The Institute of Technology and Business

in České Budějovice

International Finance

Study materials for the part-time study programme

Supervisor: Ing. Lucie Meixnerová, Ph.D.

School of Expertness and Valuation

School of Expertness and Valuation

Authors: Ing. Lucie Meixnerová, Ph.D.
Ing. Pavel Rousek, Ph.D.

Contents

1 Summary

Period	Year 1, 2nd term / Year 2, 3rd term
Course	**International Finance**
Language	English
Supervisor	Ing. Lucie Meixnerová, Ph.D.
Supervisors department	School of Expertness and Valuation
Department	School of Expertness and Valuation
Lecture tutor	Ing. Lucie Meixnerová, Ph.D.
Seminar tutor	Ing. Pavel Rousek, Ph.D.
Assessment type	Exam
Assessment note	Attendance at seminars at least 70 %. Test success min. 70 %
Extent and intensity	2/2
Credits	5
The goal of the course	The course focuses on the basic areas of international finance, international economics, and the foreign exchange market. It deals with the fields of international monetary relations, the international financial market, foreign exchange rates and international payments.
Learning outcomes	Having finished the course successfully, the student will: 34.1 Student understands the principles of the organization of the foreign exchange market. 34.2 Student knows the exchange rate systems. 34.3 Student understands the factors of the exchange rate determination. 34.4 Student manages currency risk in foreign trade relations. 34.5 Student understands the organization and planning of international trade. 34.6 Student understands investment decision making on international capital markets. 34.7 Student will process information from the balance of payments.
Syllabus of the course	Lectures 1. Foreign-trade Relations (34.4) 2. Planning of International Trade (34.5) 3. Organization of International Trade (34.5) 4. Investment Decision-making in International Trade (34.6) 5. International Capital Markets and Derivatives on Capital Markets (34.6) 6. The Foreign Exchange Market and its Instruments (34.1) 7. Exchange Rate (34.2)

<table>
<tr><td></td><td>8. Systems of Exchange Rate (34.2)
9. Fundamental Analysis of the Exchange Rate (34.3)
10. Technical Analysis of the Exchange Rate (34.3)
11. Currency Risk (34.4)
12. External Balance Indicators (34.7)
13. Payment Balance (34.7)

<u>Seminars</u>
1. Foreign-trade Relations (34.4)
2. Planning of International Trade on Model Examples (34.5)
3. Organization of International Trade on Model Examples (34.5)
4. Investment Decision-making in International Trade (34.6)
5. International Capital Markets and Derivatives on Capital Markets (34.6)
6. The Foreign Exchange Market, Principles of Its Organization and Its Instruments (34.1)
7. Historical and Contemporary Realities of the Exchange Rate (34.2)
8. Systems of Exchange Rate (34.2)
9. Fundamental Analysis of Current Exchange Rates (34.3)
10. Technical Analysis of Current Exchange Rates (34.3)
11. Historical Examples of Currency Risk Management (34.4)
12. Examples of External Balance Indicators (34.7)
13. Working with Sample Payment Balance Sheets(34.7)</td></tr>
<tr><td>Organizational forms of teaching</td><td>Lectures, seminars, consultations</td></tr>
<tr><td>Complex teaching methods</td><td>frontal education
brainstorming
group teaching
critical thinking
individual work</td></tr>
<tr><td>Study load</td><td>
<table>
<tr><th rowspan="2">Activity</th><th colspan="2">Hours per term</th></tr>
<tr><th>Daily form</th><th>Combined form</th></tr>
<tr><td>Preparation for a partial test</td><td>12</td><td>51</td></tr>
<tr><td>Preparation for lectures</td><td>13</td><td>0</td></tr>
<tr><td>Preparation for the seminar, seminar, tutorial</td><td>13</td><td>10</td></tr>
<tr><td>Attendance at lectures</td><td>26</td><td>0</td></tr>
<tr><td>Attendance at seminars/tutorials</td><td>26</td><td>16</td></tr>
<tr><td>Preparation for the final test</td><td>38</td><td>51</td></tr>
<tr><td>Attendance at the test</td><td>2</td><td>2</td></tr>
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	Total: | 130 | 130
Assessment Methods and Assessment Rate	Final test 70 % Mid-term test 30 %
Exam conditions	Participation in lectures and seminars. Earn at least 70% points from the mid-term and final test.
Teacher's information	Attendance in lessons is defined in a separate internal standard of ITB (Evidence of attendance of students at ITB). It is compulsory, except the lectures, for full-time students to attend 70 % lesson on the course in a semester.
Compulsory literature	KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648.
Recommended literature	ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. CZECH STATISTICAL OFFICE, 2018. *Hlavní makroekonomické ukazatele.* Available at: https://www.czso.cz/csu/czso/hmu_cr OECD, 2018. *Purchasing power parities (PPP).* Available at: https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm PRAGUE STOCK EXCHANGE, 2018. *PX: Historická data.* Available at: https://www.pse.cz/indexy/hodnoty-indexu/historicka-data/?ID_NOTATION=325088&ISIN=XC0009698371
Webpages	http://www.worldbank.org/ http://www.ifc.org/ http://www.imf.org/
Publishing activities	<u>Supervisor and Lecture tutor (Ing. Lucie Meixnerová, Ph.D.)</u> MEIXNEROVÁ, L., 2015. Companies' financing through the capital market in the countries: Austria, the Czech Republic, Poland and Slovenia. In: *Conference of Finance and the Performance of Firms in Science, Education, and Practice*. Zlin: Tomas Bata University in Zlín, 938-951. ISBN 978-80-7454-476-7. MEIXNEROVÁ, L. and E. SIKOROVÁ, 2017. Basic characteristics of Czech business entities in the context of national and international accounting. *Journal of International studies*. **10**(3), 120-133. ISSN 2071-833. MEIXNEROVÁ, L., 2015. Development of the capital market after the introduction of MiFID in the Czech Republic and Slovenia. In: *International Conference on Euro and the European Banking System – Evolutions and Challenges*. [s. l.]: Univerzita Alexandru Ioan Cuza

	Iași, 209-220. ISBN 978-606-714-142-9. MEIXNEROVÁ, L. and E. SIKOROVÁ, 2017. The basic characteristics of the czech business entities in the context of national and International accounting. *Marketing and Management of Innovations*. **10**(3), 120-133. ISSN 2227-6718. MEIXNEROVÁ, L., 2014. The presence of the golden section in the msci ac asia pacific share price index. Ge- international. *Journal of Management Research*. **2**(8), 388-395. ISSN 2321-1709. <u>Seminar tutor (Ing. Pavel Rousek, Ph.D.)</u> ROUSEK, P. a M. VOCHOZKA, 2015. Public Production of Private and Public Goods in the Czech Republic in 2013. In: *7th international conference Economic Challenges in Enlarged Europe*. Tallinn: Tallinn University of Technology, 1-9. ISSN 2382-6797. ROUSEK, P., 2016. Mutual Foreign Trade between China and the Visegrad Group. *Littera Scripta*. **9**(3), 42-51. ISSN 1805-9112. ROUSEK, P., 2016. BRIEF REPORT ON PUBLIC SPENDING ON INLAND AND MARITIME WATERWAYS IN PARTICULAR COUNTRY IN CERTAIN PERIOD OF TIME. *Our Sea*. **63**(3), 177-181. ISSN 0469-6255. ROUSEK, P., E. ROSOCHATECKÁ and M. PSÁRSKA, 2018. Inflation forecasting on a specific example. *Young Science*. **6**(1), 137-146. ISSN 1339-3189. ROUSEK, P., 2015. Selected Forms of Cooperation between Small and Medium-Sized Enterprises and Public Sector Institutions. In: *Innovative Economic Symposium 2015*. České Budějovice: The Institute of Technology and Business in České Budějovice, 93-97. ISSN 2464-6369.
Topics of diploma theses	Analysis of the foreign-trade relations of the selected company. Analysis of selected investment decision on international capital markets. Company's entry plan for international markets.

