal (Kubanová, 2004, p. 108). For the case of straight line, the least square equation is as follows:

$$\min S = \min \sum_{i=1}^n (y_i - a - b x_i)^2$$

The set of two simultaneous equations for finding the two unknown parameter estimates is set up as follows (Svatošová, 2010, p. 68):

$$b_{yx} = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{n \sum x_i^2 - (\sum x_i)^2} \quad a_{yx} = \frac{1}{n} (\sum y_i - b \sum x_i)$$

The formula for the statistical computation of the *coefficient of correlation* is as follows (Svatošová, 2010, p.68):

$$r_{yx} = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{\sqrt{[n \sum x_i^2 - (\sum x_i)^2][\sum y_i^2 - (\sum y_i)^2]}}$$

The *coefficient of determination* is the squared coefficient of correlation and looks like:

$$r_{X,Y}^2; r_{Y,X}^2 \in \langle 0, 1 \rangle$$

There are again two possibilities of the parameters' computation, the non-matrix (substitutional, mentioned above) and the matrix computational procedure. Both ways are based on the least squares condition. In the thesis, the statistical application of MS Office Excel is used mainly.

### 3.4.1.3. Trend analysis

The trend analysis is the statistical method used to analyse dynamic data (time-series data) and the aim is to discover their development tendencies, their power or the degree of permanency, nature and strength of factors disturbing validity of tendencies found. The trend analysis method is used to study long-term tendencies. The development can be influenced by many factors, such as effect of climate, weather,

economic cycles, economic situation, important events and etc. In the case of studying development tendencies of the balance of payments accounts, the international investment position and the external debt of the CR, the development is subject to the important events happened in the last decade.

The *trend function equation* has got the following form:

$$y = a + bx$$

This is the simple equation of the straight line, where,

x...the independent variable

y...the dependent variable

b...the slope of the line

a...the constant (the value of y when x = 0).

In the thesis, the trend line and the trend equation is created through the functional application offered in the MS Office Excel.



## **4. Balance of payments, case study of the CR international position and external debt**

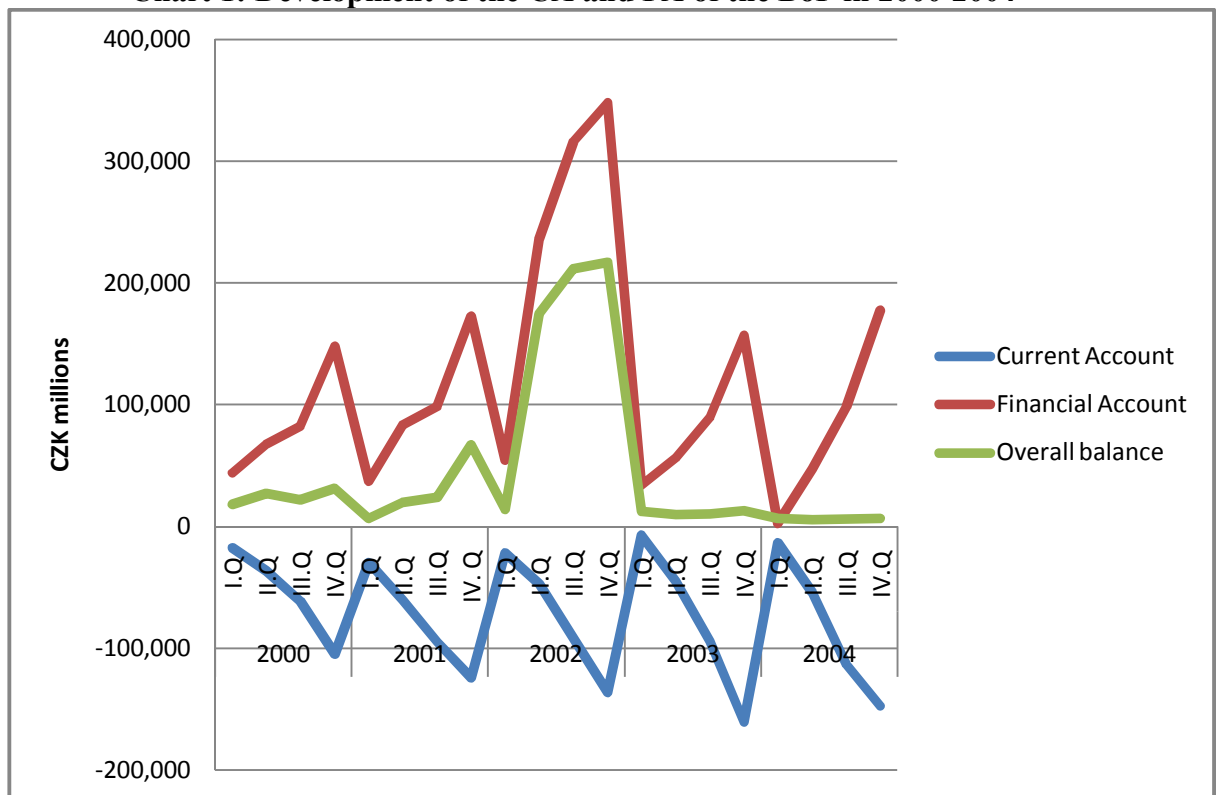
### **4.1. The analysis of the CR balance of payments, international position and external debt before the entrance to the EU (2000 – 2004)**

#### **4.1.1. The external environment and its effect on the balance of payments**

The stabilization of external economic relations was the main trend of the end of 90's. The key role in the process of stabilization of the Czech Republic balance of payments, with regard to financial flows and later fundamental changes in the development of trade and income balance, played foreign direct investment. The deficit of trade balance significantly decreased, chiefly due to temporary monetary and partially budgetary restrictions, slowdown of economic activity and falling of domestic, mainly consumption, demand. Massive inflow of foreign direct investment was mainly directed into the trade networks in the CR, service investment (insurance companies, communication technologies, distributive channels, and distribution of water, gas and power) and the area of real properties. Enormous inflow of investment was accompanied by temporary upset of trade balance in 2000 and 2001, caused mainly by increase in trade imports (needed for investment and personal consumption), related to first investments in supra-national companies (including trade networks). The liberalization of exchange regime and the introduction of investment incentives favourably affected inflow of direct investment, chiefly in the manufacturing industry. The expansion of production capacities in connection with the inflow of foreign direct investment had a favourable affect on growth in the volume of Czech output and an increase in exports to foreign markets. As a result, a fall in the trade deficit was significant at the end of 2004 (Sýkorová, 2009).

The development of the current account and financial account was crucial for the process of the stabilization of the external economic relations. The development of the CA and FA of the BoP is shown in the "Chart 1".

**Chart 1: Development of the CA and FA of the BoP in 2000-2004**



Source: CNB (own chart, MS Excel)

The development of *the current account* of the balance of payments in 2000-2004 was mainly characterised by decreasing of trade deficit. Balance of services recorded a slight fall each year, mainly due to increasing demand of habitants for import of services, which were not demanded until now, such as telecommunication services (development of mobile networks and internet), financial and insurance services, auditor services, software services, and commercial services and also decrease in revenues coming from tourist trade. Overall, the current account recorded the deficit at the end of each recording period. A crucial item, which most contributed to the overall deficit of the current account, was the balance of incomes. Main factors, participating in a rise of this deficit, were paid off dividends resulting from foreign direct investments and the amount of reinvested profit. In the case of reinvested profit, it is only the “accounting record”, which records the amount of received profit, which is left by foreign investors in companies in the Czech Republic. The same item with the sign plus is included in the financial account, actually in the item of foreign investment in the Czech Republic. Reinvested profit can be used for expansion of production or for distribution of dividends in the future.

The development of *the capital account* was insignificant in the first observation period.

*The financial account* recorded a surplus at the end of each recording period. The liberalization of exchange regime along with the introduction of system of

investment incentives stimulated inflow of foreign direct investment in the CR and allowed outflow of capital abroad. Concerning portfolio investment, at first, investments to foreign securities were possible only for banking sector. Since 1999, it has become also possible for non-banking subjects without the exchange permission<sup>10</sup>. It is interesting to point out that by the end of 1998 non-banking subjects invested almost CZK 20 milliards in foreign securities, while by the end of 2002 it reached almost CZK 120 milliards. Therefore, a rise in outflow of portfolio investment is obvious. It was mainly due the surplus of funds of commercial banks, insurance companies, pension funds and investment companies. Service of portfolio administration for enterprises and custody service got a higher importance, purchases of non-residential securities (bonds, stocks) were offered there.

*The Central National Bank's international reserves* recorded a considerable increase in 2000, 2001 and 2002. This rise reflected income on invested assets, an advance payment made by a private entity to the government account with the CNB (based on an agreement on the transfer of state receivables from the Russian Federation to the government account with the CNB), the National Property Fund's proceeds from privatisation, foreign exchange interventions and returns on reserve holdings. An increase of the CNB exchange reserves was also linked to the favourable development of the current and financial account. The CNB interventions on the interbank exchange market practically ended in 2002. The liberalization of capital flows, a fall in interest rate, replacement of old administrative devices by modern standard instruments influencing the financial and exchange market resulted in the creation of the standard environment, usual in all developed countries. Czech crown's exchange rate against foreign currencies started to move freely and generated (with some fluctuations) an appreciation for the koruna's exchange rate against the euro.

Overall, *the balance of payments* recorded a surplus at the end of each year in this period; this was reflected as an increase in exchange reserves (a sing minus). The rise in CNB international reserves during the whole observation period was chiefly due to interventions on the foreign exchange market (till 2002) and National Property Fund privatisation revenues. Revenues coming from the administration of exchange reserves also participated in the rise of exchange reserves. Slowing down of an increase in exchange reserves of Czech National bank at the end of observation period was related to the sale of international reserves relating to government debt service, payments of early accepted government loans, or other government expenses, i.e. for example the payment of penalty fees (CME arbitration and cancellation of the contract to build a motorway to Ostrava). Data about the development of the national balance of payments accounts are provided in the "Supplement 1".

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<sup>10</sup> The regulation was abolished by the government regulation no. 129/1998.

### 4.1.2. Factors stimulating foreign direct investment in the CR

Inflow of foreign direct investment in the CR was a positive reality that speeded up the process of stabilization of external environment and the structural changes in Czech economy. Already, in the second half of nineties, first factors appeared and started to stimulate inflow of direct investment in the CR. There were four key factors having the largest impact on foreign direct investment in the CR.

**Factors stimulating foreign direct investment in the CR are as follows:**

#### *a) Improvement in rating*

“Rating of the Czech Republic is an assessment of its credibility on foreign markets. The rating is a synthetic expression of the quality of the Czech state as a debtor and of its economic capability to comply with its own issued obligations and to pay off the interests and the principal of the sum owing in time and in total quantity”<sup>11</sup>. The importance of such rating lies in the fact that the debtor must pay to its creditors. The difference between the best rating assessments (e.g., AAA), i.e., reference rating, and its worse rating (e.g., A- of the Czech Republic), called credit surcharge in issuing new issues, which takes into account the worse quality of the debtor. Rating agencies, responsible for an assessment of country’s credibility on foreign markets include Moody’s, Standard & Poor’s and Fitch Ratings. The first rating was given to the former Czechoslovak National Bank by the Moody’s rating agency in January 1992. The rating level was Ba1. In March 1993, the same agency pushed up its rating up to Baa3, thereby the CR became the first post-communist country, whose credibility on foreign markets was assessed; it was the lowest credibility level though. In May 1994, the CNB achieved an improved rating assessment, i.e. Baa2, and in August 1995 it obtained even Baa1. This level of rating was not anyhow threatened by monetary fluctuations in 1997. Higher rating assessments for the CR were given by Standard & Poor’s rating agency. In July 1993, Standard & Poor’s awarded the investment level BBB. In June 1994, this agency improved its rating up to BBB+. In 1995, the agency even skipped one level of its rating assessment and admitted A level. First downturn to A- level was recorded in November 1998, i.e. after more than one year since monetary fluctuations had occurred. The main reason was “insufficient progress in reformation of the banking sector and many other enterprises”. Since then, the rating did not change until 2004, with exception in 2002 when the agency Moody’s raised its rating up to A1.

#### *b) Liberalization of exchange regime*

In 1990, central planning, monopoly of foreign trade and exchange monopoly were abolished. These were the first steps to the liberalization of exchange regime. Already in 1991, the internal currency convertibility was introduced. It had two very

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<sup>11</sup> Definition of rating provided by the MFCR;  
[http://www.mfcr.cz/cps/rde/xchg/mfcr/hs.xsl/state\\_debt\\_13264.html](http://www.mfcr.cz/cps/rde/xchg/mfcr/hs.xsl/state_debt_13264.html)

important aspects. First, it enabled a free access to exchange for entrepreneurial subjects within the framework of current payments. Second, it created legal and perpetual assumptions for capital inflow from abroad. At the beginning of 1995, the CR integrated into the European Community and became a full member of the European Community. With the signing of the European Agreement, the CR committed to harmonization of its law system with the law of the European Community and to gradual liberalization of exchange regime. The European Agreement ensured free movement of capital in the area of direct investment to and from countries of European Community. In the same year, new exchange law was introduced, the external convertibility of Czech currency was introduced on its basis, i.e. complete liberalization of payments and transfers in the area of international current transactions (for corporations and individuals) including abolishment of duty of offer and removal of limits for purchase of foreign currency for inhabitants, and almost complete liberalization on the side of capital inflow. According to the exchange law, other liberal amendments were introduced in the form of government decisions. In 2001 on the basis of amendment to exchange law, remaining restrictions of capital flows were abolished. There was only one exception of restrictions related to purchase of domestic assets by non-residents, where the CR asked the EU for temporary period.

***c) Membership of the CR in the OECD and preparation of the CR's accession to the EU***

In 1995, the CR became the member of the OECD. The Organization for Economic Co-operation and Development (OECD) is an international economic organization consisting of 34 countries founded in 1961 with the aim to promote policies that will improve the economic and social well-being of people around the world. The process of the CR's integration into the EU started with signing the signing of the Association Agreement with the EU already in 1993. This actually established a framework for gradual liberalization of trade with the EU countries and CEFTA countries. The membership in the OECD and preparation for the full EU membership made the CR more attractive to foreign investors, mainly for investors from other European countries, the EU member countries and Asia. Massive investments were made mainly in car, electronic and electro-technical industry.

***d) Legislative changes (international agreements, bankruptcy and compensation law, commercial law, privatization, law of investment incentives)***

Regulatory range for investments was generally very liberal, introduced the principle of national manipulation and emphasized the role of direct investments during the period of country's transition to the market economy. Entrepreneurial activities of foreigners in the CR are directed according to the Commercial law, which sets, that foreigners can carry on business in the Czech territory under the same conditions and at the same extent as Czech individuals, it means that the principle of national manipulation is used. License of foreign individual to carry on business in the territory of the CR occurs, when its name is signed up in the Commercial Register. According to the EU norms, obligation to sign up in the Commercial Register does not refer to persons, who have their residence in other EU member country or in other European industrial environment (the amendment is valid since February 1 2001). The CR signed international agreements about protection and support of investments with many

countries. These agreements created more advantageous conditions than the National law and also served as a guarantee for foreign investors.

The Czech law applies tax and customs tariff duties, which are the same for Czech persons as well as for foreign direct investors. Due to the membership in the GATT (General Agreement on Tariffs and Trade), the CR applies customs duties on imports according to the valid and internationally accepted custom tariff. With the signing of the agreement of abolition of double taxation with many countries, the CR created a wider range of observing tax duties for non-residents. Since May 2004 the CR has adapted customs tariffs and rules of the EU.

At the beginning of privatization process, a general idea to create a collection of amendments for incentives to foreign investors, in order to strengthen their long-term investment interest in the CR, was considered useless. Cheap and qualified labour force and good geographic situation was considered sufficient enough for the CR. Therefore, while other countries applied incentives, the CR was losing in attracting foreign investors.

Law of investment incentives<sup>12</sup> was introduced in 2000, May 1. This law finished up the process of creating legislative base for offering privileges to foreign investors. The law enables to use investment incentives for foreign investors under the same conditions as well as for Czech investors and their allocation is dependent on performance of given criteria. This law was secondly novelized in 2004<sup>13</sup>. The amendment came into the existence, when the CR entered to the EU. Changes in the system of investment incentives are maintained by the amendment; these changes were induced by the entrance of the CR to the EU and are essential with the view of transformation of competencies in the area of public support from the Office for protection of industrial competition on the EU commission.

The system of investment incentives contributed to higher inflow of investments, mainly in the industrial sector. It cannot ensure long-term success of investment though. Examples include the end of production of TVs Philips in Moravia, or departure of the enterprise Electronics from Brno. Crucial amount of inflow of direct investment was not related to offering of investment incentives and was motivated by different factors (such as geographic situation, cost of labour force) (Sýkorová, 2009).

### **4.1.3. The financial account and foreign direct investment**

The financial account influenced the overall balance results the most, as it was clearly visible in the “Chart 1”. Foreign direct investment was crucially important in the process of stabilization of the balance of payments. Its massive inflow started already in

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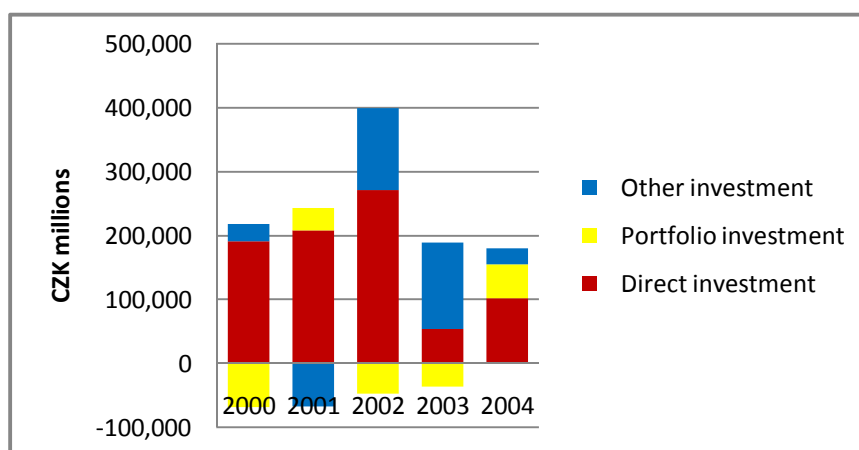
<sup>12</sup> Zákon o investičních pobídkách č. 72/2000 Sb.; translated by Barbora Sýkorová

<sup>13</sup> Novela zákona o investičních pobídkách č. 19/2004 Sb.; translated by Barbora Sýkorová

the second half of 90's. Direct investments include direct and non-direct owned affiliations, which are divided according to investor portion (%) in the equity capital or voting laws. So that, the division is as follows: subsidiary company (more than 50%), associated company (10-50%) and affiliates (100% owned long-term representation or offices of direct investor, land and buildings directly owned by non-resident; moveable devices operating in economy more than one year). Reinvested profit and other capital, including credit relations with direct investor, are also considered parts of foreign direct investment.

Inflow of foreign direct investment in the CR was differently intensive in each year related to the possibility of gaining share in large national enterprises with the perspective production of goods or services. Direct investment represented the greatest share of the financial account, except 2003, when the inflow of other investment exceeded the inflow of direct investment (see the "Chart 2"). Foreign investors had requirements for cleaning-up from the environmental stress, or were interested only in specific parts of an enterprise, when they entered selected enterprises.

