universität wien

MASTERARBEIT

Titel der Masterarbeit

"Selected Indicators of Monetary Policy and Macroeconomic Performance after the Global Financial Crisis. Comparative Research of Japan and South Korea"

Verfasser

Lukasz Stefan Malecki

angestrebter akademischer Grad

Master of Arts (MA)

Wien, 2014

Studienkennzahl lt. Studienblatt:	A 066 864
Studienrichtung lt. Studienblatt:	Masterstudium Wirtschaft und Gesellschaft Ostasiens
Betreuer:	Univ.-Prof. Mag. Dr. Rüdiger Frank

List of Contents

List of abbreviations

BLS – Bureau of Labor Statistics

CIA – Central Intelligence Agency

ECB – European Central Bank

FSA – Financial Services Agency

HICP – Harmonized Index of Consumer Price

IBRD – International Bank of Reconstruction and Development

IMF – International Monetary Fund

LDC – Least Developed Countries

MAS – Monetary Authority of Singapore

NYSE – New York Stock Exchange

OECD – Organization for Economic Co-operation and Development

RSIS – Rajaratnam School of International Studies

SCAP – Supreme Commander of the Allied Powers

SEC – Securities and Exchange Commission

UN – United Nations

WB – World Bank

1. Introduction

The first decade of the 21st century became remarkable for the global economy. In fact, in the relatively short period of less than 10 years world markets experienced two major crises which impact in one way or another could afflict nearly every country. First of the two main turbulences that disturbed economists took place at the beginning of 2000s and were caused by the so-called *Dot.com* bubble. The negative economic circumstances which appeared back then were closely connected to extremely high expectations in regard to companies from the Internet-related sectors. Due to rapid expansion of some of the firms from that particular field many investors were looking forward to make extraordinary profits based on their activity. However, as we now know from the history, in many cases those expectations became falsely elevated and led to burst of the bubble in 2001.

Second major crisis that happened shortly after was in turn much more considerable with its consequences to the global economy than its predecessor. At the end of the decade the world had recognized the seriousness of the 2008-2009 recession and not without reasons named it the Global Financial Crisis. There have been numerous publications describing and explaining the origins and implications of the events from that particular time. Nevertheless, in 2014, approximately five years after the most severe effects of the recession, the topic itself is still in minds of numerous policy- makers as well as public opinion in various states. The damage that the crisis brought to global markets and stock exchanges was often unprecedented not only in simple economic terms but also in regard to social factors. Although there is no consensus about the real and total effects of the 2008-2009 crisis, there are voices claiming that the circumstances present at that time made them the worst period for the global economy since the Great Depression of 1930s[1]. In the following years after the initial time framework, the recession itself still seemed to be present in a consciousness of many people. Furthermore, as it will be shown, the current economic activity in the post-crisis period is continuously strongly marked by the 2008-2009 events.

1.1. Research case

Having in mind the seriousness of the Global Financial Crisis and its implications to the global economy, this dissertation focuses on the selected aspects of the monetary policy and macroeconomic performance of Japan and South Korea in a post-crisis period of 2010 - 2013. Basing on the comparative method of research, the paper aims to present and analyze the chosen aspects of countries' economy. Detailed explanation of the used methodology will be given on the following pages of chapter 2. The results of the dissertation's research should help readers to understand and orientate in the matter of monetary policy direction and macroeconomic performance of the two East Asian countries in the post-crisis time. Furthermore, the outcomes presented here can make a reference point for further studies

[1] Domitrovic, Brian, Forbes: *The Worst Economic Crisis Since When?,* http://www.forbes.com/sites/briandomitrovic/2013/02/05/the-worst-economic-crisis-since-when/, accessed on 17.07.2014.

which would focus more detailed on the proposed topic or even introduce to the comparison another countries next to Japan and South Korea.

1.2. Dissertation's outline.

Chapter 2. provides the theoretical background to the paper's subject. This part of the dissertation has an introductory role. Beginning with general presentation, the following pages start with a brief explanation of economics and macroeconomics. Moreover, the individual aspects of monetary policy will be presented as well. I believe that the thematic order used in the subsequent sections will become helpful for readers to understand and follow the author's main concept. Moving further, the next units will focus on the connection between globalization and macroeconomic performance as well as on the Global Financial Crisis. The information placed here are especially relevant for appropriate recognizing further aspects of monetary policy and macroeconomic performance in case of Japan and South Korea. Finally, chapter 2. will end with units devoted to the description of the paper's methodology and identification the hitherto studies being in connection with the topic. Chapter 3. states for the case study of Japan and South Korea. In this section I will portray both countries separately in terms of the selected issues of monetary policy and macroeconomic efficiency. The data presented on these pages will serve as a base for further analysis – comparison – of both states. Chapter 4. consist of the target task of the research paper and introduces the collation of the two East Asian states together. The section will end with the conclusion remarks.

2. Theory and methodology

2.1. Economics

Definition

The word *economics* has the origins in the Greek language and its phrase *oikonomos* which can be translated as "one who manages a household". Taking a closer look at the definition of term *economics* one may notice that there is truly a great number of descriptions and interpretations of this particular word. Going through pages of publications issued by various authors some may even come to a conclusion that there are perhaps as many versions of that, one may think, simple phrase as writings available in the circulation among libraries, universities, houses, offices, and etc. Although there is no one, universal definition, it is possible to see a common concept standing behind the words coming from different writers. In order to understand a basic idea of economics I have decided to provide couple of descriptions, and so:

a) *"Economics studies how individuals, firms, government, and other organizations within our society make choices, and how these choices determine society's use of resources."*[2]

b) *"Economics talks about goods and bads. A good is anything that gives a person a utility or satisfaction. A bad is something that gives a person disutility or dissatisfaction."*[3]

c) "[Economics] *the study of how people choose among alternatives uses of their scare resources."*[4]

Generally, economics is the study of how people use scare resources to produce goods and services and subsequently manage to distribute them among other individuals in the markets. In many societies those resources are allocated through numerous decisions and combined actions taken by frequent companies, households and individuals. Therefore, scholars and other who pay attention to economics must focus on and analyze how people make these decisions and what drives them to do so. This extremely broad matter includes *inter alia* questions of where and how much they work, what makes them buy specific things, how much money they save and in what form those savings take place. Another issue of economic field relates to mutual relations and interactions between people. For instance, by monitoring market transactions economists try to understand behavior and incentives of buyers and sellers of particular goods and their will to determine the agreeable price and quantity of transaction's subject. The management and distribution of resources is closely connected with scarcity. Basically, scarcity means that society has only a limited supply of resources and therefore is simply not able to manufacture and create everything that people would like to

[2] Stiglitz, Joseph E., Carl E. Walsh, *Economics,* New York: W.W. Norton & Company, 2008, p.6.
[3] Arnold, Roger A., *Economics,* Mason: South- Western Cengage Learning, 2008, p.1.
[4] Wessels, Walter J., *Economics,* New York: Barron's Educational Series, 2006, p.1.

have. While studying these permanently ongoing processes economists make a frequent use of models which help them to understand specific matters. They assume that people behave rationally on every-day basis, yet having at the same time their own preferences. Moreover, economists also analyze actions and courses that affect much broader view of markets, in example by studying economic performance of whole countries[5]. Details about classification and contents of economics will be provided in the following chapters.

Basic concepts and principles

In order to grasp an honest, reliable and credible meaning of economics it is crucial to be familiar with basic concepts that play an important role and are fundamental to that field of the study. Only then it is recommended to go deeper into the topic where more complex and intricate issues appear. The number of those main principles may differ if we check the ideas of various scholars yet those dissimilarities stay usually rather symbolic and do not include essential changes of the general sense of theory. Disaccords come usually from diversified classifications and subsequent grouping of some principles by one author, while other scholars may possess unlike view of that particular problem and decide to separate one issue from another. For some researchers those classifications may, in example, base on overall scale of economic processes. On one hand, choices of individuals would be separated from decisions taken by governments on the national level. On the other, some may argue that decision-taking process, no matter if made by one person or the whole country, is rational and therefore similarities between various market actors do not differ significantly. Having said that, following the thoughts of Paul Krugman we can see nine main principles that lie behind nearly all economic analysis. Whereas Joseph Stiglitz describe the same issue by grouping them in more generalized way and give only five universal concepts. Finally, Gregory Mankiw seems to support the idea where essential concepts with total number of ten will be presented in three main groups which are: individual decision making, people's interaction processes, and finally the workings of the economy as a whole[6]. Having said that, I will briefly present basic concepts of economics.

First of all, decision-making process is inevitably connected with *trade off* principle. Every single person is permanently making choices. It does not really matter if we talk about a student of university, a businessman, a teacher, or unemployed person. It does refer as well to whole countries and their governors for instance in the United States, Poland, Germany or anywhere else. The issue of making choices has however a number of limitations which in most cases cannot be avoided. The main reason of those limitations is because the resource are scarce. Scarcity could be defined as a situation where the quantity of a resource that is available at some point is not large enough to satisfy all its productive uses. Therefore, a resource can be practically anything that may be used to produce something else. Many people consider their income to be the most meaningful limitation when it comes to make choices. However, a list of economy's resources usually starts with four primary contents which are land, labor (defined as time available for workers), capital (including machinery,

[5] Mankiw, Gregory N., Mark Taylor, *Principles of Economics,* Canale: Thomson Learning, 2006, p.3-4.
[6] Krugman, Paul, Robin Wells, Kathryn Graddy, *Economics,* New York: Worth Publishers, 2008, p.6-16; Mankiw, *Principles of Economics*, p.4-14; Stiglitz, *Economics,* p.6-15.

buildings and other assets) and human capital (in form of in example educational achievements and skills of workers)[7]. Accordingly, people experience scarcity on every-day basis, even when deciding if they should spend their time studying or go to supermarket, buying expensive pizza or preparing cheaper meal at home. Similarly governments decide each year the best (in the understanding of their leaders) versions of next-year budgets which would satisfy the biggest possible group of people. However, it is simply not possible to get everything we want. Even the richest individuals and states must decide and are forced to make trade-offs, although in their case the limitations may naturally vary from the less wealthy counterparts. In the end, it is important to take into account that scarcity is a part of life for everybody.

The process of making choices and trade-offs takes place because of people's respond to incentives. The way of taking decisions is defined by numerous factors such as comparing costs and potential benefits or evaluating overall pros and cons of individual decisions. For example, if the price of particular good rises, there is a high chance that people will stop buying it as the cost exceeds their expected profit of having it. Actually, many things can affect incentives, but among the most important ones are exactly prices. The impact of price on the behavior of buyers and sellers is essential in order to understand how economy functions. If the price of petrol increased, people would have a greater incentive not to drive their cars or at least use them less frequently. If the price of a new iPod falls then people will probably have bigger incentive to buy it. Nevertheless, one should definitely not forget that prices are not the only incentives which influence behavior. In fact, the problem of people's behaving and their perception of acting rational may create a meaningful obstacle for economists and their researches. Consequently, some student may find it more profitable to spend more money on something, in example shoes, only because it give him personal satisfaction. He might also be ready to travel across the country only to take photos of his favorite city no matter what the price of train tickets will be. At the same time his friend will find that travel useless and will rather stay at home, visiting the city website and check photos on the Internet. The question in this case is how can we measure incentives such as personal preferences? Is it possible to include human's likely behavior in economic models? In most cases, it is extremely hard to predict people's behavior and incentives which drive them. On the example of stock exchanges and its bubbles we can say that sometimes people tend to act precisely irrational. Still, economists try to analyze choices and decisions by focusing on incentives. In some matters those incentives are straightforward, while in other circumstances they may not be so evident, yet by identifying impulses to take particular actions economists want the understand the choices made by individuals, companies, societies, and etc[8].