2 Preparation for Lectures

2.1 Foreign-trade Relations

Keywords

International Trade, Foreign Trade, Gravity Model, Trade Barriers

The goals of the chapter

The aim of this chapter is to get acquainted with the foreign-trade relations. Special attention is paid to currency risk in foreign-trade relations.

Learning Outcomes

- 34.4 student manages currency risk in foreign trade relations

Abstract

At the beginning of the study of international finance issues, the student should make an overview of the information frame in which he/she will move. The important topics will be foreign-trade relations, international trade, international capital markets, foreign exchange market, exchange rate, currency risk, and external balance.

To begin with, students need to get an overview in two areas: in the theoretical part it is necessary to overview compulsory literature, recommended literature, and relevant web pages; in the practical part, the student will become acquainted with the actual state of the art in the field of international finance.

The basic overview of foreign-trade relations is the basic knowledge of planning, organization, investment decision-making, international capital markets, its derivatives, foreign exchange market, its instruments, exchange rate, its systems, its fundamental analysis, its technical analysis, currency risk, external balance and balance of payments.

The student needs to learn an overview of world trade to answer the question “Who trades with whom?” Main models to display important aspects are the gravity model and specification of trade barriers such as distance, borders and other barriers.

The current world is showing many changing patterns of world trade. The world is getting smaller and smaller, objects of international trade are changing and service offshoring grows up.

The closing of the first chapter is a basic overview of the real situation of the world's largest economies (current and future): United States of America (USA), European Union (EU), Brazil, Russia, India, China, South Africa (BRICS), and Japan.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy,* 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 10-23)

Control Questions

1. How the value of trade between two countries depends on their economy sizes and on their economy openness?
2. How would you explain the reasons for different international trade between different economy sizes?
3. How distance affects foreign trade? What are the main reasons that distance affects foreign trade?
4. How borders affect foreign trade? What are the main reasons that borders affect foreign trade?
5. How has the share of international production that is traded fluctuated over time? Is it increasing or decreasing?
6. Why there have been two ages of globalization?
7. What are the characteristics of the first age of globalization?
8. What are the characteristics of the second age of globalization?
9. How has the mix of goods that are traded internationally fluctuated over time? Is it more or less diversified?
10. How has the mix of services that are traded internationally fluctuated over time? Is it more or less diversified?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.1 Foreign-trade Relations

2.2 Planning of International Trade

Keywords

Ricardian Model, Specific Factors Model, Heckscher-Ohlin Model, Standard Trade Model

The goals of the chapter

The aim of this chapter is to get acquainted with the planning process in international trade relations.

Learning Outcomes

- 34.5 student understands the organization and planning of international trade

Abstract

Important knowledge in the field of international trade planning is understanding of the different models that concern this issue. The first economist who addressed this issue was Adam Smith. He introduced the concept of absolute advantage.

His work expanded David Ricardo by a model called a comparative advantage. The assumption of basic Ricardian Model is a one-factor economy in which production possibilities and relative prices and supply are shown. This model continues with a show of trade in the one-factor world: determining the relative price after the trade, the gains from trade, the losses from nontrade and relative wages. Students need to avoid misconceptions about comparative advantage. Misconceptions about productivity, competitiveness, and labor are most common.

The model of comparative advantage becomes more complex with many goods. The requirement for students is the acquaintance of setting up the model, relative wages, and specialization and determining the relative wage in the multi-good model. The model is fully complete by adding transport costs and nontraded goods.

Another area solved in the compulsory literature is the relationship between specific factors (the Specific Factors Model) and income distribution (gains from trade). The student will also be introduced to a preliminary view on the political economy of trade and international labor mobility.

The Heckscher-Ohlin Model introduces relation of trade and resources in a two-factor economy. There are several effects of international trade between two-factor economies. Everything is completed by empirical evidence on the Heckscher-Ohlin Model.

The last introduced model is the Standard Trade Model with these partial areas:

- Standard Model of a trading economy
- Tariffs and export subsidies
- Simultaneous shifts in supply and demand
- International borrowing and lending

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 24-136)

Control Questions

1. How does the Ricardian model work? How it illustrates the principle of comparative advantage?
2. What are the major gains from international trade?
3. Based on Factors Model how a mobile factor will respond to price changes by moving across sectors.
4. Why trade will generate both winners and losers in the short run.
5. Why trade is a politically contentious issue.
6. Based on Heckscher-Ohlin Model how differences in resources generate a specific pattern of trade?
7. Why the gains from trade will not be equally spread even in the long run and identify the likely winners and losers.
8. How the components of the standard trade model, production possibilities frontiers, isovalue lines, and indifference curves fit together to illustrate how trade patterns are established by a combination of supply-side and demand-side factors?
9. How changes in the terms of trade and economic growth affect the welfare of nations engaged in international trade?

10. How would you relate international borrowing and lending to the standard trade model, where goods are exchanged over time?

Points of Interest

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Link to the Practical Part

3.2 Planning of International Trade on Model Examples

2.3 Organization of International Trade

Keywords

International Trade, Organization, Economies of Scale, External Economies, Economic Geography

The goals of the chapter

The aim of this chapter is to get acquainted with the organizational arrangement of international trade.

Learning Outcomes

- 34.5 student understands the organization and planning of international trade

Abstract

The student will be introduced to external economies of scale within the framework of this topic. Economies of scale are connected to other topics:

- International location of production – international specialization due to climate, historical contexts etc.
- International trade – exchange of goods, services, and capital across state, federal or local borders
- Market structure – characteristics of market like types such as perfect competition, monopolistic competition, oligopoly or monopoly

In this chapter, students learn about the organization of international trade from the perspective of international organizations, economies of scale, external economies and economic geography.

The theory of external economies needs to be mastered including all components such as specialized suppliers, labor market pooling, knowledge spillovers and market equilibrium. Within the connection of External Economies and International Trade some problems need to be solved (output, prices, the pattern of trade, trade, and welfare, dynamic increasing returns).

A special case of international trade to learn is an interregional trade as a lower level of long-distance trade and long-distance business activities. This is related to knowledge of economic geography.

Study of location, distribution, and arrangement of economic activities is important knowledge for students of international finance. The current state of economic geography is designed with historical consequences.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 137-154)

Control Questions

1. Why international trade often occurs from increasing returns to scale?
2. What are the differences between internal and external economies of scale?
3. What are the sources of external economies?
4. What are the roles of external economies and knowledge spillovers in shaping comparative advantage and international trade patterns?
5. What are the causes of the international division of labor?
6. What are the positive consequences of the international division of labor? How do you explain these positive consequences?
7. What are the negative consequences of the international division of labor? How do you explain these negative consequences?
8. What is the principle of functioning of the international displacement effect?
9. What are the positive consequences of the international displacement effect? How do you explain these positive consequences?
10. What are the negative consequences of the international displacement effect? How do you explain these negative consequences?

Points of Interest

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Link to the Practical Part

3.3 Organization of International Trade on Model Examples

2.4 *Investment Decision-making in International Trade*

Keywords

International Trade, Investment Decision-making, Trade Costs, Export Decisions

The goals of the chapter

The aim of this chapter is to get acquainted with the decision-making process in international trade activities.

Learning Outcomes

- 34.6 student understands investment decision making on international capital markets

Abstract

In the global economy, there are many challenges for companies like the export decision, import decision, decision on cross-border movement of capital, international outsourcing, and participation in multinational enterprises.

The student must learn the theory of imperfect competition that illuminates the issue of monopoly, oligopoly, and monopolistic competition. It is based on microeconomics, so if the compulsory and recommended literature is not sufficient, it is necessary to study the microeconomic theory:

- Monopoly – the only subject on the supply side (producer); monopsony – the only subject on the demand side (consumer)
- Oligopoly – several subjects on the supply side (producers); duopoly – two subjects on the supply side (producers); oligopsony – several subjects on the demand side (consumers); duopsony – two subjects on the demand side (consumers)
- Monopolistic competition – many subjects on the supply side (producers)

The above theory is the basis for the link of monopolistic competition to trade: effects of increased market size, gains from an integrated market, and the significance of intra-industry trade.