**Chart 2: The structure of the financial account in 2000-2004**



Source: CNB (own chart, MS Excel)

First entry of foreign direct investors to Czech enterprises was realized already at the beginning of the economic transition (for example car company Škoda Mladá Boleslav, Sklo Union Teplice). Some privatization projects were not successful at the first attempt and after the agreement with foreign investor it led back to the compensation with the CR (for example Czech airlines). Some enterprises were privatized in stages (for example Český Telecom). Some investments finished up in an international arbitrary (for example TV NOVA) in consequence of foreign investor action, because the CR did not meet the agreement on protection of foreign investment.

Massive inflow of foreign direct investment was significant in the second half of nineties. It was related to the privatization of commercial banks and the creation of foreign commercial networks in the CR. The inflow of foreign direct investment influenced not only the structure of the balance of payments but also changed the structure of the economy and influenced the development of many macroeconomic

aggregates (prices, investments, production and personal consumption, development of consumer loans, revenues and expenses of budget).

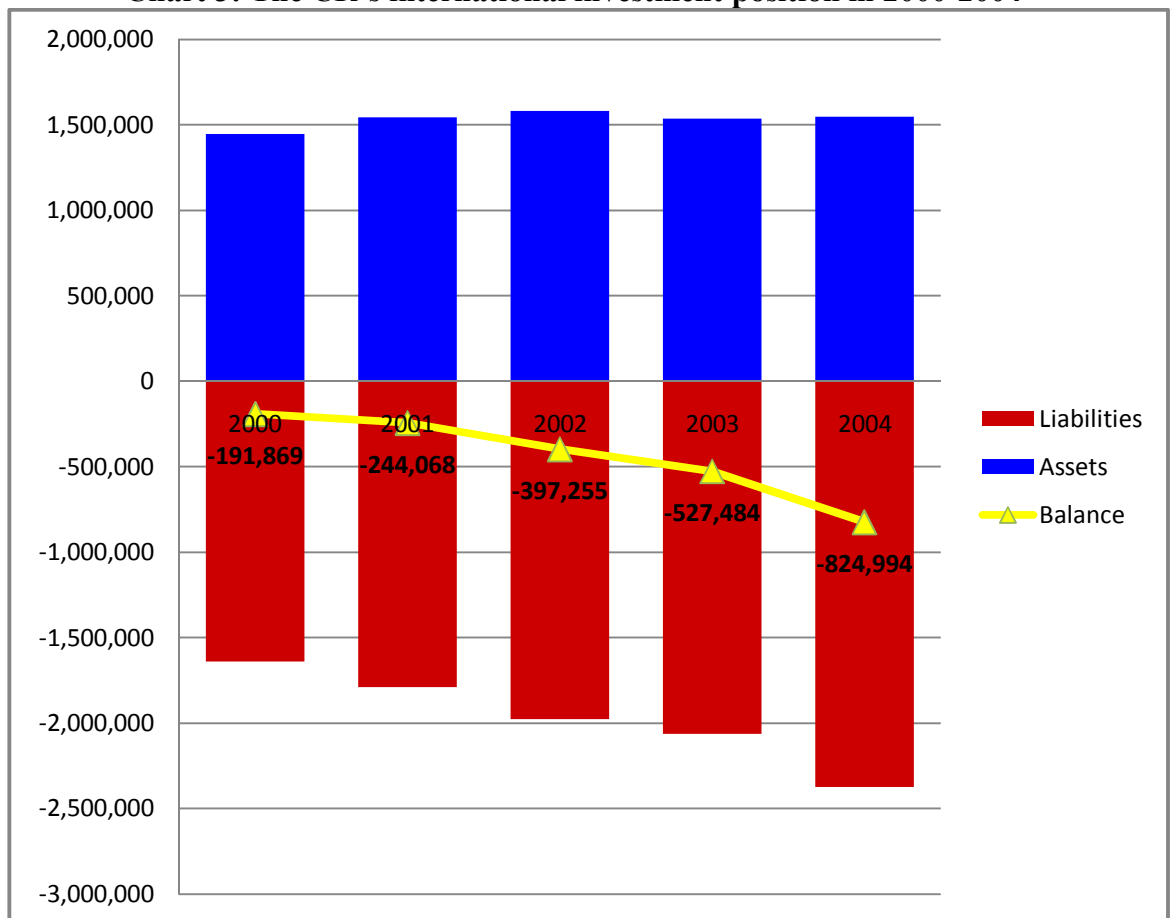
From the macroeconomic point of view, inflow of foreign direct investment in the CR was actually positive reality. It speeded up the structural changes in Czech economy. Due to the privatization of country's property, the CR gained means of great importance. A growth in profits of enterprises with foreign participation in the CR resulted in an improvement of macroeconomic aggregates of the CR on one hand (a rise in exports and a consequent improvement of the trade balance), but on the other hand, payments of dividends abroad decreased the extent of usage of produced GDP. In 1999, incomes from direct investments amounted to CZK 36 milliards and in 2006 it was CZK 180 milliards. At the macroeconomic level, GDP decreases by this amount while conversion to GNP in a given year, i.e. the amount of earned pensions from work and capital in a given year cleaned up of transfers in relation to abroad.

#### **4.1.4. Analysis of the international investment position and external debt**

The international investment position indicates the performance of Czech economy towards the rest of the world. The CR's international investment position (external financial assets minus external financial liabilities) has recorded a deficit since 1996 and therefore the CR is considered to be the debtor nation. Inward foreign investment has exceeded outward foreign investment in the whole observation period, (see the "Chart 3"). On one hand, it is a negative thing, because it causes a continual widening of the CR's international investment position deficit and consequently a rise in the CR's external debt. On the other hand, it is a positive thing, because the CR seems to be attractive for foreign investors due to several reasons. Firstly, investors believe that it can be a profitable business for them and a great challenge for the CR to develop and grow economically, lower unemployment, or just introduce new technologies. Secondly, the CR is the country, which other countries trust to, mainly due to its quite stable economy. Thirdly, the CR is very well geographically located. And lastly, the CR offers interesting investment conditions.



**Chart 3: The CR's international investment position in 2000-2004**



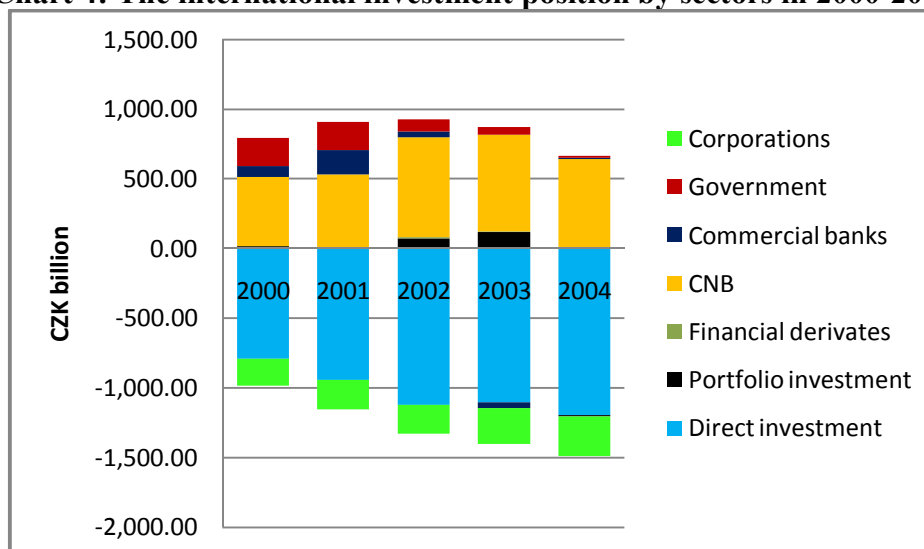
Source: CNB (own chart, MS Excel)

### The international investment position

The high foreign direct investment inflow was passing through into a widening deficit on the CR's *international investment position*. At the end of 2000, the international investment position of the CR showed a deficit of CZK 191.9 billion (EUR 5.5 million). There was an increase in the net debtor position of the state every following year, chiefly due to high capital inflow, heading primarily into the area of foreign direct investment. At the end of 2001, the investment position of the CR recorded a deficit of CZK 244.1 billion (EUR 7.6), which was connected to the greater rise in liabilities than in assets. The rise in assets was linked to the commercial banks, which recorded a significant rise in their creditor position vis-à-vis non residents, and to the increase in the CNB reserves. With regard to structure (see the "Chart 4"), the deficit on the overall investment position was mainly due to foreign direct investment, which showed a deficit of CZK 941.2 billion at the end of 2001. Regarding portfolio investment and financial derivatives, they both recorded a net outflow of funds at the end of 2001. Compared with the year earlier, the financial derivatives recorded an increase, while portfolio investment recorded a decline. It was mainly attributable to the impacts of September terrorist attacks in the U.S. on the international capital markets and also to

high losses of some bank and nonbanks resulting from unsuccessful trading in non-standard foreign securities. The CNB had the largest creditor position abroad (CZK 524.6 billion). The commercial banks had also the creditor position and recorded an amazing increase compared to the previous year. The outflow of banking sector funds went mainly into short-term foreign currency deposits with foreign banks. The government sector also maintained its position as the creditor abroad (CNB, BoP reports, 2000, 2001).

**Chart 4: The international investment position by sectors in 2000-2004**



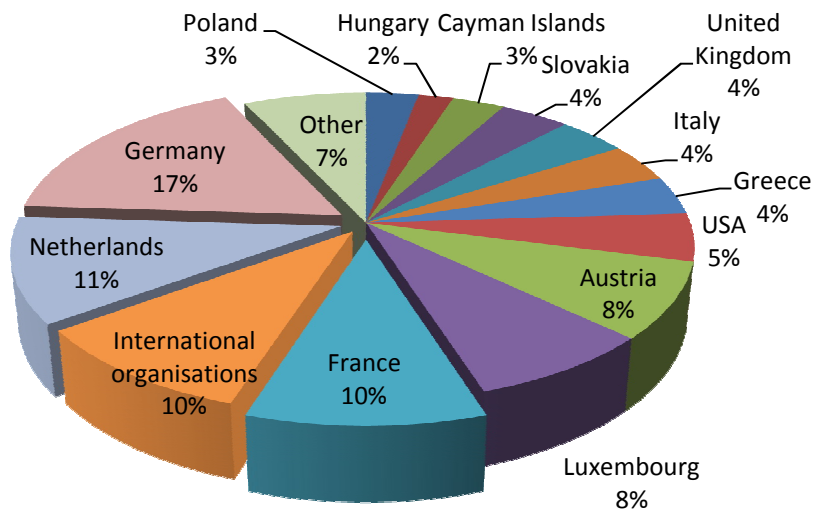
Source: CNB (own chart, MS Excel)

At the end of 2002, the international investment position of the CR showed a deficit of CZK 397.3 billion (EUR 12.6 millions). Compared to the year 2000, the deficit more than doubled chiefly due to the large inflow of foreign direct investment in the CR and the deficit on the current account. Another important thing that affected the international investment position was the appreciation of the Czech koruna, mainly against the US dollar (at the end of 2001 the USD rate had been CZK 36.259 and at the end of 2002 the USD rate was CZK 30.141; the very high rate in 2001 was related to the terrorist attacks in the U.S.). Regarding the structure, the largest contributor to the overall deficit of the international investment position was direct investment, which exceeded CZK 1 billion. Portfolio investment showed a considerable net increase in its creditor position compared to the year earlier. Domestic investors invested their free funds mainly in long-term securities (65%, compared to 2001 it was 59%), followed by equity securities (32%, in 2001 it was 37%) and least of all, short-term bonds (3%, in 2001 it was 4%). Financial derivatives also recorded a net increase in creditor position and a net surplus of CZK 8.9 billion. The CNB, having the largest creditor position, recorded a rise in assets. The incredible rise during the year was due to the growth in international reserves, which were encouraged by intervention purchases of foreign exchange, by the depositing of National Property Fund revenues from the sale of Transgas on a CNB account, and by exchange rate movements. The commercial banks and government had the international net creditor position but both recorded a net decrease in their creditor positions. The change in the investment position of

commercial banks was affected mainly by their individual strategies for changing their asset structures in response to movements in the interest rate differential and their preference for holding their foreign assets in foreign securities. The government surplus decreased as a result of debt repayment by the Russian federation in the first quarter of 2002. As previous years, the foreign funds were mostly channelled to the corporate sector, having the debtor position abroad (CNB, BoP reports, 2002).

At the end of 2003, the international investment position of the CR recorded a deficit of CZK 527.5 billion (EUR 16,3 millions). Worsening of the international investment position was related to the growth in liabilities and the fall in assets. In 2003, the ratio of the international investment position to GDP was already 20%. The international investment position was affected by developments in the balance of payments and by exchange rate regimes. With regard to structure, the contribution of the individual areas to the overall deficit was different than in previous years. There was recorded no rise in direct investment. The result was affected by the lower volume of privatisation and the departure of a major foreign investor from Eurotel and Telecom. Portfolio investment recorded a slight improvement in the creditor position. The portion of domestic investments in long-term securities increased considerably (86%), while investments in equity securities fell sharply (14%) and there was almost no capital invested in short-term bonds. This sharp fall was a result of the sale of mutual fund shares allocated in the Cayman Islands. By territory, securities issued in the EU countries accounted for most of the assets of domestic investors (see the "Chart 5"). Non-residents invested mainly in financial intermediation and insurance (38.1%), transport and telecommunications (24% - including the purchase of Telecom shares from a foreign investor by institutional investors), power generation (16%) and services (15%). By territory, most investment came from the Netherlands (21%), the USA (19%), Great Britain (17%), Germany (13%) and Luxembourg (10%). Financial derivatives showed a slight decline in a surplus. Even the CNB recorded a fall in the creditor position. The reason was the reduction in the amount of international reserves. Besides the exchange rate changes in 2003, foreign exchange was sold to the government for the early repayment of government loans and to pay costs resulting from arbitration in the case of the Czech Republic against CME concerning TV NOVA. In 2003, the commercial banks lost its creditor position and changed to the debtor position. The change was caused chiefly by a fall in short-term assets (deposits abroad) and an increase in short-term liabilities (liabilities to foreign banks and clients). The assets structure of commercial banks changed, with funds from foreign deposits being used to purchase foreign bonds. The government sector continued to worsen its creditor position. Due to floods in the CR and bad transport infrastructure, government drew loans from the European Investment Bank to remedy flood damage and for transport infrastructure. The corporate sector continued to be the second largest contributor to the overall deficit of the investment position. To finance expensive corporations' activities, it was necessary to draw loans both from parent companies and foreign banks, which had the negative effect on the investment position of the corporate sector (CNB, BoP reports, 2003).

**Chart 5: Foreign securities held by residents as at the end of 2003 by territory**



Source: CNB (own chart, MS Excel)

At the end of 2004, the Czech Republic's international investment position showed a deficit of CZK 825 billion (EUR 27.1 millions), representing 29% of GDP. In 2004, the rise in liabilities was related to capital inflow in the form of portfolio and direct investment. The fall in assets was due to a decrease in the CNB's international reserves and a decline in government assets. Other factors affecting the international investment position of the CR included the appreciation of the koruna's exchange rate against the euro and the dollar. Regarding the structure (see the "Chart 4"), the negative international investment position was affected by all the components of the investment position except the commercial banks, which did not contribute to the increase in the investment position deficit. The rise in direct investment deficit was a result of reinvested earnings and capital increases in existing investments. Portfolio investment showed the sharpest year-on-year change in its position. In 2004, portfolio investment switched from the creditor to debtor position. The change was connected with non-residents's investment in securities issued by Czech entities and denominated in both koruna and foreign currencies. Besides this, the growth in prices of koruna non-debt securities held by non-residents also contributed to the rise in liabilities. Investment of domestic investors abroad increased, but in a really small extent. The CNB, the largest creditor, recorded a decrease in assets thanks to the valuation changes stemming from the koruna's appreciation against the euro and the dollar. Commercial banks recorded a significant improvement, giving it back its international creditor position. The change in the net investment position was affected by the growth in total assets and a decline in liabilities, which was probably related to optimisation of fund allocation by parent banks. The government's creditor position declined even more than in the previous year. The fall was caused by the settlement of bad debt dating from the period of central planning. The rise in liabilities was chiefly affected by an increase in long-term loans drawn by government sector from international institutions for anti-flood measures and

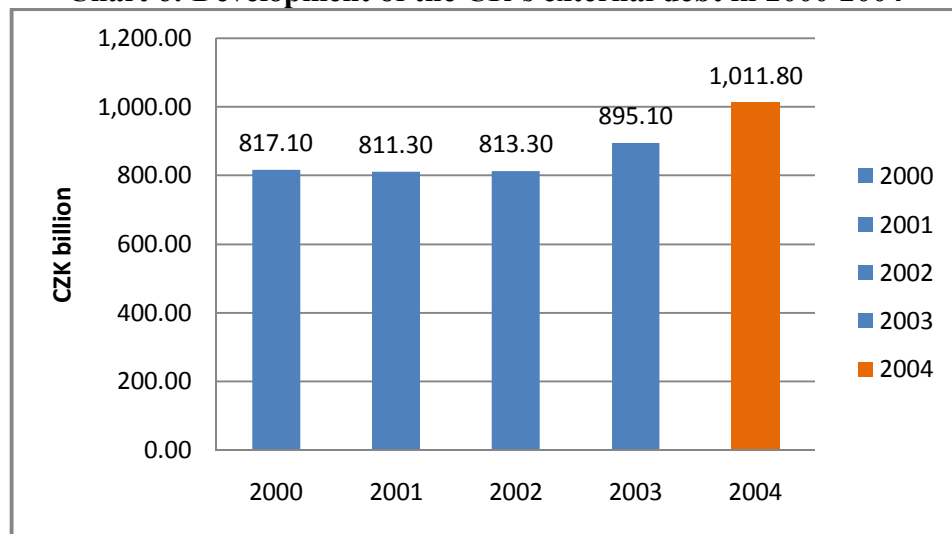
transport infrastructure development. As in previous years, the corporate sector widened its deficit, it was due to funds drawn from abroad (loans and supplier credits) (CNB, BoP reports, 2004).

### **The external debt**

The total *external debt* of the CR showed a modest drop in 2000, it decreased to CZK 817.1 billion (EUR 23,3 millions), but it still remained at a relatively high level, slightly above 37% of GDP. The external debt/GDP ratio showed the strong dependence of the Czech economy on foreign resources. The share of short-term debt in total debt has been gradually increasing since 1997. At the end of 2000, the short-term debt represented 42% of the total. The indicators of the country's external stability in terms of debt characteristics relative to GDP (the external debt, debt service and the investment position trend) do not differ from those in neighbouring transition economies. Because of the massive foreign direct investment inflow, the current account imbalance did not pose a direct risk for the time being. The potential combination of unfavourable external factors (the price factor, including exchange rate developments, and a fall in demand in EU countries), the internal public finance imbalance and slowing of foreign direct investment inflow could increase foreign entities' sensitivity to the trade imbalance (CNB, BoP reports, 2000).