Another basic component of economics is the principle of *trade*, which can be described as voluntary exchange in markets. Trade has already been present for a long time, a lot before rise of modern industrial societies as we know today. The benefits of exchange were understood many ages ago and it has also remained changed today. Trade can be successfully illustrated by the example of family that wants to be totally self- sufficient. It means that every good and service that family members will use would be previously manufactured or

[7] Krugman, *Economics,* p.6.
[8] Stiglitz, *Economics,* p.8-9.

provided by themselves, including growing its own food, sewing own clothing, providing entertainment or build cars in order to travel across Europe. Perhaps it could be possible, at least partly, yet this self-sufficiency would be extremely hard to reach. Pivotal role in improving that situation will definitely bring trade in which people divide works between themselves. In this case, people may focus on providing a good or service that other want in return for different goods and services. Gains that are created by trade allow people to get more and cheaper of what they want than what they could get by being self-sufficient. Division of tasks, often described as a specialization, is a situation in which people are engaged in particular activity, for instance production of one, concrete good. Another side of trade is that many firms manufacture the same products, trying to sell them on the same markets. In example, Airbus and Boeing constantly compete in the aviation market, Volkswagen and Citroen struggle for dominance on the automobile market, and Samsung and Apple seek for their consumers in the high-technologies markets. Yet unlike to competition between sportsmen, where the winner can be only one, trade can be actually profitable for both sides. Similar to specialization among individuals, it may be also successfully applicable to firms and whole countries[9]. Thanks to that, many can profit significantly from their ability to trade with others. Trade gives people a possibility to buy broader variety of goods and services at lower cost. The same refers to transactions on much bigger scale, for instance led by companies or even whole countries.

The functioning of markets and their efficiency is, in turn, strongly consolidated with *information* concept. The reason of that is because making deliberate choices requires information. Individuals and companies are willing to possess maximal possible knowledge about the good or service they are about to purchase. The cost of that particular good is, however, not the only information that determine buyers whether they should buy it or not. Additionally, they also want to know the capabilities and limitations of each of the product, as there is a high possibility that it would be manufactured by more than one firm. Accordingly, a man who plans to get himself a car will firstly specify general money supply that he has and intend to allocate for a new good. Subsequently, he would make a recognition on a car market and collect all the possibilities that are agreeable with his preferences. In order to make comparison of various models the man will be looking for relevant information, such as initial price, mechanical condition of individual car, their specifications regarding engine, equipment, costs of using, and etc. In some ways, information itself is perceived as other goods and services. In many areas, the meaning of information and data is so important and substantial that it affects other markets and sectors of the economy. Again, as an example we can refer to stock exchanges around the world where information, even often with untrue contents, may cause some serious fluctuations on indexes. However, when it comes to make a choice, in some cases customer may experience lacks in gathering proper information. In order to prevent that, governments of many countries require companies in their countries to regularly provide reports, so the proper and necessary information can be available for other market subjects. In many key segments, such as financial sector, these requirements are very strict and comprehensive. Within the national structures there are often special, separate organs which task is to deal with supervising and control companies on markets. For example,

[9] Mankiw, *Principles of Economics,* p.8-9.

the Securities and Exchange Commission (SEC) oversees American stock markets, in Japan supervising role is dedicated to Financial Services Agency (FSA) and in Singapore similar role has Monetary Authority of Singapore (MAS)[10]. Therefore, information, or its shortage, is of great significance in establishing the configuration of markets and their ability to guarantee that the economy's scare resources will be used efficiently[11].

The last principal of economics appeal to *equilibrium* in distribution on markets. The collapse of the Soviet Union and fall of communism in Eastern Europe could be one of the most important event during the 20th century. After the World War II communist countries of so-called Eastern Bloc (*inter alia* East Germany, Poland, Czech Republic, Hungary and the Soviet Union) were functioning with a deep premise that their government's central planners were on the best way to appropriately guide economic activity and guarantee high economic growth. In general, these planers determined what goods and services were going to be manufactured, what was the quantity of them, and who produced and consumed these goods and services. The main point of central planning was the fact that only the government was able to arrange economic activity in a way that, from its point of view, could boost economic growth in a country and favor general prosperity and well-being[12]. In the end, that situation came out as a highly inefficient. The expectations of central planners were remarkably above the production possibility of enterprises in the countries. One of the obstacles on a way to provide equilibrium was a lack of information and therefore futile management of available resources. In a free- market economy decisions regarding economic activity are made primarily by millions of households and private companies. In such case, companies themselves choose what they want to produce and whom they ought to hire in order to create biggest profit. Households, on the other hand, make decisions where they want to work and "vote" with their income by spending it on particular goods and services. The *Invisible Hand* of free-market economies spontaneously determine the allocation of resources and accordingly leads to equilibrium. The concept of equilibrium is greatly useful when studying economic interactions. It helps to understand the complex details and economic behavior of market's partakers.

In a summary, the main principles of economics refer to three basic problems of economic organization- *what, how,* and *for whom*. It certainly does not matter whether we talk about industrialized countries, a central-planned economy or even remote and isolated tribal nation. Every society and nation must face and be able to resolve problems of *what* merchandise will be produced, *how* these goods will be manufactured, and *for whom* there are going to be made. The question of *what?* relates to type of produced commodities and its quantity. A society should be able to define what amount of each possible goods and services it will make and what would be the time of production. The question may be, for instance, whether it is better to produce and sell to consumers a new car today or perhaps next year? What should be the initial number of produced cars? How economic situation will influence the production of them? Usually, in a long-term, economies produce a raised number or various goods and services. In the meantime, however, market participants decide to reallocate its resources in

[10] Polish Financial Supervision Auditory, *Foreign Supervision Organs,* https://www.knf.gov.pl/o_nas/urzad_komisji/przydatne_linki/index.html, accessed on 1.03.2014.
[11] Stiglitz, *Economics,* p.13-14.
[12] Mankiw, *Principles of Economics,* p.9

order to increase productivity and profit. On the other hand, the issue of *how goods will be produced* applies to the question of who is going to do the production, what resources will be used, and what technologies one will use. In this case the sub-questions include *inter alia* the type of workforce, production management, or kind of resources. Finally, the last matter is the issue of *for whom* goods and services are produced. In the vast majorities of economies there is only a slight share of society which income enable its members to buy most of the things they want. A much larger proportion of a nation has relatively smaller disposal income, while in many situations it may be even not enough to ensure basic necessities of life[13]. Nevertheless, having in mind these three economic- organization problems, market forces tend to influence the fluctuations of supply and demand and aim to bring a balance among different market participators.

Classification

The discipline of economics can be divided into two main areas of microeconomics and macroeconomics. Those terms are believed to be adopted originally in 1933 by Professor Ragnar Frish from Oslo University and since then have been broadly used by his counterparts around the world. The term microeconomics has its origins in the Greek language where word "Mikors" means small. Macroeconomics term, on the other hand, comes from the Greek word "Makros" and means large. As K.R. Gupta says *"Macro and Microeconomics stand on two different branches of a same tree. Though there is a great deal of interdependence between them, they have many distinctions in their respective approaches."*[14]. David Begg makes this distinction between them more transparent as he mentions that "*Microeconomic analysis offer a detailed treatment of individual decisions about particular commodities…. Macroeconomics emphasizes the interactions in the economy as a whole. It deliberately simplifies the individual building blocks of the analysis in order to retain a manageable analysis of the complete interaction of the economy"*[15].

Microeconomics applies to the detailed study and analysis of the behavior and decisions of market participants such as firms, individuals and households in regard to allocation of limited resources. Microeconomics look into issues of how these decisions and behaviors influence the supply and demand variables for different goods and services. Moreover, it examines factors that determine prices, and also how prices, in turn, make an impact on quantity of goods and services due to supply and demand variable changes. Macroeconomics, however, pays special attention to the behavior of the economy as a whole. In particular, macroeconomists look at the indicators and data that measure the aggregate sum of, for instance, unemployment rate, inflation, economic growth or trade values. Microeconomics and macroeconomics are closely connected. Since the changes within the whole economy emerge from the decisions of millions of individuals, it would be impossible to understand macroeconomic progress without investigating related microeconomic decisions. Yet because of both of those branches addresses different questions, they may often require various approaches. Nevertheless, one may not be fully understood without relation to another.

[13] Samuelson, Paul A., *Economics,* New Delhi: Tata Mc-Graw Hill, 19th edition, 2010, p.8-10.
[14] Gupta, Kulwant R., *Macroeconomics,* Delhi: Atlantic, 2008, p.3-5.
[15] Begg, David, Stanley Fisher, Rudiger Dornbusch, *Economics,* 6th edition, Berkshire: McGraw- Hill, 2000, p.13.

2.2. Macroeconomics

Introduction

On the previous pages I have already given a minor clue what macroeconomics is about. Still, this chapter will present more detailed nature of macroeconomics and its main components. We will also see that although this field of study has been extensively researched for the last two hundred years, there are still many aspects on which many scholars do not agree with each other. At this point, however, it may seems reasonable to justify in some way the economists who published and were active in the nineteenth century or in the first half for the twentieth century. The technology level at that time made it extremely difficult to measure an aggregate (overall) activity of whole economies. In fact, economists had to collect numerous separate pieces of information regarding macroeconomic issues and subsequently put it together. In a result, the process of data gathering was definitely much more difficult and time-consuming than in the modern era of computers and internet connection. In general, a momentous turn actually took place after the end of World War II when major economies began to collect economic data on a regularly basis. Moreover, also many international organizations that were created in the mist of the last global conflict, such as International Monetary Fund (IMF), World Bank (WB) and the Organization for Economic Co-operation and Development (OECD), started to gather economic information systematically. United States, for example, began to measure and publish aggregate output of its economy since 1947[16].

Nevertheless, there is still a notable consensus on general definition of macroeconomics. O. Blanchard, for instance, argues that while looking at the economy, macroeconomists previously pay special attention to three main issues[17], which are:

- Output – seen as the sum of production of the whole economy, and its rate of growth.
- Unemployment – defined as the percentage of work force in the economy who stay without a job but are looking for it.
- Inflation rate – described as a rate at which the average level of price of goods and services in the economy is rising over specified time.

