

**CZECH UNIVERSITY OF LIFE SCIENCES  
PRAGUE  
FACULTY OF ECONOMICS AND MANAGEMENT  
DEPARTMENT OF ECONOMICS**



**BACHELOR THESIS**

**The impact of foreign currency exchange rate on foreign trade: Case  
study of the Czech Republic**

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# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## BACHELOR THESIS ASSIGNMENT

Tarek Rebai

Economics and Management

Thesis title

**The impact of foreign currency exchange rate on foreign trade: Case study of the Czech Republic**

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### Objectives of thesis

The aim of the thesis is to conduct the impact of the foreign exchange rate fluctuations on foreign trade of the Czech Republic.

### Methodology

The thesis uses comparative and descriptive methods to perform the analysis of the impact of foreign exchange rate fluctuation on foreign trade of the Czech Republic.

**The proposed extent of the thesis**

40 – 50 pages

**Keywords**

trade, commerce, exchange rate, foreign import, export, depreciation, appreciation, intervention, demand supply

**Recommended information sources**

HARTMAN, Ondřej a TUREK, Ludvík. První kroky na FOREXu: jak obchodovat a uspět na měnových trzích.

Vyd. 1. Brno: Computer Press, 2009. 120 s. ISBN 978-80-251-2006-

JÍLEK, Josef. Finanční trhy a investování. 1. vyd. Praha: Grada Publishing, a. s., 2009. 648 s. ISBN 978-80-247-1653-4.)

ŽAMBERSKÝ, Pavel a TAUŠER, Josef. Ekonomie měnového kurzu I. Vyd. 1. V Praze: Vysoká škola ekonomická, Nakladatelství Oeconomica, 2003. 60 s. ISBN 80-245-0637-8.

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## **Declaration**

I declare that I have worked on my thesis called “The impact of foreign currency exchange rate on foreign trade: Case study of the Czech Republic” on my own and I have used only the scientific literature and other information sources that are mentioned in the references at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any third person.

In Prague on 22 November 2016

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Tarek REBAI

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**The impact of foreign currency exchange rate on foreign trade: Case study  
of the Czech Republic**

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**Dopad kurzu zahraniční měny k zahraničním obchodu: Případová studie  
České republiky**

**Summary:**

Nowadays, the increasing globalization of foreign trade is one of the most important parts of their national economy. Its size is influenced by numerous factors. One significant factor is the exchange rate. Now the exchange rate is a value considerably volatile and hard to predict. The aim of the thesis to this is to analyze the evolution of the exchange rate to determine its effect on foreign trade.

The work is divided into two parts do. The theoretical part explains the basic concepts of this issue. Described herein are regularities in currency markets, including foreign exchange differences, which are a major problem in the implementation of foreign trade. In the practical part, then we pay attention to the development of the exchange rate since 2000 to 2015 make the development of the range of export and import according to developments in the foreign exchange rate.

**Key words:**

trade, exchange rate, foreign, export, import, deppretiation, appretiation, intervention, value, forex,

**Souhrn:**

V současné době stále rostoucí globalizace je zahraniční obchod jednou z nejdůležitějších součástí národního hospodářství. Jeho velikost je ovlivněna mnoha faktory. Jedním významným faktorem je směnný kurz. Směnný kurz je hodnota značně volatilní a těžko předvídat. Cílem práce s tím je analyzovat vývoj směnného kurzu a určit jeho dopad na zahraniční obchod.

Práce je rozdělena do dvou částí. Teoretická část vysvětluje základní pojmy této problematiky. Jsou zde popsány pravidelnosti na měnových trzích, včetně kurzových rozdílů, které jsou hlavním problémem při provádění zahraničního obchodu. V praktické části pak věnujeme pozornost vývoji směnného kurzu dvěma hlavními měnám pro zahraniční obchod v České Republice a to euru a dolaru. Vývoj kurzů budeme sledovat v období od roku 2000 do 2015, a dále se budeme věnovat analýze rozsahu exportu a importu v závislosti na vývoji devizových kurzů.

**Klíčová slova:**

zahraniční obchod, směnný kurz, export, import, apreciacie, depreciace, intervence, hodnota, forex,



## Contents

1	Introduction .....	12
2	The aim of the thesis and methodology .....	12
3	Theoretical part .....	13
3.1	History of foreign exchange .....	13
3.2	Currency Exchange Rate .....	14
3.3	Currency Pairs .....	14
3.4	The appreciation of Currency.....	15
3.4.1	The effects of a currency appreciation .....	15
3.5	The deppretiation of a currency.....	16
3.5.1	The effects of currency deppretiation.....	17
3.5.2	The main reasons of fluctuations: .....	18
3.6	Foreign exchange market.....	18
3.7	Exchange rate systems.....	19
3.7.1	Currency exchange regimes .....	21
3.8	Foreign exchange interventions .....	24
3.8.1	The main reasons of CNB interventions .....	25
3.9	Nominal and Real exchange rate .....	26
3.10	The law of one price .....	27
3.10.1	Formal Presentation of the Law of One Price .....	28
3.11	Purchasing Power Parity.....	29
3.11.1	The absolute version of PPP.....	29
3.11.2	The relative version of PPP .....	30
3.11.3	Interes rate parity.....	30
3.11.4	Assumptions for interest rate parity .....	30

3.12	Foreign trade and foreign exchange rate .....	31
3.13	Determinants of Foreign Trade .....	34
4	Analytical Part: Fluctuation and impact on foreign trade in Czech Republic .....	36
4.1	Historical Currency Exchange Rate Development of USD and EURO .....	36
4.1.1	Currency Pair EURO/CZK Development .....	38
4.1.2	Currency Pair USD/CZK development .....	39
4.1.3	Currency Pair EURO/USD Developemnt .....	40
4.2.	Czech Export Strategy .....	41
4.3	Development of foreign trade in Czech Republic .....	42
4.3.1	Development of Import against Export .....	43
4.3.2	The foreign trade balance .....	44
4.4	The structure of Czech Trade .....	45
4.5	Assessing the impact of the exchange rate on foreign trade.....	47
5	Conclusion .....	49
	Bibliography .....	50

**List of graphs:**

Graph No. 1 Demand and supply of currency

Graph No. 2 Historical development EURO/USD

Graph No. 3 EURO/CZK development from 01.2010 – 01.2015

Graph No. 4 USD/CZK development from 01.2010 – 01.2015

Graph No. 5 Historical development of the exchange rate EURO/USD from 02.2010 – 02.2015

Graph No. 6 Import/Export in billions czk from 2000 - 2015

Graph No. 7 Czech Republic Foreign Trade Balance

Graph No. 8 Import/Export againsts EURO development

**List of tables:**

Table No. 1 Import/Export and balance from 2000 – 2015

Table No. 2 Most traded countries average From 2005 – 2015 in %

## **1 Introduction**

The exchange rate is one of the main macroeconomic indicators of the economy of each country and in today's global economies showing current economic situation designated countries. His changes and fluctuations translate into economic development. This thesis discusses the role of the exchange rate in effect on the economy and foreign trade.

In the first Castis we are engaged in basic theoretical background of monetary policy. The practical part is focused directly on the exchange rate development in the Czech Republic and foreign trade. Among the major events that are mentioned include the shift from a controlled exchange rate system to a floating exchange rate and exchange rate fluctuations and the impact on international trade and related interventions Czech National Bank, and Czech export strategy which both should support the Czech economy.

## **2 The aim of the thesis and methodology**

Aim of this thesis is to observe the impact of the foreign exchange rate fluctuations on foreign trade in the Czech Republic. We will use real nominal exchange rate observe development and describe the relation between exchange currency rate and foreign trade. Thesis uses comparative and descriptive methods to perform the analysis of the impact of foreign exchange rate fluctuation on foreign trade of the Czech Republic.