In 2001, the downward trend in the Czech Republic's external debt continued (see the "Chart 6"). At the end of 2001, the total external debt declined to CZK 811.3 billion (EUR 25,4 millions). The fall in the total external debt was related to a fall in long-term. The time structure of the debt developed favourably, with a great fall in long-term debt and with a slight rise in short-term debt. Debt of around CZK 7 billion was repaid to the former German Democratic Republic. The most significant fall in long-term debt in convertible currencies was recorded in the banking sector thanks to repayments exceeding drawings on new credits from abroad. By contrast, the corporate sector and the government sector showed a rise in long-term foreign liabilities compared to the previous year. Regarding the short-term liabilities, the commercial banks and the government sector recorded a decline in liabilities. A rise in short-term liabilities was recorded only in the corporate sector. The external stability indicators in terms of debt characteristics recorded a year-on-year improvement in 2001. The repayment of external debt corresponded to 8.6% of annual exports of goods and services. The most favourable factors included a fall in nominal debt below the level of 35%, a greater coverage of debt and debt service by exports, and a favourable trend in short-term debt relative to the international reserves. The extent of the external imbalance, especially on the trade balance, can be considered reasonable given the possibilities of financing the imbalance by the foreign capital inflow (CNB, BoP reports, 2001).

**Chart 6: Development of the CR's external debt in 2000-2004**



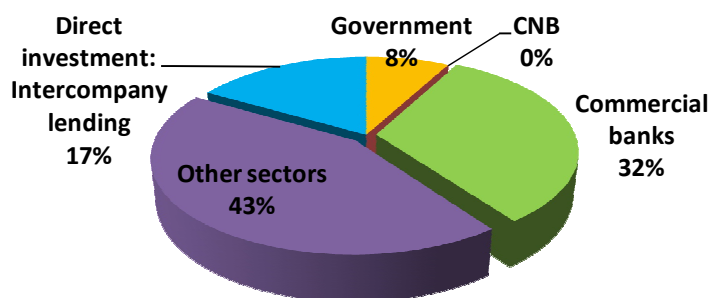
Source: CNB (own chart, MS Excel)

At the end of 2002, the total external debt of the CR increased by CZK 2 billion in comparison with 2001, but was still lower than in 2000. The total external debt amounted to CZK 813.3 billion (EUR 25,7 millions). The ratio of external debt to GDP decreased furthermore to 33%. The result was affected by a decrease in the short-term liabilities on one hand and by an increase in the long-term liabilities on the other hand. The slight fall in the overall debt was partially affected by the appreciation of the Czech koruna, mainly against the dollar and as a result, the fall in the total debt was not so significant. The external stability indicators developed favourably in 2002. The development of the balance of payments in 2002 can thus be seen as consolidated. The potential risks were related mainly with external factors such as prices of raw materials and a world economic recession (CNB, BoP reports, 2002).

In 2003, the upward tendency in the CR's external debt continued. At the end of 2003, the total external debt increased to CZK 895.1 billion (EUR 27,6 millions). The ratio of the external debt to GDP rose to approximately 35%. The public sector's share of the long-term external debt was about 41%. The government sector contributed to the increase in the long-term debt more significantly than in previous years, it was due to the drawing of loans from the EIB for the construction of anti-flood measures and transport infrastructure, as well as for regional development purposes. However, the major contributor to the long-term external debt was the corporate sector, whose share to the long-term external debt totalled to 73%. As regards the external debt indicators, they showed a positive development, they stabilised in 2003 and did not signal any increased risk for the further development of external economic relations. But due to the reduced inflow of foreign direct investment, it was necessary to use debt instruments to finance the current account deficit as there was no possibility to cover the deficit by direct investment. Consequently, it led to a rise in the external debt. These factors affected the CR's perception by foreign investors, particularly at the end of the year, which also influenced the sentiment regarding the Czech koruna's position on the foreign exchange market (CNB, BoP reports, 2003).

The total external debt exceeded CZK 1 billion at the end of 2004, exactly it amounted to CZK 1,011.8 billion (EUR 33,2 millions). The growth in the external debt was linked to the rise in the long-term liabilities. The government sector accounted for most of the rise in the long-term debt, representing 23.4% of the CR's total long-term debt. The corporate sector and the banking sector recorded the highest increase in the short-term liabilities. With regard to the instruments used in the external debt structure, loans and deposits from banks and corporations contributed the highest share (around 40%). The growth in the external debt of the government and corporate sectors generated a rise in the ratio of external debt to GDP (36%) in 2004. Despite the GDP growth achieved, growth in liabilities with fixed maturity has been visible since 2002. As a result, the ratio of the external debt to GDP has been worsening. But, according to the international standards (IMF), the external debt of the CR was still considered to be at a safe level, i.e. below 40% (CNB, BoP reports, 2004). The average percentage share of individual sectors to the total external debt in the first observation period is provided in the "Chart 7". Data about the development of the international investment position are provided in the "Supplement 2" and data about the development of the external debt in the "Supplement 3".

**Chart 7: The average percentage share of sectors to the CR's external debt**



Source: CNB (own chart, MS Excel)

To summarise, the growth in the CR's international investment position deficit was linked to high inflow of funds from abroad, especially in the form of direct investment, and a rise in the CR's debt abroad. The foreign funds were mostly channelled into the corporate sector, which has always recorded the debtor position abroad. The CNB, on the contrary, had the largest creditor position, owing to the international reserves. The commercial banks also represented the creditor position abroad each year, except 2003. Concerning the portfolio investment, domestic investors invested their free funds mainly in long-term securities, then in equity securities and at least in short-term bonds. By territory, securities issued in EU countries accounted for most of the assets of domestic investors. The portfolio investment had also the creditor position abroad each year, except 2004. By the end of 2004, the IIP deficit widened by more than CZK 600 billion compared with the year 2000. The ratio of the IIP to GDP was 8.8% at the end of 2000, while at the end of 2004 it amounted already to 29% of GDP. The external debt was slightly decreasing in 2001 and 2002 but it started to increase by the end of 2003 and in 2004, it even exceeded CZK 1 billion. The corporate

sector accounted for the greatest share of the total external debt in the first observation period. The share of short-term debt was slightly decreasing. In the debt breakdown by instrument, loans and deposits represented the largest portion of the total debt. The ratio of external debt to GDP was 35% on average, which is below the sensitive level of 40% according to the IMF. Overall, the development of the CR's international investment position and external debt statements proved the stabilization of the Czech economy and its external relations.



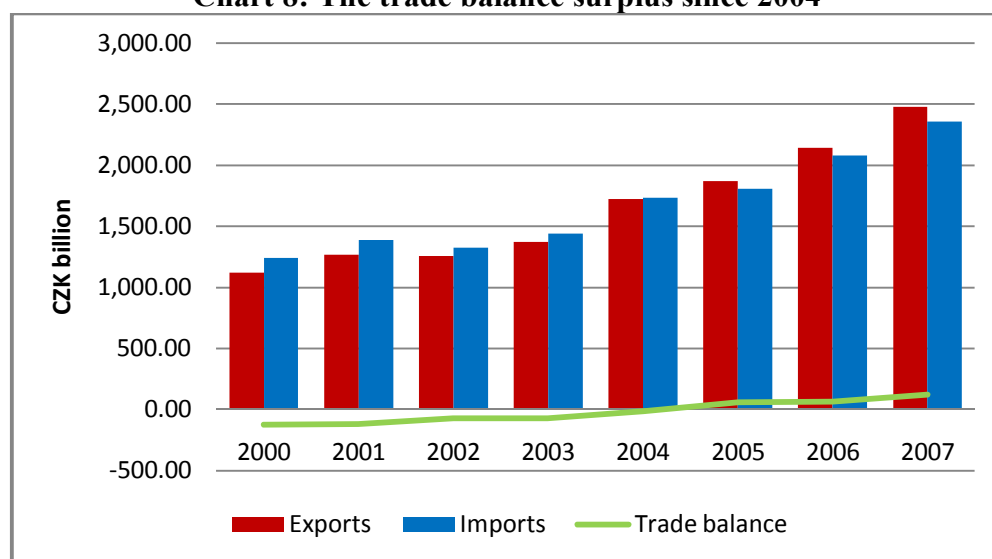
## **4.2. The analysis of the CR balance of payments, international position and external debt after the entrance to the EU (2005 – 2007)**

### **4.2.1. External environment and its effect on the balance of payments**

On 1 May 2004, the process of the CR's integration into the European Union was finished by the full EU membership. The accession of the CR into the EU was the formal end of transition process from the centrally planned economy to the market economy. By the signature of the Association Agreement already in 1993, the CR established a framework for liberalization of trade with the EU and CEFTA countries. By the accession to the EU, the CR agreed that the country will follow standards build up by the European integration for several decades and will struggle for the introduction of Euro currency in the shortest period as possible. Integrated processes in the EU countries were not straightforward; in some cases it was even inevitable to give in previously proclaimed intentions, due to different economic and political reasons. This also touched the process of introduction of euro currency. Due to the outbreak of world financial crisis at the end of 2007, the introduction of euro currency has been out of the debate. New EU members differed in their economic levels, schemes of monetary policy and exchange regimes. The above reasons made the integration process more complicated. Therefore, nominal and real convergence in individual countries had to proceed in different channels and accomplishment of stated Maastricht criteria, which are necessary assumption of the entrance to the Euro-zone, in the period of rapid economic growth, are becoming hardly achievable in most EU countries. The admission of the CR to the EU was related to liberalization of its regulated trade in selected goods categories, e.g. agricultural products, and cancellation of customs and administrative barriers and started applying the EU Customs Tariff duties and import quotas towards third countries. Norms of the EU have become part of the Czech law and began to influence directly, or indirectly some items in the balance of payments. The above agreements created conditions for drawing on the EU funds prior to accession and full connection to those funds after accession. In 2004, the CR's balance of payments was favourably affected by the external environment. The period of the world economic recovery fostered growth in Czech exports. Export of machines and equipment, and export of cars were the most significant factors in improving the trade balance. Economic growth in the EU countries was the key factor underlying the increase in sales of Czech products. Demand for Czech goods also rose year on year in advanced market economies outside the EU (the USA and Japan) and in newly industrialised Asian countries. The economic recovery in advanced countries and the high demand for raw materials, energy and semi-manufactures in the fast growing Chinese (and Indian) economy pushed up prices on world markets. Since May 2004, the U.S. showed an increasing external imbalance and rising state budget deficit, which resulted in a depreciation of the dollar-euro exchange rates on the world market. This was also reflected in the koruna-dollar exchange rates, which, in turn, softened the impact of the dollar prices of raw materials on the Czech economy.

The growth of production in manufacturing industry was the result of foreign direct investment inflow in the CR, mainly in the car industry and electro-technical industry. In some cases, components necessary to finish an engineering product are mostly produced in the CR (car industry), while some components are imported (mainly from Asia) and the final product is completed in the CR (production of computers and consumer electronics). The growth of export was related to the growth of import (components) and the surplus of trade balance was created by the value added by manufacturing in our territory (see the “Chart 8”). On the side of imports, chemicals and fuels also had an important representation. Since 2005, the turnover of foreign trade started to increase and the trade balance has recorded a surplus. It was due to many reasons, such as building of logistic parks in the CR, budget-priced renting of storage areas in the CR (lower than in the Western Europe) and opening borders for free movement of goods after the admission to the EU (while having relatively good road-traffic infrastructure). The growth in foreign trade turnover was then related not only to the cooperation in the area of production, but also in the area of logistic (storage) services in the CR after opening the EU borders.

**Chart 8: The trade balance surplus since 2004**

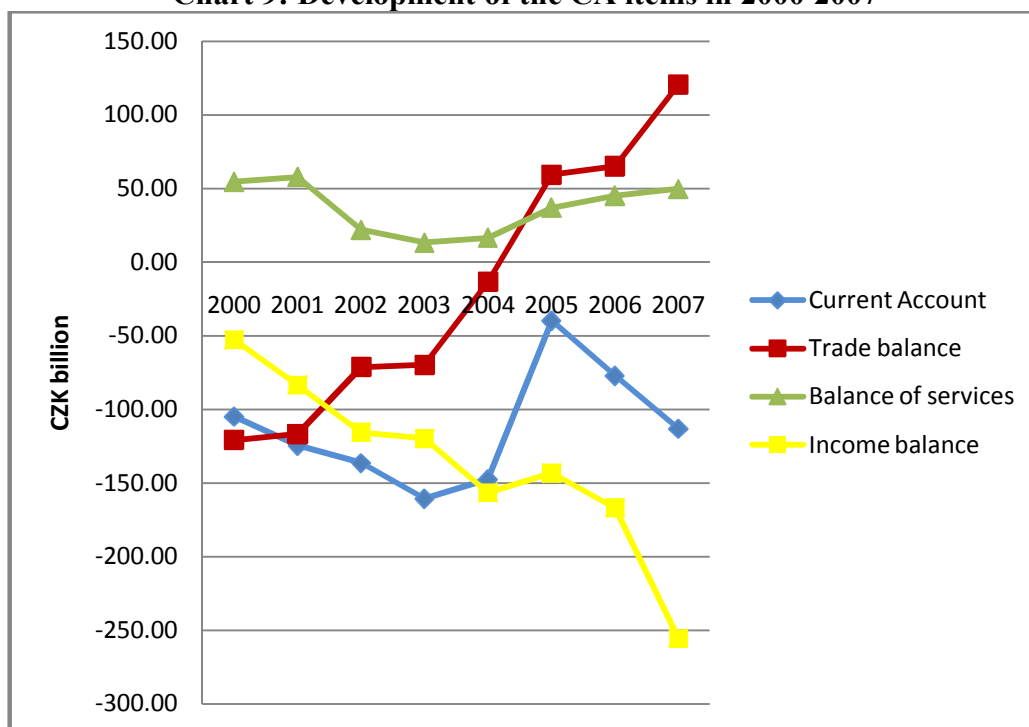


Source: CNB (own chart, MS Excel)

The adoption of new laws (the amendment of VAT law) enabled to foreign enterprises to be registered as a payer of VAT in the CR. These enterprises, which were usually connected to the enterprises in the CR, fostered the growth in imports and exports and as a result significantly participated in the growth of surplus in the trade balance. Payments of VAT and confirmed claims to refund VAT influenced the balance of transfers, chiefly due to time disharmony (Sýkorová, 2009).

Transactions between the CR and the EU budget are recorded in the balance of current transfers and in the capital account. New item recorded in the capital account is the trade with emission permits. Emission permits are declared by the EU and it relates to laws to emit greenhouse gases CO<sub>2</sub><sup>14</sup> (Sýkorová, 2009).

**Chart 9: Development of the CA items in 2000-2007**



Source: CNB (own chart, MS Excel)

*The BOP current account* showed a slight improvement compared to the first observation period (see the “Chart 9”). Besides the improvement of trade balance, the balance of services was also improved after the entrance of the CR to the EU. In the balance of other services, improvement was seen in those transactions, which showed a passive balance in the previous period. Enterprises with foreign participation, focusing on audit, accounting, development and sales of software, logistics, and commercials and so on, started to open its subsidiaries in the CR and offer its services not only to domestic firms, but also to firms with their official seat abroad. A passive growth in the balance of transfers is still continuing. At the end of 2007, the deficit of income balance increased to CZK 255.7 billion (in 2000, it was only CZK 52.9 billion). The growth in

<sup>14</sup> One emission enables to release one ton of greenhouse gases. Enterprises in whole Europe made reserves of emissions, which exceeded their needs. Energetic enterprise CEZ gained more than CZK 3 milliards on sale of permits in 2006, because its estimations, concerning the development on the market of emissions, were correct. CEZ sold its emission permits at price of about EUR 20. First emission of permits was for years 2005-2007 and then their validity ends. For following period 2008-2012, the European Commission will put higher restrictions in allocation of permits and it is possible to expect that their price will go up.

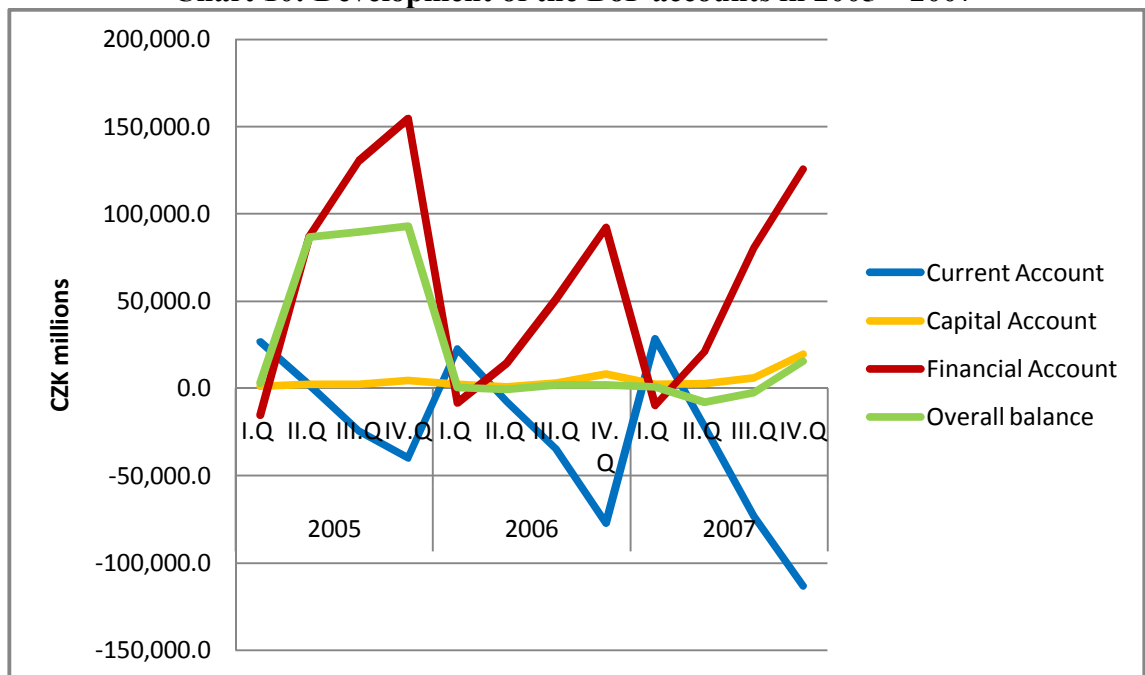
expenses was related to the higher revenues from property investments for foreign investors and the growth in incomes of foreign workers employed in the CR. Year-on-year increase of incomes was connected on the contrary with an encashment of interests from bonds.

Compared to 2006, the number of foreigners employed in the CR increased almost by a quarter; according to the CSO estimations, the number exceeded 256.5 thousands of foreign employees, employed in local enterprises. From the BoP point of view, the rise in the number of foreign employees, employed in the CR, was linked to the increase in the income expenses, including social insurance deductions, by about 20%. As regards the Czechs, employed abroad, their incomes remained at the same level. Despite the gradual opening of labour market in the EU, the number of Czechs employed abroad did not change very much and according to the CSO information, their number reached only 27.6 thousands at the end of 2007 (Sýkorová, 2009).

Domestic investors received increased dividends especially from portfolio investment abroad. Direct investors did not record any significant increase in their dividends. As the domestic enterprises, in the foreign ownership, showed the favourable economic results, the foreign owners could enjoy greater dividends. Profit for direct investors increased, while the profit for portfolio investors decreased. It was the opposite situation to the situation in the CR. An expected amount of profit left by foreign investors for further development of enterprises with their portion was still increasing in the CR. On the contrary, the amount of profit reinvested abroad has slightly decreased. Holding of foreign securities brought higher revenues to domestic portfolio investors, as well as to foreign investors from holding of securities of domestic enterprises. In principle, all interest revenues came from holding of long-term securities. Banking sphere had a significant influence on an improvement of interest balance from other financial assets and liabilities. More than 70% of achieved growth in the interest revenues was attributed to the CNB exchange reserves. The higher interests paid abroad were proved by the government sector. Besides the interests calculated from the value of a contract related to the lease of air-fighters from Sweden, almost all interest payments were connected with the credits received from the EIB. Interest revenues from government loans abroad, issued earlier, were insignificant (Sýkorová, 2009).