At the beginning, the companies affect the international trade, but after a certain time the relationship becomes mutual and the international trade begins to influence the companies.

Winners and Losers will appear, industry performance will change, and other effects of increased market size will appear.
It is also necessary for the student to know outsourcing in international trade, trade costs, export decisions and dumping.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 155-191)

Control Questions

1. What is the main difference between national and international investment decision-making?
2. How internal economies of scale and product differentiation lead to international trade and intra-industry trade?
3. What are the new types of welfare gains from intra-industry trade?
4. How can economic integration lead to both winners and losers among companies in the same industry?
5. What is dumping?
6. Should be dumping be singled out as an unfair trade practice? Why?
7. What is antidumping?
8. Does the enforcement of antidumping laws lead to protectionism?
9. Why companies that engage in the global economy (exporters, importers, international outsourcers, multinational enterprises) perform better than companies that do not interact with foreign markets?
10. What are the theories that explain the existence of multinationals and the motivation for foreign direct investment across economies?

Points of Interest

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http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.4 Investment Decision-making in International Trade

2.5 International Capital Markets and Derivatives on Capital Markets

Keywords

Financial Markets, Money Markets, Capital Markets, Derivatives

The goals of the chapter

The aim of this chapter is to get acquainted with the international financial, money and capital markets, incl. financial derivatives on these markets.

Learning Outcomes

- 34.6 student understands investment decision making on international capital markets

Abstract

Students begin their learning with basic information about financial markets and their division into money market with short-term loans and short-term financial instruments trading and capital markets with long-term loans and long-term financial instruments trading. Other necessary knowledge is the breakdown of financial markets into stock markets (stocks, shares, equities, equity securities), foreign exchange or Forex (currency pairs), commodity markets (commodities through derivatives: oil, gas, agricultural products, coffee, metals, precious metals, energy etc.) and others (e.g. securities lending).

There are many options in which derivatives to invest:

- Shares, share indexes, foreign currencies, debt instruments
- Options
- Call options
- Put options
- American Options
- European Options

Important knowledge is a business strategy because traders in the financial, money and capital markets can follow different strategies based on different analyzes:

- Fundamental analysis

- Technical analysis
- Efficient market theory

Specific subjects of trade are so-called derivatives, which mean the possibility or the obligation to trade in the future. Most common derivatives are forwards and futures (trade in the future, the price set in the present), options (possibility of trade in the future, the price set in the present), and swaps (cash-flow in the future, price and other conditions set today).

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 10-191)

Control Questions

1. What is traded on money markets?
2. What is traded on capital markets?
3. What is traded on stock markets?
4. What is traded on Forex?
5. What is traded on commodity markets?
6. What is traded on other markets?
7. Which business strategies do you know?
8. How would you describe Forwards and Futures?
9. How would you describe Options?
10. How would you describe Swaps?

Points of Interest

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Link to the Practical Part

3.5 International Capital Markets and Derivatives on Capital Markets

2.6 *The Foreign Exchange Market and its Instruments*

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Foreign Exchange Instruments

The goals of the chapter

The aim of this chapter is to get acquainted with the foreign exchange market (Forex), incl. instruments on this market.

Learning Outcomes

- 34.1 student understands the principles of the organization of the foreign exchange market

Abstract

At the very beginning, the students need to put the topic Foreign Exchange into the basic information framework of global trade policy. It is necessary to have knowledge about instruments of international trade policy (e.g. basic tariff analysis, costs of a tariff, and benefits of a tariff).

There is important information in the political economy of trade policy especially the case of free trade. Some aspects are connected to foreign exchange market e.g. rent-seeking. Students need to learn fundamental benefits of free trade and understand the important arguments against free trade.

Foreign Exchange (Forex) is a market with currencies. There are currencies exchanged – exchange of one currency for another one. Huge cash amounts are traded by different global financial institutions.

- Spot Market: Price set on trade date; exchange usually in two days.
- Forwards and Futures Market: Price set on trade date; exchange on the maturity date.
- Options Market: Price set on trade date; right to exchange on the maturity date.
- Swaps Market: Combination of spot sale and forward repurchase.

There can be used different strategies on Forex. The parallel of fundamental analysis uses the information about macroeconomic analysis of the country, statements of authorities of

the country and so on. Technical analysis uses the historical data. The third approach is the efficient market theory.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 192-292)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

Control Questions

1. What are costs of a tariff?
2. What are benefits of a tariff?
3. What does Foreign Exchange mean?
4. What is the Spot Forex Market definition?
5. What is the Forward Forex Market definition?
6. What is the Options Forex Market definition?
7. What is the Swaps Forex Market definition?
8. How does fundamental analysis of Forex Market work?
9. How does technical analysis of Forex Market work?
10. How does the theory of efficient markets on Forex work?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.6 The Foreign Exchange Market, Principles of Its Organization and Its Instruments

2.7 Exchange Rate

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate

The goals of the chapter

The aim of this chapter is to get acquainted with general information and general knowledge about the exchange rate.

Learning Outcomes

- 34.2 student knows the exchange rate systems

Abstract

Compulsory literature reflects the fact that international finance and exchange rates are many interconnected topics. That is why considerable attention is being paid to this area.

The exchange rate is a price on the foreign exchange market. Asset approach to this fact focuses on topics such as International transactions (domestic and foreign prices, exchange rates and relative prices), foreign exchange market (characteristics of the market, subjects on the market), demand for foreign currency assets (return, risk, liquidity, interest rates, exchange rates), equilibrium in the foreign exchange market (interest parity), interest rates, expectations, and equilibrium.

Another interesting subtopic is money market and money market attributes. All students need to define money demand, money supply and equilibrium in the money market. These aspects affect all money functions:

- Medium of Exchange
- Unit of Account
- Store of Value

The information obtained can be used for analysis of price levels and exchange rate. In this area can be deduced the law of one price, purchasing power parity (absolute PPP and relative PPP) and models based on purchasing power parity.

The exchange rate in short-run and exchange rate in long-run, of course, belong to the necessary knowledge.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

Control Questions

1. What state is typical for equilibrium in the foreign exchange market?
2. What are the influence factors of money demand?
3. What are the influence factors of the money supply?
4. What is the effect of interest rates in different countries on the exchange rate of its currencies?
5. What is the effect of inflation rate in different countries on the exchange rate of its currencies?
6. What are the effects of trade balance and payment balance of different countries on the exchange rate of its currencies?
7. What are the main conclusions of the law of one price
8. What are the main conclusions of the purchasing power parity theory
9. What is absolute PPP?
10. What is relative PPP?

Points of Interest

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http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.7 Historical and Contemporary Realities of the Exchange Rate

2.8 *Systems of Exchange Rate*

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Exchange Rate Systems

The goals of the chapter

The aim of this chapter is to get acquainted with specialized information and specialized knowledge about the exchange rate, incl. systems of the exchange rate.

Learning Outcomes

- 34.2 student knows the exchange rate systems

Abstract

The key to understanding the systems of the exchange rate is the realization that Forex is a market with all market mechanisms and market aspects. Supply in Forex is made up of entities who want to sell the currency (such as importers); demand in Forex is made up of entities who want to buy the currency (such as exporters). If the export dominates over the long term, there is a tendency to appreciate/revalue the currency; if the import dominates, there is a tendency to depreciation/devaluation. Everything depends on the "degree of freedom" in the foreign exchange market.

All the aspects of the free market are used in the float system (free-floating). The exchange rate is based on the equilibrium of demand and supply.

Managed float system (managed floating) respects the market mechanism, but central banks attempt to actively influence their countries' exchange rates by buying currencies and selling currencies.

The fixed exchange-rate system means that exchange rate is fixed to the single currency, to a basket of other currencies, or to another measure of value (e.g. gold). The objective of central banks is to maintain this administrative price.