In theoretical part we use internet sources, and economic literature to explain important topics of monetary policy that are related with foreign trade. The practical part is devoted to the analysis of the exchange rate from 2000 to 2015 and foreign trade in Czech Republic. The data required for this analysis are drawn primarily from the pages of the Czech National Bank's Czech statistical database, and the pages of the Czech Statistical Office, and pages of Ministry of Industry and Trade

### **3 Theoretical part**

In a global economy where countries trade among themselves, it is necessary to establish a relationship between the two currencies so as to maintain the balance value of goods and services with which both countries traded. The exchange rate as one of the most important indicators of the economy gives us the ratio between the two currencies. It is the ratio between the currency of one country's currency and the country's second. Of course there are also supranational currency, which are common to several countries. (Žamborský & Taušer, 2003)

International trade theories are simply different theories to explain international trade. Trade is the concept of exchanging goods and services between two people or entities. International trade is then the concept of this exchange between people or entities in two different countries. People or entities trade because they believe that they benefit from the exchange. They may need or want the goods or services. While at the surface, this many sound very simple, there is a great deal of theory, policy, and business strategy that constitutes international trade.<sup>1</sup>

#### **3.1 History of foreign exchange**

After the end of World War II all major currencies were pegged against the value of gold under an international pact adopted at a conference held at Bretton Woods, which became the informal name of the system. This stabilized exchange rates initially, but became untenable as economies developed in the post-war era and gold prices became increasingly expensive. In 1971, the system was effectively eliminated, enabling exchange rates to float freely. With the widespread adoption of the Internet in the 1990s, banks and small companies created online networks to produce automated quotes and allowed for instantaneous trading. Advancing technology and regulation created a new category of brokers that enabled individuals to trade foreign exchange for the first time. Today, retail brokers, who can be found in virtually every corner of the world, account for a meaningful fraction of global spot foreign exchange volumes.<sup>2</sup>

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<sup>1</sup> <http://2012books.lardbucket.org/books/challenges-and-opportunities-in-international-business/index.html>

<sup>2</sup> <http://www.nasdaq.com/forex/education/history-of-retail-forex-market.aspx>

### 3.2 Currency Exchange Rate

There are different meaning of the word Currency Exchange according to the different authors. Here are a few meanings of it:

*“The rate at which two currencies in the market can be exchanged. International currency exchange rates display how much of one unit of a currency can be exchanged for another currency. Currency exchange rates can be floating, in which case they change continually based on a multitude of factors. Alternatively, the exchange rates of some foreign currencies are pegged, or fixed, to other currencies, in which case they move in tandem with the currencies to which they are pegged.”* (Investopedia, 2014)

Here we have another example of definition of currency exchange rate:

*“Exchange rates allow you to determine how much of one currency you can exchange for another. For example, the dollar's exchange rate tells you how much a dollar is worth in a foreign currency, and vice versa. You will definitely need to understand exchange rates when you travel to another country. For example, if you traveled to the United Kingdom on June 24, 2016, you'd find a dollar was worth \$1.32 British pounds.”* (Amadeo, 2016)

### 3.3 Currency Pairs

*“Two currencies with exchange rates that are traded in the retail forex market. The rates of exchange between foreign currency pairs are calculated as the factor by which a base currency is multiplied to yield an equivalent value or purchasing power of foreign currency. The currency exchange rates of foreign currency pairs float, meaning that they change continually based on a multitude of factors.”* (Investopedia, 2014)<sup>3</sup>

For Czech traders one of the most important factor is currency rate of their home currency (czk) to foreign currency. For example, Czech company trades with German company, and Czech company supply foreign company, this would make the value of EURO very important in term

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<sup>3</sup><http://www.investopedia.com/terms/forex/i/international-currency-exchange-rates.asp>  
<http://www.investopedia.com/terms/forex/f/foreign-currency-pairs.asp>  
<https://www.thebalance.com/what-are-exchange-rates-3306083>

of price policy. The reason behind this is that, the Foreign investor prefers strong home currency compete to foreign currency. Assuming for German company that currency rate for EUR/CZK is 26,5 CZK for 1 EUR, and if czech currency decreased value, it would be EUR/CZK 26,9 CZK for 1 EUR importation from czech republic would be cheaper by 1,5%.

### 3.4 The appreciation of Currency

There are many definitions for word Appreciation of currency. Here we have examples:

*‘‘Increase in the value of one country's currency with respect to another. This means that one unit of the appreciating currency buys more units of the other currency than it did previously. Economic fundamentals of the two countries generally determine the relative value between each. Appreciation also makes exports from the country with the appreciating currency more expensive, while making imports less expensive. Exchange rates may be fixed or flexible. An exchange rate is fixed when two countries agree to maintain a fixed rate to settle daily trade differences between respective Central Banks. (forextraders, 2016)*

For domestic trader appreciation of currency could be an issue when currency's value increases that means import became more expensive. One of the main reasons of appreciation is import to domestic country. Demand of foreign currency makes currency more valuable, then forex market could set price higher. When country set fix price of foreign currency, appreciation could not be significant. One of the most famous Fixed Exchange Rate is a Gold Standard. In the mid-18<sup>th</sup> century 1ounce of gold worth 20USD. An foreign exchange rate is flexible, or "floating," when two countries agree to let international market forces determine the rate through supply and demand. Most world trade currently takes place with flexible exchange rates that fluctuate within relatively fixed limits. <sup>4</sup>

#### 3.4.1 The effects of a currency appreciation

**Export is more expensive.** The foreign price of Czech Exports will increase foreigners will find Czech exports more expensive. Therefore with a higher price, we would expect to see a fall in the quantity of Czech exports.

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<sup>4</sup> <http://www.forextraders.com/forex-glossary/what-is-appreciation.html>

**Import is cheaper.** Czech consumers will find that £1 now buys a greater quantity of European goods. Therefore, with cheaper imports we would expect to see an increase in the quantity of imports.

**Lower (X-M)** With lower export demand and greater spending on imports, we would expect fall in domestic Aggregate Demand (AD), causing lower economic growth.

**Lower inflation.** An appreciation tends to cause lower inflation because:

- **Import prices are cheaper.** The cost of imported goods and raw materials will fall after an appreciation, e.g. imported oil will decrease, leading to cheaper petrol prices.
- **Price policy after Appreciation.** With export prices more expensive, manufacturers have greater incentives to cut costs to try and remain competitive.

An appreciation can help improve living standards – it enables consumers to buy cheaper imports. If the appreciation is a result of improved competitiveness, then the appreciation is sustainable, and it shouldn't cause lower growth. An appreciation could be a problem, if the currency appreciates rapidly during a difficult economic circumstances.<sup>5</sup>

### 3.5 The deppretiation of a currency

**Definition:**

*“Currency depreciation is a decrease in the level of a currency in a floating exchange rate system due to market forces. Currency depreciation can occur due to any number of reasons – economic fundamentals, interest rate differentials, political instability, risk aversion among investors and so on. Countries with weak economic fundamentals such as chronic current account deficits and high rates of inflation generally have depreciating currencies. Currency depreciation, if orderly and gradual, improves a nation’s export competitiveness and may improve its trade deficit over time. But abrupt and sizeable currency depreciation may scare foreign investors who fear the currency may fall further, and lead to them pulling portfolio*

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<sup>5</sup> <http://www.economicshelp.org/blog/10050/economics/effects-appreciation/>



*investments out of the country, putting further downward pressure on the currency.’’*  
(Investopedia, 2014) <sup>6</sup>

Deppretiation is oposite of appretiation. It's very often caused by import decreasing, or decreasing of traveling. Deppretiation is has significant impact for domestic trader. Decreasing of foreign currency makes import to domestic country cheaper, or traveling to foreign country. In forex market deppretiation is very caused by currency surplus, then market decreas value to support seles of currency, and gain back domestic currency to enable trade with another currency.

### **3.5.1 The effects of currency deppretiation**

1. **Exports cheaper.** A devaluation of the exchange rate will make exports more competitive and appear cheaper to foreigners. This will increase demand for exports.

2. **Imports more expensive.** A devaluation means imports, such as petrol, food and raw materials will become more expensive. This will reduce demand for imports.

3. **Increased aggregate demand (AD).** A devaluation could cause higher economic growth. Part of AD is  $(X-M)$  therefore higher exports and lower imports should increase AD (assuming demand is relatively elastic). In normal circumstances, higher AD is likely to cause higher real GDP and inflation.

4. **Inflation** is likely to occur following a devaluation because:

- imports are more expensive – causing cost push inflation;
- AD is increasing causing demand pull inflation;
- with exports becoming cheaper manufacturers may have less incentive to cut costs and become more efficient.

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<sup>6</sup> <http://www.investopedia.com/terms/c/currency-depreciation.asp>

5. **Improvements in the current account.** With exports more competitive and imports more expensive, we should see higher exports and lower imports, which will reduce the current account deficit.

6. **Wages.** A devaluation in the currency makes the country less attractive for foreign workers. For example, with fall in the value of the Czech Koruna, migrant workers from Europe may prefer to work in Germany than the Czech Republic.<sup>7</sup>

### **3.5.2 The main reasons of fluctuations:**

- inflation;
- interest rate;
- speculations;
- change in competitiveness;
- balance of payments;
- government debt;
- government Intervention;
- economic growth/recession.

### **3.6 Foreign exchange market**

Forex Exchange is among the most liquid markets of the world. It is a market on which trading with foreign currencies and the main goal is to generate a profit, which is derived from the difference in exchange rates between those currencies. It is traded through computer technology and the market therefore does not have its own stock exchange. It is traded 24 hours a day and interrupt transactions occur only on weekends. The market depends on the time zones for this reason, has formed four main centers - Sydney, Tokyo, London and New York.