The balance of current transfers has recorded the passive balance since 2006. The transfers of government sector dominated on the credit side and the private transfers on the debit side. The balance of government transfers was influenced mainly by the higher tax deductions from incomes and social insurance subsidies as a result of growing number of foreigners employed in the CR. The government transfers also recorded an increase in the VAT refunded to non-residents, also a slight rise in subsidies paid to the international organizations and a growth in pensions paid abroad. The negative balance of private transfers was affected by an increase in outflow of means in the form of gifts and heritage, a decline in remittances (payments to the CR from abroad) and other transfers of households. On the contrary, the tax deductions from incomes and social insurance of Czech citizens working abroad fell (Sýkorová, 2009). The development of individual accounts is provided in the "Chart 10".

**Chart 10: Development of the BoP accounts in 2005 – 2007**



Source: CNB (own chart, MS Excel)

*The capital account* has shown surplus since 2005. The development of the capital account was affected mainly by incomes from the EU structural funds (CZK 19.6 billion).

*The financial account* has recorded the positive balance throughout the whole observation period (2000-2009) with the tendency of slight decline (from CZK 177.3 billion at the end of 2004 to CZK 125.8 billion at the end of 2007). Active balance of the financial account was influenced by direct investments mainly (CZK 179 billion in 2007). A growth in the reinvested profit (CZK 130 billion) contributed the most. In 2005, the privatization of Czech Telecom and Unipetrol dramatically increased inflow of direct investments (up to CZK 279.6 billion), which was then linked to a rise in the exchange reserves (up to 92.9 billion) milliards), because government exchange revenues coming from the privatization were saved in the CNB.

Outflow of capital abroad, in the form of direct investment, was gradually increasing. The growth in outflow of capital was connected with the CEZ acquisitions abroad, enabled by an achieved level of liberalization in capital outflow and with a new possibility to use the status of European company<sup>15</sup>.

<sup>15</sup> The European company (Societas Europaea; SE) is the capital commercial enterprise, established by the European Council. It is arranged by the Council Regulation no. ES/2157/2001 on the Statute of a European company and Council directive 2001/86/ES, which also complements the statute of European company with the view of employees' involvement. In the case of the CR, the European arrangement is

With regard to the item of portfolio investment, in the period of restructalisation of financing governmental loans, government started to use emissions of securities to finance its loans. Public (for example Czech Export Bank, CEZ) and private enterprises (for example leasing enterprises) also started to use emissions of securities abroad for its financing. Concerning the foreign investors, their interest in investments in Czech securities slightly decreased. On the contrary, Czech investors showed a greater interest in foreign assets and loan instruments. The development of portfolio investment, while speaking about securities, was also affected by an interest differential of Czech currency according to foreign currencies. The market of portfolio investment was affected by many domestic and foreign economic factors. The outbreak of financial crisis triggered by the collapse of the banking system in the U.S. at the second half of 2007 was among the most serious events.

The item of other investment showed up an outflow of banking sector sources abroad, especially in the form of short-term deposits in foreign banks, and issuing of long-term loans to foreign entities. On the credit side, an increase in Czech deposits was recorded. Debit side of other investment was influenced by loans drawn by the government sector from the EIB at the national and regional level to build the infrastructure. The corporate sector recorded the largest portion of capital inflow, chiefly owing to long-term credits drawn from foreign banks and parent companies.

*The change of exchange reserves* was influenced by revenues coming from the administration of exchange reserves abroad, the government exchange revenues from privatization of assets saved according to agreements between government and Czech National Bank in its accounts and operations for its clients. In 2006, Czech National Bank was selling a part of its revenues from exchange reserves from previous period, which resulted in decrease of reserves from CZK 92,9 billion in 2005 to CZK 2,1 billion. Data about the development of the balance of payments in the CR are provided in the “Supplement 1”.

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followed up with implementing law no. 627/2004 about European company. SE can be registered in any member state of the European Union, and the registration can be easily transferred to another member state. There is no EU-wide register of SEs (SE is registered on the national register of the member state in which it has its head office), but each registration is to be published in the Official Journal of the European Union. Base capital is EUR 120,000 and taxes are paid in all EU countries, where SE functions. In 2007, company Koh-I-Noor become the European joint-stock company with its head office in Luxembourg. Outflow of portfolio investment was the result of diversification of structure of actives of banking and non-banking subjects.

#### 4.2.2. Impacts of the EU membership on the balance of payments of the CR

By the date of the CR entrance to the EU, the CR accepted to be a part of the customs union in the EU. In relation to third countries, i.e. non-member countries of the EU, the CR gave up its sovereignty while creating foreign trade policies and became to use the common trade policies of the EU. Before the CR's integration into the EU, the CR applied different trade political regimes towards its trade partners and tradable items, which corresponded to its own commercial interests. The *common trade policy*, besides associated and developing policy, was the most important item of the external economic relations. Its importance lies in the united regulations of exports and imports of member countries and in their common representation in trade questions towards third countries. Overall, the common trade policy facilitates the enforcement of the EU interests in the international trade. Also the position of the EU on the world market (the largest world exporter and second largest importer) ensures the quality and success of the common trade policy. The EU also assures an advantageous access for member countries to third markets by all possible instruments. And on the contrary, it opens its market for goods coming from third countries, whereas it controls very strictly, if international trade rules are followed. In the case of their violation, it applies arrangements for protection of its interests.

The EU has *preferential contractual relations* with many of non-member countries. The preferential agreement, i.e. an agreement of creating free trade or customs union, which assures more beneficial conditions for exchange of goods between trade partners; it is actually more convenient than the application of endorsement of highest advantages. The preferential trade agreements cover about 40% of trade between the EU and third countries, non-preferential agreements cover about 49% of trade. In the case of the CR, the share of trade on the basis of preferential agreements covered almost 60%, while non-preferential agreements covered about 20% before the entrance to the EU<sup>16</sup>.

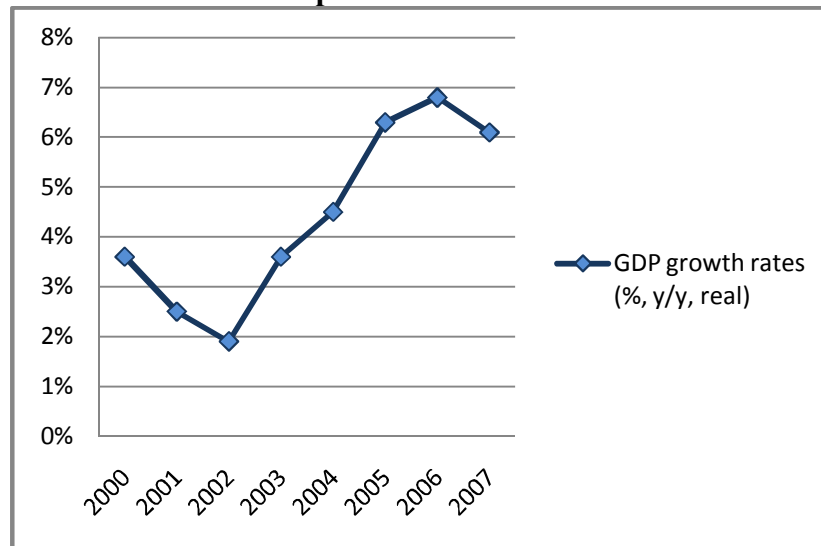
By the accession to the EU, the CR accepted agreements concerning also trade with countries, with which the CR had never signed any preferential trade agreements before. The EU agreements have a wider extent of preferences and a wider territorial coverage. Therefore, in the case of some Czech regions, the CR noted a great improvement thanks to the entrance to the EU. It touches for example bilateral agreements with countries of Latin America or Mediterranean, where the EU has a very wide contractual base. Before the entrance to the EU, the CR had only several bilateral non-preferential trade agreements with those countries. Thanks to these agreements, trade between the CR and mentioned countries runs according to the preferential

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<sup>16</sup> The highest share of preferential agreements was covered by trade with CEFTA countries and other European countries with free trade. PLCHOVÁ, B.: Dopady změn v zahraničněobchodní politice na českou ekonomiku po našem vstupu do EU, In: Acta Oeconomica Pragensia, 3/2004, p. 140-141. Translated by Barbora Sýkorová.

customs duties and as a result it is cheaper. Besides this, the Czech market opened more to new preferential partners. Generally, the economic performance of the CR, expressed in GDP growth rates (% , y/y, real), sharply increased after the entrance to the EU (see the “Chart 11”), then slightly decreased at the end of 2007.

**Chart 11: Economic performance of the CR in 2000-2007**



Source: CSO (own chart, MS Excel)

The only change in non-preferential relations is that after the entrance to the EU the CR cannot use any advantages coming from the application of General system of preferences. This system allowed duty-free export of chosen products to markets of developed partnership countries, mainly the U.S., Canada and Japan. According to an analysis of the Czech Ministry of Industry and Trade, the termination of the application of General system of preferences should not have any crucial impacts on the structure of Czech export but it is possible to predict that some of Czech exporters will not be able to stay on these markets because of a required increase in customs duties in the final price of product, other exporters will switch to products of given export categories with lower customs duties. On top of this, the application of the General system of preferences concerning import from countries of the OECD is a certain exception and cannot have long-term character. In relation to transforming countries, or countries with a state economy, trade political regime of the CR did not changed very much. The only change was the extension and reinforcement of platforms for interrelated industrial relations. Also any radical changes should not be made in the trade political relations towards developing countries. The CR will offer, as well as other EU member countries, a preferential care to African countries, Caribbean area and Mediterranean (i.e. a group of countries ACP) and to other developing countries. Due to low trade with those countries, impacts on Czech imports should not be significant.

The obligatory adaption of the EU common trade policy was not viewed as a main problem, because the CR has focused just on the foreign trade with the EU for a long-term period. *“Handover of sovereignties in the areas of external trade policies to*



*the hands of the EU does not mean practically any real damage, because in consequence of accepted obligations (WTO, European agreements) the CR has very limited or even minimal political territorial possibilities. Compared with more powerful partners, the CR must always conduct according to expected "good morals", because it cannot really participate in any trade wars with them"* (Foltýn, Hřích, 2001, p. 30; translated by B. Sýkorová). The liberalization of movement of capital was one of the obligations towards the EU and the OECD at the time of the EU entrance debates. In comparison with the EU countries, which liberated the movement of capital for almost 50 years, the process of liberalization of capital movement was really short (15 years) in the CR. However, it is impossible to compare completely different periods of time. The CR started to communicate with developed market economies at the beginning of the nineties; it was the time of globalization of financial markets and liquidation of control of capital movement. Free movement of capital was one of the main policies of the EU, in which the CR wanted to integrate and therefore, it was necessary to accept the "rules of the game" of larger entity.

By the Czech integration into the EU, assumptions for full connection to the EU budget on the credit and debit side were created. Government transfers are recorded in the item of current transfers in the BoP current account and transfers from the Cohesion Fund and structural funds are recorded in the capital account, which also created the base for industrial policy and social cohesion in the EU. Before the entrance to the EU, the CR drew only chosen union funds in the form of so called the pre-entrance programs. After several complicated meetings, the final proposition of a clear position of the CR in 2004-2006 was ratified on the amount of EUR 778 million (CZK 24 billion). Besides this, the trial to enforce the direct compensations to the budget was successful; it actually eliminated the possibility that the CR would be a clear contributor to the EU budget of in first six years of its membership. The amount of means supplied to the EU budget is derived from the amount of gross national product (gross domestic product minus the balance of transfers to abroad, i.e. for example dividends) and its transfers are obligatory. On the credit side, means are entitled and their drawings depend on a preparation of national projects. National means for co-financing must be declared at the same time with national projects. Means from the budget can be used in period of T+2 since the introduction of entitlement. Means given to the CR for the period 2004-2006 was then possible to use to the year 2008.

The statistics of the balance of payments observes transactions in the accounts connected with transfers of means between institutions of the EU, the Commission budget and institutions in the CR. Means from the European Funds are transferred in favour of the National Fund of Czech Ministry of Finance, which is the payment agency for implementation of structural operations. Payments for agricultural policy are recorded as revenues in the specially created account of Czech Ministry of Agriculture. Revenues are realized in EUR and are converted by the exchange rate used for a given transaction into the BoP.

The clear position of the CR towards the EU budget, calculated as a difference of total transfers from the budget and transfers to the EU budget, reached the positive balance in the period of 2004-2007 and the CR received CZK 9, 5 billion from the EU

institutions. In the balance of payments, interrelated transfers are recorded in the current account in the item of government transfers.

A payment of capital and reserves of the EIB is recorded in the financial account and represented the passive balance in the amount of CZK 0,8 billion. In 2006, the financial perspective of the EU (i.e. the financial frame of the EU) was agreed after complicated meetings. The financial frame is accepted in the form of Inter-institutional agreement, i.e. the agreement between the European Commission, the European Parliament and the Council of the EU. The object of agreement is the principle budget priorities of the EU and setting of expense constrains for each of these priorities.

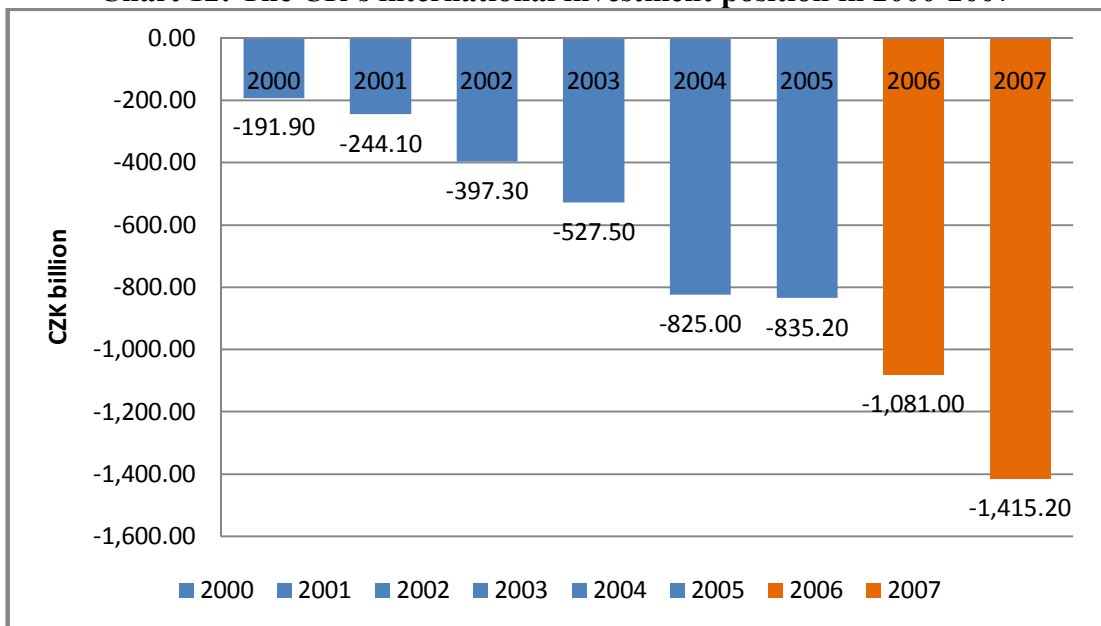
The financial perspective is arranged for the period of five to seven years. The final form of financial perspective for the period of 2007-2013 was finished after two year meeting, opened in February 2004. The result was the Inter-institutional agreement between three key European institutions. The final amount of financial perspective for seven year period totalled EUR 864,3 billion, which represented about 1% of GDP of all EU countries. A significant part of the budget was created by expenses for common agricultural policy (EUR 293 billion), followed by expenses for structural funds and the Cohesion Fund. The budget plan for the period of 2007-2013 opens the possibility to use means at the amount of CZK 90 billion annually. It depends on a capability of the CR to absorb those means.

National financial participation is necessary, when decisions of project entitlements are made (from 15 to 30% value of a project). Since financial means (mainly agricultural donations) are very often refunded, quite high requirements are put on the budgets of public finance, and in the case of the CR also on the structural changes of the budget and the reform of budgetary policy. With a view to already realized financial drawings and the experience of other European member countries, the full drawing of allocated financial frame for the CR in the period of 2007-2013 is not probable. In spite of this, it is spoken about quite high financial means, which will influence the balance of payments and the expenditure side of the state budget and will become an important impulse for Czech economy.

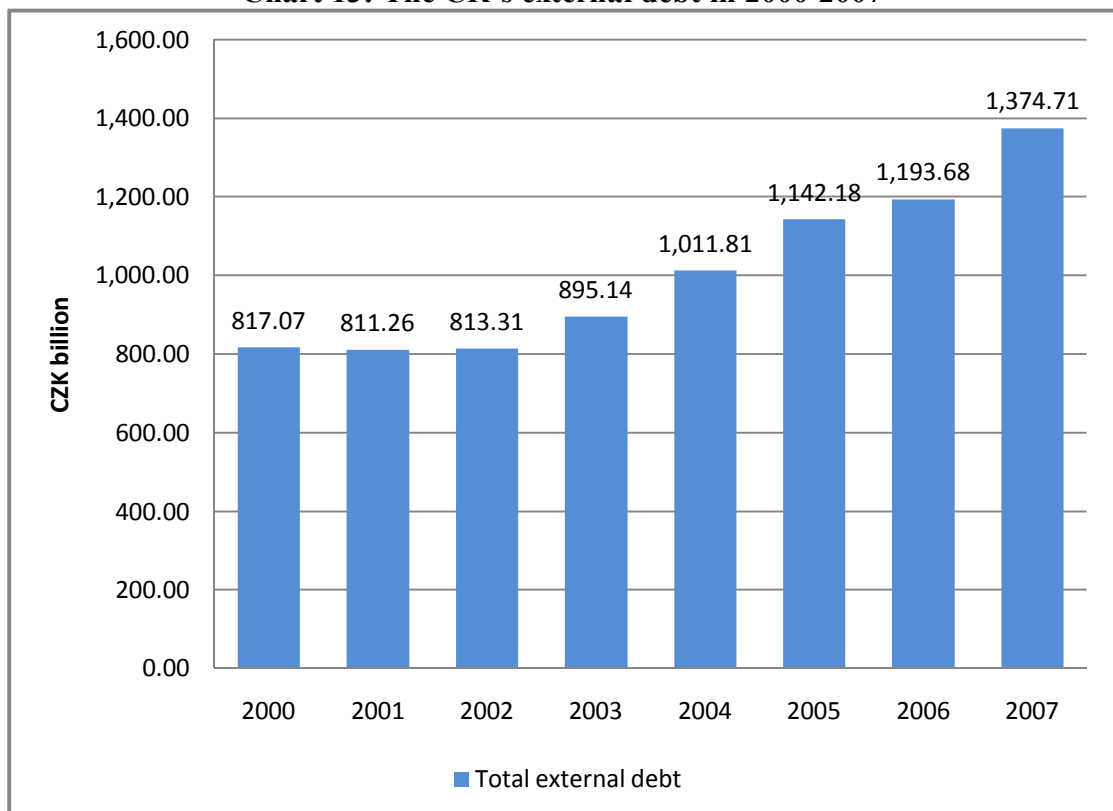
#### **4.2.3. Analysis of the international investment position and external debt**

The CR's international investment position deficit continued to rise each year of the observation period. The rise in the deficit was chiefly related to the inflow of foreign direct investment and other investment to the CR. As the international investment position deficit was rising, the external debt was widening (see the "Chart 12" and "Chart 13"). In 2005, the growth in the deficit of the international investment position slowed but in 2006 and 2007 the deficit continued to rise (see the "Chart 12"). Due to the membership in the EU, the CR could draw on the EU budget and on the contrary must also supply certain amount of financial means to the EU budget. By the integration into the EU, the free movement of capital was assured.