The students need to study a floating exchange rate and foreign exchange intervention, which means stabilization policies (monetary policy and fiscal policy) with a floating exchange rate. Supplementary topic to study:

- Fixed exchange rate and foreign exchange intervention
- Stabilization policies (monetary and fiscal) with a fixed exchange rate

At the end of this chapter are topics like reserve currencies in the world monetary system, the gold standard, bimetallic standard and gold exchange standard.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

Control Questions

1. What is the essence of the float system of exchange rate?
2. What is the essence of the managed float system of exchange rate?
3. What is the essence of the fixed system of exchange rate?
4. Who are the subjects on the supply side of foreign exchange market? What is the difference from subjects on the supply side of other markets?
5. Who are the subjects on the demand side of foreign exchange market? What is the difference from subjects on the demand side of other markets?
6. Is monetary policy effective in the floating system? Why?
7. Is fiscal policy effective in the floating system? Why?
8. Is monetary policy effective in the fixed system? Why?
9. Is fiscal policy effective in the fixed system? Why?
10. What does gold standard mean?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.8 Systems of Exchange Rate

2.9 Fundamental Analysis of the Exchange Rate

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Fundamental Analysis

The goals of the chapter

The aim of this chapter is to get acquainted with specialized information and specialized knowledge about the exchange rate, incl. fundamental analysis of the exchange rate.

Learning Outcomes

- 34.3 student understands the factors of the exchange rate determination

Abstract

Fundamental analysis in the currency market is a parallel of fundamental analysis in the stock market. There are minor differences in the input parameters, but the process is similar. On Forex, there is no share in profit (no dividends), no share in capital (no share in assets), just price changes. Together with the technical analysis form one complex unit.

Fundamental analysis tries to estimate of future development based on analysis of currency information. An instrument for this is a determination of the intrinsic value of the currency. The student must master the techniques for determination of intrinsic value.

The basis for determining future progression is the past progression of exchange rates. It is therefore needed to know many past data – the longer the time series, the more accurate estimation.

Fundamental analysis tries to estimate of future development based on analysis of currency information. An instrument for this is a determination of the intrinsic value of the currency. The student must master the techniques for determination of intrinsic value.

There are three possible result states:

- The intrinsic value of the currency is higher than the market value of the currency: the underestimated currency is for traders the impulse to buy the currency.

- The intrinsic value of the currency is lower than the market value of the currency: the overestimated currency is for traders the impulse to sell the currency.
- The intrinsic value of the currency is equal to market value of the currency: the well-estimated currency is for traders the impulse to keep the currency.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

Control Questions

1. What are the principles of fundamental analysis?
2. Is there any difference between fundamental analysis on stock market and fundamental analysis on foreign exchange market?
3. What does intrinsic value mean? How to find it?
4. What relationship of intrinsic value and market value is suitable for selling foreign currency?
5. What relationship of intrinsic value and market value is suitable for buying foreign currency?
6. What relationship of intrinsic value and market value is suitable for keeping foreign currency?
7. What strategy does a buy and hold investor apply?
8. What strategy does a value investor apply?
9. What strategy does a contrarian investor apply?
10. What strategy does a pairs-trade investor apply?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.9 Fundamental Analysis of Current Exchange RatesFundamental Analysis of Current Exchange Rates

2.10 *Technical Analysis of the Exchange Rate*

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Technical Analysis

The goals of the chapter

The aim of this chapter is to get acquainted with specialized information and specialized knowledge about the exchange rate, incl. technical analysis of the exchange rate.

Learning Outcomes

- 34.3 student understands the factors of the exchange rate determination

Abstract

Technical analysis is another way for estimation of future development. It is, therefore, a supplement of fundamental analysis. Its use has begun on the stock market, but it can also be used on the foreign exchange market. Both analyses together form one complex unit. It is based on knowledge of past development. It calculates many indicators.

The first group of indicators is price-based. To this group belong, for example, Average Directional Index, Commodity Channel Index, Moving Average Convergence/Divergence (MACD), Relative Strength Index (RSI), Relative Vigor Index (RVI), Stochastic Oscillator, Momentum, and Trix.

Most of these indicators were created for the analysis of the stock market. However, they can be successfully applied to the exchange rate market, but some specificities have to be taken into account. Students must know the basics and principles of calculation of Average Directional Index, Commodity Channel Index, Moving Average Convergence/Divergence (MACD), Relative Strength Index (RSI), Relative Vigor Index (RVI), Stochastic Oscillator, Momentum, and Trix.

The second group of indicators is volume-based. To this group belong, for example, Accumulation/Distribution Index, On-Balance Volume, and Money Flow.

The above also applies to the volume-based indicators: origins on stock markets; application on exchange rate market; taking into account specifics. Students must know the

basis and principles of calculation of Accumulation/Distribution Index, On-Balance Volume, and Money Flow.

All indicators may be broken down in another view into delayed indicators (ex-post) and lead indicators (ex-ante).

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

Control Questions

1. What is hedging of currency risk?
2. Do you know any current example of political risk and its impact on the exchange rate?
3. Do you know any current example of transaction risk and its impact on the exchange rate?
4. Do you know any present-day example of economic risk and its impact on the exchange rate of selected currency?
5. Do you know any present-day example of translation risk and its impact on the exchange rate of selected currency?
6. Do you know any present-day example of contingent risk and its impact on the exchange rate of selected currency?
7. What is the principle of price-based indicators of technical analysis?
8. Which price-based indicators of technical analysis do you know?
9. What is the principle of volume-based indicators of technical?
10. Which volume-based indicators of technical analysis do you know?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.10 Technical Analysis of Current Exchange Rates

2.11 Currency Risk

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Currency Risk

The goals of the chapter

The aim of this chapter is to get acquainted with the currency risk.

Learning Outcomes

- 34.4 student manages currency risk in foreign trade relations

Abstract

Currency risk is a different term for foreign-exchange risk or exchange-rate risk. This kind of risk is connected to international operations. The whole risk is composed of different partial risks:

- Transaction risk
- Economic risk
- Translation risk
- Contingent risk

Economic theory assumes aversion to risk; a positive or neutral relationship to risk is not considered. Risk reduction is therefore preferred. Currency risk could be reduced by several different methods. Favorite methods are:

- Hedging,
- Geographical diversification of the international portfolio,
- Monitoring of macroeconomic indicators (inflation rate, interest rate, public debt etc.)

For a deeper study, students must understand foreign exchange market properties, especially Purchasing Power Parity, Interest Rate Parity and International Fisher Effect. Equal exchange rate to purchasing power and indifferent interest rates are important factors for establishing the equilibrium exchange rate.

There are some statistical methods in currency risk measurement. Most important methods are variance (σ^2) and standard deviation (σ). The variance and the standard deviation is an expectation of how far a particular value will be from the mean (average, expected value).

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

Control Questions

1. What is the principle of hedging?
2. What is the principle of geographical diversification of the international portfolio?
3. Is geographical diversification inside the US sufficient? Is geographical diversification inside the Eurozone sufficient?
4. What is the principle of monitoring of macroeconomic indicators?
5. Which macroeconomic indicators are good/bad for currency risk reduction?
6. How do you understand Purchasing Power Parity?
7. How do you understand Interest Rate Parity?
8. How do you understand International Fisher Effect?
9. What is the calculation formula of variance? How is it used in currency risk management?
10. What is the calculation formula of standard deviation? How is it used in currency risk management?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.11 Historical Examples of Currency Risk Management

2.12 *External Balance Indicators*

Keywords

Macroeconomic Indicators, External Balance, External Balance Indicators

The goals of the chapter

The aim of this chapter is to get acquainted with the macroeconomic indicators. Special attention is paid to external balance indicators.

Learning Outcomes

- 34.7 student will process information from the balance of payments

Abstract

External balance is closely interconnected to internal balance. Compulsory literature deals with maintaining internal balance and maintaining external balance. Tool for internal and external balance achieving are especially monetary and fiscal policy. Student's attention must be paid further to expenditure-changing and expenditure-switching policies.