Those are the central variables of macro- branch of economics, from which furthermany sub-questions arise, regarding particular issues. While analyzing those factors, economists try to create a broader picture of markets, where millions of participants define every day the performance of economy on macro level. In this case they try to ask questions like: is unemployment too high? Are the stock markets' indexes too low or high? Why has the growth slowed down? Or where does wage inequality come from?

[16] Blanchard, Olivier, *Macroeconomics*, 2nd edition, New Jersey: Prentice- Hall, 2000, p.20.
[17] Ibid, p.4.

A.B. Abel and B. Bernanke, in turn, define macroeconomics as „[Macroeconomics] *is the study of the structure and performance of national economies and of the policies that governments use to try to affect economic performance"*[18]. Following their words, researches of this field focus on issues which include questions, *inter alia*, like:

- What defines a nations economic growth in a long-run?
- The reason of fluctuations of nation's economic activity.
- Factors that influence the levels of prices.
- What is the affection of nation's participation in a global economic system.
- Is it possible to improve government economic policies?
- Causes of unemployment.

Macroeconomists search to provide answers to those questions that have a great significance and are vastly important for nations. The actual results of their studies are often particularly debated by politicians who may also interpret them according to personal goals and objectives. Yet media and the public opinion are strongly interested in the topic as well, since it affects all the people within a nation.

Looking at another sources, one will notice that macroeconomics is usually defined in a close way to the definitions provided above. Here are few more examples:

- "*Macroeconomics – the study of economy-wide phenomena, including unemployment and economic growth."*[19]
- *"*[Macroeconomics] *Study of the behavior of the whole economies or economic systems … . Macroeconomics is concerned primarily with the forecasting of national income, through the analysis of major economic factors that show predictable patterns and trends, and of their influence on one another. These factors include level of employment/unemployment, gross national product, balance of payments position, and prices (deflation or inflation)."*[20]
- "[Macroeconomics] *The branch of economics concerned with large-scale or general economic factors, such as interest rates and national productivity."*[21]

Although differently formed, it is possible to notice that the contents and core of the individual definitions remain relatively the same. Therefore, the issues that are particularly related to macroeconomics are economic growth (especially in a long-run), unemployment, inflation and international economy (trade). Now, I will briefly present those main macroeconomic points more detailed.

[18] Abel, Andrew B., Ben Bernanke, *Macroeconomics,* 2nd edition, Reading: Addison- Wesley, 1995, p.3.
[19] Mankiw, *Principles of Economics,* p.27.
[20] Business Dictionary, *Macroeconomics,* http://www.businessdictionary.com/definition/macroeconomics.html, accessed on 7.03.2014.
[21] Oxford Dictionaries, *Macroeconomics,* http://www.oxforddictionaries.com/definition/english/macroeconomics, accessed on 7.03.2014.

Economic Growth

While visiting developing and emerging countries such as Vietnam, Cambodia or China, one may see relatively high differences in general standard of living comparing to the advanced economies in Western Europe or North America (classification of International Monetary Fund[22]). Usually, the lack of basic needs like shelter, health care, education and inadequate food supplies is known to much bigger group within the society than it is, for instance, in Denmark, the United States or Japan. The questions which macroeconomists often ask is why some countries experienced high economic growth, while other developed at the same time clearly slower. How is it possible that states that once were considered as rich and prosperous at some point lost their initiative and became surpassed by another. Other countries, in turn, experienced in some period truly amazing growths, in some cases so spectacular that were described as *economic miracles.*

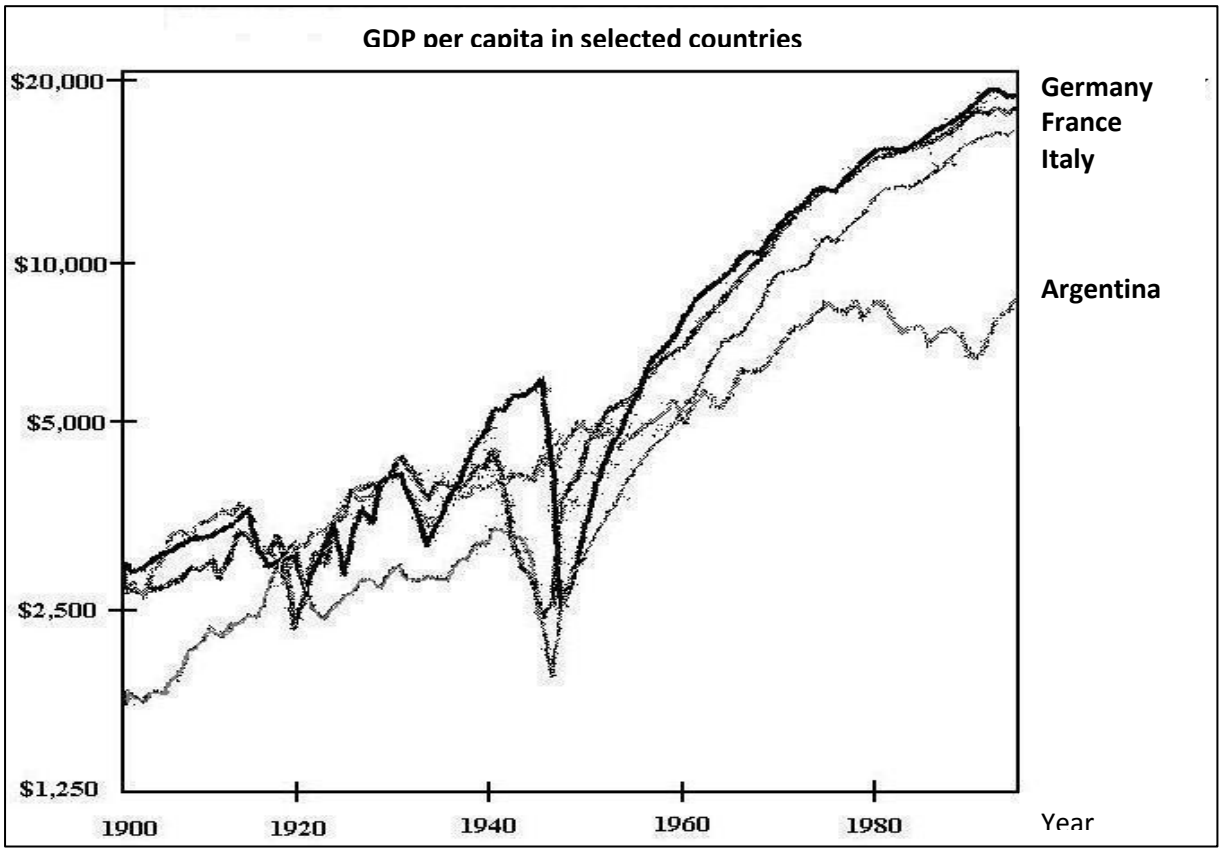


Figure 1. GDP per capita in selected countries. Source: Agnew, John, *The Marshall Plan Today,* London: Routledge, 2004.

Figure 1. presents the growth of Gross Domestic Product (GDP) per capita in West Germany, France, Italy and Argentina between 1900 and 2000. In general, in the last century the value of the index in European countries rose by multiple times, starting from around 2,500 USD at the beginning of 20th century and nearly hit the levels of 20,000 USD hundred years later. Over the same period, Argentina entered the 20th century with approximately the same value of GDP per capita, yet ten decades later the same index did not even reach the

[22] International Monetary Fund, *World Economic Outlook Database,* http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/weoselagr.aspx, accessed on 8.03.2014.

level of 10,000 USD, which was less than half of European results at that time. The question in this case would be what were the reasons of such progress in case of these countries? Why West European's economies developed at visibly higher pace than its counterpart in South America? What is also important in this case is that at some point in the first half of the century all countries' GDP per capita nearly equalized and reached practically the same levels. However, later on, the differences between West Germany, Italy, France on one side and Argentina on the other increased, especially after the end of World War II in 1945.

In this case, as well as in many other examples, there can be actually multiple reasons of diversified development pace among the states. In part, the long-term growth of individual economies may be explained by rising population of the nation. Increasing number of people within the country means that more workers are available for current and new jobs which enlarge national output. The other significant factor is the rise of the value of output that can be provided with a given amount of labor. The sum of output produced per unit of labor input - per worker, for instance- is called by macroeconomists as average labor productivity. Western Europe was, as we could see, more prosperous in terms of economic advance, than Argentina, and therefore the societies of West Germany or France could enjoy at that time higher standard of living than citizens of Argentina. Nevertheless, there is no complete answer to the problem of how to provide permanent, stable and high economic growth or what exactly determines it. While some believe in the issue of saves and investments, others dedicate special role to technological progress and other factors that increase productivity of workers and machines[23]. Undoubtedly, a balance and appropriate proportions of numerous factors should be kept, in regard to specific conditions of each economy.

Employment and unemployment

Each country, whether it is an advanced economy of Japan, an emerging market of Poland or the one from the group of Least Developed Countries (LDC) like Myanmar (classification of the United Nations[24]), has its labor force which is combined of employment and unemployment share. Employment is the sum of people who are actively employed, whereas unemployment consists of the total number of people who are actively looking for a job but are not currently employed. The official labor force statistics do not count in discouraged workers. Discouraged workers are the ones who are capable of working but they have resigned from looking for a job. The unemployment rates are one of the basic information regarding current condition of the national economy. There are frequently presented in various media or used by politicians especially during campaigns before elections. High unemployment is a reason for macroeconomists and society to concern, as it may signal a weak condition and poor performance of markets which provide jobs for labor force. Low unemployment, in turn, informs that markets perform relatively well and jobs are easier to find (the meaning of "high" and "low" is quite broad and a matter of subjectivity, it will be also discussed further). Unemployment has close correlation with business cycle

[23] Abel, *Macroeconomics,* p.5.
[24] World Bank, *Least Developed Countries: UN classification,* http://data.worldbank.org/region/LDC, accessed on 8.03.2014.

fluctuations. Usually, during recessions and crises in the economy unemployment rate is increasing and when markets expand, the same rate is declining[25].

The important thing while considering the issue of unemployment is that its value at any point will not equal zero, even if the final output is the same or close to its potential. A key to understand that is in different types of unemployment. Economists usually think of four main kinds: seasonal, structural, cyclical and frictional[26].