**Chart 12: The CR's international investment position in 2000-2007**



**Chart 13: The CR's external debt in 2000-2007**



Source: CNB (own charts, MS Excel)

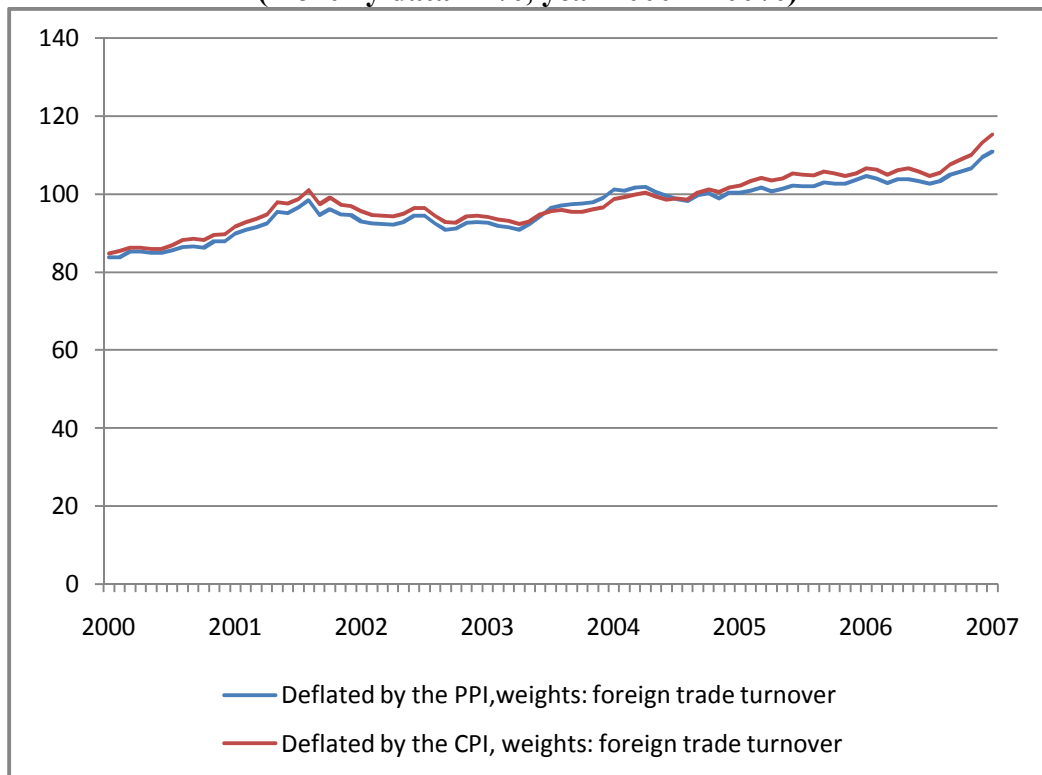
## The international investment position

The *international investment position* of the CR recorded a deficit of CZK 835,3 millions (EUR 28,8 millions) at the end of 2005, which represents 28% of GDP. The resulting balance was affected by an increase in liabilities, which was linked mainly with capital inflow in the form of direct investment. The increase in the net debtor position of foreign direct investment was related to the privatization and to estimated reinvested earnings by foreign investors. Due to the exchange rate and price effects, portfolio investment switched from the net debtor position to the creditor position. The development of the real effective exchange rate of koruna<sup>17</sup> is provided in the “Chart 14” Regarding the structure, investment in debt securities prevailed investment in equity securities. CNB international reserves, adjusted for the CNB’s liabilities towards non-residents, were the main contributor to the international investment position assets. The rise in the assets was mainly caused by privatization revenues. The commercial banks were the other item contributing to the international investment position assets. The increase in the creditor position was chiefly related to a rise in short-term assets abroad. Government lost its creditor position. Since 2005, government has represented the net debtor position. The transition from the creditor to the debtor position was due to de-blocking operations and repayments of government loans, which led to a considerable decline in governmental assets. The rise in liabilities was chiefly affected by an increase in long-term loans accepted from international institutions for the construction of transport infrastructure and the lease of fighter aircraft. Concerning the corporate sector, widening of its net debtor position continued, chiefly owing to long-term credits drawn by corporations from foreign banks and parent companies. Supplier credits also recorded an increase (CNB, BoP reports, 2005).

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<sup>17</sup> “Real effective exchange rate (REER) is one of the indicators of the development of the international competitiveness of a country and in general it stands for various measures of relative prices or costs expressed in a given currency. The method selected for the computation of REER was that of a weighted geometrical average of the ratio of the nominal exchange rate index and the differential (the ratio of foreign indices to domestic indices) of the respective price indicator. The weights are the shares of 23 biggest business partners in the turnover of foreign trade. The countries of the euro area are for the purpose of these computations considered as a single area. The structure of the countries and their weighted shares are identical with those used in the methodology of the computation of the nominal effective exchange rate of the koruna. The weights relate to the total turnover of foreign trade.” (CNB, BoP reports, 2005, annex 2, p.25).

**Chart 14: Real effective exchange rate of the koruna deflated by price indices  
(monthly data in %, year 2000 = 100%)**



Source: CNB (own chart, MS Excel);

*Note: appreciation > 100; depreciation < 100*

At the end of 2006, the deficit of the international investment position of the CR exceeded 1 billion, it amounted to CZK 1,081 billion (EUR 39,315 millions), which represents 34% of GDP. The net debtor position of the CR increased chiefly due to high inflow of foreign direct investment, portfolio investment and other investment. The rise in the foreign direct investment stock mainly reflected the growth in investment in corporate equity capital, the estimated share of foreign owners in reinvested earnings and borrowing on intercompany loans. Even though, portfolio investment contributed to the rise in the overall deficit of international investment position, portfolio investment recorded a significant increase in its creditor position. Concerning the CNB international reserves, the largest net creditor, recorded another fall in its assets, it was largely due to exchange rate effects on their koruna value. The commercial banks recorded decrease in the creditor position. It was related mainly to a decrease in the stock of short-term foreign exchange assets abroad. The commercial banks also drew on long-term financial and special-purpose loans from abroad, which also led to the decrease in the creditor position. Government sector continued to widen its debtor position, chiefly due to the same reasons as in 2005. The corporate sector remained the debtor position (CNB, BoP reports, 2006).

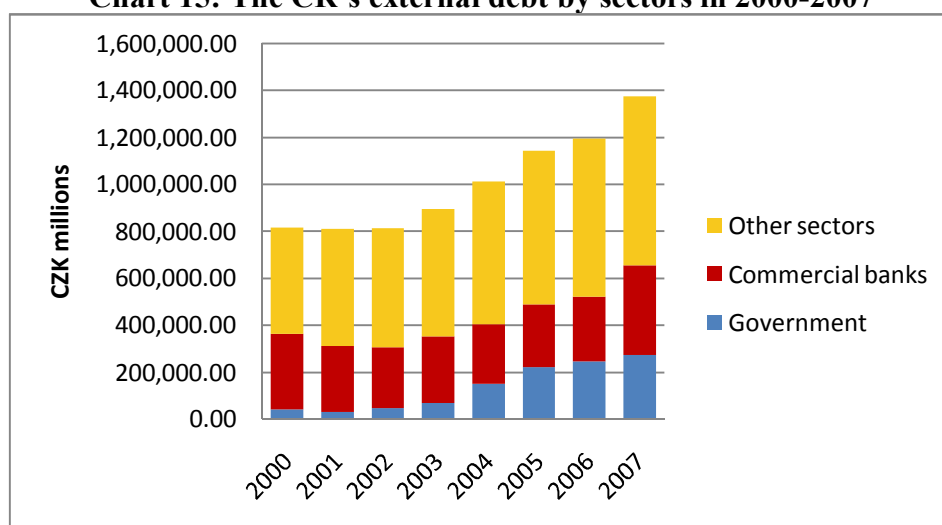
At the end of the last year of the second observation period, i.e. at the end of 2007, the international investment position widened its deficit to CZK 1,415.2 billion

(EUR 53,164 millions). Foreign-owned corporations recorded the largest growth in liabilities. But foreign direct investment remained as the largest contributor to the net debtor position. Assets grew more moderately than liabilities. The largest increase in assets was recorded under other investment. As in the previous year, portfolio investment recorded an increase in its creditor position. Investments were made mainly in debt instruments. The CNB and commercial banks recorded a surplus in their creditor positions. The CNB international reserves showed a slight decrease in both, assets and liabilities. Overall, the CNB recorded a fall in its creditor position. The government's debtor position widened moderately year on year. The debtor position of the corporate sector also increased, it was mostly due to a rise in short-term liabilities (CNB, BoP reports, 2007).

### The external debt

The total *external debt* of the CR at the end of 2005 amounted to CZK 1,142.2 billion (EUR 39.4 billion). Short-term debt accounted for 31.4% of the total debt. As regards sectors, on the one hand the corporate sector recorded the greatest volume of long-term liabilities (CZK 497.1 billion), it represented about 63% of the long-term debt. On the other hand, the government sector accounted for most of the rise in total debt (see the "Chart 15") and had the 28.6% share of the total long-term debt. This happened because the government issued long-term bonds and continued to draw on long-term loans from the European Investment Bank. Concerning the short-term debt, the banking sector was responsible for the greatest share of short-term liabilities (57.4%), and was followed by the corporate sector (40.6%). With regard to the instruments used, loans represented the largest share of the total foreign debt (38.6%), followed by long-term securities (19%). Bank deposits and commercial credits accounted for 16.8% and 9.5% respectively of the total debt. The loans drawn under direct investment slightly decreased year on year, accounting for around 14% (CNB, BoP reports, 2005).

**Chart 15: The CR's external debt by sectors in 2000-2007**



Source: CNB (own chart, MS Excel)

The total external debt of the CR increased to CZK 1,193.7 billion (EUR 43,4 millions) at the end of 2006. The share of short-term debt slightly decreased compared to the previous year. The long-term debt represented 69.4 % of the total. Regarding sectors, the corporate sector accounted for most of the total debt (57.1%), followed by the commercial banks (22.4%) and the government sector (20.3%). As regards the instruments, loans and bonds had the biggest share in the structure of the total foreign debt (CNB, BoP reports, 2006).

As regard to the total external debt of the CR at the end of 2007, the total external debt was CZK 1,374.7 billion (EUR 51,642 millions). The corporate sector accounted for 51.4% of the total debt, followed by the commercial banks, which contributed by 28.4% to the total debt and government with 20.2% contribution to the total debt. As regards the instruments, loans dominated but deposits and bond recorded the highest increase in debt (CNB, BoP reports, 2007). Data about the development of the international investment position are provided in the “Supplement 2” and data about the development of the external debt in the “Supplement 3”.

To sum up, the rise in the CR’s international investment position was linked, as in the previous period, to the high inflow of capital in the form of direct and other investment and cause the rise in the CR’s external debt. After the integration to the EU, there was a slight improvement, visible at the end of 2005. Besides the CNB, as the largest creditor, the commercial banks recorded a significant growth in its creditor position and portfolio investment changed to the creditor position, mainly due to the exchange rate and price effects. But on the contrary, the government sector lost its creditor position. It was related to de-blocking operations and repayments of government loans, which as a result caused a considerable decline in government assets. The rise in liabilities was linked to the long-term loans drawn from the international institutions for the construction of transport infrastructure and the lease of fighter aircraft. At the end of 2005, the international investment position deficit amounted to 28% of GDP, while at the end of 2007 the deficit increased to 40% of GDP. Even though the CR’s external debt was rising, the ratio of external debt to GDP was about the same each year, i.e. 38%. The corporate sector accounted for most of the total external debt, followed by the commercial banks and the government sector (central government and municipalities). Companies accounted for 55% of the total debt on average in the observation period. The share of the short-term debt was about 31% each year. Loans dominated the debt breakdown by instrument. Overall, the CR’s international investment position and external debt statements developed favourably in the second observation period.

### **4.3. The analysis of the CR balance of payments, international position and external debt after the outbreak of the financial and economic crisis (2008 – 2009)**

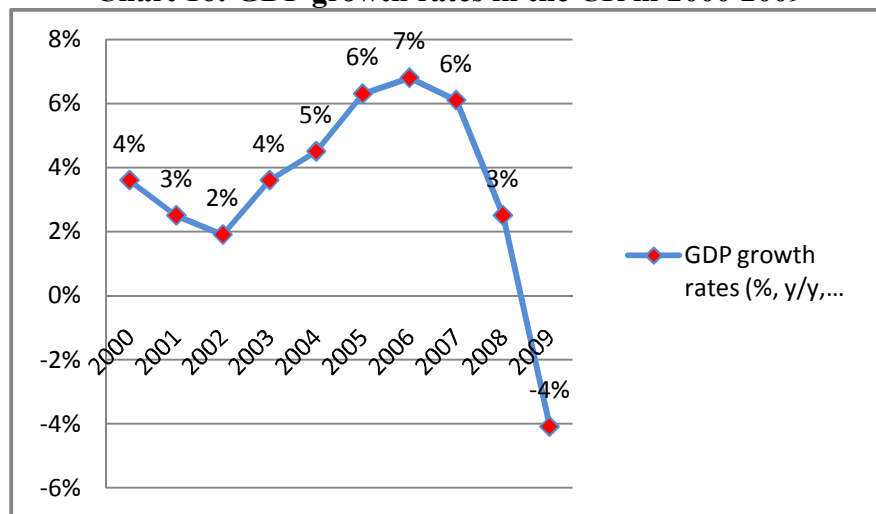
#### **4.3.1. External economic relations after the outbreak of the financial and economic crisis**

The world economy has been passing through a turbulent period of the financial and economic crisis. Banks have collapsed, stock prices have slumped and there has been a significant decline in economic activity. The crisis began by the collapse of the banking system, owing to a liquidity shortfall, in the United States in 2007, but it came after a long period of international financial instability, trade imbalances and several local and regional crises. By late 2008, the crisis had spread into many countries. Governments and central banks responded with unprecedented fiscal stimulus, monetary policy expansion, and institutional bailouts, but the crisis continued to spread and large numbers of workers have been laid off all over the world. Economies worldwide slowed during this period as credit tightened and international trade declined. In September 2008, the stock markets noted a huge downturn worldwide, on September 10, Prague's stock market turned down to 26 months' minimum, New York's stock market noted the deepest downturn on September 15 since September 11 2001. On September 25, the U.S. experienced the largest bankrupt in its entire history, Washington Mutual Bank, the U.S.'s largest savings and loan association, collapsed. In the end of September, the financial crisis was considered worldwide. Even though, it is considered by many economists to be the worst financial crisis since the Great Depression of the 1930s, many see the crisis as an opportunity for renewed regulation and democratic re-structuring of the global economy. But solutions are complicated by the depth of the crisis, by the lack of strong global institutions, and by overlapping crises in the environment, natural resources and global trade (Global policy).

The gradual slowdown of the Czech economy started at the beginning of 2008 and in the fourth quarter the economy entered into the recession. A significant slowdown in GDP growth was affected at the end of 2008 by the weakening of global demand and of demand from the country's largest trading partners. The decreasing economic performance was reflected mainly in manufacturing, related to a considerable decrease in demand for investment and export goods. In 2009, the Czech economy experienced a period of critically low GDP growth (see the "Chart 16"). But by the end of 2009, the drop in GDP was more positive than in the first two quarters of 2009. Therefore, it was suggested that the decline in GDP has already reached its bottom and the period of recovery from the economic recession should start (<http://www.mfcr.cz>).



**Chart 16: GDP growth rates in the CR in 2000-2009**

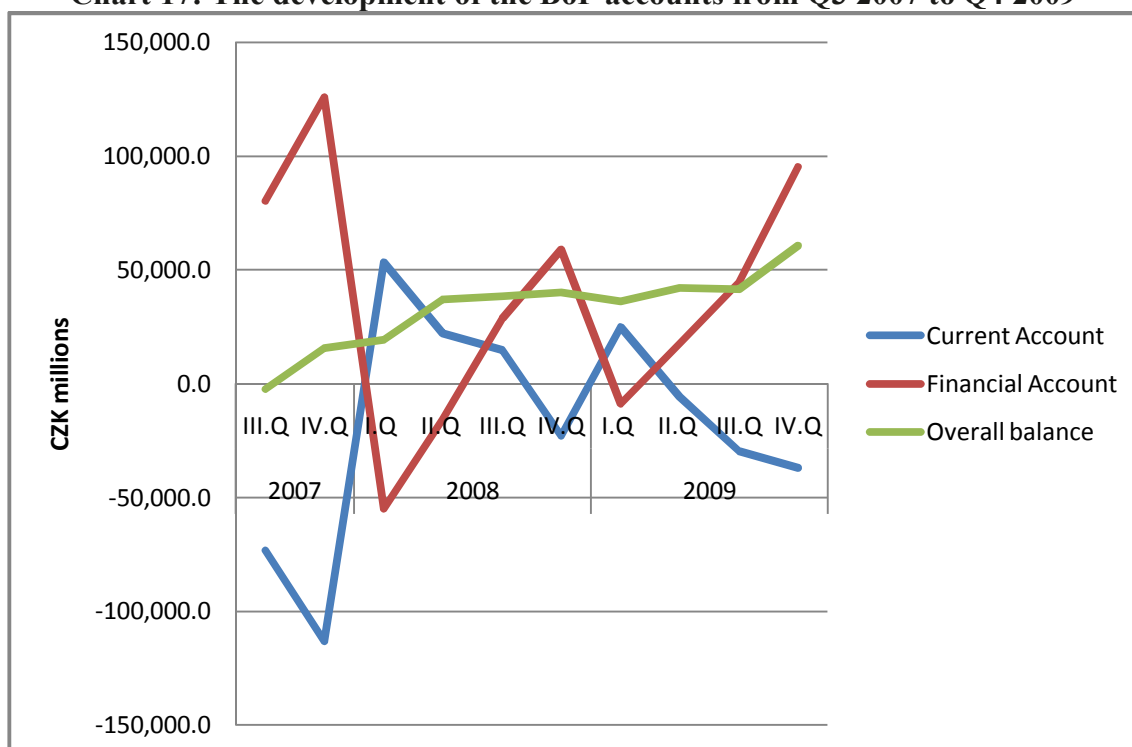


Source: CSO (own chart, MS Excel)

The current and financial accounts of the balance of payments recorded significant fluctuations since the fourth quarter of 2007 (see the “Chart 17”). **The current account** deficit in 2008 considerably decreased compared to 2007. Its improvement can be attributed to a better result in the service balance and balance of current transfers. The income balance also recorded a slight improvement, but still remained as the largest contributor to the overall current account deficit. The income deficit was partly a consequence of the fall in income from portfolio investment. On the debit side, increased cost for employing foreigners in the CR, increased dividends paid out to foreign owners of domestic shares and rising interest payments on loans and deposits drawn from foreign banks contributed to the income deficit. The positive balance of trade decreased especially owing to the development in the fourth quarter. The trade surplus fell as a result of a fall in demand from the CR’s most important trading partner countries and deterioration in the terms of trade due to a rise in the prices of mineral fuels. Positive terms of trade remained only with regard to machinery production and manufactured goods. Foreign trade prices were influenced by changes in prices on foreign markets as well as by the koruna’s exchange rate. Concerning the service balance, the services surplus increased considerably as a result of rising foreign demand for other services, including merchanting, computer services and business and management consultancy. Exports of transport services exceeded imports of transport services, chiefly through growth in net income from road freight transport and from the provision of auxiliary services connected with the air and rail transport of goods. Net receipts from foreign tourism dropped as a consequence of a slight decrease in income along with an increase in expenditure by Czech population on travel and accommodation abroad. The current transfers recorded a fall in its deficit; it was mainly due to higher income from government transfers in connection with higher collection of taxes and social security contributions from foreign workers employed in the CR. **The capital account** surplus increased each year as a consequence of a rise on trade in emissions permits and growth in receipts from the EU structural funds. In 2008, **the financial account** recorded a significant fall compared to the previous year. This

development was influenced by a great fall in the inflow of foreign direct investment in the form of reinvested earnings, it was linked to the outbreak of the financial crisis. On the other hand, the net inflow of foreign capital into the corporate sector rose compared to the previous year. The surplus of the financial account can be attributed to yields received from the sale of foreign securities by domestic companies. Portfolio investment also recorded a slight improvement. Financial derivatives showed a deficit at the end of 2008. *The international reserves* of the Czech National Bank, adjusted for valuation changes, rose as a result of investment income on the reserves and transactions executed for CNB customers (CNB, BoP reports, 2008).