Macroeconomic policy has several functions: allocation, redistribution, stabilization, and stimulation. These functions are mainly provided through:

- Monetary policy its tools are liquidity rules, credit and interest limits (and other direct tools), market operations, reserve requirement, interventions affecting the exchange rate (and other indirect tools)
- Fiscal policy – its tools are taxes (revenue of public budgets), transfers, and government investments (expenditure of public budgets)

The student needs to learn all basic indicators of external balance. The most important one is external balance on goods and services which indicates the surplus/deficit of country's current account. It is calculated as the difference between cross-border movements of goods or exports minus imports.

External balance on goods and services is an indicator that is pursued by a number of global institutions such as the World Bank or the International Monetary Fund.

There are some case studies in the compulsory literature. There is a need to become acquainted with an external balance under the Gold Standard, external balance under Bretton Woods System and external balance since 1973.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 504-660)

Control Questions

1. What are the ways to maintain internal balance? What are the ways to maintain external balance?
2. Who is implementing monetary policy in theory? Who is implementing it in case of specific countries?
3. What are the basic tools of monetary policy?
4. Under what circumstances is monetary policy efficient?
5. Who is implementing fiscal policy in theory? Who is implementing it in case of specific countries?
6. What are the basic tools of fiscal policy?
7. Under what circumstances is fiscal policy efficient?
8. What is the definition of current account? What are the components of the current account?
9. What is the definition of financial account? What are the components of the financial account?
10. What is the definition of capital account? What are the components of the capital account?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.12 Examples of External Balance Indicators

2.13 Payment Balance

Keywords

Macroeconomic Indicators, Balance of Payments, Current Account, Financial Account

The goals of the chapter

The aim of this chapter is to get acquainted with the macroeconomic indicators. Special attention is paid to payment balance.

Learning Outcomes

- 34.7 student will process information from the balance of payments

Abstract

In this chapter, the knowledge overview of the whole issue of international finance will be completed. The balance of payments is a macroeconomic statement in the form of balance. It means the two sides (positive and negative) of the balance of payments are always equal (zero-sum). It is a structured document.

The horizontal structure of the balance of payments is following:

- Current Account: trade balance (import and export of goods), balance of services (import and export of services), income balance, balance of current transfers
- Financial Account: balance of investments, balance of derivatives
- Capital Account: balance of capital transfers
- Balancing Items: errors, change in foreign exchange reserves

The vertical structure of the balance of payments is following:

- Credit items: the inflow of money into the national economy (export of goods, export of services, import of capital, import of investments, reduction of foreign exchange reserves)
- Debit items: the outflow of money from the national economy (import of goods, import of services, export of capital, export of investments, increase in foreign exchange reserves)

Within this structure, the student must be able to explain under ceteris paribus, for example, "Why the increase in export leads to the growth of foreign reserves?" and "How this operation will be reflected in the balance of payments?"
There are many different historical approaches to international trade and its reporting in the balance of payments. The literature states that the three most important epochs were Protectionism and Mercantilism, Free Trade Period and Bretton Woods System.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 504-660)

Control Questions

1. What is the effect of import of goods growth on foreign exchange reserves? What is the cause of this effect?
2. How will this operation be reflected in the balance of payments?
3. What is the effect of import of services growth on foreign exchange reserves? What is the cause of this effect?
4. How will this operation be reflected in the balance of payments?
5. What is the effect of import of capital growth on foreign exchange reserves? What is the cause of this effect?
6. How will this operation be reflected in the balance of payments?
7. What is the difference between trade account and income account?
8. How would you define Protectionism and Mercantilism?
9. How would you define free trade?
10. How would you define Bretton Woods System?

Points of Interest

http://www.worldbank.org/

http://www.ifc.org/

http://www.imf.org/

Link to the Practical Part

3.13 Working with Sample Payment Balance Sheets

3 Preparation for Seminars

3.1 Foreign-trade Relations

Keywords

International Trade, Foreign Trade, Gravity Model, Trade Barriers

The goals of the chapter

The aim of this chapter is to get acquainted with the foreign-trade relations. Special attention is paid to currency risk in foreign-trade relations.

Learning Outcomes

- 34.4 student manages currency risk in foreign trade relations

Example, model task

1. **Find relevant information and analyze Czech foreign-trade relations.**

The most important factors are export, import, turnover (total of exports and imports) and balance (the difference between exports and imports).

Tab. 1: External trade in goods in the cross-border concept (CZK million, current prices)

Year	Turnover	Exports	Imports	Balance
1993	847 685	421 601	426 084	-4 483
1994	957 219	458 842	498 377	-39 534
1995	1 231 911	566 171	665 740	-99 570
1996	1 356 350	601 680	754 670	-152 990
1997	1 568 972	709 261	859 711	-150 450
1998	1 748 693	834 227	914 466	-80 239
1999	1 881 925	908 756	973 169	-64 413
2000	2 363 023	1 121 099	1 241 924	-120 825
2001	2 653 713	1 268 149	1 385 564	-117 415
2002	2 580 531	1 254 860	1 325 671	-70 811
2003	2 811 653	1 370 930	1 440 723	-69 793
2004	3 471 753	1 722 657	1 749 095	-26 438

Year	Turnover	Exports	Imports	Balance
2005	3 698 548	1 868 586	1 829 962	38 624
2006	4 249 386	2 144 573	2 104 812	39 761
2007	4 870 552	2 479 234	2 391 319	87 915
2008	4 880 225	2 473 736	2 406 489	67 246
2009	4 127 659	2 138 623	1 989 036	149 587
2010	4 944 354	2 532 797	2 411 556	121 241
2011	5 566 254	2 878 691	2 687 563	191 128
2012	5 839 486	3 072 598	2 766 888	305 710
2013	5 998 189	3 174 704	2 823 485	351 220
2014	6 828 456	3 628 826	3 199 630	429 195
2015	7 360 249	3 883 249	3 477 000	406 249
2016	7 468 714	3 974 043	3 494 671	479 371

Source: Czech Statistical Office (2018)

The Czech foreign trade balance was negative from 1993 to 2004. It has been a period of positive balance since 2005. This condition corresponds to the theory. The theory states that the period of positive and negative balance of payments alternates in the same way as economic cycles.

Assignment of Individual Work, Assignment of Task

2. Find relevant information and analyze EU foreign-trade relations.
3. Find relevant information and analyze US foreign-trade relations.
4. Find relevant information and analyze foreign-trade relations of the selected country.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 10-23)

Recommended Literature

CZECH STATISTICAL OFFICE, 2018. *Hlavní makroekonomické ukazatele.* Available at: https://www.czso.cz/csu/czso/hmu_cr.

3.2 Planning of International Trade on Model Examples

Keywords

Ricardian Model, Specific Factors Model, Heckscher-Ohlin Model, Standard Trade Model

The goals of the chapter

The aim of this chapter is to get acquainted with the planning process in international trade relations.

Learning Outcomes

- 34.5 student understands the organization and planning of international trade

Example, model task

1. **Suppose possible production of United States 10 million roses or 100 thousand computers and possible production of Columbia 10 million roses or 30 thousand computers. Discuss the benefits of international trade in the Ricardian Model.**

What would happen if the US stops production of roses (-10 million) and produces computers (+100 thousand) instead? Missing roses are imported from Columbia. Columbia increases its production of roses (+10 million) and stops production of computers (- 30 thousand). “The world is producing just as many roses as before, but it is now producing more computers. So, this rearrangement of production, with the United States, concentrating on computers and Colombia concentrating on roses, increases the size of the world’s economic pie. Because the world is producing more, it is possible in principle to raise everyone’s standard of living” Krugman et al. (2017, pp. 25-26).

Tab. 2: Hypothetical Changes in Production

	Million Roses	**Thousand Computers**
United States	-10	+100
Colombia	+10	-30
Total	0	+70

Source: Krugman et al. (2017, pp. 25-26)

“The reason that international trade produces this increase in world output is that it allows each country to specialize in producing the good in which it has a comparative advantage. A country has a comparative advantage in producing a good if the opportunity cost of producing that good in terms of other goods is lower in that country than it is in other countries. In this example, Colombia has a comparative advantage in winter roses and the United States has a comparative advantage in computers” Krugman et al. (2017, pp. 25-26).