Seasonal unemployment is closely connected with particular periods during the year in which many aspects change and influence labor market including available labor force, seasons of the year, or time of holidays. For example, the month of December is a moment of general preparation for the incoming Christmas time and people tend to increase spending their income on presents. In that period shops have a great demand for retail salesmen who would be ready to work in shopping centers and malls in the country. On the other hand, some sectors at the same time have to deal with lower demand for workers. Construction industry slows down in the winter because weather conditions outdoor make it impossible to work. Frictional unemployment refers to people who change their job from one to another and stay unemployed during that time. It would not happen if people could do that immediately. Nevertheless, this transition is a normal process especially in the dynamic economies such as in the United States where some industries expand and grow while other decline. Frictional unemployment can also refer to new graduates which after finishing their schools may spend months until they become employed. During these months they will be counted as unemployed labor force. Having that in mind, it is important to remember that there is practically always going to be some level of frictional unemployment in the economy. Structural unemployment comes from the inappropriate adjustment of skills of unemployed workers to the needs of available job positions. Usually, the unemployment among individuals is rather short-lived with the average time of three to six months. However, there is also a group of people who remain unemployed for more than six months. This long-term lack of work may often results from structural changes on the markets. The factor of dynamic economy is here as crucial as in frictional unemployment issue. Expanding economy is constantly transforming and having particular sectors rapidly growing while other declining. In this case, the unemployed workers may possess no professional experience that is required for the newly created jobs. In the city of Detroit, USA, for example, the unemployment rose sharply in the first decade of 21st century when General Motors, one of the main job-provider in the city, had severe financial problems[27]. As the company was a major industry in the town, many fired workers experienced structural unemployment which prevented them from finding new jobs. In a consequence, the unemployment rate in Detroit in 2003 was initially around 15% and reached in 2009 the level of 25%[28].

These three types of unemployment – seasonal, structural and frictional – create a natural rate of unemployment. This natural rate is however not permanently fixed and may

[25] Krugman, *Economics,* p.564-565.
[26] Stiglitz, *Economics,* p.501-502.
[27] Wikipedia, *General Motors*, http://en.wikipedia.org/wiki/General_motors#Financial_results, accessed on 9.03.2014.
[28] Tanner, Kristi, "Detroit Free Press", *Detroit's unemployment rate over the last decade*, July 21, 2013, http://www.freep.com/article/20130721/OPINION05/307210033/Raw-Data-Detroit-s-unemployment-rate over-last-decade, accessed on 9.03.2014.

change over time. Joseph E. Stiglitz claims that nowadays the natural rate of unemployment is at around 5 to 5.5%[29]. Looking at the same rates in the individual countries in Europe such as Germany and Austria (5.0% and 4.9% respectively, data for January 2014[30]) one may argue that the natural rate is even lower, perhaps around 2%. Although the values in both countries were around the level of 5% we should remember that Europe is currently still in the mist of the Global Financial Crisis of 2008-2009 and Eurozone debt problems which occurred few years later. Therefore, it may be reasonable to say that the natural rate of unemployment today is lower than 5%.

Finally, the fourth kind of unemployment is associated with business cycles present in economies. Cyclical unemployment declines in the prosperous times when the economy goes into a bulge and rises when the markets are witnessing recession. Policymakers in governments are chiefly concerned by these economic fluctuations. They pay special attention to reduce the magnitude and the frequency of this type of unemployment, by lowering the magnitude and frequency of business cycles. There are numerous methods of compensating the impact of those fluctuations on unemployed workers. For example, governments may provide financial dole under special conditions or create an additional demand for public works during the recession.

Inflation

"*Inflation is a rise in the average price of goods over time. Pure inflation is the special case in which all prices of goods and factors of production are rising at the same time.*"[31]

"When the prices of most goods and services are rising over time, the economy is said to be experiencing inflation… .The percentage increase in the average level of prices over a year is called the inflation rate ."[32]

"Inflation is a sustained rise in the general level of prices, a sustained rise in the price level. The inflation rate is the rate at which the price level increases."[33]

Inflation is actually not about the value of goods and services but mainly about the value of money. It is a very sensitive topic because of the both positive and negative effects it may cause. Moreover, whether particular impacts are perceived as positive or negative, depends also from the point of view. On the one hand, the group of consumers, for instance, will probably not be pleased that they are forced to pay more in the shopping centers for what they want, especially if their income does not rise at the same time. On the other hand, governments may sometimes desire some level of inflation as it helps to, in example, get advantages while counting national public debts. Having said that, leaderships of numerous

[29] Stiglitz, *Economics,* p.501-503.
[30] Eurostat, *Unemployment rates seasonally adjusted, January 2014,* http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:Unemployment_rates,_seasonally_adjusted,_January_2014.png&filetimestamp=20140228082240, accessed on 9.03.2014.
[31] Begg, *Economics,* p.463.
[32] Abel, *Macroeconomics,* p.8.
[33] Blanchard, *Macroeconomics*, p.27.

states indeed tend to implement appropriate monetary policy which would help them to reach agreed inflation target. Here one may ask the question why would someone want to increase the prices of most goods and services and therefore pay more for them? The answer for that question can be found in the price stability, a matter which all economies are looking forward to provide in a short-, medium-, and long-term perspective. The European Central Bank, as an European Union's institution that has been active since 1 January 1999 and is responsible for conducting the monetary policy for the Eurozone, defines price stability as "*a year-on-year increase in the Harmonized Index of Consumer Prices (HICP) for the euro area of below 2%"*[34]. The reason for aiming at the levels close to 2% is to, *inter alia*, provide appropriate and adequate measures in order to avoid the risks of possible deflation. Having a situation of deflationary environment may cause significant obstacles for monetary policy which in turn cannot be able to stimulate overall demand by using interest rates. The governors of the European Central Bank come thus with a conclusion that it is easier to fight inflation that struggle with deflation. The policy of price stability leads to benefits from which profits practically whole economy. Firstly, the strategy makes the monetary policy more transparent which is crucial for market part-takers and their everyday activities in the economy. Transparency facilitates their operations and functioning on the markets and helps them understand the goals and objectives of the monetary policy. Secondly, price stability plays an important role in ensuring the citizens about the clear criterions and standards on which the central bank bases. This is essential for the market participants and their perceiving of the institution responsible for the monetary policy. The picture of the central bank as a responsible and accountable subject is a fundamental issue of guiding transactions among the people. Eventually, the pursuit of price stability gives a reference to the public regarding to the further policy and economic environment and helps to shape expectations of price developments in the future[35].

A central bank of the biggest economy in the world - the United State's Federal Reserve – declares in its statute relatively similar objectives and roles regarding conducting monetary policy which are first of all maximum employment and stable prices. In order to pursue those goals, the Federal Reserve is looking forward to clarify its decisions to the public opinion as transparently and clearly as possible. The bank's governors believe that "*clarity in policy communications facilitates well-informed decision-making by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability… ."*[36] Similarly to the European Central Bank, Federal Reserve governors judged that inflation at the rate of 2% (measured by the annual change in the price index) is the most compatible with the bank's objectives mentioned in its statute. Additionally, in adapting monetary policy, it is strongly desired to mitigate fluctuations of inflation as much as possible and try to provide possibly only slight and partial changes if needed.

[34] European Central Bank, *Definition of price stability,* http://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html, accessed on 14.03.2014.
[35] Ibid., accessed on 14.03.2014.
[36] Federal Reserve, *Money, Interest Rates, and Monetary Policy*, http://www.federalreserve.gov/faqs/money_12848.htm, accessed on 14.03.2014.

General increase of prices of goods and services over time is not a new phenomenon. In advanced economies, such as the United States or countries of Western Europe especially after the World War II, people often get use to the circumstances that for many of the goods they need to pay more as what they paid before. However, there may as well appear periods in the economy when most prices fall and in a result customers can spend less money on the products they want to purchase[37]. Nevertheless, although the inflation itself has been a pattern in the last 60 years, there have still appeared some significant fluctuations in the pace at which the prices rose.

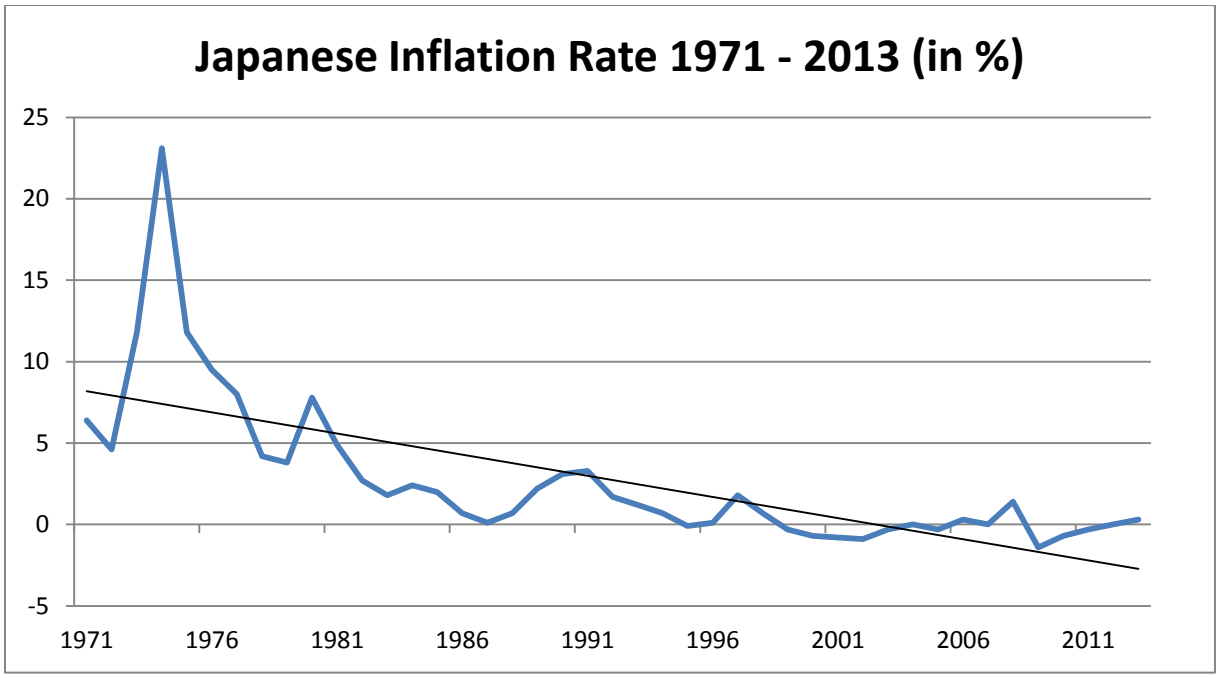


Figure 2. Japanese inflation. Source: Rate Inflation. http://www.rateinflation.com/inflation-rate/japan-historical-inflation-rate, accessed on 14.03.2014.

Figure 2. presents Japanese inflation rate between 1971 and 2013. At the beginning of the presented period, from 1972 to 1975 the rate was at the double-digit values, reaching almost 25% in 1974. However, since the late 1970s inflation gradually yet constantly was declining. 1980 was the last year when the rate was above the level of 5%, peaking at this time to 7,8% with year-on-year basis. From 1981 the rate in Japan has been permanently below 5%. Worth noticing may be especially the time starting beginning with mid-1990s till basically the end of presented period. 1995 was the first year when Japan witnessed deflation (-0.1%). Afterwards, the inflation within the Japanese economy has incessantly oscillated around 0%. The period of 1999-2003 was particular in this context as the only time when state's economy experienced deflation in five years in a row. In general, the range of inflation rate in Japan between 1971 and 2013 was relatively broad, reaching nearly 25% (23.1% in 1974 and -1.4% in 2009). In this case, the country's performance in the context of inflation would be greatly beyond the goals of both European Central Bank and the Federal Reserve with their target of 2% on year-on-year basis. Japan was however not the only country which experienced in its history heavy fluctuations of price levels. In 1970s also other advanced

[37] Mankiw, *Principles of Economics,* p.27.

economies such as the United States, West Germany, France or Great Britain had to deal with drastic increase to double-digit inflation in their economies. Yet historical data present even greater spread of inflation undergo. One of the most famous example took place in Germany in the early 1920s after the World War I. The inflation that was present between 1921 and 1923 was actually called a hyperinflation, as at some point the paper money eventually became useless and much of the market transactions were organized in form of barter[38].