**Chart 17: The development of the BoP accounts from Q3 2007 to Q4 2009**



Source: CNB (own chart, MS Excel)

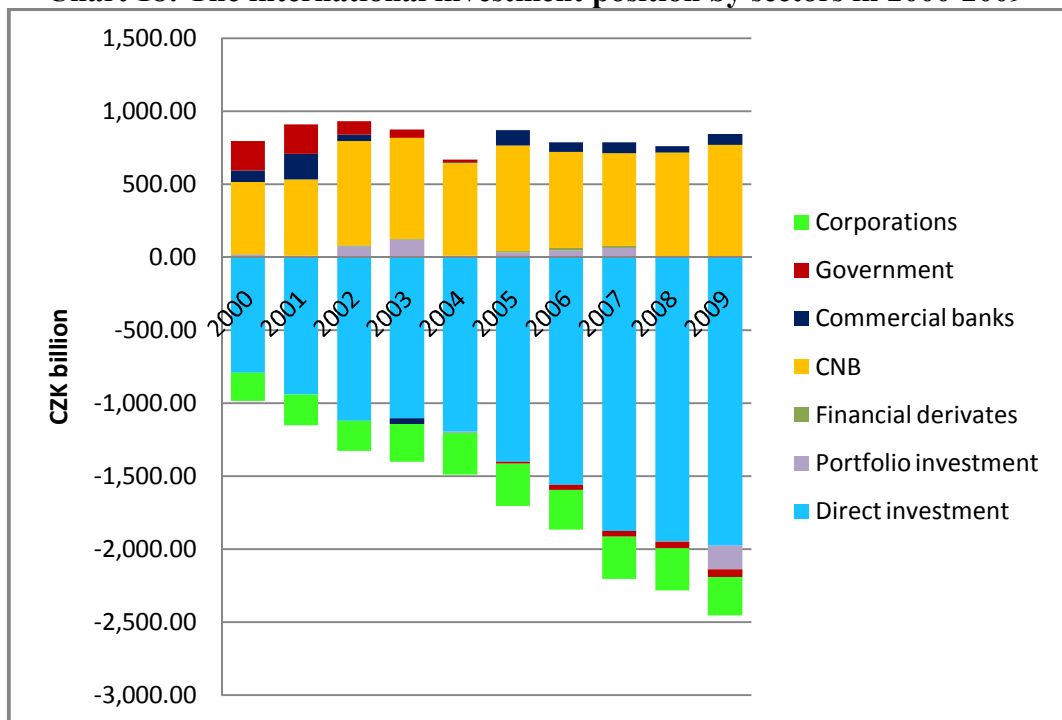
*The current account* deficit slightly widened in 2009 and the development of its items changed. Trade surplus rose as imports of goods from non-EU countries decreased and exports of goods increased and thus improved the terms of trade (i.e. exports minus imports). As regards the services balance, the services surplus declined significantly, chiefly as a consequence of a rise in the deficit for other business and non-business services, and partially because of lower net income from transport services. After a slight fall in the income deficit in 2008, the unfavourable upward trend in deficit re-emerged. The rise was related to a fall in income from domestic direct investment abroad and with lower interest for domestic investors and the banking sector, including the CNB. Even though, the resulting income balance was negative, several factors influenced the income balance positively, such as a fall in wage expenditure on foreign workers and a decline in number of foreign workers in the CR. Current transfers recorded a year-on-year decrease in the deficit. This was connected to higher net income

from government transfers, an increase in net income from the EU budget and to low contribution to international institutions. Due to the world financial crisis, the development of individual items in *the financial account* completely changed in comparison with previous years. The majority of the inflow of foreign capital was in the form of purchases of bonds of Czech entities by non-residents, reinvested earnings from direct investments and financial loans to the government sector. Portfolio investment balance rose year on year. As a consequence of the financial crisis on the capital markets, domestic investors lost confidence to invest in foreign securities. *The international reserves* of the Czech National Bank, adjusted for valuation changes, rose as a result of income from the EU budget, government sector income from the sale of emissions permits, income from the investment of international reserves abroad and other transactions carried out mainly for customers of the bank. The CNB also sold part of the income on the international reserves (CNB, BoP reports, 2009). Data about the development of the balance of payments accounts for the whole observation period is provided in the “Supplement 1”.

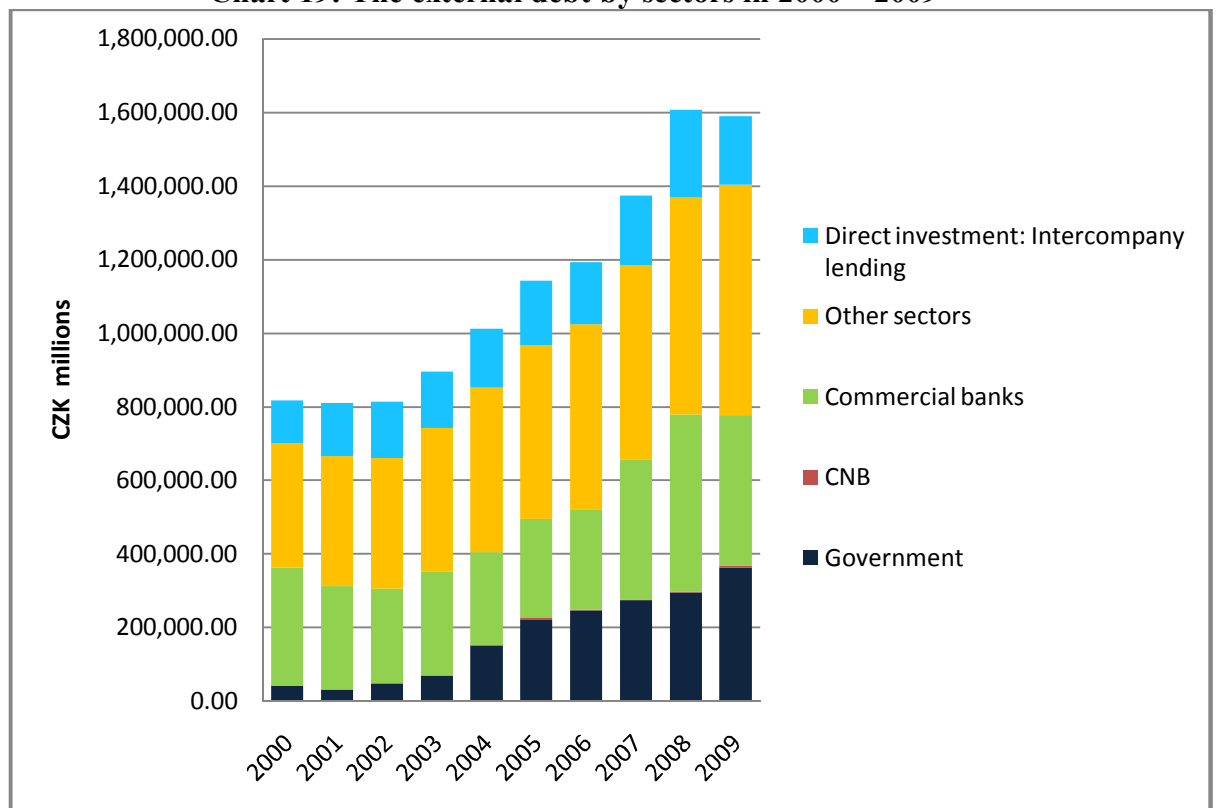
#### **4.3.2. Analysis of the international investment position and external debt**

The financial and economic crisis did not worsen the development of the international investment position and external debt of the CR anyhow significantly. It rather slowdown the development of these statements and changed its structure (see the “Charts 18 and 19”). Data about the development of the international investment position and external debt for the whole observation period are provided in the “Supplements 2 and 3”.

**Chart 18: The international investment position by sectors in 2000-2009**



**Chart 19: The external debt by sectors in 2000 – 2009**

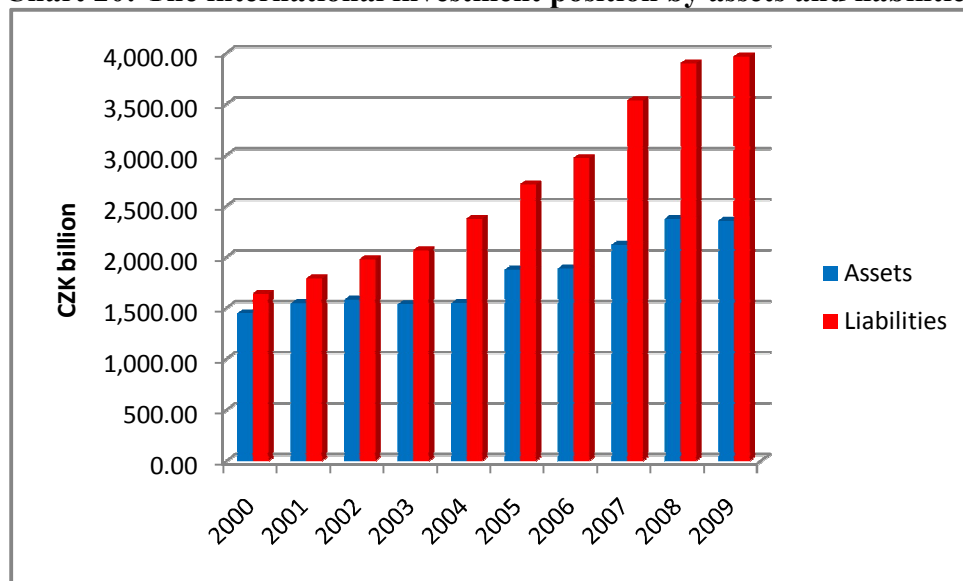


Source: CNB (own charts, MS Excel)

## The international investment position

The CR's *international investment position* recorded a deficit of CZK 1,522.9 billion (EUR 56,550 millions) at the end of 2008. The investment position was chiefly affected by direct investment. The resulting balance was influenced in particular by a rise in liabilities (see the "Chart 20"). Foreign-owned companies contributed to the growth in liabilities the most. The debtor position under direct investment continued to rise, similarly as in previous years. The growth in the debtor position was reflected in increases in the equity capital of foreign investors in domestic companies. Portfolio investment showed year-on-year changes as a consequence of the crisis on the capital markets. Portfolio investment switched from the creditor position to the debtor position. It was mostly affected by a fall in the investments of Czech residents in foreign securities. On the contrary, a fall in the investments of non-residents in Czech securities was significant. It was related to decreasing interest in investment in equity securities and a fall in prices. Financial derivatives also changed from the creditor position to the debtor position. The largest external creditor position had the CNB. Since 2005, the government sector has the debtor position with still increasing deficit. The debtor position of the corporate sector decreased compared to the previous year, chiefly due to a rise in short-term export credits (CNB, BoP reports, 2008).

**Chart 20: The international investment position by assets and liabilities**



Source: CNB (own chart, MS Excel)

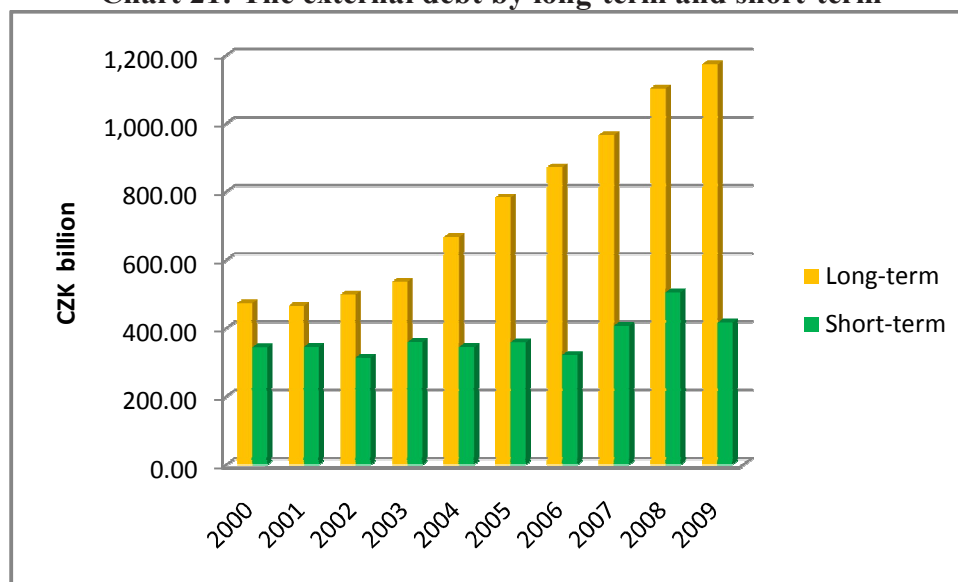
In 2009, the investment position of the CR was affected by portfolio investment the most. At the end of 2009, the deficit of the international investment position of the CR amounted to CZK 1,609 billion (EUR 60,797 millions). Concerning direct investment, there were no changes, its deficit continued to rise. However, under portfolio investment, several changes appeared. The debtor position of portfolio investment worsened considerably. It was affected by a rise in investments by non-residents in domestic securities. They made investments in Czech bonds, issued on foreign markets. Financial derivatives recorded a surplus at the end of 2009. The CNB

showed a great growth in the surplus, it was related to income from its own and client transactions. Commercial banks recorded an improvement in its creditor position. Corporate sector was able to decrease its deficit slightly, owing to the same reasons as in 2008 (CNB, BoP reports, 2009).

### The external debt

The total *external debt* of the CR was CZK 1,607 billion (EUR 59,689 millions). The share of short-term debt slightly increased (see the “Chart 21”). The corporate sector contributed by 58.4% to the total debt. The government sector accounted for 27.7% and commercial banks for 13.9% of the total debt. As regards the instruments, loans represented the biggest portion in the total external debt (CNB, BoP reports, 2008).

**Chart 21: The external debt by long-term and short-term**



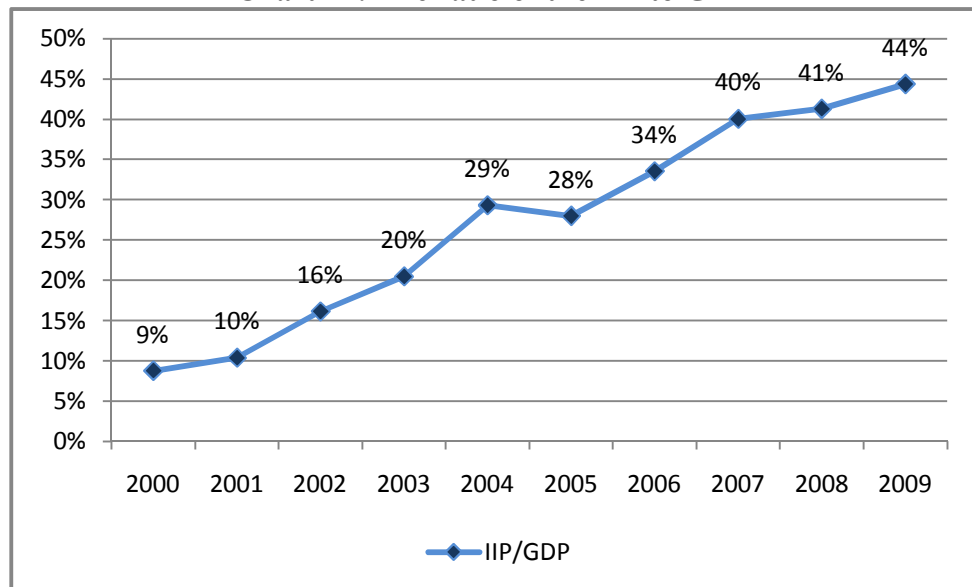
Source: CNB (own chart, MS Excel)

The total external debt of the CR at the end of 2009 recorded a fall and was CZK 1,589.7 billion (EUR 60,069 millions). The share of short term liabilities decreased a bit. The largest share of the total debt was represented by the corporate sector (39.3%), followed by the commercial banks (26%) and the government sector (22.9%). As in previous years, loans accounted for the biggest portion of the total external debt but bonds recorded the largest increase in debt (CNB, BoP reports, 2009).

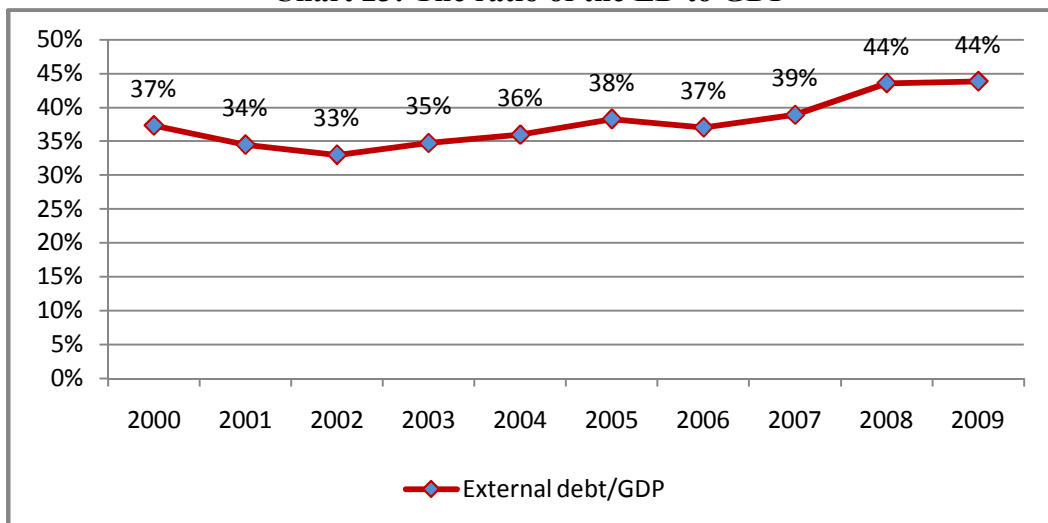
To summarize, the CR’s international investment position deficit and the external debt widened each year. The growth in investment position deficit was connected to inflows of foreign direct and portfolio investment in the CR. The international investment position deficit at the end of 2009 was 44.4% of GDP, in comparison with 2007, it increased by approximately 10%. The CR’s external debt also increased, it totalled 43.8% of GDP at the end of 2009. Compared to 2007, it rose by about 5%. These ratios were mostly influenced by the fall in nominal GDP. As the financial and economic crisis was spreading, the economic activity was slowing down,

not any significant investments were made. Consequently, the international investment position and external debt did not worsen considerably, but in comparison with GDP growth rates, the results were not really favourable (see “Charts 22 and 23”). The economic and financial crisis has brought many negative impacts on these statements.