Assignment of Individual Work, Assignment of Task

2. Suppose possible production of United States 20 million roses or 100 thousand computers and possible production of Columbia 10 million roses or 30 thousand computers. Discuss the benefits of international trade in the Ricardian Model.
3. Describe the response of output to a change in the relative price of cloth (food price and cloth price ratio) in the Specific Factors Model.
4. What is the empirical evidence on the Heckscher-Ohlin Model?

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 24-136)

3.3 Organization of International Trade on Model Examples

Keywords

International Trade, Organization, Economies of Scale, External Economies, Economic Geography

The goals of the chapter

The aim of this chapter is to get acquainted with the organizational arrangement of international trade.

Learning Outcomes

- 34.5 student understands the organization and planning of international trade

Example, model task

1. **Two hypothetical countries (US and UK) produce 10 widgets as outputs (each country) only by using 15 units of labor as input (each country). Discuss the benefits of international trade based on economies of scale.**

Tab. 3: Relationship of Input to Output for a Hypothetical Industry

Output	Total Labor Input	Average Labor Input
5	10	2.00
10	15	1.50
15	20	1.33
20	25	1.25
25	30	1.20
30	35	1.17

Source: Krugman et al. (2017, pp. 138-139)

"According to the table, this requires 15 hours of labor in each country, so in the world, 30 hours of labor produce 20 widgets. But now suppose that we concentrate world production of widgets in one country, say the United States, and let the United States employ 30 hours of labor in the widget industry. In a single country, these 30 hours of labor can produce 25 widgets. So, by concentrating production of widgets in the United States, the world economy can use the same amount of labor to produce 25 percent more widgets." Krugman et al. (2017, pp. 138-139).

Assignment of Individual Work, Assignment of Task

2. Find real examples of economies of scale. Discuss the benefits of international trade based on economies of scale.
3. Find and explain examples of tradable industries.
4. Find and explain examples of non-tradable industries.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 137-154)

3.4 Investment Decision-making in International Trade

Keywords

International Trade, Investment Decision-making, Trade Costs, Export Decisions

The goals of the chapter

The aim of this chapter is to get acquainted with the decision-making process in international trade activities.

Learning Outcomes

- 34.6 student understands investment decision making on international capital markets

Example, model task

1. **Use the expected value of the distribution to decide. A company sells ice-cream. Profit of each ice-cream is 1€ (costs 1.50; revenues 2.50). The company can decide how many portions to produce. The company is strongly depended on weather conditions.**

Tab. 4: Profit as the result of a combination of demand and supply (production)

		Demand			**Expected v. S(E)**
		Stormy 1 (10%)	**Cloudy 10 (30%)**	**Sunny 100 (60%)**	
Production	**Small 1**	1,00	1,00	1,00	1,00
	Medium 10	-12,50	10,00	10,00	7,75
	Large 100	-147,50	-125,00	100,00	7,75

Source: Own processing

The highest expected value of profit is in case of medium or large production. These two options are the same convenience because we are only deciding on the basis of the highest expected value.

Assignment of Individual Work, Assignment of Task

2. Use the expected value and variance of the distribution to decide.
3. Use the expected utility to decide.
4. Use the maximax criterion to decide.
5. Use the Wald's maximin criterion to decide.
6. Use the Hurwicz's criterion to decide.
7. Use the Savage's criterion to decide.
8. Use the Laplace's insufficient reason criterion to decide.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 155-191)

3.5 *International Capital Markets and Derivatives on Capital Markets*

Keywords

Financial Markets, Money Markets, Capital Markets, Derivatives

The goals of the chapter

The aim of this chapter is to get acquainted with the international financial, money and capital markets, incl. financial derivatives on these markets.

Learning Outcomes

- 34.6 student understands investment decision making on international capital markets

Example, model task

1. **Find relevant information and analyze the situation on Prague Stock Exchange.**

The index of Prague Stock Exchange is called PX.

Tab. 5: Index PX

Year	Opening price	Final price
1993	335,20	705,20
1994	705,20	557,20
1995	557,20	425,90
1996	425,90	539,60
1997	539,60	495,30
1998	495,30	394,20
1999	394,70	489,70
2000	484,00	478,50
2001	476,30	394,60
2002	394,10	460,70
2003	459,60	659,10
2004	660,50	1032,00
2005	1034,30	1473,00

Year	Opening price	Final price
2006	1471,00	1588,90
2007	1587,10	1815,10
2008	1816,10	858,20
2009	867,90	1117,30
2010	1121,20	1224,80
2011	1232,40	911,10
2012	913,70	1038,70
2013	1038,73	989,04
2014	989,13	946,71
2015	946,02	956,33
2016	954,17	921,61
2017	921,63	1078,16

Source: Prague Stock Exchange (2018)

There was a stable situation on Prague Stock Exchange from 1993 to 2002; PX level ~500. Rapid growth started in 2003 and finished in 2007; PX grew from ~500 to ~1800. There was a rapid decline in 2008; PX fell from ~1800 to ~1000. There has been a stable situation since 2009; PX level ~500.

Assignment of Individual Work, Assignment of Task

2. Find relevant information and analyze the situation on Euronext.
3. Find relevant information and analyze the situation on Frankfurt Stock Exchange.
4. Find relevant information and analyze the situation on London Stock Exchange.
5. Find relevant information and analyze the situation on New York Stock Exchange.
6. Find relevant information and analyze the situation on Tokyo Stock Exchange.
7. Find relevant information and analyze the situation on the selected stock exchange.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 10-191)

Recommended Literature

PRAGUE STOCK EXCHANGE, 2018. *PX: Historická data.* Available at: https://www.pse.cz/indexy/hodnoty-indexu/historicka-data/?ID_NOTATION=325088&ISIN=XC0009698371

3.6 The Foreign Exchange Market, Principles of Its Organization and Its Instruments

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Foreign Exchange Instruments

The goals of the chapter

The aim of this chapter is to get acquainted with the foreign exchange market (Forex), incl. instruments on this market.

Learning Outcomes

- 34.1 student understands the principles of the organization of the foreign exchange market

Example, model task

1. **How is exchange rate related to the inflation?**

"Suppose that you notice that silver can be bought in Ruritania for 1,000 pesos a troy ounce and sold in the United States for $30.00. You think you may be on to a good thing. You take $20,000 and exchange it for $20,000 x RUP50/USD1 = 1,000,000 pesos. That's enough to buy 1,000 ounces of silver. You put this silver on the first plane to the United States, where you sell it for $30,000. You have made a gross profit of $10,000. Of course, you must pay transportation and insurance costs out of this, but there should still be something left over for you" Allen, Brealey, Myers (2014, p. 698).

Because of a larger demand for silver in Ruritania, the price there will be increasing. And due to a larger supply of silver in the US, the price there will be decreasing. This will take so long, that the gap will be closed. This is called the purchasing power parity.

"Purchasing power parity implies that any differences in the rates of inflation will be offset by a change in the exchange rate. For example, if prices are rising by 1.0% in the United States and by 11.1% in Ruritania, the number of pesos that you can buy for $1 must rise by 1.111/1.01 - 1, or 10%" Allen, Brealey, Myers (2014, p. 698).

Assignment of Individual Work, Assignment of Task

1. Find data on the use of basis swap in the selected foreign exchange market.
2. Find data on the use of currency future in the selected foreign exchange market.
3. Find data on the use of currency swap in the selected foreign exchange market.
4. Find data on the use of foreign exchange binary option in the selected foreign exchange market.
5. Find data on the use of foreign exchange forward in the selected foreign exchange market.
6. Find data on the use of foreign exchange option in the selected foreign exchange market.
7. Find data on the use of foreign exchange swap in the selected foreign exchange market.
8. Find data on the use of forward exchange rate in the selected foreign exchange market.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 192-292)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. Principles of corporate finance. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

3.7 *Historical and Contemporary Realities of the Exchange Rate*

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate

The goals of the chapter

The aim of this chapter is to get acquainted with general information and general knowledge about the exchange rate.