As showed previously on the example of the European Central Bank and the Federal Reserve inflation issue is closely observed by many countries. Although its exact impacts and influence on the economy are lively debated, there are some costs of inflation that many economists agree with. A. Abel and B. Bernanke describe the cost of high inflation in a general way claiming that "*When the inflation rate reaches an extremely high level, with prices changing daily or hourly, the economy tends to function poorly. High inflation also means that the purchasing power of money erodes quickly, which forces people to scramble to spend their money almost as soon as they receive it."*[39]. J. Stiglitz seems to support the view when he says that "*People sense there is something wrong with the economy when there is high inflation."* G. N. Mankiw presents the costs more detailed, counting at least five main of them: shoe-leather costs, menu costs, misallocation of resources, confusion among market participants, and arbitrary redistribution of wealth[40].

The term shoe-leather cost refers to the situation where because of high inflation people try to avoid holding big sums of money in a form of cash. In the circumstances of rapidly growing prices, customers will most likely have majority of their savings on a interest-bearing bank accounts which would cover or at least diminish the declining value of money. That behavior is called the shoe-leather cost because inflation will force people to take more frequent trips to the banks and therefore their shoes will wear out more quickly. It cannot be taken literally yet the concept behind it applies more to the time and comfort one has to sacrifice to keep less money in the pocket than in a time when inflation is low. Menu cost of the inflation relates to the need of frequent change of the list of prices in the, in example, supermarkets or restaurants. In the face of high inflation, firms are forced to replace the old price information with new ones. This factor is not frustrating in low-inflation economies but it is severe in the case of moderate, high, or hyperinflation. However, as P. Krugman points out, currently menu costs "*are becoming less and less important, since prices can be changed electronically and fewer merchants attach price stickers to merchandise"*[41]. Another cost that is highly related to inflation is the misallocation of resources. That aspect is important because free-market economies strongly rely on prices as the information which helps to allocate free resources. Consumers make their choices what to purchase by confronting the price and quality of diverse good and services. In a result, they influence the behavior and production trends among the industries and companies. However, in a high-inflation environment, repeatedly changing prices distort consumer decisions, and consequently markets are limited with their actions to allocate rare resources in a most efficient way. Confusion among market participants and general inconvenience between buyers and sellers in one more issue that arise

[38] Begg, *Economics*, p.833.
[39] Abel, *Macroeconomics,* p.9.
[40] Mankiw, *Principles of Economics,* p.621-628.
[41] Krugman, *Economics,* p.844.

from the high inflation. One of the function of money is a measure unit that is commonly used during economic transactions. People recall those units and adapt it to the values of individual goods and services, like price of cars, plane tickets or potatoes. However, when the supply of money increases and creates inflation, the real value of the unit and its function of measure become deformed. In a consequence, consumers' judgment of the costs of various products is much more difficult and leads to confusion and entanglement. Eventually, inflation may lead to arbitrary, lawless and chaotic redistribution of wealth. As many countries have progressive tax rates, this particular costs may be often painful especially to numerous companies. Some firm, for instance, can store a big number of its final goods that await for sale. Yet in the high-inflation environment the nominal price of these goods will increase over time. If the income from this transactions will be treated as ratable profit, the firm will be obligated to pay higher taxes even if the real value of its supplies remains at the same level.

Economic Fluctuations

Modern, industrialized economies are extremely dynamic economies. New goods and services are being everlastingly introduced on the markets while in the meantime the old ones disappear. Consumer's demand frequently changes from one product to another, following the trends that are designated by companies. Some multinational firms (i.e. Apple Inc., Samsung, and Electronic Arts) that specialize in the technological areas of consumer electronics, computer software and personal computers, introduce their new products even couple of times in a year and become serious market- competitors to other enterprises all around the world. In a result, in many cases it leads to the creation of new jobs in one sectors, but also to losses of them in another. These processes, although in many cases happening principally on the microeconomic level in individual sectors, sometimes can influence and interrupt whole countries on the macroeconomic horizon. Moreover, economic disruptions that have their origins in some individual sectors may be able to quickly move the general anxiety and turbulences onto another areas of national economy and in a consequence affect whole country[42].

However, the factor of dynamics of the economies is not an issue that appeared freshly in the 21st century. Beginning with the Industrial Revolution in the 19th century, the economies of many countries like the United States have grown rapidly in the following decades. The increase of output in these countries has created numerous effects on their structure where one of them was hugely improved living standard. Yet even if those countries that have become relatively prosperous in a long-run there have been also moments on a timeline when their economic expansion has been periodically broken by various circumstances. In that time they often experienced declining production, spending and income downfall, but also rising unemployment or inflation. In general, economic environment at the time of those breaks was much less favorable for markets than normally. Still, after every slump, even if it was extended and highly severe, the economic activities were followed by return of the markets on the path of economic growth. Usually markets were also even able to overtake the peaks from the previous years and continue growths. That process of following

[42] Stiglitz, *Economics,* p.637-638.

sequences of economic expansion and recession is known as the business cycle. Business cycles, noted also as economic fluctuations, are one of the main concern of macroeconomists and governments because they reflect strongly the condition of economy as a whole. In the times of growth economy's output increases, unemployment stays low, and the average prosperity among the citizens rises. On the other hand, when the economy declines, there is a high chance that many sectors experience diminishing manufacturing and sales, their profits decline, and unemployment rate grows. Because of the great significance of the business cycle's impact and its broad effects, economists try to find causes of economic fluctuations and to resolve if there is any way to avoid or at least diminish the appearance and range of those cycles. One of the first work and analyze of business cycles was the study from 1946 by Arthur Burns (later Federal Reserve chairman of 1970-1978) and Wesley Mitchell[43]. In the work they presented a definition which explains that:

"*Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises. A cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic, in duration cycles vary from more than one year to ten or twelve years.*"[44]

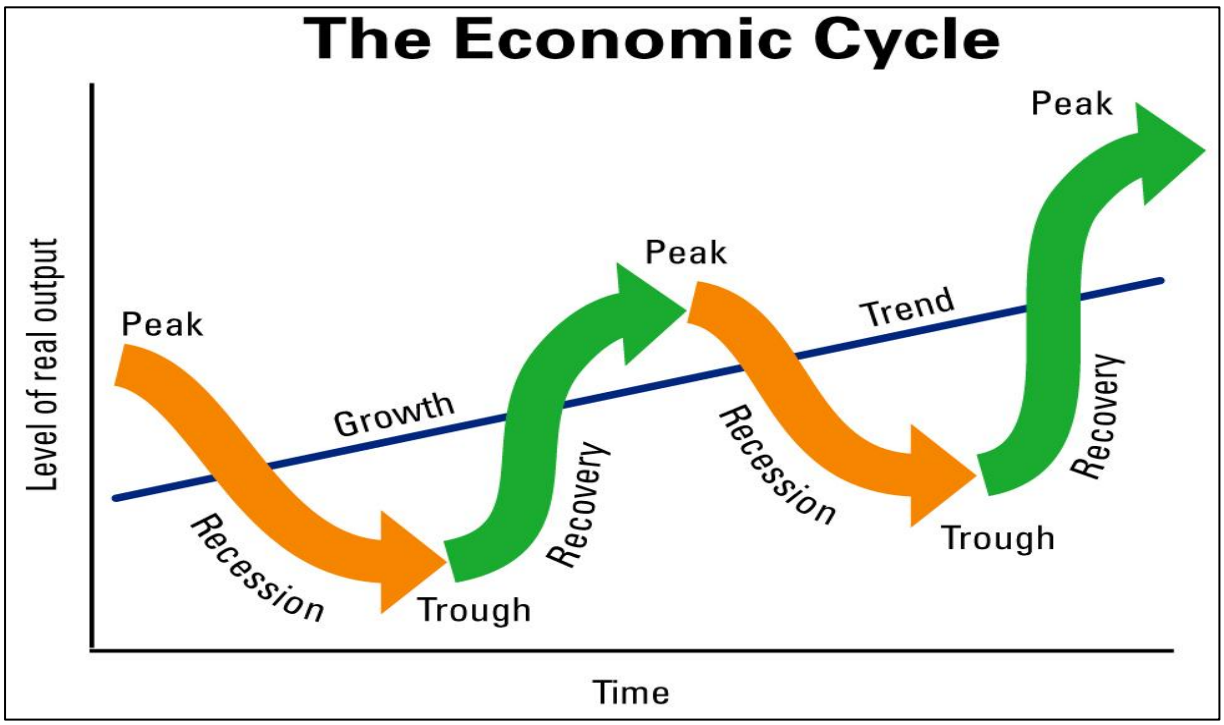


Figure 3. The Economic Cycle. Source: http://mrshearingeconomics.weebly.com/economic-cycle.html, accessed on 16.03.2014.

[43] Abel, *Macroeconomics,* p.289-290.

[44] National Bureau of Economic Research: Burns, Arthur F., Mitchell, Wesley C., *Measuring Business Cycles* 1947,
p.1, http://papers.nber.org/books/burn46-1, accessed on 22.03.2014.

The definition consists of four elements that are worth being highlighted and explained. Those points are: aggregate economic activity, expansions and contractions, recurrent, and durability.

Firstly, aggregate economic activity within the business cycles means that fluctuations refer to general performance of the economy, instead of individual variable and index. Although GDP value in this case may be a relevant and meaningful source of information while analyzing business cycles, it is important to look also at another indicators, for example rate of unemployment of trade values. Secondly, business cycles are characterized and marked by specific periods over time. Figure 3. presents different phases of economic performance which follow one after another. The blue line shows the average, long-term growth path of total economic output, while the arrows shows the fluctuations of business activity during that time. The time when economy is declining and market activities decrease is called a recession or contraction. At some point the economy witnesses depression which means that it reaches the lowest point on the curve of economic activity, known also as trough. The trough of various recessions may indeed differ as there are numerous circumstances that make an impact on the markets. Nevertheless, after reaching the trough, economic activity begins to increase. The period of the aggregate recovery is called an expansion or a boom. When recovery comes to its highest point, the peak, economy starts to declined again and the process of business cycles repeats. What is important is that each peak of the following recoveries tends to reach higher levels as its predecessor. Therefore, in a long-term, economy is able to experience aggregate growth. Recurrence, as another aspect of business cycles means that fluctuations do not appear regularly, and with predictable gaps. They do not occur periodically such as for example seasons of the year. Economists often vary with their opinions regarding the exact position of the economy in regard to concrete business fluctuation's phase. For example, some of them may forecast the long-run economic growth in the following months or even years, while others at the same time believe economy to be at the peak of current boom and argue for the incoming recession. Yet although difficult to foretell, there is still undoubtedly a repeatable path of recession- trough- recovery- peak- process in industrial economies that proves the adequacy of recurrence factor. Eventually, the durability of a complete business cycle itself may vary significantly. In some cases economy will witness only short and light contraction in aggregate activity while in other case the recession may be extremely severe and prolonged. The same refers to the recovery periods, when phase of economic boom can either remain only for short-term, i.e. up to 5 years, or be present on the markets even for a decade. In the end, due to the persistence of changeable periods of recessions and recoveries, economists are constantly looking for a troughs and peaks in the economic activities, which are the turning points during the individual phases[45]. By doing this, they are able to prepare their prognoses for the potential shifts in economic activities.