The main participants in the Forex are central banks and governments (control of money supply in the country), banks (service providers), investment companies, corporations, companies,

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<sup>7</sup> <http://www.economicshelp.org/macroeconomics/exchangerate/effects-devaluation/>

speculators and investors (generate profit based on the movement of exchange rates) and commoners (payments abroad).

At present, it is also possible to open a so-called mini accounts. Trade can be from a few thousand crowns through various intermediaries using various forex platforms. The advantages are, apart from the not too high first deposit also the possibility of opening different demo accounts where you can trade independently try. For most brokerage fees also exist, as they are already included in the foreign exchange differences - spread. The advantage is the size of the market and hence high liquidity. The market also can not be controlled by central banks and institutions. Forex trading can also bring high profits through leverage. It works on the principle of speculative account where the broker calls, for example, \$ 1,000 as a guarantee for the position of every traded 100 thousand. dollars. If the trader should lose the position is encouraged by the broker to place additional money or to close the position. Thus it is possible even at low input of capital, achieve higher profits. It should however be noted that it is very risky, because in a short time lose the majority of its capital. (Hartman & Turek, 2009)

A daily traded currencies in average worth \$ 5.3 trillion. Forex market so far exceed the stock markets and bond markets. This market scope includes most countries in the world and one of the largest centers of currency transactions including four main centers Tokyo, London and New York. It is estimated that around 15% of trading volume in forex performs corporations and governments that buy and sell goods and services abroad, and 85% of trades constitute investment with the aim of making a profit on currency movements.

### **3.7 Exchange rate systems**

In terms of determination of exchange rates is also important at what exchange rate regime and the currency that is not freely convertible. In terms of its convertibility can be divided into various currency: **convertible** and **non-convertible**. Convertible are divided according to their degree of convertibility of currencies: the convertibility of **internal** and **external** convertibility. **Non-convertible** are traded on the foreign exchange market and the exchange rate is not determined by the interaction of supply and demand, but by decision of relevant institutions (Central Bank, Ministry of Finance etc.). The exchange rate would normally ceases to perform its basic function and does domestic companies with the necessary information about the actual

prices abroad. The economy is isolated from the outside world which contributes to inefficient functioning of domestic companies.

**Convertible** currencies are usually traded on the forex markets. Their rate is determined almost always based on the interaction between supply and demand. If the currency is convertible only internally, then it only traded in the domestic foreign exchange market on which foreign companies have limited access or participation eliminated entirely. Internal convertibility is used to access domestic companies to foreign currencies.

Generally it also means obligation for domestic companies they got paid for their activities abroad in foreign currency. Their bank account they only lead in the domestic currency and all income in foreign currencies instantly converted into domestic currency. This obtained foreign currency offer its clients, who need to make payments abroad or for other purposes. If a bank has a surplus of foreign currency, it will offer in the domestic foreign exchange market in the event of a shortage on the market is looking for. If the discrepancy arises in the market between supply and demand, bank intervenes to keep the exchange rate.

**External convertibility** is defined by Article VIII of the IMF Agreement, which requires a minimum of convertibility for transactions on the current account of the balance of payments. Such currency is then normally exchanged on the forex market. If it is given freely convertible currency for all transactions throughout the balance of payments, then we consider it fully convertible. Thus external convertibility is still far does not mean **full convertibility**. External convertibility does not mean full convertibility. Convertible currencies can works in two basic rate regimes:

- **Floating**
  - Floating is divided into:
    - clean/independent/free floating;
    - managed/dirty floating.
  
- **Fixed**
  - Fixed are divided into:
    - regime of fix rate;
    - crawling peg;

- currency board.

### **3.7.1 Currency exchange regimes**

There is six types of currency exchange regimes. Following paragraphs represent each of them.

#### **Clean Floating**

The clean floating rate regime, the central bank previously resolved not to intervene. The currency exchange rate is so purely the result of interaction between supply and demand in the foreign exchange market, the central bank into action in the foreign exchange market do not operate. In this mode, the central bank basically does not need to hold foreign exchange reserves. Provided is still holding from the time before the introduction of the Clean floating rate, then the change is usually negligible and the overall balance of payments surplus is usually so close to zero.

#### **Managed Floating**

Managed floating rate regime allows the central bank to intervene according what is happening in the forex market, but if it agree as appropriate. Central bnaka can directly influence the exchange rate only market funds (interventions). If it considers that the exchange rate is not in interests with the interests of the domestic economy, then it tries to influence the required direction. Over appretiating domestic currency may weaken the central bank purchase of foreign currency for domestic currency and oposit. In reality, the central banks intervene against the local currency. Interventions in the direction of strengthening local currencies are rather exceptional, suggesting that decision-making in central banks is generally unaffected by the interest commission.

#### **Fixed Rate Regime**

Fixed rate regime in the domestic currency is bound to another currency, currency basket or a supranational currency. The central bank sets the value of the reference currency and commits to this level in the long term to maintain the exchange rate through foreign exchange intervention. It is also usually determined fluctuation band which would be the domestic

currency towards reference currency should not deflect. Fluctuation band is usually stated as a percentage. Extent of fluctuation band for certain currency could be significantly different. Czech Republic, for example, to apply from the beginning of the 1991 to February 1996 fixed rate to a basket of five currencies and later seven currencies fluctuation band of  $\pm 0.5\%$ . Later the zone was extended to  $\pm 7.5\%$ , in order to limit the inflow of speculative capital effect of exchange rate risk.

Within the Exchange Rate Mechanism II, whose members may be those EU member states. Which have not accepted Euro as the national currency peg to the euro, however fluctuation band was in August 1993 due to currency turbulence in the years 1992-1993 was set at  $\pm 15\%$  which allows the change of the currency against the euro by almost 30%.

In the event that there is a misalignment of the exchange rate fluctuation band of determined central bank has to intervene to keep the exchange rate within the band. In the event that local currency has long-term tendency to weaken beyond the band, the central bank runs the risk of depletion of foreign exchange reserves, the amount of which is in fixed rate modes is very important. Nenili bank is able to keep the exchange rate interventions within the band is forced to devaluate the domestic currency or go to a floating rate regime as did Czech National Bank in May 1997

### **Crawling Peg**

Crawling peg the nominal exchange rate system hard to pravidelnimy pre-announced adjustments central parity against the reference currency or a basket of currencies. In fact, again mostly a regular toll devaluation of the domestic currency. Sometimes crawling peg is also often referred to as a system of fixed real exchange rate. Because regular devaluation of the nominal exchange rate compensates for its strengthening as a result of higher domestic inflation. In this system, the central bank is committed to maintaining the fixed exchange rate of the domestic currency against the reference currency or basket of currencies individual with that at the beginning of the month will be a slight devaluation of the domestic currency. Cele fluctuation band is pushed upwards. About the introduction of this system was considered in the Czech Republic but endless happened. The reason was the relatively low rate of inflation in the Czech Republic

## **Currency Board**

Currency board system is the real exchange rate bands without fluctuation. In this mode, the central bank waives autonomous monetary policy. Central banks newly issued money will get the economy only as a result of foreign currency exchange markets forceful intervention against pressures for appreciation of the domestic currency, the central bank buys and sells foreign currencies newly issued currency home. Newly issued the money is covered by rising foreign reserves.

This system is very effective in the fight against inflation, because we know that high inflation is always a result of excessive emissions of money in the domestic economy, which is not in the context of the currency board possible, because the central bank muzeemitovat new money and increasing the money supply only in the event occurring pressure on the appreciation of the domestic currency. Certain problems may be long-term maintenance irrevocable central parity.

In case that labor productivity in the domestic economy is growing slower than the country's reference currency, can domestic companies gradually lose competitiveness which will negatively affect in particular the current account deficit and the demand for foreign currency will exceed its supply and downward pressure on the domestic currency may becoming unsustainable. Another problem may be growing indebtedness of the domestic economy, where foreign investoripostupně lose confidence in the solvency of the government and the domestic economy will begin to leave.

## **Gold standart compare to Currency Board**

Gold standard is its genuine form functioned in the years 1860 - 1914. The currency board essentially represents essentially monetary arrangement very similar to the gold standard. We know that during the functioning of the gold standard were used only full-fledged money. All newly issued banknotes had to be completely covered with gold. The amount of money in circulation and were limited stash of gold. Autonomous monetary policy that actually does not existed, as well as the currency board.