Learning Outcomes

- 34.2 student knows the exchange rate systems

Example, model task

1. **Find relevant information and analyze the situation of Czech crown (CZK).**

History of the Czech crown as one of the successors of the Czechoslovak crown dates to 1993.

Tab. 6: Average exchange rates of CZK

Year	CZK/EUR	CZK/USD
1993	N/A	29,155
1994	N/A	28,782
1995	N/A	26,545
1996	N/A	27,138
1997	N/A	31,711
1998	N/A	32,274
1999	36,882	34,600
2000	35,610	38,590
2001	34,083	38,038
2002	30,812	32,736
2003	31,844	28,227
2004	31,904	25,701
2005	29,784	23,947
2006	28,343	22,609

Year	CZK/EUR	CZK/USD
2007	27,762	20,308
2008	24,942	17,035
2009	26,445	19,057
2010	25,290	19,111
2011	24,586	17,688
2012	25,143	19,583
2013	25,974	19,565
2014	27,533	20,746
2015	27,283	24,600
2016	25,536	21,763

Source: Czech Statistical Office (2018)

The Czech crown has been appreciating in long-term. The Czech crown appreciated against the euro from 36.882 in 1999 to 25.536 in 2016. It appreciated to the USD from 34,600 to 21,763 in the same time period.

Assignment of Individual Work, Assignment of Task

2. Find relevant information and analyze the situation of Euro (EUR).
3. Find relevant information and analyze the situation of United States dollar (USD).
4. Find relevant information and analyze the situation of selected currency.
5. Find relevant information and analyze the situation of Bitcoin.
6. Find relevant information and analyze the situation of selected cryptocurrency.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

Recommended Literature

ALLEN, R. A., S. C. BREALEY and F. MYERS, 2014. *Principles of corporate finance*. 11th ed. New York: NY: McGraw-Hill Education. ISBN 978-0-07-715156-0. (pp. 693-718)

CZECH STATISTICAL OFFICE, 2018. *Hlavní makroekonomické ukazatele*. Available at: https://www.czso.cz/csu/czso/hmu_cr.

3.8 Systems of Exchange Rate

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Exchange Rate Systems

The goals of the chapter

The aim of this chapter is to get acquainted with specialized information and specialized knowledge about the exchange rate, incl. systems of the exchange rate.

Learning Outcomes

- 34.2 student knows the exchange rate systems

Example, model task

1. **What are the effects of $100 foreign exchange intervention**

Tab. 7: Effects of $100 foreign exchange intervention

Domestic Central Bank's Action	Domestic Money Supply	Central Bank's Domestic Assets	Central Bank's Foreign Assets
Non-sterilized foreign exchange purchase	+$100	0	+$100
Sterilized foreign exchange purchase	0	-$100	+$100
Non-sterilized foreign exchange sale	-$100	0	-$100
Sterilized foreign exchange sale	0	+$100	-$100

Source: Krugman et al. (2017, pp. 468)

Assignment of Individual Work, Assignment of Task

1. Demonstrate the impact of the monetary expansion on stabilization policies with a fixed exchange rate.
2. Demonstrate the impact of the monetary restriction on stabilization policies with a fixed exchange rate.

3. Demonstrate the impact of the fiscal expansion on stabilization policies with a fixed exchange rate.
4. Demonstrate the impact of the fiscal restriction on stabilization policies with a fixed exchange rate.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

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3.9 *Fundamental Analysis of Current Exchange Rates*

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Fundamental Analysis

The goals of the chapter

The aim of this chapter is to get acquainted with specialized information and specialized knowledge about the exchange rate, incl. fundamental analysis of the exchange rate.

Learning Outcomes

- 34.3 student understands the factors of the exchange rate determination

Example, model task

1. **Analyze the development of the Czech crown (CZK) exchange rate based on fundamental analysis.**

Tab. 8: Average exchange rates of CZK with a fundamental forecast

Year	CZK/EUR	Purchasing Power Parity CZK/USD	CZK/USD	Purchasing Power Parity CZK/USD
1993	N/A	N/A	29,155	N/A
1994	N/A	N/A	28,782	N/A
1995	N/A	N/A	26,545	N/A
1996	N/A	N/A	27,138	N/A
1997	N/A	N/A	31,711	N/A
1998	N/A	N/A	32,274	N/A
1999	36,882	N/A	34,600	N/A
2000	35,610	N/A	38,590	N/A
2001	34,083	N/A	38,038	N/A
2002	30,812	N/A	32,736	N/A
2003	31,844	N/A	28,227	N/A
2004	31,904	N/A	25,701	N/A
2005	29,784	N/A	23,947	N/A
2006	28,343	N/A	22,609	N/A
2007	27,762	N/A	20,308	N/A

Year	CZK/EUR	Purchasing Power Parity CZK/USD	CZK/USD	Purchasing Power Parity CZK/USD
2008	24,942	17,26	17,035	13,92
2009	26,445	17,16	19,057	13,64
2010	25,290	17,24	19,111	13,66
2011	24,586	17,10	17,688	13,35
2012	25,143	17,18	19,583	13,30
2013	25,974	16,92	19,565	12,79
2014	27,533	16,90	20,746	12,70
2015	27,283	17,17	24,600	13,02
2016	25,536	17,27	21,763	13,00

Source: Czech Statistical Office (2018); OECD (2018); Own processing

The real exchange rate CZK/EUR is approximately 8.73 CZK or 51% higher than its PPP equivalent. The real exchange rate CZK/USD is approximately 6.64 CZK or 50% higher than its PPP equivalent. The exchange rate of the Czech crown is therefore undervalued.

Assignment of Individual Work, Assignment of Task

2. Analyze the development of Euro (EUR) exchange rate based on fundamental analysis.
3. Analyze the development of United States dollar (USD) exchange rate based on fundamental analysis.
4. Analyze the development of selected currency exchange rate based on fundamental analysis.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

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OECD, 2018. *Purchasing power parities (PPP).* Available at: https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm

3.10 Technical Analysis of Current Exchange Rates

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Technical Analysis

The goals of the chapter

The aim of this chapter is to get acquainted with specialized information and specialized knowledge about the exchange rate, incl. technical analysis of the exchange rate.

Learning Outcomes

- 34.3 student understands the factors of the exchange rate determination

Example, model task

1. **Estimate the future development of the Czech crown (CZK) exchange rate based on technical analysis.**

Tab. 9: Average exchange rates of CZK with a linear forecast

Year	CZK/EUR	CZK/USD
1993	N/A	29,155
1994	N/A	28,782
1995	N/A	26,545
1996	N/A	27,138
1997	N/A	31,711
1998	N/A	32,274
1999	36,882	34,600
2000	35,610	38,590
2001	34,083	38,038
2002	30,812	32,736
2003	31,844	28,227
2004	31,904	25,701
2005	29,784	23,947
2006	28,343	22,609
2007	27,762	20,308
2008	24,942	17,035
2009	26,445	19,057

Year	CZK/EUR	CZK/USD
2010	25,290	19,111
2011	24,586	17,688
2012	25,143	19,583
2013	25,974	19,565
2014	27,533	20,746
2015	27,283	24,600
2016	25,536	21,763
2017*	-0,6178 * year + 1269,2 = 23,097	-0,6271 * year + 1282,8 = 17,939
2018*	-0,6178 * year + 1269,2 = 22,480	-0,6271 * year + 1282,8 = 17,312
2019*	-0,6178 * year + 1269,2 = 21,862	-0,6271 * year + 1282,8 = 16,685
2020*	-0,6178 * year + 1269,2 = 21,644	-0,6271 * year + 1282,8 = 16,058
2021*	-0,6178 * year + 1269,2 = 20,626	-0,6271 * year + 1282,8 = 15,431

Source: Czech Statistical Office (2018); Own processing

The linear forecast expects appreciation of Czech crown to 20.626 CZK/EUR and 15.431 CZK/USD in five years.