**Chart 22: The ratio of the IIP to GDP**



**Chart 23: The ratio of the ED to GDP**



Source: CNB (own charts, MS Excel)

## 4.4. Statistical analysis and discussion

### 4.4.1. Regression and correlation

The Czech economy's *foreign indebtedness* has been connected with the high investment activity since the entrance to the EU. The problem is that this investment activity was not reflected in adequate domestic savings. Therefore, the external debt of the CR has been increasing and the international investment position deficit has been widening. But on the other hand, the inflow of capital has been also linked to the growth in GDP. Therefore, I would like to analyse the correlation relationship between the GDP (expressed in current prices) and the external debt, and then between the GDP and the international investment position.

#### The regression and correlation between GDP and external debt

Table 6: Calculation of the correlation coefficient between GDP and ED

Year	GDP (CZK billion) (y)	External debt (CZK billion) (x)
2000	2,189.20	817.10
2001	2,352.20	811.30
2002	2,464.40	813.30
2003	2,577.10	895.10
2004	2,814.80	1,011.80
2005	2,983.90	1,142.20
2006	3,222.40	1,193.70
2007	3,535.50	1,374.70
2008	3,689.00	1,607.40
2009	3,625.90	1,589.70

Covariance matrix	GDP	External debt
GDP	89506405.3	34665041.7
External debt	34665041.7	13542481.7

Correlation matrix	GDP	External debt
GDP	1	
External debt	0.975	1

Source: own computation (MS Excel)

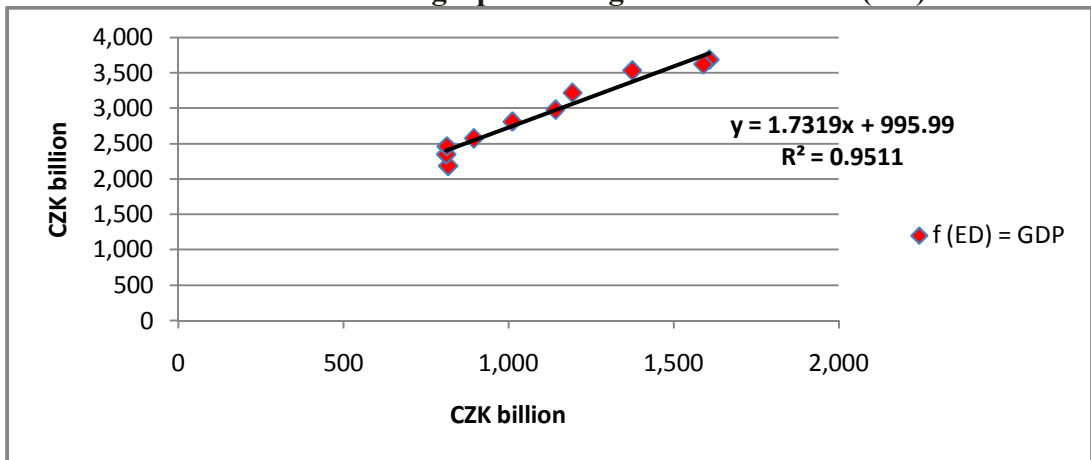
The regression function:  $f(ED) = GDP$

The regression function equation:  $y = 1.7319x + 995.99$

The coefficient of determination:  $r^2 = 0.95$  (95%)

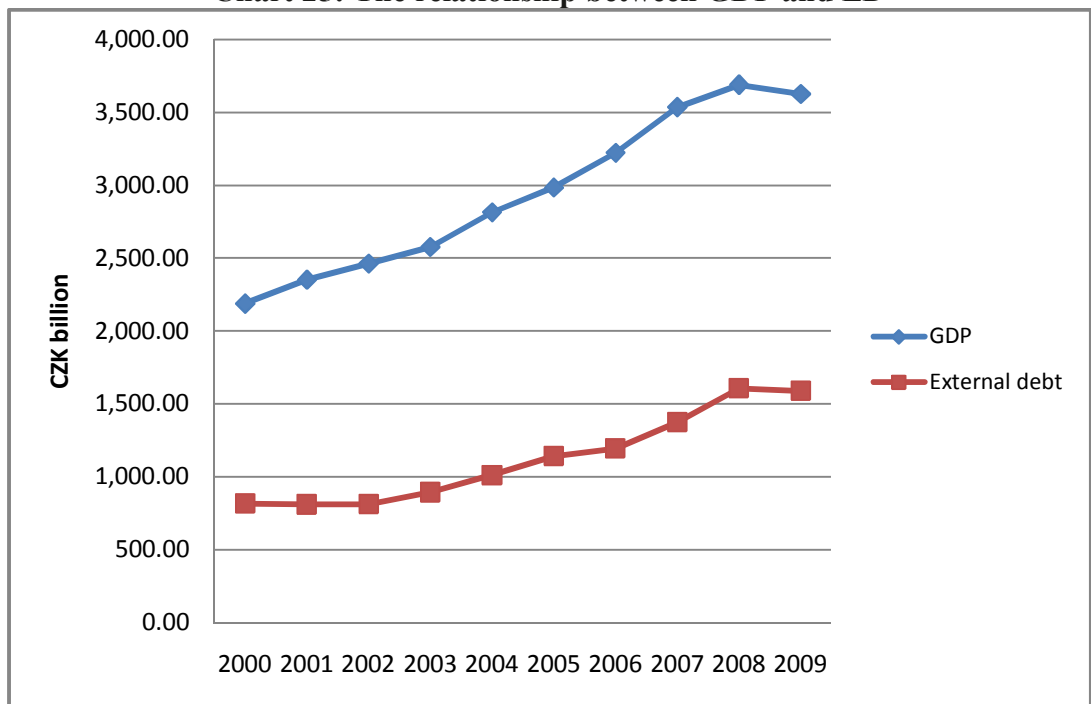


**Chart 24: The correlation graph and regression function  $f(ED) = GDP$**



Source: own chart (MS Excel)

**Chart 25: The relationship between GDP and ED**



Source: CSO (own chart, MS Excel)

The *coefficient of determination* is 95%. It means that 95% of the dependent variable  $y$  (GDP) is explained by the analyzed relationship. The coefficient of determination, the correlation graph and the chart of the relationship between GDP and external debt suggest that there exists the strong correlation relationship between GDP and external debt. If the external debt is rising, the GDP is also increasing. As a result, the economic performance is strongly dependent on the external debt. After the outbreak of the financial and economic crisis, as the external debt started to decrease slightly, the GDP also began to fall.

### **The regression and correlation between GDP and IIP**

Since the external debt of the CR is derived from the CR's international investment position statement, there should exist the correlation relationship between GDP and the international investment position.

**Table 7: Calculation of the correlation coefficient between GDP and IIP**

<b>Year</b>	<b>GDP (CZK billion) (y)</b>	<b>IIP (CZK billion) (x)</b>
<b>2000</b>	2,189.20	-191.90
<b>2001</b>	2,352.20	-244.10
<b>2002</b>	2,464.40	-397.30
<b>2003</b>	2,577.10	-527.50
<b>2004</b>	2,814.80	-825.00
<b>2005</b>	2,983.90	-835.20
<b>2006</b>	3,222.40	-1,081.00
<b>2007</b>	3,535.50	-1,415.20
<b>2008</b>	3,689.00	-1,522.90
<b>2009</b>	3,625.90	-1,609.00

<b>Covariance matrix</b>	<b>GDP</b>	<b>IIP</b>
<b>GDP</b>	89506405.3	-28086074.4
<b>IIP</b>	-28086074.4	9990155.5

<b>Correlation matrix</b>	<b>GDP</b>	<b>IIP</b>
<b>GDP</b>	1	
<b>IIP</b>	-0.994	1

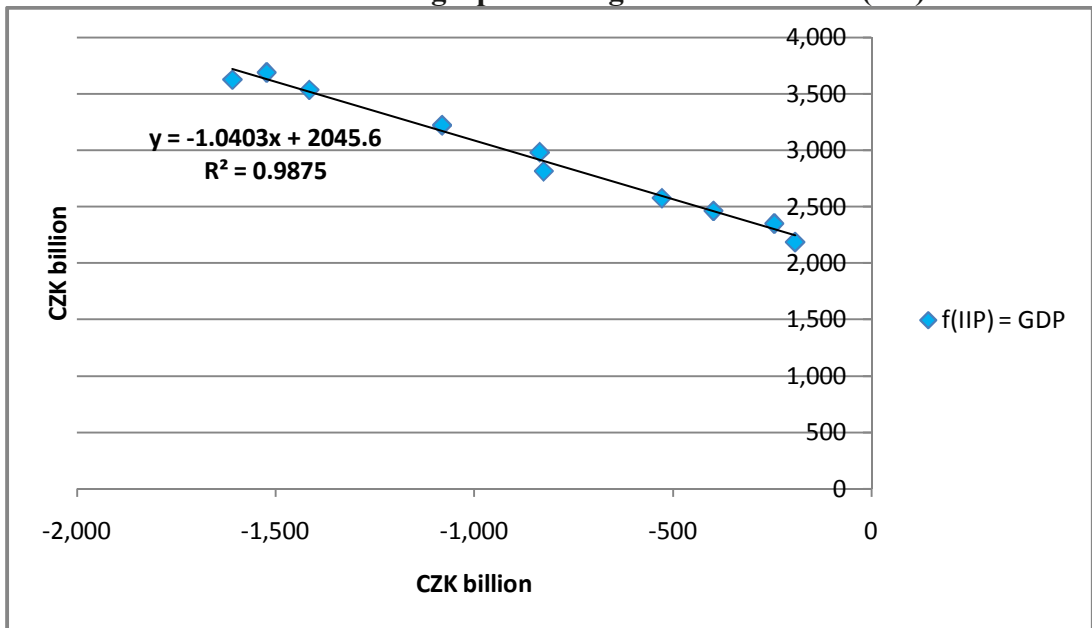
Source: own computation (MS Excel)

**The regression function:  $f(IIP) = GDP$**

**The regression function equation:  $y = -1.0403x + 2,045.6$**

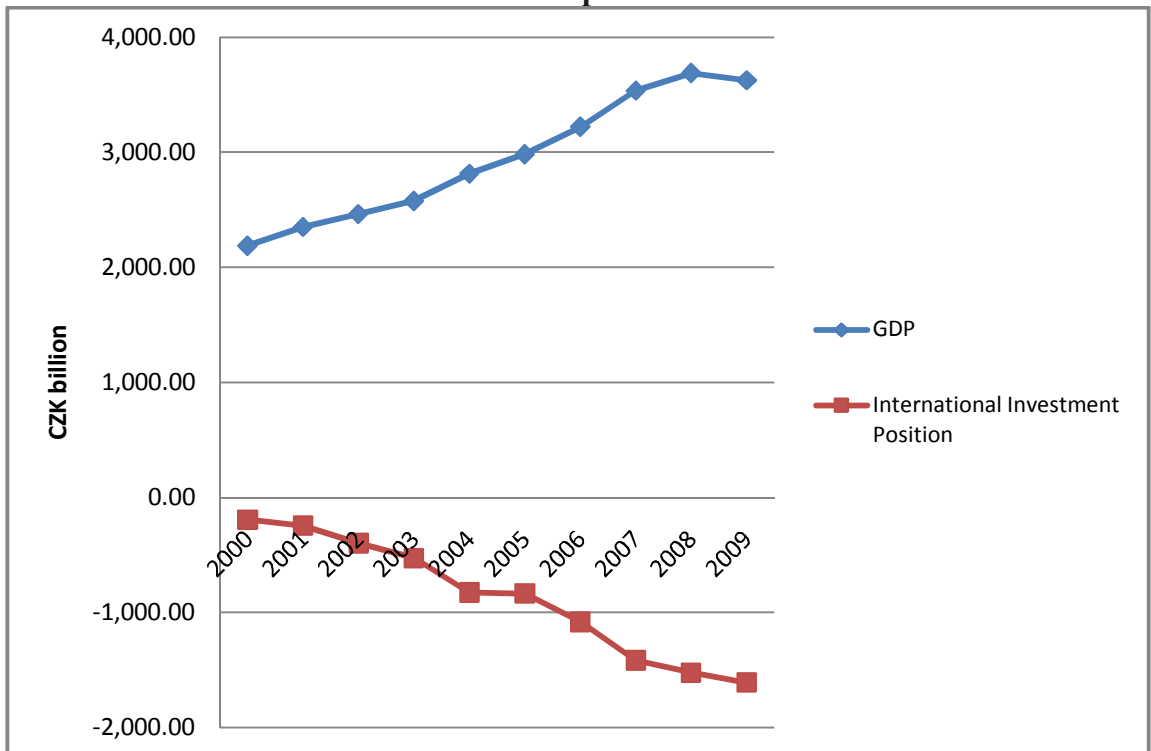
**The coefficient of determination:  $r^2 = 0.988$  (98.8%)**

**Chart 26: The correlation graph and regression function  $f(IIP) = GDP$**



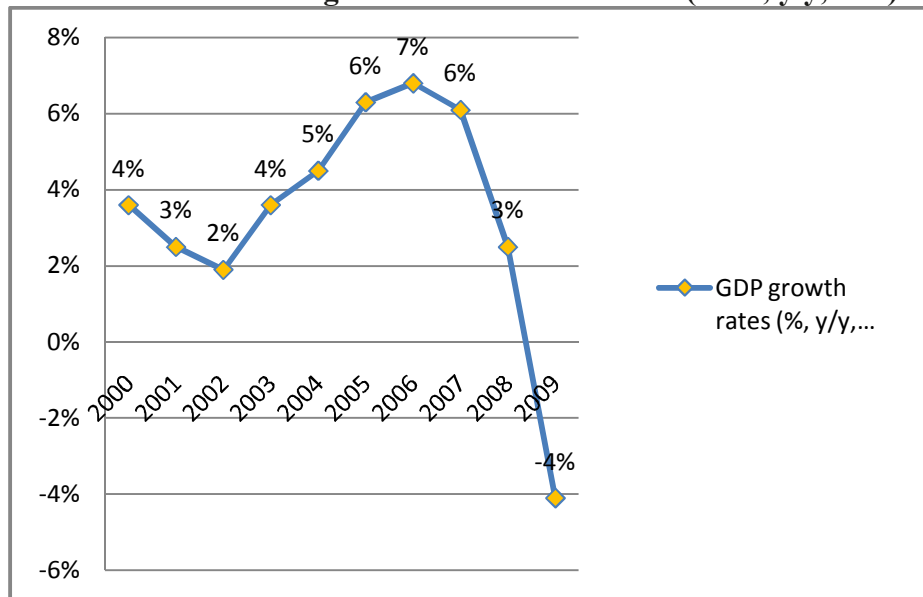
Source: own chart (MS Excel)

**Chart 27: The relationship between GDP and IIP**



Source: CNB (own chart, MS Excel)

**Chart 28: The GDP growth rates in 2000-2009 (in %, y/y, real)**



Source: CSO (own chart, MS Excel)

The *coefficient of determination*, i.e. the squared coefficient of correlation, usually expressed in %, is **98.8%**. It is even higher than the coefficient of determination of GDP and external debt. There is the strong negative correlation (the coefficient of correlation is  $-0,994$  as it is calculated above) between GDP and the IIP. From the “Chart 26”, the converse relationship is visible. If the international investment position is decreasing (the rise in the deficit), the GDP is increasing. Higher inflow of capital from abroad is linked to the higher economic performance. In the first year right after the entrance to the EU, the deficit of the IIP worsened considerably and the GDP rose significantly (see the “Chart 27”). However, the economic boom was interrupted by the financial and economic crisis. As the economic activity slowed down in 2008, the IIP deficit did not rise significantly and GDP recorded even a slight fall. Therefore, this can prove that there is the strong negative dependence between the GDP and the IIP and its development is highly influenced by the factor of important events.

#### 4.4.2. Trend analysis

##### The development tendency of the external debt

##### **The estimation of parameters of the linear trend function:**

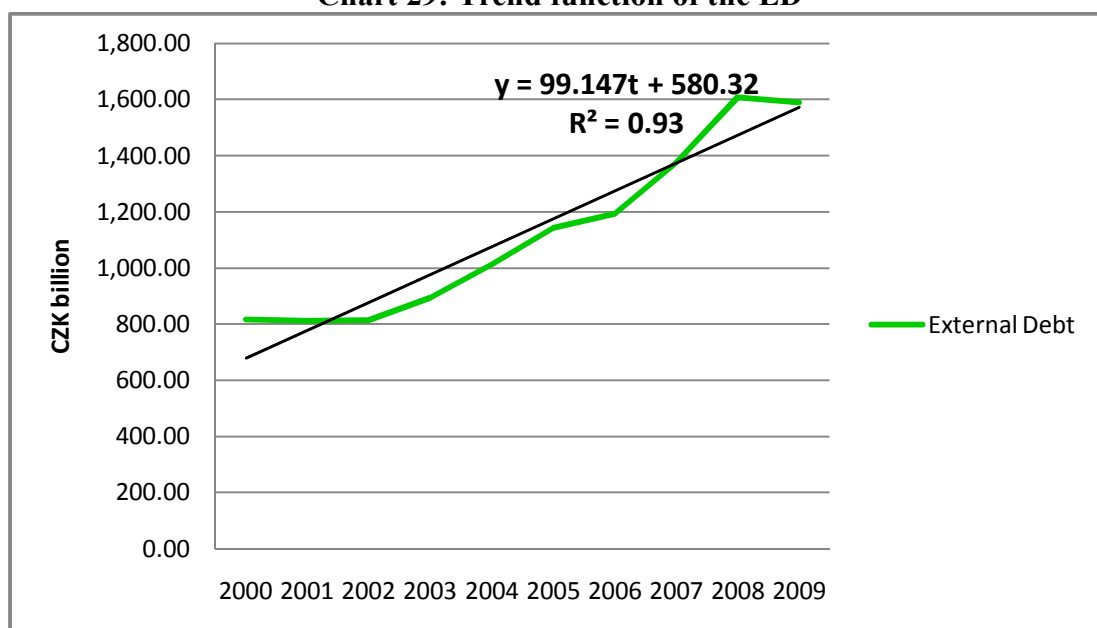
**The trend function:**  $f(t) = y$ , where  $t$ ...year and  $y$ ...ED

**The trend function equation:**  $y = 99.147t + 580.32$

Parameters:  $a = 580.32$ ;  $b = 99.147$

**The coefficient of determination:**  $r^2 = 93\%$  ( $r = 0.96$ )

**Chart 29: Trend function of the ED**



Source: own computation (MS Excel)

From the value of the coefficient of determination ( $r^2 = 0.93$ ), it can be derived, that the linear trend for this time series is suitable. From the chart, it is clear that the external debt has the tendency to rise and does not show any significant fluctuations around the trend function. This tendency has been visible since 2002, i.e. the period of preparation for the full integration to the EU. The significant growth in the external debt was recorded right after the outbreak of the financial crises, and then at the end of 2008 this rising tendency slowed down a bit.