[45] Abel, *Macroeconomics*, p.291-293.

2.3. The tools of macroeconomic analysis

Gathering of data, measurement, survey and subsequent analyze of the collected information is an essential part of scientific studies. Precise measurement is of great importance not only for evaluating and developing already present ideas but also for creating alternative, often very different and unlike theories. In the end, measurement can be also useful for trying to predict future patterns and trends that are likely to appear. Scholars of all academic studies pay close attention to particular group of data which allows them to carry on honest and credible studies with providing potential results ultimately. It is naturally not different with the science of economics where a broad group of evidence and information is used by the economists for leading analysis of individual issues. As it has been already mentioned on the previous pages, economics can be divided into two general branches: microeconomics and macroeconomics. Microeconomics refers to the issues of how individual households and companies constitute their decisions and in what way it influence another market- participants. Macroeconomics, on the other hand, is the study of the economy as a whole. Its basic objective is to explain and clarify the economic shifts and variations that make an impact on households, firms and whole markets at the same time. In order to run such studies scholars look at numerous indexes and indicators that refer especially to the overall performance of the economies. Without excessively going into details of, in example individual sectors and industries, they analyze the combined and aggregate functioning of market- participants.

In this section of the dissertation I will focus on the explanation of the particular measurement tools that are commonly used by the economists while analyzing the issues of macroeconomics. The tools that are going to be presented are in regard to previously introduced questions of economic growth, inflation and unemployment within national economies. Those measurement instruments portrayed in the chapter are: Gross Domestic Product, unemployment rate, GDP deflator, and Consumer Price Index.

2.3.1. Gross Domestic Product

Definition

While studying economic performance of individual countries economists often pay special attention to the aggregate output of single states. By setting the overall value of manufactured goods and services and subsequently comparing the data between different countries one can indeed get some picture of how one or another economy is performing on the global scene. Therefore, most of the governments, but also academic institutions, non-governmental organizations and other actors constantly collect and analyze complex and detailed information in order to define country's productivity in a given period of time. Gross Domestic Product as one of the main macroeconomic measurement tool is exactly the index that is responsible for counting the total national income. Usually the countries that have higher GDP in most cases can more easily afford to spend their revenue on things which increase the general standard of leaving (for example education, health care, or social support). Therefore, policy-makers and leaderships of nations continuously try to make

decisions which would result in the increasing amount of total output (income and expenditure) within their countries. However, following pages of the work will prove that although GDP itself is an important economic indicator among many publications, it can be at the same time also very tricky. Countries' total income (the value of GDP) does not necessarily have to mean that the nation can be considered as a rich one. In fact, Gross Domestic Product can often provide extremely ambiguous information because of the great distinctions in the term itself. Having that in mind, it is crucial to be extremely précised when analyzing the issue of GDP. Still, in practice, definitions of GDP in various publications and other sources are rather similar with their fundamental concept and individual contents. Since many scholars generally agree with the essence of GDP, frequent definitions are actually often alike.

"*Gross Domestic Product (GDP) is the market value of all final goods and services produced within a country in a given period of time.*"[46]

"*Gross Domestic Product, or GDP, is the total value of all final goods and services produced in an economy during a given period, usually a year.*"[47]

"[Gross Domestic Product] *The total money value of all final goods and service produced for the marketplace within a nation's borders during a given period of time (usually a year).*"[48]

"*Gross Domestic Product (GDP) measures the output produced by factors of production located in the domestic economy regardless of who owns these factors.*"[49]

Comparing the given definitions one may see the that the general idea of GDP is reflected in most cases in a form of one, short phrase. Yet at the same time there are many subtle issues that arise when calculating an economy's GDP. Each of the presented definitions include some common important terms that refer to crucial issues when studying this particular matter.

First of all, Gross Domestic Product's measurement approach is overall and comprehensive. It contains all goods and services created within the economy, such as cars, food, real estates, or transport services, which subsequently sold legally in the markets. In its calculations GDP excludes some products that are based on illegal transactions, for example illicit drugs or black-market deal's articles. Still, in many cases the value of those transactions is estimated and provided in the statistics so governments of numerous countries usually have some idea about the value of the business activities coming from the illegal sources. The next essential issue of GDP is that it measures only the worth of final goods. The reason of doing so is that the value of intermediate goods is already calculated in the prices of final goods. With this manipulation of economic equations economists avoid the mistake of counting the same product two times. For example, adding the price of steel to the market value of the car

[46] Mankiw, *Principles of Economics,* p.468.
[47] Krugman, *Economics,* p.584.
[48] Stiglitz, *Economics,* p. 486.
[49] Begg, *Economics,* p.333.

would cause its double counting in the statistics. Another important thing is that GDP estimates include not only palpable goods, like clothing, housing, or electronics, but also impalpable services that are created within the nation's economy. For instance, purchasing the computer becomes a share of GDP in the same way as (legally) paying for the car wash. At this point it is important to say that Gross Domestic Product counts only the goods and services that are currently product, excluding the items manufactured in the past. As an example one may look at the transactions on automobile market. The company that produces and sells a new car contributes to the increase of GDP. However, when one person sells a used car to another, the value of that transactions will be not included in GDP. Subsequently, one should bear in mind that the indicator measures only the production's value within the borders of a particular country. An American student who is temporarily working in Spain for his summer job contributes to the Spanish GDP and German businessman who owns the factory in Poland increase the value of Polish GDP. Therefore, state's Gross Domestic Product include all the goods and services produced domestically, without the distinction of the manufacturer's nationality. Lastly, GDP index computes the overall production in the specific period of time. Usually, the indicator provides the information about the whole year production yet there are also cases that countries' central statistical offices and other institutions report the GDP figures quarterly. Additionally, presented data can be in some ways modified by specified statistical procedures, for example seasonal adjustment. Doing that, economists take into account particular times of year when economy produces more goods and services than during others, like during pre-Christmas period. As already mentioned before, GDP can be defined as the aggregate output of the national economy's income. Yet despite understanding the GDP issue according to the previously mentioned definitions there is also one more way of thinking about an economy's GDP. Descriptions given at the beginning of the chapter looked at GDP from the production perspective. Another option while studying the question is looking from the income side. It is because households purchase goods and services from various companies and those companies, in turn, use their income to cover the labor costs and create profit to the owners. Firms provide salaries to employees, pay rent to landowners and finally make gains themselves. In a consequence, all expenditures in the economy equal to someone's income[50]. This theory is known as the circular-flow of expenditures and income.

Nominal and Real GDP

As already said, GDP measures the aggregate output in a whole economy. This aggregate output is counted with the units of money, such as American dollar or Euro However, using money in this case may lead to significant problem while computing economy's performance over some time. This particular problem is the issue of inflation and changing value of the money. Mobile phones, real estates, food, and other products tend to cost more than they used to before. Although the pace of price changes is indeed different, there is generally an overall increase of costs of goods and services over the years. Therefore, measuring country's GDP without taking into consideration the rising prices of products can

[50] Mankiw, *Principles of Economics,* p.467-470.

lead to deceptive and unreliable final results. In order to avoid that, economists make a distinction of GDP on nominal and real estimation. Nominal GDP states for the total quantity of goods and services multiplied by their current price. According to this sense, nominal GDP should increase over time for at least two reasons. First of all, it was already said that the production of goods in most countries rises in a long term. Secondly, the prices of nearly all goods also increase due to the process of inflation. If the purpose of the economist is to measure only production and its change during given period of time, it is necessary to get rid of the effect of inflation. That is the role of real GDP which counts the total amount of produced goods and services according to the constant prices of chosen base period (year)[51].

Calculating of nominal GDP		
Year	Price of Blu-ray	Quantity of Blu-ray
2010	100 $	1000
2011	105 $	1100
GDP in 2010	100 $ x 1000 = 100,000 $	
GDP in 2011	105 $ x 1100 = 115,000 $	

Table 1. Calculating of nominal GDP. Source: Own table.

Real GDP	
Real GDP (year 2010 as base year)	year 2010: 100 $ x 1000 = 100,000 $ year 2011: 100 $ x 1100 = 110,000 $
GDP Deflator (year 2010 as base year)	year 2010 = 100 year 2011 = 100 x (year 2011 nominal GDP) / (year 2011 real GDP) = 100 x (115,000/110,000)= 104,5(45)
Deflating nominal GDP	Real GDP in 2011= nominal GDP/GDP deflator 115,000 $/1.045 ~ 110,000 $

Table 2. Calculating of real GDP. Source: Own table.

Tables 1. and 2. present the calculations of nominal and real GDP on an example of random economy where Blu-ray discs are the only good being produced and sold on the markets. Table 1. shows the GDP data in current prices for years 2010 and 2011 (nominal GDP). In that period both prices of the discs and manufactured quantity of this particular good changed with the ultimate GDP result of 100,000$ and 115,00$ (for 2010 and 2011 respectively). However, as already said, counting of Gross Domestic Product according to the nominal approach is misleading and does not take into account the change of prices and its final impact on the GDP. Analyzing of the real value of GDP increase requires to use constant prices of the base year. Table 2. computes the same example of Blu-ray discs economy with an approach of the real GDP equation. In this case, the real increase of GDP in 2011 in refer

[51] Blanchard, *Macroeconomics*, p.488.

to 2010 was at the level of 10%, from 100,000$ to 110,000$ (2010 and 2011 respectively), after including the change of the prices in the given period. In the end, the approach of real GDP measurement provides more accurate and reliable results while analyzing individual economies' growth and their total output over time, especially if the economy is experiencing sharp rise of prices at that time.