### 3.8 Foreign exchange interventions

Definitions of Foreign Intervention:

*“A foreign exchange intervention is a monetary policy tool in which a central bank takes an active participatory role in influencing the monetary funds transfer rate of the national currency. Central banks, especially those in developing countries, intervene in the foreign exchange market in order to build reserves, stabilize the exchange rate and to correct misalignments. The success of foreign exchange intervention depends on how the central bank sterilizes the impact of its interventions, as well as general macroeconomic policies set by the government.”* (Investipedia, 2014)

Here we have another example of foreign exchange intervention

*“ Currency interventions - or forex interventions - occur when a central bank purchases or sells the country's own currency in the foreign exchange market in order to influence its value. The practice is relatively new in terms of monetary policy, but has already been used by a number of countries including Japan, Switzerland and China to control currency valuations. For the most part, currency interventions are designed to keep the value of a domestic currency lower relative to foreign currencies.*

*Higher currency valuations cause exports to be less competitive, since the price of products are then higher when purchased in a foreign currency. As a result, a lower currency valuation can help improve exports and drive economic growth.”* (Kuepper, 2016)

Forex Intervention is financial tool that is intended to decrease price of domestic currency. Purpose of this tool is to support domestic export to boost domestic economic. Higher prices of foreign currency causes higher price for import, and that has impact on purchasing power. In fact this causes higher production in domestic country, which has impact on employment. Higher employment causes higher wages, which reduce prices of foreign products. Intervention doesn't works with pair currency, higher price of EUR causes higher price of dollar and other currencies.<sup>8</sup>

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<sup>8</sup> [https://www.cnb.cz/cs/faq/menovy\\_kurz\\_jako\\_nastroj\\_menove\\_politiky.html](https://www.cnb.cz/cs/faq/menovy_kurz_jako_nastroj_menove_politiky.html)



The main objective of the intervention is to influence the exchange rate of the domestic currency. They can perform two basic ways directly and indirectly. Indirect intervention involving a change of central bank interest rates in order to influence the movement of foreign capital. Growth rates would lead to an influx of a decrease in the outflow of foreign capital. This movement leads to a change in the relationship between supply and demand of foreign currency for domestic currency, thus changing the exchange rate. Direct (FX) intervention of the central bank buys or sells domestic currency for foreign currency. In this case there is a change in demand or an offer foreign currency for domestic currency with an impact on exchange rate. (Revenda, Mandel, Koderá, Musílek, & Dvořák, 2004)

### **3.8.1 The main reasons of CNB interventions**

Czech economy underwent in 2012-2013, a period of economic downturn that adversely reflected in increased unemployment, declining incomes and household consumption, as well as profits and investment firms. The Czech National Bank responded to these developments by fully use its main monetary policy tool, while at the end of 2012 lowered interest rates to zero technical (0.05%). Furthermore, CNB agreed that the historically low level of interest rates will be kept as long as needed. While the CNB in accordance with its statutory mandate was and is to maintain price stability and to contribute to the stable development of the Czech economy. CNB therefore simultaneously since the autumn of 2012 communicated its readiness to use other tools if necessary for further monetary policy easing. For this purpose, for many good reasons chosen exchange rate. The very announcement of the CNB that is ready to use the course, led in late 2012 and early 2013 to the weakening of the koruna, which allowed curb disinflationary trends

It turned out that the recession and the downturn in the labor market subside only very slowly, and their anti-inflationary effects of lead, along with a decline in prices of raw materials and energy to further reduce inflation. CNB expected that in early 2014, will drop to zero, and that after adjustment for changes in excise taxes on cigarettes even the overall price level falls. Prices of many items of the consumer basket (especially the prices of consumer goods) while

falling for a long time. CNB therefore acted to fulfill its statutory mandate, which is to maintain price stability.<sup>9</sup>

### 3.9 Nominal and Real exchange rate

The nominal exchange rate is an expression of the exchange rate at a certain moment in time. It's a relationship in which we can exchange the two currencies. There are two expressions course. Expressing direct quotations, which expresses the amount of domestic currency per unit of foreign currency, eg. 27 CZK / EUR and indirect quotations, in which the expressed amount of foreign currency per unit of domestic currency for example. 0.027 EUR / CZK. In the first case, we know how much money is worth one euro.

In the second case, we know how much we get euros for one crown. Most commentators courses with which we encounter in everyday life, are the direct expression. The real exchange rate indicates the ratio of average home price of a product or service to the average foreign product or service. To correct ratio, it is necessary that the products or services denominated in the same currency. In other words, we can say that the real exchange rate shows the ratio of domestic and foreign price levels according to the relationship<sup>10</sup>:

$$RER = \left[ \left( \frac{\$}{\text{€}} \right) \times P_F \right] \div P_{US}$$

Here, RER, PE, and PUS indicate the real exchange rate, the price of the Euro-zone's consumption basket, and the price of the U.S. consumption basket.

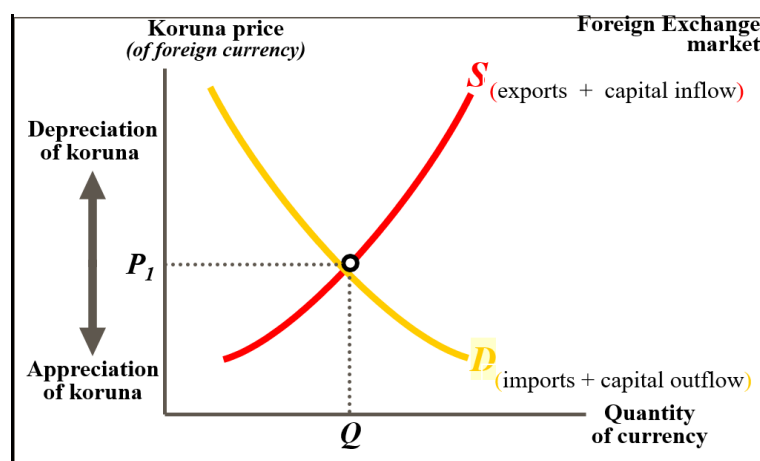
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<sup>9</sup> [https://www.cnb.cz/cs/faq/duvody\\_a\\_prinosy\\_oslabeni\\_koruny.html](https://www.cnb.cz/cs/faq/duvody_a_prinosy_oslabeni_koruny.html)

<sup>10</sup> [https://www.cnb.cz/en/faq/what\\_is\\_the\\_nominal\\_and\\_real\\_exchange\\_rate.html](https://www.cnb.cz/en/faq/what_is_the_nominal_and_real_exchange_rate.html)

(Žamborský & Taušer, 2003)

**Graph No. 1 Demand and supply of currency**



Source: Own construction

When the price of Euro falls, Euro-made goods and services appear less expensive to Czech buyers. If for example German prices are constant, Czech buyers will buy more German goods and services, and the quantity demanded of pounds will rise. (MAITAH, 2009)

### 3.10 The law of one price

In compliance with the following assumptions there is no reason that the same product has been in a long-term one country more expensive than in another country. If that were the case, then would this product be absolutely sure of the ground in the cheaper ones exported to the country in which it is more expensive leading to a leveling of prices.

Assumptions:

- free trade between countries;
- transport costs zero;
- zero learning costs;
- zero time costs.

Law of One Price says that the same product should be placed in the home country as well as abroad if the price we convert to a common currency. If the price of goods was significantly lower than the price of the same goods from abroad, there is a great demand on the domestic market and vice versa domestic manufacturers will try to sell the goods abroad. If we wanted

to use, for example, cheaper goods abroad, must also be added the costs incurred in the acquisition of goods. Therefore, the difference in prices had to be sufficient to cover the costs associated with the acquisition. This process is referred to as commodity arbitrage and runs until the balance is equal in both markets. It is necessary to say that it is only a theoretical concept that pays for certain services and products. (Žamborský & Taušer, 2003)

### 3.10.1 Formal Presentation of the Law of One Price

Let  $P^L$  and  $P^C$  denote the prices in Liverpool and Chicago respectively. Furthermore, we also observe the transport and transactions costs, linked to shipping the commodity from Chicago to Liverpool,  $P^{Tc}$ . All prices are measured in the same currency and units, say, shillings per imperial quarter. What has been explained above verbally can be expressed formally. The law of one price adjusted for transport and transaction costs implies the following equilibrium, which henceforward will be referred to as the Fundamental Law of One Price Identity or FLOPI:

$$P^L = P^C + P^{Tc} \Leftrightarrow \frac{P^L}{P^C + P^{Tc}} = 1$$

in case the two markets both produce and can trade a commodity in either direction the law of one price states that the price difference should be smaller or equal to transport and transaction costs. FLOPI then is smaller or equal to one. If the price difference is larger than transport and transaction costs, trade will close the gap as suggested above. Occasionally domestic demand and supply conditions in two producing economies can be such that price differences are smaller than transport and transaction costs and there will not be any need for trade. In this particular case the two economies are both self-sufficient in wheat.<sup>11</sup>

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<sup>11</sup> <https://eh.net/encyclopedia/the-law-of-one-price/>

### 3.11 Purchasing Power Parity

#### Definition:

*“Purchasing power parity compares two currencies in different countries based on the price of similar goods. When the purchasing power is the same in both countries, the currency is in equilibrium. This means that the price of a good should be constant from one place to another if denominated in the same currency.” (McBride, 2007)*

*“One party may lawfully agree to repay a large sum to another, corresponding to the amount required to buy the same parcel of goods that the latter might have bought if he had not delivered his money in exchange.” (Domingo de Bañez 1594)*

Purchasing power parity exists in versions absolute and relative. It's an economic theory which relates the exchange rate and prices of goods and services in two countries. The first deals with the definition of the exchange rate and brings static view. Relative version examines the causes of exchange rate movements and expresses dynamic view.