Tab. 10: Average exchange rates of CZK with a seasonal forecast

Year	CZK/EUR	CZK/USD
1993	N/A	29,155
1994	N/A	28,782
1995	N/A	26,545
1996	N/A	27,138
1997	N/A	31,711
1998	N/A	32,274
1999	36,882	34,600
2000	35,610	38,590
2001	34,083	38,038
2002	30,812	32,736
2003	31,844	28,227
2004	31,904	25,701
2005	29,784	23,947
2006	28,343	22,609
2007	27,762	20,308
2008	24,942	17,035
2009	26,445	19,057
2010	25,290	19,111

Year	CZK/EUR	CZK/USD
2011	24,586	17,688
2012	25,143	19,583
2013	25,974	19,565
2014	27,533	20,746
2015	27,283	24,600
2016	25,536	21,763
2017*	24,918	21,319
2018*	24,300	20,700
2019*	23,683	20,081
2020*	23,065	19,462
2021*	22,447	18,843

Source: Czech Statistical Office (2018); Own processing

The seasonal forecast expects appreciation of Czech crown to 22.447 CZK/EUR and 18.843 CZK/USD in five years.

Assignment of Individual Work, Assignment of Task

2. Estimate the future development of Euro (EUR) exchange rate based on technical analysis.
3. Estimate the future development of United States dollar (USD) exchange rate based on technical analysis.
4. Estimate the future development of selected currency exchange rate based on technical analysis.

Literature

Compulsory Literature

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CZECH STATISTICAL OFFICE, 2018. *Hlavní makroekonomické ukazatele.* Available at: https://www.czso.cz/csu/czso/hmu_cr

3.11 Historical Examples of Currency Risk Management

Keywords

Foreign Exchange, Foreign Exchange Market, Forex, Exchange Rate, Currency Risk

The goals of the chapter

The aim of this chapter is to get acquainted with the currency risk.

Learning Outcomes

- 34.4 student manages currency risk in foreign trade relations

Example, model task

1. **How did George Soros earn money on financial speculations in 1992?**

George Soros used the ERM-mechanism to earn money by financial speculations on Great Britain Pound (GBP). ERM-system means mandatory intervention during changes in the exchange rate of more than 6%.

a) It was high inflation and low interest rates in the UK, which meant capital outflows and pressure on currency depreciation.
b) Bank of England made mandatory monetary restriction (increasing of interest rates).
c) G. Soros started to the sale of a huge amount of GBP, which meant additional pressure on currency depreciation.
d) Bank of England decided that further monetary restriction in unbearable (the interest rate at 15 %) and left the ERM-system.
e) The rapid depreciation of GBP appeared. G. Soros bought GBP back with profit

Assignment of Individual Work, Assignment of Task

2. When was CZK under fixed exchange rate? How could speculators use it?
3. When was the exchange rate commitment of the Czech National Bank? How could speculators use it?
4. Find and describe different historical examples of currency speculations.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 293-503)

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3.12 *Examples of External Balance Indicators*

Keywords

Macroeconomic Indicators, External Balance, External Balance Indicators

The goals of the chapter

The aim of this chapter is to get acquainted with the macroeconomic indicators. Special attention is paid to external balance indicators.

Learning Outcomes

- 34.7 student will process information from the balance of payments

Example, model task

1. **What was Brazil's 1998-1999 Balance of Payments Crisis causes and consequences?**

"Brazil suffered runaway inflation in the 1980s. After many failed stabilization attempts, the country introduced a new currency, the real (pronounced ray-AL), in 1994. Initially pegged to the U.S. dollar, the real was subsequently allowed to crawl upward, depreciating against the dollar at a moderate rate. Because the rate of crawl of the exchange rate was below the difference between Brazilian and foreign inflation, the real experienced a real appreciation (so to speak), lowering the economy's competitiveness in foreign markets. In turn, high interest rates, bank failures, and unemployment slowed inflation, which dropped from an annual rate of 2,669 percent in 1994 to only 10 percent in 1997.

Rapid economic growth did not return, however, and the government's fiscal deficit remained worryingly high. A major part of the problem was the very high interest rate the government had to pay on its debt, a rate that reflected the market's skepticism that the limited and controlled crawl depreciation of the real against the dollar could be maintained. In the fall of 1998, skepticism intensified. As the figure on the page 481 shows, interest rates spiked upward, and the central bank's foreign reserves began rapidly to bleed away.

Concerned that a Brazilian collapse would destabilize neighboring countries, the IMF put together a stabilization fund of more than $40 billion to help Brazil defend the real. But markets remained pessimistic and the plan failed. In January 1999, Brazil devalued the real by 8 percent and then allowed it to float and to lose a further 40 percent of its value. Recession followed as the government struggled to prevent a free fall of the currency. Fortunately, inflation did not take off, and the resulting recession proved short-lived as" Krugman et al. (p. 480)

Assignment of Individual Work, Assignment of Task

2. Find and analyze different examples of the balance of payment crisis.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 504-660)

3.13 Working with Sample Payment Balance Sheets

Keywords

Macroeconomic Indicators, Balance of Payments, Current Account, Financial Account

The goals of the chapter

The aim of this chapter is to get acquainted with the macroeconomic indicators. Special attention is paid to payment balance.

Learning Outcomes

- 34.7 student will process information from the balance of payments

Example, model task

1. **Find relevant information and analyze Czech Balance of Payments.**

The balance of Payments of the Czech Republic is divided into current account and financial account.

Tab. 11: Balance of Payments

Year	Current Account (CZK million)	Financial Account (CZK million)	Current Account (% of GDP)	Financial Account (% of GDP)
1993	13286,7	131,5	1,1	0,0
1994	-22643,2	-28765,1	-1,7	-2,1
1995	-36331,3	-20372,8	-2,3	-1,3
1996	-111868,8	-136057,6	-6,2	-7,5
1997	-113037,2	-90359,1	-5,8	-4,6
1998	-40492,0	-31709,5	-1,9	-1,5
1999	-50596,4	-49427,7	-2,3	-2,2
2000	-104877,1	-116453,8	-4,4	-4,9
2001	-124478,3	-105696,9	-4,8	-4,1
2002	-136378,1	-130882,4	-5,1	-4,9
2003	-160614,6	-144190,1	-5,7	-5,1
2004	-114414,4	-151266,7	-3,7	-4,9
2005	-68732,9	-53556,6	-2,1	-1,6
2006	-86627,9	-82908,9	-2,5	-2,4
2007	-177112,9	-111061,7	-4,6	-2,9

Year	Current Account (CZK million)	Financial Account (CZK million)	Current Account (% of GDP)	Financial Account (% of GDP)
2008	-75254,7	-43229,1	-1,9	-1,1
2009	-89203,0	-72346,9	-2,3	-1,8
2010	-141776,5	-122338,9	-3,6	-3,1
2011	-84800,8	-74763,6	-2,1	-1,9
2012	-63313,0	11688,7	-1,6	0,3
2013	-21784,4	68307,5	-0,5	1,7
2014	7882,6	59416,2	0,2	1,4
2015	11283,1	175781,9	0,2	3,8
2016	52641,9	117678,4	1,1	2,5

Source: Czech Statistical Office (2018)

In the beginning, the values were positive. However, there has been a relatively long period of negative values since 1994. This period ended in 2012 (in case of financial account) or in 2014 (in case of current account). Both accounts are positive nowadays.

Assignment of Individual Work, Assignment of Task

2. Find relevant information and analyze EU balance of payments.
3. Find relevant information and analyze US balance of payments.
4. Find relevant information and analyze the balance of payments of the selected country.

Literature

Compulsory Literature

KRUGMAN, P. R., M. OBSTFELD and M. MELITZ, M., 2017. *International Finance: Theory and Policy*, 10th ed. [s. l.]: Pearson Education. ISBN 978-0133423648. (pp. 504-660)

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