2.3.2. Unemployment rate

In addition to Gross Domestic Product measure there are many other economic tools that assist researchers with their studying of the macroeconomic performance of the economy. Despite GDP, another indicator that is of great importance is the unemployment rate. Unemployment may often have some devastating effects on the national economy, such as recession or political turbulences. It leads to lost output and decreased productivity in comparison to the economy's full potential. Therefore, unemployment issue is one of the most important topic not only for scholars and governments but also for whole societies as well. The main concept of the unemployment and its types have been already discussed earlier in the dissertation. As already said, in the real world there is always going to be some group of unemployed workers. In a result, this leads to the fact that basically at any time the full potential of society's resources will not be actively used in manufacturing goods and services. In most of the countries, appropriate governmental and non-governmental institutions are constantly tracking the level of unemployment. In the United States the agency responsible for gathering the issue's data is called the Bureau of Labor Statistics (BLS), in the United Kingdom the same task is fulfilled by the Office on National Statistics, whereas in Poland that role is for the Central Statistical Office (CSO)[52].

In order to evaluate the unemployment rate within the national economy statisticians assign every person to one of the following categories: employed, unemployed, or not in the labor force. In most advanced economies such as Japan or those in the European Union, the minimum age, as one of the conditions for being assigned to the labor force, is 15[53]. In the United States (also depending from the individual state and type of job) a person has to be minimum 14 years old in order to be included in the labor statistics[54]. Nonetheless, regardless of the specific and detailed labor conditions that are present in the individual countries, there are three categories that people are allocated to. A person can be considered as employed, if he or she works full-time or part-time. An unemployed is an individual that does not work but is looking for a job. Finally, the last category consists of people who are not working and also are not looking for a job. The motives of being not in the labor force can be truly diversified. Although those people indeed have a potential to provide additional output to the national

[52] Wikipedia, *List of National and International Statistical Services*, http://en.wikipedia.org/wiki/List_of_national_and_international_statistical_services, accessed on 29.03.2014.

[53] Eurostat, *Harmonized unemployment rate by sex*, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=en&pcode=teilm020&tableSelection=1 plugin=1; Statistics Bureau of Japan, *Coverage for the Employment Survey*, http://www.stat.go.jp/english/data/shugyou/2012/a1.htm, accessed on 29.03.2014.

[54] U.S. Department of Labor, *Youth and Labor. Age Requirements*, http://www.stat.go.jp/english/data/shugyou/2012/a1.htm, accessed on 29.03.2014.

economy, their passive professional attitude excludes them from being assigned to the group of unemployed[55]. The unemployment rate is the fraction of unemployed and the labor force. The labor force, in turn, is defined as the total sum of unemployed and employed.

$u = \frac{U}{L}$ unemployment rate = unemployed / labor force

$L = U + N$ labor force = unemployed + employed

Labor Force in Australia (February 2014)			
	Number (thousands)	Share of Labor Force (percent)	Share of Population
Employed workers	11 502.2	94	50,7
Unemployed workers	733.7	6	3,2
Labor force (employed and unemployed workers)	12,230	100	53,9
Not in labor force	10,470	-	46,1
Population	22,700	-	-

Table 3. Labor Force in Australia. Source: Australian Bureau of Statistics, http://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0, accessed on 29.03.2014.

Table 3. shows the labor data for Australia for the February 2014. In that month the labor force of the country consisted of slightly over 12 million people against just about 10,5 million individuals that were classified as being not in the labor force. The employed workers with the absolute number of 11,5 million created a 94% level of employment. On the other hand, the unemployed workers were responsible for around 6% of the unemployment rate with their total number of nearly 734 thousand. In a consequence, employed workers made at that time almost 51% share of Australian total population (22,7 million) and unemployed individuals formed simultaneously 3,2% part. Eventually, the 12 million group of labor force was responsible for nearly 54% of all the people within the country whereas the others, categorized as being no in the labor force, created a 46,1% share of total population in Australia.

Summarizing, macroeconomists and representatives of the governments pay particular attention to unemployment rate mainly because of two basic reasons. Firstly, the unemployment rate gives an information about the performing of the economy, whether its resources are used at the level of, or at least close to, full potential. Secondly, unemployment phenomenon itself may have indeed severe social consequences.

[55] Abel, *Macroeconomics,* p.91-93.

2.3.3. Consumer Price Index

The third main issue in regards to the macroeconomic performance of individual economies refers to the matter of changing prices over time, namely the process of inflation and deflation. As already explained in the previous chapters, both inflation and deflation can form some heavy obstacles for the economies and markets on their path to the sustainable and long-term economic growth. Moreover, there are two main problems of changing prices. First of all, the value of goods and services does not usually rise by the same proportion. If the prices of goods increased every year by, for example, 4%, then measuring, forecasting and general expectations would become easy and unchanged; the inflation rate would be 5% However, as showed on the example of Japan in chapter 2.2. most of the countries experience fluctuations of price levels. The range and frequency of these fluctuations may differ, depending from numerous factors that influence the value of money. Second problem with measuring the changes of price levels is that economies produce a huge assortment of goods and services. Not all of them experience exactly the same variations in the price levels. Furthermore, the weightiness of particular goods for the economy as a whole may significantly differ. The worth of real estate and its importance for the markets is probably much more substantial than the price of rubber bands or rulers. Nevertheless, in order to establish the change in the aggregate price level, economists tend to compute the average proportion increase of prices. If the consumer is obligated to pay for the same basket of goods 105 $ in 2013 comparing to 100 $ in 2012, then we say that prices, on average, increased by 5%. Results like this are often presented in a form of a price index. To make the comparison easy and readable, measures of the prices levels are expressed in particular year given in relation to any base year[56].

There is a number of various price indexes. One of the most important one is the Consumer Price Index (CPI). It tracks the information about prices that are considered to be the most relevant for the households. By gathering the price data on the specific goods that illustrate how the typical households spend their income, governments, central banks and other institutions track the fluctuations and movement of these price level. CPI measures an overall cost of goods and services. The process of counting CPI and creating statistics can be explained within five steps that macroeconomists take. Firstly, calculating the consumer price index requires to establish of which prices exactly are most essential to the typical consumer. For example, the European Index of Consumer Prices, which is counting annually by the Eurostat, includes in its basket goods and services such as food, both alcoholic and non-alcoholic beverages, health, recreation, culture, transport, or housing and clothing[57]. Furthermore, the weight of each good is adjusting in the statistics depending on the importance and meaning for the buyers. Secondly, it is necessary to find the actual prices for each of the goods and services in the previously chosen basket, for each point in time respectively (for example 2010-2012). The third step refers to the calculation of each basket's costs in the chosen period (in this case for each of the three years of 2010, 2011 and 2012).

[56] Stiglitz, *Economics,* p. 514-515.

[57] Eurostat, *Frequent out-of-pocket purchases (FOOPP),* http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Frequent_out-of pocket_purchases_(FROOPP), accessed on 30.03.2014.

Subsequently, a base year for computing the index has to be picked. This particular year will serve as a reference for the other years that are going to be compared. The index is calculated by taking the cost of the basket in the given year and dividing it by the cost of the basket in the base year. Afterwards, that number should be multiplied by 100. The final result that comes from this equation states for the consumer price index. The last step is to compute the inflation rate by using consumer price index[58]. In order to do that, one may use the following formula:

$$\text{Inflation rate in a given year} = \frac{100 \text{ x (CPI in a given year} - \text{CPI in a base year)}}{\text{CPI in a base year}}$$

1. Basket of goods:

- **3 pencils** - **2 onions** - **1 cinema ticket**

2. Price of each individual good in the analyzed years.

Year	Price of pencil	Price of onion	Price of cinema ticket
2011	2 €	1 €	5 €
2012	2,5 €	1,25 €	6 €
2013	3 €	1,5 €	7 €

3. The cost of the basket for each year.

2011 (3 pencils x 2 €) + (2 onions x 1 €) + (1 ticket x 5 €) = 13 €
2012 (3 pencils x 2,5 €) + (2 onions x 1,25 €) + (1 ticket x 6 €) = 16 €
2013 (3 pencils x 3 €) + (2 onions x 1,5 €) + (1 ticket x 7 €) = 19 €

4. The base year and calculation of the consumer price index.

2011: (13 €/13 €) x 100 = 100
2012: (16 €/13 €) x 100 = 123
2013: (19 €/13 €) x 100 = 146

5. Computing the inflation rate.

2011: base year
2012: 100 x (123 - 100)/100 = 23 %
2013: 100 x (146 - 100/ 100 = 46 %

Table 4. Computing the CPI and the inflation rate. Source: Own table.

Table 4. presents the methodology of calculating the consumer price index and the inflation rate. In the example's random economy the basket of goods consists of three goods: 3 pencils, 2 onions and 1 cinema ticket. The example's examination focus on the period of three years between 2011 and 2013 where 2011 is a base year. First three steps of that model illustrates the computing of the cost of each basket of goods for the particular year. Subsequently, the consumer price index is calculated. Finally, step five specify the exact inflation rate of years 2012 and 2013 in regard to 2011 (in this case 23% and 46% respectively).

[58] Mankiw, *Principles of Economics,* p.486-488.

2.4. Monetary policy

2.4.1. Money

Definition

Money is often considered to be an important thing in a modern world. Many people frequently tend to increase their money supply through various – both legal and illegal – ways. Some may consider money to be a synonym of success while others see in it the source of evil and general moral bane. Furthermore, a will for gathering it can even push individuals to commit a crime or offense. On the one hand, there are people who claim that they don't specially care about money and its amount and on the other hand some openly admit to and recognize that it is an important factor in their life. However we characterize money and mark its features, most people would probably agree that it currently plays a valid role in every-day life. One way or another, whatever is our perception of money, it would be hard to imagine the functioning of modern world without it. Yet what money actually is? How it can be defined? Although these days it is used commonly, the exact characterization of it is not always clear and precise. Below are presented few definitions:

"*Money is any generally accepted means of payment for delivery of goods or settlement of debt. It is the medium of exchange*"[59]

"*Money is defined in terms of what it does: money is any asset that can be easily used to purchase goods and services*"[60]

"*.... money refers specifically to assets that are widely used and accepted as payment*"[61]

Given definitions can induce one to a conclusion that money can be everything. In fact, what really defines what things can be included in money and which things are excluded is to recognize the specific functions of it. In the presented definitions some of these functions were already mentioned such as *medium of exchange* or *assets that are widely used*. Actually, in the history there were numerous things that have served as money, including: cattle, pigs, horses, sheep, goats, slaves, rice, tea, tobacco, pitch, wool, salt, wine, porcelain, iron, leather, debts of individuals, debts of banks or debts of governments[62]. This incomplete list says that there is nothing which is originally created as money. Again, what defines it is the functions that money posses.

[59] Begg, *Economics,* p.374.
[60] Krugman, *Economics,* p.754.
[61] Abel, *Macroeconomics,* p.220.
[62] Goldfeld, Stephen M., Chandler, Lester V., *The Economics of money and banking,* New York: Harper and Row Publishers 1986, p.11-12.

Functions of money

Regardless from the detailed groupings and individual classifications of money functions we can extract at least few basic tasks that such as: money as a unit of value, standard for delayed payments, medium of exchange, and store of value.