#### 3.11.1 The absolute version of PPP

Absolute version of purchasing power parity does not compare only one product or service, but focuses on the overall price level in both countries. Exchange rate and compares the price levels of goods and services in both countries that make up the consumer basket. According to the theory of absolute purchasing power parity, the price level is recalculated on the exchange rate should be the same in both countries.

The exchange rate in a direct quotation corresponds to the ratio of the:

- domestic price level  $P_D$  (price of domestic product)
- foreign price level  $P_F$  (the price of foreign product).

This creates an equilibrium exchange rate  $ER_{PPP}$  (Žamberský, Taušer 2003)

$$ER_{PPP} = \frac{P_D}{P_F}$$

### 3.11.2 The relative version of PPP

Absolute version of PPP explaining what should be the exchange rate on a specific date in relation to the relative price levels, relative PPP says what should be a change in the exchange rate for a given period in relation to the change in relative price levels in both countries. relative version of PPP tells us how we should change the exchange rate for a certain period so that the relative deviation of the exchange rate at the beginning and end of the period was the same. Only on such a domestic currency in real terms does not deppretiate. If the value of the real exchange rate during the reporting period, the then local currency depreciated in real terms. (Žamborský & Taušer, 2003)

Relative PPP is calculated as:

$$S = \frac{P_1}{P_2}$$

Where:

"S" represents exchange rate of currency 1 to currency 2

"P1" represents the cost of good "x" in currency 1

"P2" represents the cost of good "x" in currency 2

### 3.11.3 Interes rate parity

PPP theory explains currency movements more in the long term, IRP theory explains the short-term currency fluctuations. The basic principle is again very simple. Increases in interest rates in the domestic economy will lead ceteris paribus to an influx of portfolio capital from abroad, increasing demand for the domestic currency and its short-term appreciation (Žamborský & Taušer, 2003)

### 3.11.4 Assumptions for interest rate parity

Completely free movement of capital (all transactions on the financial account are passed without limitation) investors are looking for maximum return, regardless of the currency in

which the assets are denominated (assets are perfect substitutes). There is not risk of the assets. There is not capital gains tax on the proceeds given (or the same in all economies).<sup>12</sup>

### **3.12 Foreign trade and foreign exchange rate**

Foreign or international trade is the exchange of goods of one country with other countries. For the state is the source of economic growth, because it brings the possibility of sales of goods and services. The fact that competition is increasing at international level, with states trying to protect domestic producers from foreign certain measures, ie. The restrictions. However, in recent years there has been called. Trade liberalization that remove obstacles to international trade, and thus the foreign trade increasingly widespread.

Changes in the exchange rate acts differently in large and small economy. Organisation for Economic Co-Operation and Development examined the effect of exchange rate fluctuations on a small open economy and concluded that these economies are affected more than large economies. The research results show that small open economies must be borne almost entirely changes in the exchange rate. The reason is little diversification of production and export base, if the growth in import prices due to the depreciation of the domestic currency, the number of domestic producers are small and insufficient to substitute foreign products with domestic production. The size of the impact of depreciation depends on the business partner and the sector.

Organisation for Economic Co-Operation and Development came simulation-based depreciation of the claim that agricultural products are more sensitive to changes in the exchange rate over-manufacture products. One of the conclusions of this study is to claim that the relationship of the exchange rate and foreign trade mainly depends on the price elasticities of each traded product, the market share within the trade in the product, product composition of imports and exports and pricing strategies of Importers and Exporters. The amount of the impact on foreign trade will eventually be reflected in other economic indicators, increased export has a positive effect on reducing unemployment, accelerate innovation processes and economic growth.

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<sup>12</sup> <http://www.univerzita-online.cz/fin/mezinarodni-finance/parita-urokovych-sazeb/>

## **Reasons for foreign trade**

States trade with each other for several reasons. The most important reasons for the existence of foreign trade include:

- diversity of production conditions and technologies: they include different raw materials equipment, climatic conditions, geographical location, natural conditions for agricultural production. If the country does not have certain amenities, they have the goods, which has a shortage, buy otherwise. So the best way is through foreign trade.
- economies of scale: producer may increase in production volume to achieve higher profits, because the average cost of production growth declining. , If the domestic market is already saturated, the company can vyvářet surpluses abroad.
- different preferences.
- existence of government economic policy: eg. Tax, subsidy measures price changes of goods and creates an advantage in their sales.
- between production and consumption - eg. The country is not able to cover their production capacity consumption of their inhabitants.<sup>13</sup>

## **Currency exchange rate and trade**

The intermediary goal of monetary policy which would Svensson could lead the country out of a liquidity trap is the exchange rate. He asks a following question: what is the theoretical impact on the economy and foreign trade. The exchange rate in a direct quotation shows the price of a foreign currency unit expressed in domestic currency units. Indirect quotation of the exchange rate shows the price of domestic currency units expressed in foreign currency units. Spot exchange rate is the exchange rate quotations of currency spot contracts with settlement within two business days. Designation forward exchange rate used in the derivative currency market, where settlement occurs later.

The exchange rate is one because of its strong influence on the balance of payments and other macroeconomic variables among the most important price in the economy. Usually expressed as the average daily nominal exchange rates of domestic currency against foreign currencies.

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<sup>13</sup> (MAJEROVÁ, 2011)



Its size is formed on the basis of foreign exchange supply and demand. The exchange rate affects the structure of output and investment, operating on the labor market and prices and its misalignment can lead to inefficient allocation of domestic absorption and external trade.<sup>14</sup>

### **Exchange rate and net exports in the long and short term**

The exchange rate effect on the size of net exports differently in long and short term. If the depreciation of the exchange rate, domestic goods will be on the international market is relatively cheaper. If the manufacturer demand for his product a certain price expressed in domestic currency, after the depreciation of the national currency will be paying this amount that a smaller amount of foreign currency. Foreign demand for domestic goods and increase domestic exports will grow. At the same time there is a relative increase in the price of foreign goods in the domestic market, and thereby to lower imports. Per unit of foreign currency is now home buyer have to spend larger amounts of local currency than it was before depreciation. Due to the relative increase in prices of foreign goods, then there is a drop in demand for foreign goods and imports fall.

The adjustment of prices and production, however, will not occur immediately. Intervenes if the central bank in the currency market in the direction of the depreciation of the national currency, foreign exchange earnings from exports can in a short period after the devaluation reduced further. Domestic exporters and foreign buyers among themselves mostly long-term contracts and therefore can not in the short term to lower their prices to stimulate foreign demand. Foreign buyers do not change their suppliers immediately, need time to adapt, and are wary of new suppliers.

If, after all, foreign demand has increased, domestic manufacturers have a predetermined production plan and a certain number of employees, it would not be able in the short term to produce more goods. In the short term therefore, there is a stagnation of exports. Import in the long term after depreciation decreases due to its relatively higher prices than domestic production. In the short term, however, can grow. When buying goods import domestic participants exchange domestic currency for foreign.

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<sup>14</sup> (Sevensson, 2001)  
(Jílek, 2004; Jílek, Finanční trhy a investování, 2009)  
(Neuman, Žamberský, & Jiránková, 2010)

After depreciation of the exchange rate must be issued for each unit of foreign currency greater amount of domestic currency. Because in the short term as well as for export, domestic demand is inelastic, import costs will rise. Net exports will be negative in the short term, due to stagnant exports and increasing imports. In the empirical part analyzes the change in exports and imports in the short period after the initiation of foreign intervention in the Czech Republic and verified the hypothesis that in the two months after the initiation of interventions stagnation of export value and import value growth, respectively. that exports continued their long-term trend and imports grew faster than in previous years.<sup>15</sup>

### **3.13 Determinants of Foreign Trade**

The exchange rate is fluctuating. At the rate has many factors which influence the exchange rate fluctuates. The most common factors that affect the exchange rate, include interest and inflation differentials, the development of foreign trade, central bank intervention, economic growth and purchasing power parity theory.