### **The estimation of the external debt in the future**

$$y_{2012} = 99.147 \cdot 13 + 580.32 = 1,770.084 \text{ (CZK billion)}$$

$$y_{2015} = 99.147 \cdot 16 + 580.32 = 2,166.672 \text{ (CZK billion)}$$

$$y_{2020} = 99.147 \cdot 21 + 580.32 = 2,662.407 \text{ (CZK billion)}$$

According to the trend analysis, if the rising tendency of the external debt will continue, the external debt will reach CZK 2,662.4 billion by the end of 2020, which would be actually 3.25 times higher than at the end of 2000 (CZK 817.1 billion).

### **The development tendency of the international investment position**

#### **The estimation of parameters of the linear trend function:**

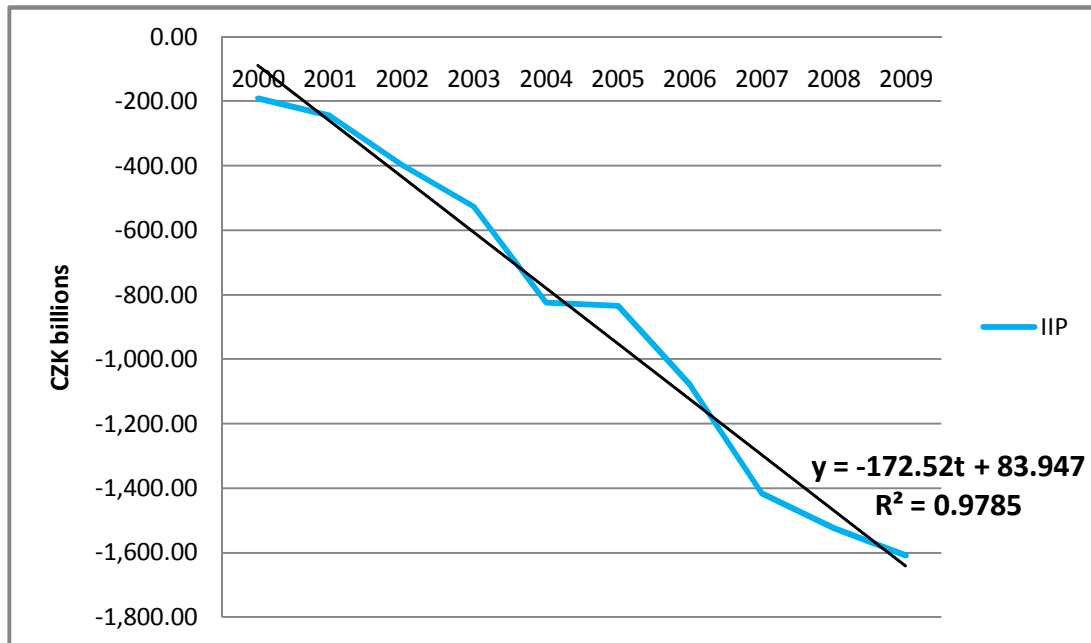
**The trend function:**  $f(t) = y$ , where t...year and y...IIP

**The trend function equation:**  $y = -172.52t + 83.947$

Parameters: a = 83.947; b = -172.52

**The coefficient of determination:  $r^2 = 97.85\%$  ( $r = 0.9891$ )**

**Chart 30: Trend function of the IIP**



Source: own computation (MS Excel)

From the value of the coefficient of determination ( $r^2 = 0.9785$ ), it can be derived, that the linear trend for this time series is very suitable. As before, from the chart, it is clearly visible that the international investment position has the tendency to widen its deficit year on year and fluctuates around the trend function slightly. Until 2007, the development was rather favourable but then it started to worsen as a result of spreading of the economic and financial crisis. As the crisis spread all around the World, the investment activity slowed down. This is visible in the development of the international investment position.

#### **The estimation of the international investment position in the future**

$$y_{2012} = -172.52 \cdot 13 + 83.947 = -2,158.81 \text{ (CZK billion)}$$

$$y_{2015} = -172.52 \cdot 16 + 83.947 = -2,676.37 \text{ (CZK billion)}$$

$$y_{2020} = -172.52 \cdot 21 + 83.947 = -3,538.97 \text{ (CZK billion)}$$

According to the trend analysis, if the declining tendency of the debtor position will continue, the deficit of the international investment position will be CZK 3,538.97 billion by the end of 2020, which would be actually about 18.5 times higher than the deficit at the end of 2000 (CZK 191.9 billion).

To conclude the statistical part, there is a strong dependence of the GDP growth on the external debt and the international investment position. The deficit of the IIP has been increasing faster than the total external debt. As the external debt rises, it seems that the economy tends to perform better in order to cover the debts. From the charts, it can be derived that the important events, such as the integration into the EU and the world economic and financial crises, influenced the development of the IIP and external debt of the CR.

## 5. Conclusions

The balance of payments and international investment position data are the most important for national and international policy formulation. These data represent external aspects, such as payments imbalances and inward and outward foreign investment, which are crucial for economic and other policy decisions in the extremely increasing interdependent world economy.

By the full integration of the CR into the EU, the CR agreed to follow four freedoms of the EU's internal market, which guarantee the free movement of goods, capital, services and people. The admission of the CR to the EU was related to liberalization of its regulated trade in selected goods categories, e.g. agricultural products, cancellation of customs and administrative barriers and application of the EU Customs Tariff duties and import quotas towards third countries. Before the CR's integration into the EU, the CR applied different trade political regimes towards its trade partners and tradable items, which corresponded to its own commercial interests. On the accession date, the CR had to give up some of its sovereignty. The common trade policy, besides associated and developing policy, was the most important item of the external economic relations. Its importance lies in the united regulations of exports and imports of member countries and in their common representation in trade questions towards third countries. Overall, the common trade policy facilitates the enforcement of the EU interests in the international trade. Membership in the EU brought several impacts on the Czech economy, which was then reflected in related statements of the economy.

After the entrance to the EU, from 2005 to 2007, the CR's balance of payments was favourably affected by the external environment. The period of the world economic recovery fostered growth in Czech exports. Export of machines and equipment, and export of cars were the most significant factors in improving the trade balance. Czech economy was passing through a period of rapid GDP growth, averaging 6.6% annually. The growth of production was related to foreign direct investment inflow in the CR, mainly in the car industry and electro industry.

Not all principal freedoms of the EU were applied symmetrically to new member countries of the EU, but selectively on the basis of national interests of different countries of the EU. It was the most visible in implicated rules for free movement of people and in extent of agricultural donations. Schengen agreement has been valid in the CR since December 2007 and liberalization of movement of labour force in the EU is being removed by individual "original" countries of the EU. Free movement of individuals and labour force is shown in the item of tourist trade and the balance of incomes.

In the items of current transfers, in the capital account and in the exchange reserves connection to the EU budget should be seen. The CR has got the possibility to use these financial resources from the EU budget. However, their liberation depends on readiness of the Czech economy to use these resources. Till now, the CR was not really successful; our economy was not able to use the total amount of provided resources.



Liberalization of capital movement is seen in the financial account; liberalization became in the beginning of nineties. It resulted in inflows of foreign capital in the form of direct and portfolio investment, and consequently it helped to speed up the process of transformation of our economy and to increase desirable competitive environment mainly in the market of financial services. In some cases, inflow of foreign capital also brought some negative impacts, such as restructuralization of our economy and closing of many operations, which were the backbone of export (glass industry) in past. It also resulted in an increase of unemployment. This type of capital inflow has its reflection in the balance of incomes in the form of profit outflow and interests outflow from these investments, which is not possible to evaluate positively.

The international investment position of the CR recorded a deficit since 1996 and consequently the CR has got a label the “debtor nation”. The growth in the CR’s international investment position deficit was linked to high inflow of funds from abroad, especially in the form of direct investment, and a rise in the CR’s debt abroad. Since the integration into the EU, the IIP’s deficit widened even more rapidly. On one hand, it is a negative thing, because it causes a continual widening of the CR’s international investment position deficit and related rise in the CR’s external debt. On the other hand, it is a positive thing, because the CR is viewed very positively by foreign investors, chiefly due to quiet stable economy, a good geographical location in the centre of Europe and interesting conditions, such as quiet cheap and highly-qualified labour force. Foreign investors believe that investments in the CR will generate a profit in the future. As regards the CR, high inflow of capital provides a great challenge for the CR to develop and grow economically, lower unemployment, or just introduce new technologies and increase the production.

The external debt of the CR has been connected with the high investment activity since the entrance to the EU. The problem is that this investment activity was not reflected in adequate domestic savings. Therefore, the external debt of the CR has been increasing. The foreign indebtedness was evident in the deficit income balance in the form of high outflow of wages, interest expenditures, and repatriated or reinvested profits. As a result, the negative income balance exceeds the otherwise positive balance of goods and services in the current account, which actually provided a quite good performance of foreign trade.

The outbreak of the financial and economic crisis interrupted the period of economic growth. It was also reflected in the balance of payments, international investment position and external debt of the CR. At the end of 2008, the Czech economy experienced a period of critically low GDP growth. A significant decline in economic performance was related to a considerable decrease in demand for investment and export goods. There was also no intention to make any investment abroad or to import goods in the CR; only necessary goods were imported. Economies worldwide slowed down during this period as credit tightened and international trade declined. The investment activity fell down dramatically. It was most visible in the BoP financial account. There was a great fall in the inflow of foreign direct investment, especially in the form of reinvested earnings. Both foreign investors and domestic investors lost confidence to invest in foreign securities. The international investment position and the

external debt did not worsen significantly, the external debt even decreased. But, due to very low economic activity, the external debt to GDP ratio and the IIP to GDP ratio increased significantly, they were just above the internationally recognized safety level. These ratios were mostly influenced by the fall in nominal GDP.

On the basis of the statistical analysis, it was proved that there is the strong dependence of GDP on the external debt. As the external debt increases, the economic activity tends to rise in order to cover the debts. There is also a strong negative correlation between the IIP and GDP. As there is a high inflow of investment from abroad, the deficit of IIP widens, the economy develops and GDP rises. This actually happened after the integration into the EU. On the contrary, as the economic activity slows down, the tendency of not making any high investments appear. This situation happened right after the outbreak of the world economic and financial crisis. In this situation, the government and the CNB apply varied fiscal and monetary stimuli to keep the indicators of external stability below the internationally recognized safety levels. The hypotheses provided at the beginning of the thesis are accepted.

The balance of payments, international investment position and external debt constitute the set of international accounts for an economy. These statements show the competitive abilities and the economic and financial position of a given country towards the rest of the world. These statements will always provide very valuable information for directing sphere to evaluate the performance of Czech economy towards foreign economies.

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## **7. Appendices**

**Appendix 1: Balance of payments of the Czech Republic in 2000-2009**

**Appendix 2: International Investment Position of the CR in 2000-2009**

- a) International Investment Position by assets and liabilities
- b) International Investment Position by sectors

**Appendix 3: External Debt of the CR in 2000-2009**

- a) External Debt by long-term and short-term
- b) External Debt by sectors

**Appendix 1: Balance of payments of the Czech Republic in 2000-2009 (in CZK billion)**

<b>CZK billion</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>A. Current Account</b>	<b>-104.90</b>	<b>-124.50</b>	<b>-136.40</b>	<b>-160.60</b>	<b>-147.50</b>	<b>-39.80</b>	<b>-77.20</b>	<b>-113.10</b>	<b>-22.90</b>	<b>-37.00</b>
<i>Trade balance</i>	-120.80	-116.70	-71.30	-69.80	-13.40	59.40	65.10	120.60	102.70	180.60
Exports	1,121.10	1,269.60	1,254.40	1,370.90	1,722.70	1,868.60	2,144.60	2,479.20	2,473.70	2,131.30
Imports	1,241.90	1,386.30	1,325.70	1,440.70	1,736.10	1,809.20	2,079.50	2,358.60	2,371.00	1,950.80
<i>Balance of services</i>	54.60	57.90	21.90	13.20	16.60	36.90	45.10	49.70	65.90	27.00
Credit	264.80	269.70	231.10	219.20	247.10	282.40	314.00	341.50	370.30	385.30
Debit	210.20	211.70	209.30	205.90	230.50	245.50	268.90	291.80	304.40	358.30
<i>Income balance</i>	-52.90	-83.50	-115.60	-119.90	-156.60	-143.40	-166.90	-255.70	-174.30	-230.90
<i>Current transfers</i>	14.40	17.80	28.70	15.80	6.00	7.30	-20.40	-27.70	-17.20	-13.70
<b>B. Capital Account</b>	<b>-0.20</b>	<b>-0.30</b>	<b>-0.10</b>	<b>-0.10</b>	<b>-14.20</b>	<b>4.70</b>	<b>8.50</b>	<b>19.60</b>	<b>30.40</b>	<b>41.00</b>
<b>C. Financial Account</b>	<b>148.00</b>	<b>172.80</b>	<b>347.80</b>	<b>157.10</b>	<b>177.30</b>	<b>154.80</b>	<b>92.40</b>	<b>125.80</b>	<b>59.00</b>	<b>95.10</b>
<i>Direct investment</i>	190.80	208.30	270.90	53.50	101.80	279.60	90.30	179.00	36.30	26.40
<i>Portfolio investment</i>	-68.20	34.90	-46.70	-35.70	53.00	-81.20	-26.90	-57.20	-9.10	113.80
<i>Financial derivatives</i>	-1.40	-3.20	-4.30	3.90	-3.20	-2.80	-6.20	1.30	-14.00	-7.70
<i>Other investment</i>	26.90	-67.10	96.40	107.90	-31.70	-40.80	35.30	2.70	45.90	-37.40
<b>D. Net errors and omissions. Valuation changes.</b>	<b>-11.40</b>	<b>19.10</b>	<b>5.60</b>	<b>16.50</b>	<b>-8.90</b>	<b>-26.80</b>	<b>-21.60</b>	<b>-16.60</b>	<b>-26.40</b>	<b>-38.40</b>
<b>Overall balance</b>	<b>31.60</b>	<b>67.20</b>	<b>216.90</b>	<b>12.90</b>	<b>6.80</b>	<b>92.90</b>	<b>2.10</b>	<b>15.70</b>	<b>40.10</b>	<b>60.60</b>
<b>E. Change in reserves (-increase)</b>	<b>-31.60</b>	<b>-67.20</b>	<b>-216.90</b>	<b>-12.90</b>	<b>-6.80</b>	<b>-92.90</b>	<b>-2.10</b>	<b>-15.70</b>	<b>-40.10</b>	<b>-60.60</b>

Source: CNB; [http://www.cnb.cz/en/statistics/bop\\_stat/bop\\_q/index.html](http://www.cnb.cz/en/statistics/bop_stat/bop_q/index.html)

## Appendix 2: International Investment Position of the CR in 2000-2009 (in CZK billion)

### a) International Investment Position by assets and liabilities

CZK billion	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Assets</b>	1448.40	1544.90	1579.90	1537.30	1549.30	1875.40	1888.20	2118.70	2374.70	2356.60
<b>Liabilities</b>	1640.30	1789.00	1977.30	2064.80	2374.30	2710.60	2969.20	3533.90	3897.60	3965.60
<b>NET INVESTMENT POSITION</b>	<b>-191.90</b>	<b>-244.10</b>	<b>-397.40</b>	<b>-527.50</b>	<b>-825.00</b>	<b>-835.20</b>	<b>-1081.00</b>	<b>-1415.20</b>	<b>-1522.90</b>	<b>-1609.00</b>

Source: CNB (own table, MS Excel)

### b) International Investment Position by sectors

CZK billion	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Direct investment</b>	-790.50	-941.20	-1,121.10	-1,103.20	-1,196.50	-1,402.80	-1,562.10	-1,877.40	-1,947.10	-1,975.80
<b>Portfolio investment</b>	15.80	4.80	73.20	120.30	-8.80	30.00	44.30	62.30	-3.00	-161.50
<b>Financial derivatives</b>	1.00	4.30	8.90	4.70	7.90	10.70	16.90	15.30	-1.50	4.50
<b>CNB</b>	497.00	524.60	715.10	692.00	636.00	724.00	657.90	632.70	717.60	763.90
<b>Commercial banks</b>	78.90	175.10	42.00	-39.30	5.70	104.20	65.40	77.30	42.60	75.70
<b>Government</b>	201.10	201.30	90.00	57.10	16.50	-13.90	-31.80	-38.50	-42.40	-54.00
<b>Corporations</b>	-195.20	-213.00	-205.50	-259.10	-285.80	-287.40	-271.60	-286.90	-289.10	-261.80
<b>NET INVESTMENT POSITION</b>	<b>-191.90</b>	<b>-244.10</b>	<b>-397.40</b>	<b>-527.50</b>	<b>-825.00</b>	<b>-835.20</b>	<b>-1,081.00</b>	<b>-1,415.20</b>	<b>-1,522.90</b>	<b>-1,609.00</b>

Source: CNB (own table, MS Excel)



### Appendix 3: External Debt of the CR in 2000-2009 (in CZK billion)

#### a) External Debt by long-term and short-term

CZK billion	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>TOTAL EXTERNAL DEBT</b>	<b>817.07</b>	<b>811.26</b>	<b>813.31</b>	<b>895.14</b>	<b>1,011.81</b>	<b>1,142.18</b>	<b>1,193.68</b>	<b>1,374.71</b>	<b>1,607.43</b>	<b>1,589.73</b>
<b>of which:</b>										
<b>Long-term</b>	473.27	465.69	498.83	536.00	667.33	783.53	872.11	966.89	1,102.77	1,173.18
<b>Short-term</b>	343.80	345.57	314.47	359.14	344.48	358.65	321.57	407.82	504.65	416.55
<b>Share of short-term debt</b>	<b>42.1%</b>	<b>42.6%</b>	<b>38.7%</b>	<b>40.1%</b>	<b>34.0%</b>	<b>31.4%</b>	<b>26.9%</b>	<b>29.7%</b>	<b>31.4%</b>	<b>26.2%</b>

Source: CNB (own table, MS Excel)

#### b) External Debt by sectors

CZK billion	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Government</b>	40.82	31.30	48.46	69.74	151.06	222.11	247.37	274.39	295.43	364.08
<b>Monetary authorities (CNB)</b>	0.19	0.20	0.16	0.12	0.94	5.97	1.81	1.24	1.79	3.75
<b>Banks</b>	321.98	280.84	257.54	283.29	252.84	268.04	272.96	382.04	482.40	410.36
<b>Other sectors</b>	337.89	354.11	354.72	389.60	448.21	470.60	502.26	527.34	588.84	625.06
<b>Direct investment: Intercompany lending</b>	116.19	144.80	152.43	152.39	158.75	175.46	169.29	189.71	238.97	186.48
<b>GROSS EXTERNAL DEBT</b>	<b>817.07</b>	<b>811.26</b>	<b>813.31</b>	<b>895.14</b>	<b>1,011.81</b>	<b>1,142.18</b>	<b>1,193.68</b>	<b>1,374.71</b>	<b>1,607.43</b>	<b>1,589.73</b>

Source: CNB (own table, MS Excel)