#### **The interest rate differential**

Interest rate spread is the: “*difference between the interest rates at home and abroad*” (Tuleja, Majerová, & Nezval, 2012). If domestic interest rate exceeds the interest rate abroad, they talk about the positive interest rate differential. In the event that there is less talk about negative interest rate differential. For investors, the high interest rate options to better assess their financial resources. For this reason, they will move their capital where there will be a high positive interest rate differential.

#### **Inflation differential**

Inflation differential is “*the difference between the rate of inflation in domestic country and abroad*” (Tuleja, Majerová, & Nezval, 2012)

For the inflation differential, the same pattern as the interest rate differential. In a country where inflation is lower, increases the demand for goods because it becomes cheaper. On payment of

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<sup>15</sup> (Neuman, Žamberský, & Jiráňková, 2010)  
(Mandel & Tomšík, 2008)

obligations it is necessary to have the currency, so there is an increase in demand for this currency.

### **Development of foreign trade and balance of trade**

Trade balance is the difference between exports and imports of goods. In the case of an active trade balance prevails exports over imports. By getting more exports, foreign entities need to domestic currency to pay for its obligations, and therefore the demand for the domestic currency will increase and strengthen the exchange rate .

### **PPP theory**

This theory is based on the law of one price. He says "*must be identical products sold in different countries for the same price when prices are expressed in the same currency*" (Tuleja, Majerová, & Nezval, 2012)

Explanation:

When the validity of purchasing power parity, the price eg. Mobile phone the same as in Prague and Berlin. This is ensured by the international price arbitrage. If the cell phone in question will be in Berlin cheaper, increased demand in Berlin. On the contrary, in Prague will reduce demand for mobile phones.

This causes an increase in prices in Berlin or reduce prices in Prague, prices will handle this.

The very theory of purchasing power parity (hereinafter PPP) has two versions, absolute and relative form. Under the absolute version of the PPP's "*exchange rate between two countries determined by the ratio of price levels in those countries*" (Tuleja, Majerová, & Nezval, 2012)

## **4 Analytical Part: Fluctuation and impact on foreign trade in Czech Republic**

In this part we will describe fluctuation of foreign exchange rate of two main currencies used for foreign trade in Czech Republic which is EURO/USD but mainly EURO. These two currencies are used the most for foreign trade and we will be using descriptive and comparative analysis to demonstrate impact on foreign trade. In the case of foreign trade Territorial structure also analyzed to determine the country with which the Czech Republic the most and the least traded.

We will use graphs of currency exchange rate, and we will compare trade before intervention of CNB in November 2013 and while intervention. In first step we will describe Czech's Export strategy, and development of currency exchange rate of 2 main currencies for trade in Czech Republic which is EURO and USD. In second step we will describe import/export in Czech Republic. We will be focusing on Czech's national bank intervention and compare the impact of currency's value on trade. We will try to describe the impact of intervention on foreign trade unemployment.

### **4.1 Historical Currency Exchange Rate Development of USD and EURO**

EURO began in the foreign exchange (virtual) form on January 1, 1999, but in the form of currency was introduced into circulation on 1 January 2002 and replaced the previously existing currency used in the countries of the eurozone.

Euro continued in a basket ECU in a symbolic EUR 1 = 1 ECU. Default external value of the euro against the US dollar amounted to EUR 1 = \$ 1.1789 and a calculation based on the USD / ECU in the last trading day before the euro (31 December 1998).

Euro historically its strongest rate, which represented 1.5990 US dollar per euro, reached the forex market July 15, 2008, its largest drop was recorded at October 26, 2000 at a rate of \$ 0.8252 per euro. In 2015, the euro hovers at around \$ 1.1 per euro.

When introducing the euro in 1999 is expected to gradually increase the share of the euro in global foreign exchange reserves and the euro will become the world's reserve currency, the US dollar equivalent. This prediction, however, did not materialize. Since the introduction of the

euro in 1999 until 2009, although the share of the euro in global foreign exchange reserves increased from 17.9% to 27.6%, but since 2010 the share of the euro in global foreign exchange reserves and declining in the second quarter of 2015 amounted to only 20, 5%. For comparison, the US dollar in 1999 accounted for 71% of foreign exchange reserves of central banks, in 2009 it was 62.1% and

In Graf below we can see EURO and USD timeline development. It starts on January 1, 1999, when the Czech National Bank (CNB) has set the historicly the first rate of Czech currency to the euro at 35,226 EUR / CZK. Followed by the rapid weakening of three up to 3 czk, which was caused by the lingering economic recession from previous years and reducing interest rates, which the CNB total of eleven times. Although the crown after the initial quarterly decline began with the influx of foreign capital and devaluation of the euro in financial markets strengthen, at the level of the opening of the course came to the end of 2000.

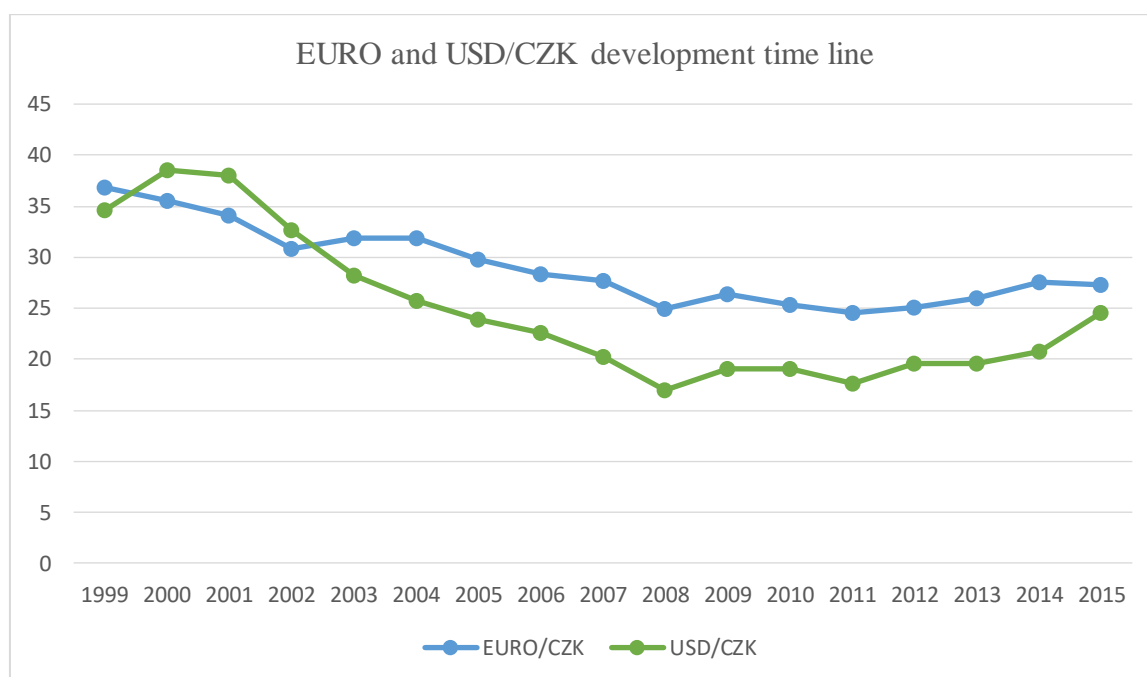
The next two years they conducted mainly in tendency to strengthen. CNB tried to foreign exchange intervention to prevent excessive appreciation of the koruna, however, the appreciation trend of the koruna against the euro was finally pushed through.

The year 2002 brought the problem to the sharp appreciation of the koruna, which departed from the corresponding underlying the development of the domestic economy. From late 2001 to mid-2002 reached the level of appreciation of almost 15%. The koruna got to a level below 30.00 EUR / CZK. Its very hilarious role is also played by the CNB monetary policy. Due to the slow lowering of interest rates has increased the interest rate differential against the rates of the European Central Bank (ECB). The Czech koruna was appretiatin till 2008.

In July 2008, the koruna has stabilized around the level of 23 CZK / EUR, but after verbal intervention by CNB governor Zdenek Tůma cut rates, the koruna depreciated significantly, course

CZK / EUR is less than a week to get to 23.80. CNB and wanted to ensure a strong and credible currency. Czech koruna remained stable with fluctuations in the interface about 1,4czk until 2013, when the CNB decided to intervene.

## Graph No. 2 Historical development EURO/USD



Source of data: (kurzy.cz)

In 2000 USD amounted to 38.5984, which featured the most from 1993 to the present. Further its development declined until 2008, when its value dropped to 17,017. This value implies a minimum in its development. Furthermore lifted slightly, its average level in 2011 stopped on the value of 17.0717.

This course is therefore over nineteen years, average values range between 38.5984 and 17.9717. The size of exchange rate changes is thus 29.5183. This is a significant appreciation of the dollar. In the future it is expected that the exchange rate depreciated to a value similar to the once dosáhnutého highs.

### 4.1.1 Currency Pair EURO/CZK Development

In this graf we can see course development of EURO/CZK from 01.2010 – 02.2015. Czech's Nationa Bank uses managed floating regime rate, that means the exchange rate is determined by supply and demand in the currency market. As we can see from 2010 to november 2013 when the CNB began to intervene fluctuation was between 24,01CZK/1EURO and 26,40CZK/1EURO. ČNB started intervention 06.11.2013 in this day we can see depretiation of

Czech Koruna from 25,8CZK/EURO to 26,85CZK/EURO and depreciation was stil continues up to 28,41CZK/EURO. In period from 01.2010 to 02.2015 we can see difference of 4,4CZK or 18,32% . In 2016 rate is keeping mostly on 27,02 and fluctuation was between 27,02 and 27,15.

**Graph No. 3 EURO/CZK development from 01.2010 – 01.2015**



Source: (kurzy.cz)

#### **4.1.2 Currency Pair USD/CZK development**

In this graf we can see USD/CZK development in period 01.2010 – 02.2015. USD is most traded currency in the world. The USD can be found in a pair with all the other major currencies and often acts as the intermediary in triangular currency transactions. This is all because the USD acts as the unofficial global reserve currency it makes usd prone to fluctuations. While intervention USD/CZK went from 19,07CZK/USD to 20,08CZK/USD. Minimum of USD/CZK was 16,265 and maximum was 24,859 which is different of 8,594 which is 52,83%. Here we can see the huge difference between EURO fluctuation and USD where percentage change while intervention was approximately 3 times higher.

**Graph No. 4 USD/CZK development from 01.2010 – 01.2015**



Source: (kurzy.cz)

### **4.1.3 Currency Pair EURO/USD Development**

Both currencies the euro and the USD are the most important international currencies. The EUR/USD is the most traded currency pair in the world. It is reported that the EUR/USD alone attributes to nearly a quarter of foreign exchange

Although the percentage of this pair's volume decreased over the year from 30% in 2001 to 24.1% in 2013, the daily average turnover itself quadrupled. Thanks to high volatility, the laissez-faire floating regime and the active international market of the two economic entities, the exchange rates of the EUR/USD are recorded to change constantly.

On this graf below we can see historical development of EUR/USD. Because EUR/USD are most traded currencies in the world it is very susceptible to fluctuations. In this period from 2010 – 2015 we can see minimum for 1EUR is 1.1197USD and maximum is 1EUR is 1.4885USD so fluctuation band is 0,3688 or 32,93%.



**Graph No. 5 Historical development of the exchange rate EURO/USD from 02.2010 – 02.2015**



Source:( kurzy.cz)

## **4.2. Czech Export Strategy**

Export Strategy of the Czech Republic based on the current state of the Czech economy (condition of Czech companies, their sectoral composition, capital strength, technical and technological level of Czech products and services, etc.) And the situation on European and world markets (developments in major export markets of the Czech Republic, open EU issues, uneven growth of the world economy, the situation on global financial markets, etc.).

Export Strategy of the Czech Republic defines the strategic framework for the export policy in 2020 and summarizes the overall vision of the state export support activities, their objectives as well as measures which should lead to the fulfillment of these objectives. Export Strategy seeks access to export promotion activities relatively broadly - it means that not only focuses on the activities and practices that are directly and exclusively related to export processes, but also on other, related and connected state policy. The ambition of the export strategy is to

maximize the synergies that result from various activities undertaken by public institutions for the promotion and development of Czech exports.

It is built on three pillars: intelligence for export, export development and promotion of business opportunities. The Strategy consists of 12 basic projects and identifies their main objectives and attributes. Projects will be implemented by a series of concrete measures aimed at restructuring and streamlining of export support. Into pillars and project cards, the Action Plan for export and internationalization, which then processes the MIT and whose object is the organization of the implementation of export cards and their interrelations.

One of the key principles of the Export Strategy is defining priority and interest markets for Czech exporters in cooperation with the business sector. These markets are identified based on growth potential, absorption capacity and compatibility in relation to the Czech economy. It should be noted that the EU still represent and in the future will be an important outlet for Czech exports. The aim is to focus on maintaining existing positions and further development of these positions, especially in the segment of small and medium-sized enterprises.

12 priority countries - Brazil, the PRC, India, Iraq, Kazakhstan, Mexico, Russian Federation, Serbia, Turkey, Ukraine, USA, Vietnam.<sup>16</sup>

### **4.3 Development of foreign trade in Czech Republic**

Besides the development of the exchange rate itself is an essential part of the job description of the development of foreign trade of the Czech Republic. Attention will be paid to the long-term development of foreign trade within the specified period or analysis of commodity and territorial structure.

On the table below we can see that the total volume of foreign trade in the period 2000 - 2015 grew with trendy all the time.

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<sup>16</sup> <http://www.mpo.cz/dokument103015.html> Ministry of Industry and Trade

Also interesting is the fact that a higher growth rate in the period just showed exports, which since 2012 has a much faster growth rate than imports, to which has some influence devaluation of the Czech crown. In previous years, appreciating koruna did not have much negative impact on Czech exporters, as expected, but rather contributed to their significant development. Exporting firms to prove that they are capable of developing the course work effectively and to exploit its changes to their advantage. Thus confirming that Czech exports to foreign markets is quite competitive.

**Table No. 1 Import/Export and balance from 2000 - 2015**

year	Turnover	Export	Import	Bilanc	Change against previous year in %		The coverage of imports by exports in%
	in billions. Kč				Export	Import	
2000	2 363,0	1 121,1	1 241,9	-120,8	23,4	27,6	90,3
2001	2 653,7	1 268,1	1 385,6	-117,4	13,1	11,6	91,5
2002	2 580,5	1 254,9	1 325,7	-70,8	-1,0	-4,3	94,7
2003	2 811,7	1 370,9	1 440,7	-69,8	9,2	8,7	95,2
2004	3 471,8	1 722,7	1 749,1	-26,4	25,7	21,4	98,5
2005	3 698,5	1 868,6	1 830,0	38,6	8,5	4,6	102,1
2006	4 249,4	2 144,6	2 104,8	39,8	14,8	15,0	101,9
2007	4 870,6	2 479,2	2 391,3	87,9	15,6	13,6	103,7
2008	4 880,2	2 473,7	2 406,5	67,2	-0,2	0,6	102,8
2009	4 127,7	2 138,6	1 989,0	149,6	-13,5	-17,3	107,5
2010	4 944,4	2 532,8	2 411,6	121,2	18,4	21,2	105,0
2011	5 566,3	2 878,7	2 687,6	191,1	13,7	11,4	107,1
2012	5 839,5	3 072,6	2 766,9	305,7	6,7	3,0	111,0
2013	5 998,2	3 174,7	2 823,5	351,2	3,3	2,0	112,4
2014	6 828,5	3 628,8	3 199,6	429,2	14,3	13,3	113,4
2015 <sup>1)</sup>	7 377,9	3 901,7	3 476,2	425,5	7,5	8,6	112,2

Source: Source: ČSÚ, MPO (Czech statistical office, Ministry of Industry and Trade )

#### 4.3.1 Development of Import against Export

For better representation of available graphics we will use graph of import and export in billions CZK, and balance graf

**Graph No. 6 Import/Export in billions czk from 2000 - 2015**



Source: ČSÚ, MPO (Czech statistical office, Ministry of Industry and Trade Before Czech Republic joined EU total exports recorded the largest increase in 2004, the year in which the Czech Republic joined the EU, and up to 25.66%. Conversely, the biggest drop occurred in 2009, up by 13.5%. this fall, however, is a consequence of the economic crisis. Since 2009 Czech Export has been significantly growing and after changing of Czech Export Strategy in 2012 we can see almost 2 times higher volume of import and export than previous years.

#### **4.3.2 The foreign trade balance**

Trade balance is the difference between exports and imports, between the domestic and foreign economies. It is an important indicator of economic performance shows how much a country is able to cover imports by exports. The trade balance is also called. Net exports (this is again due to the difference between exports and imports). Net exports is one of the four factors used for calculating GDP, and therefore an important indicator of the economy.

Trade balance was until the end of 2005 is negative, because there imports outweighed over exports. The situation improved in 2005, a year after the Czech Republic joined the EU.

From that year until the present, the balance surplus, ie. outweigh exports.

The lowest balance recorded a foreign trade v2000, when it reached – 120,8 billion. CZK.

The largest sum amounted balance (429.2.1 bil. CZK) in 2014

As mentioned above, the Czech Republic most traded with EU countries. State under the Export Strategy of the Czech Republic for the period 2012 until 2020, the state tries to encourage exporters to export to other countries.

**Graph No. 7 Czech Republic Foreign Trade Balance**



Source: (CSO, 2016), (MIT, 2016))

**4.4 The structure of Czech Trade**

In this chapter we will be describing largest trading partners for Czech Republic in 2005, 2010 and 2015. We will compare these 3 years because 2005 is the first year for the Czech Republic in the EU and 2010 is the year after the economic crisis and the middle year of this period and 2015 when Czech foreign trade was the highest in the last decades.

The main share of the value of trades the Czech Republic has developed with industrial countries, especially EU member countries with which the Czech Republic realizes approximately 75% of the turnover. Our major partners are Germany and Slovakia. With these countries we realize approximately 40% of the total foreign trade, about 43% of the value of exports. The territorial structure of Czech foreign trade is not unlike the commodity structure, which is too wide. Approximately 50% of the turnover of exchange is carried out in trade with neighboring countries, namely Germany, Austria, Poland, Slovakia and Hungary.

Focusing on only a limited number of foreign markets is a major risk and leads to high dependence of the Czech economy on the development of the economic cycle neighboring economies, which are crucial partners. Negative developments in the economies of these countries then could mean huge problems for economic development and trade of the Czech Republic. Therefore, the priority of territorial diversification of Czech exports, as well as an increase in Czech exports to countries with which the Czech Republic has a long-term passive balance of trade, particularly with China and Russia.

Dominates EU countries, whose share of the foreign trade turnover of nearly 80%. The main feature of the current development of the territorial structure is constantly growing dependence of the Czech Republic on trade with EU countries, while the importance of trade with other territories of the world is gradually decreasing. The balance of foreign trade exchange with other regions of the world is passive, the highest negative balance in the foreign trade exchange with the new EU Member States, the PRC and Russia. The following table shows how a change has occurred territorial structure of foreign trade after joining the EU.

Table No. 2 Most traded countries average From 2005 – 2015 in %

<b>Average from 2005 to 2015 order and share in %</b>			
<b>Imports</b>		<b>Exports</b>	
<b>Austria</b>	<b>3,4</b>	<b>Germany</b>	<b>31,9</b>
<b>Belgium</b>	<b>1,9</b>	<b>Slovakia</b>	<b>8,8</b>
<b>France</b>	<b>5,9</b>	<b>Poland</b>	<b>6,0</b>
<b>Germany</b>	<b>26,7</b>	<b>United Kingdom</b>	<b>4,9</b>
<b>Hungary</b>	<b>4,7</b>	<b>France</b>	<b>5,3</b>
<b>China</b>	<b>9,9</b>	<b>Austria</b>	<b>4,7</b>
<b>Italy</b>	<b>4,3</b>	<b>Italy</b>	<b>4,2</b>
<b>Netherlands</b>	<b>3,5</b>	<b>Hungary</b>	<b>2,7</b>
<b>Poland</b>	<b>6,5</b>	<b>Netherlands</b>	<b>3,4</b>
<b>Russian Federation</b>	<b>5,2</b>	<b>Spain</b>	<b>2,5</b>
<b>Slovakia</b>	<b>5,5</b>	<b>United States</b>	<b>2,1</b>
<b>South Korea</b>	<b>1,6</b>	<b>Belgium</b>	<b>2,6</b>

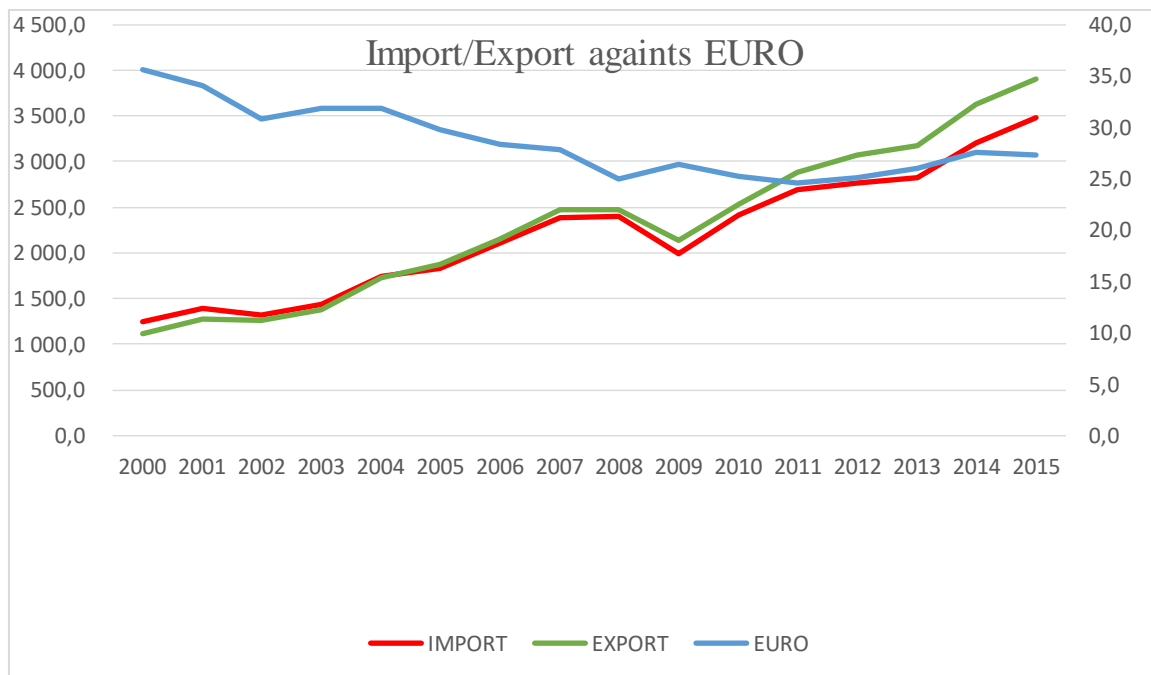
<b>Spain</b>	<b>1,8</b>	<b>Russian Federation</b>	<b>2,7</b>
<b>United Kingdom</b>	<b>4,5</b>	<b>Switzerland</b>	<b>1,5</b>
<b>United States</b>	<b>2,2</b>	<b>Sweden</b>	<b>1,6</b>

Source (CSO, 2016) (MIT, 2016)

#### 4.5 Assessing the impact of the exchange rate on foreign trade

In the chart below shows how the developed courses CZK / EUR, exports and imports within the EU from 2000 to 2015. This chart will also condemn the influence of the exchange rate on the aforementioned indicators. For the construction of the graph was used data obtained from the CSO, the amount of individual courses are annual averages and are based on Eurostat statistics.

**Graph No. 8 Import/Export againsts EURO development**



Source: Own elaboration using data from the CSO

The graph also shows only affect the exchange rate CZK / EUR. The reason for this is the amount of trades that showed previous analysis. Furthermore, the graph shows that while the exchange rate EUR / CZK is reduced, export and import increases. Since 2001 there the excess of exports over imports. The exchange rate in this period continued to decrease. Despite the fact

that in 2002 there was a slight increase in the exchange rate, export in this period continued to increase, imports recorded a slight decline.

But the situation changed in 2007 when the size of both export and import decreased. This decrease can be explained by the economic situation, since in this period hit the Czech Republic economic crisis. The situation improved in 2009. The exchange rate exchange rate in this period was registered both a decrease and an increase. Since 2009 there is an increase of exports and imports and the lowering of the exchange rate.

It follows that the exchange rate affects the size of exports and imports. However, influential their size have other determinant, which is acknowledged in the theoretical background of this work.



## 5 Conclusion

Foreign trade development depends to some extent on the development of the exchange rate. Because the Czech Republic as a member of the European Union is not yet among the 19 eurozone countries, the problem of dependence of the exchange rate and foreign trade is still current. Assuming that the Czech Republic enter the eurozone and will therefore be used as an official currency with the same currency as other states with which most trades, this problem will reduce, but not disappear completely.

The aim of this study was to analyze the evolution of the exchange rate between 2000 and 2015 and determine the impact of currency on foreign trade.

The analyzes of the exchange rate clearly indicates that the Czech koruna against the euro since 1999 strengthens. The last eleven years have seen significant depreciation, causing the good condition of the Czech economy. This evolution leads to increasing exports, which has also resulted in greater competitiveness of Czech products on world markets. However, much more strengthening Czech koruna reached against the dollar. The course of this currency pair has appreciated from 2000 to 2008. In recent years, there has been only a slight increase in the average value of 17 CZK / UDS. Volatility of this rate for the last nineteen years was so great that the difference between the maximum and the minimum exchange rate was 29 CZK.

The exchange rate is a key determinant of foreign trade. It must however be noted that the size of exports will certainly influence other factors which can not be quantified. Such as the central bank intervened size of interest rates, consumer preferences, political and other. These other variables could be eg. The size of the rate of inflation in the country and in the Czech Republic, the size of import into the country, etc.

## **Bibliography**