First of all, money is used as a mentioned unit of value. Today, in most of the countries money serves in a form of particular currencies such as dollar in the United States, yen in Japan, won in the Republic of Korea, or polish zloty in Poland. Some currencies, however, can be used as a primary unit not only in one states, but also on the regional level. In this case an example would be euro currency in the Eurozone of the European Union. Each of these currencies (money) serve as a unit in which one may express relative worth of goods and services. By using it as the denomination of quality and value, money simplify the identification of all goods on a similar basis. Secondly, the presence of money is important not only for current economic exchange but also for the economic activities that include payment of the obligations in the future. For example, these function facilitate especially transactions such as lending agreements or salaries for employees. In second case, standard-of-delayed-payment function makes it easier to reward workers at the end of the given period, for example month, for their work with the specified amount of money instead of the number of particular goods and services. The problem with the last is that the prices of goods can change considerably over time, causing a profit or loss for the transaction's participants. It is not said that money itself cannot gain or lose its value (through deflation or inflation). However, the menace of the commodity-value fluctuations together with the unsure quality of potential goods that would be repaid cause that payments which would take place in the future go in favor of money using. Subsequently, money serves as a common medium of exchange. The definitions given in the previous part recalled the use of money as any mean that allows to pay for goods and services. These function refers to the case where one who wants to buy or sell something does not have to use other commodities in order to finalize the transaction. In the past there have been indeed many various things that were used as the medium of exchange (gold, precious stones, and others). In fact, the only requirement to consider something for money was that people would be eager to commonly accept it in their economic activities. Today, the mechanism of money as it is known in modern economies base on the banknotes, coins and other documents issued by the authorized institutions. In this case, people are not obligated anymore to collect goods, sell their services or simply exchange them directly with the ones who need them. Instead, they use money which eventually leads to saving time and energy. Finally, the last function of money is closely connected with serving as a store of value. That means that the owner of the money does not necessarily have to exchange his money supplies with the moment he gets it, but he can use it to spend it on goods and services in the future. Here it is important to mention two things. First of all, money itself is not the only reserve of value. In fact, many assets can possess properties which allow them to keep their value. Gold, real estates, jewelry, land or stocks and bonds are just examples of such things. Second point is that money is also not a perfect store of value. As already explained with the process of inflation, money is likely to reduce its value over time as well. For example, the prices of particular goods may increase in a given period which

automatically says that for the same amount of money one is able to buy less of this good, which also equals that money lost its previous value[63].

Having these in mind, current understanding of money requires us to remember that it has to fulfill specific requirements in order to call particular asset money.

Money supply and measurement

The money supply is the sum of money available in the economy. Being more detailed, money supply is cash in circulation and bank deposits. This explanation, however, gives only general picture of what money supply actually is. In fact, the issue is much more complex with some points blurred and not fully transparent. Until around 1980s the role of bank as a financial institution was rather clear and transparent and therefore it was relatively easy to decide which deposits should be counted as money supply. Yet financial deregulation and development of financial engineering that took place at that time initially in the United States caused that banks and other institutions with similar occupation began to involve in the practices which made it more difficult to identify the whole money supply[64]. Consequently, today, because assets vary, there is no universal and single measure of the sum of money in the economy. Having that in mind, many countries and policymakers use few different standards of the money stock. The official measures of money supply is commonly known as monetary aggregates. The individual monetary aggregates differ in terms of their definition of the concept of money. There are several standards of money supply including *inter alia* monetary base, M1 or M2. Monetary based is seen as the total amount of currency in the circulation plus deposits that commercial banks and other institutions have in their accounts in the central bank, for example at the Federal Reserve. Still, in the United States the two most broadly used monetary aggregates are M1 and M2. Aggregate M1 can be defined as the sum of currency that is held by public and on the deposits at depository institutions (commercial banks, credit unions, and etc.). M2 aggregate, in turn, includes everything from M1 plus saving deposits, small-denomination (less than 100,000$) time deposits and holdings of money market mutual funds (MMMFs)[65]. Although these are the main aggregates of money measure, there are also two additional monetary standards, usually less used and known than previously mentioned M1 and M2. These supplementary aggregates are M3 and L. M3 measure consists of M2 plus other assets like large-denomination (over 100,000$) time deposits and MMMFs being in possess of institutions. Aggregate L is even broader, as it includes M3 plus additional assets. Nevertheless, many of those assets in aggregates M3 and L cannot be considered as money in the direct sense mainly because they are unacceptable while making purchases. Yet because some of the assets can be relatively quickly exchanged into cash, it possible for some economists to put them in the wider measures of money[66].

[63] Horvitz, Paul M., *Monetary Policy and the Financial System*, New Jersey: Prentice- Hall 1963, p.3-7.
[64] Begg, *Economics,* p.386.
[65] Federal Reserve, *What is the money supply?,* http://www.federalreserve.gov/faqs/money_12845.htm, accessed on 11.05.2014.
[66] Abel, *Macroeconomics,* p.222-224.

The information presented here refer to the monetary system in the United States, yet this measure of money stock is universal on the international level and can be used on a similar basis in another countries as well.

Money and the real economy

Money is a valid and significant matter for many people yet not because of the money object itself but because of its influence on the economy. One use to measure numerous economic variables such as income or total production by individual currencies but what eventually counts is the goods and services we can purchase. One rather does not want a pile of money for its own sake but rather for the things he or she can buy with it. The study and analyze of money and monetary policy is a mean to understand the functioning of the whole economic system. Economists are especially concerned about the money supply and its consequences mainly because of the changes it can cause in real factors such as production, employment or real, total income. Although today these issues are of great concern among economists and policymakers, that wasn't always a case in the past. Some of the representatives of classical school of the 19th and early 20th century tended to diminish the significance and influence of money on the real part of the economy[67]. Such view was stated by John Stuart Mill when he said that:

"*It must be evident, however, that the mere introduction of a particular mode of exchanging things for one another by first exchanging a thing for money, and then exchanging the money for something else, makes no difference in the essential character of transactions…. There cannot, in short, be intrinsically a more insignificant thing, in the economy of society, than money…. It is a machine for doing quickly and commodiously, what would be done, though less quickly and commodiously, without it, and like many other types of machinery, it only exerts a distinct and independent influence of its own when it gets out of order…. Things which by barter would exchange for one another, will, if sold for money, sell for an equal amount of it, and so will exchange for one another still, though the process of exchanging them will consist of two operations instead of one."*[68]

Mill presented rather negative perception of money and its importance, yet when he claims that money can be a problem when "*it gets out of order"* it still suggested to look after money supplies in order to avoid disturbances. In practice, one of the most emphatic example of money's *getting out of order* and its economic and social consequences could be notice few decades later during German hyperinflation after the World War I. Nowadays, however, economists give money and monetary policy relatively more remarkable role than John Mill. They have in mind that money affects effectively the real variables of economy including fluctuations of economic growth (business cycles), shifts in employment level, or changes in the price levels (inflation and deflation). Therefore, appropriate and responsible monetary control and management has become an important way in achieving monetary policy

[67] Horvitz, *Monetary Policy and the Financial System,* p.8-9.
[68] Mill, John Stuart, *Principles of Political Economy,* Project Gutenberg EBooks, p.341, www.gutenberg.org/files/30107/30107-pdf.pdf, accessed on 11.05.2014.

objectives[69]. Still, the exact impact of monetary policy on country's economic performance remains as the topic for live debates and therefore cannot be specified precisely.

2.4.2. Monetary policy goals

Monetary policy would be naturally useless if it did not possess any ultimate goals or purpose. Money itself, as already mentioned earlier in the paper, is believed to have real influence on the economy as a whole. Therefore, the role of monetary policy is to avoid three fundamental economic harms which can be caused by inadequate money supply in the economy – unemployment, inflation, and lack of economic growth. Although these statement may seem easy, there are actually many issues which complicate identification and achievement of these objectives[70].

Full employment

The issue of unemployment level is often lively debated among the politicians and public opinion. In general, most people would probably agree with the statement that high number of individuals staying without a job generates losses to the national economy and is economically and socially undesirable. However, the problem with this matter is the question about the reasonable value of the unemployment rate. In the previous chapters it has been showed that some types of unemployment – such as structural of frictional – basically prevent the rate from declining to the 0% level. In fact, some unemployment types, for instance structural, may be acceptable from the economical point of view as it helps workers to adjust their skills to the demand side of the employers and subsequently bring more balance to the economy. In such case there is again a new question whether those levels should reach 1 %, 5% or perhaps more. Therefore, a clear and universal answer to the issue of appropriate unemployment rate goal remains unknown.

Price stability

Price stability, in turn, not only consists of similar doubts as the point of unemployment rate goal but may also bring some new inaccuracies and disputes. First of all, here appears the same question as before in regard to the *appropriate* changes in price levels. German experience with hyperinflation in the early 1920s showed the devastating havoc of the frequent and broad price fluctuations to the national economy. Few decades later, high inflation, often double digit, reached some advanced Western economies and created again troubles to the economic activities. On the other hand, the example of Japanese struggle with price changes close to 0% or even deflating in the 1990s wasn't really positive for the country's markets as well. Having that in mind, the issue of desirable price stability or eventual change of prices remains unknown as well. Furthermore, it is not fully obvious who can be actually hurt by inflation. For example, while random citizen can be affected by

[69] Goldfeld, *The Economics of money and banking,* p.16-18.
[70] Horvitz, *Monetary Policy and the Financial System,* p.337-338.

inflation in a form of gradually decreasing purchasing power, government, on the other hand, may gain at the same time when counting of its public debt will be also influenced by rise of general level of prices.

Economic growth

Economic growth, next to full employment and price stability objectives, is seen as an another important goal of monetary policy. Growth itself, however, is wished not because of its own regard but because its derivatives and possibilities that it gives to the economy and people. Continuous expansion of the economy can improve the general standard of living both of current as well as future generations. Growth of the economy bases on many factors including *inter alia* increased productivity, automation, broader knowledge about particular disciplines, increased population and etc. Still, one should have in mind that it is essential to measure economic growth in real terms, instead of not precisely stated terms like money. Therefore, one of the ways to measure it is Gross Domestic Product. Yet GDP measurement can also be very tricky and can provide incomprehension when it comes to presenting and comparing numerous data. In such case, different variations of the indicators are used by the economists in order to define and follow economic expansion, such as GDP per capita, GDP based on purchasing-power-parity per capita, GDP based on purchasing-power-parity share of world total, and others[71].

Others

Among already mentioned monetary policy goals it is also possible to distinguish other objectives of the policy. These may involve targets such as more righteous income distribution, natural resources conservation, whittling down the national debt, and others. The central bank of the United States, Federal Reserve, pays, for instance, particular attention to performance of financial markets within the country. The institution, through its actions, tries to prevent financial panics, promote a sound and transparent banking system or facilitate the trade of government securities. These operations are sometimes difficult to distinguish whether they should be classified as means to achieve main goals or should be treated as completely independent ones[72]. In the end, monetary policy goals can be dealt complementary, as their purpose is likely to regard economy's performance as a whole.

[71] Stiglitz, *Economics,* p. 489-498; IMF, *World Economic Outlook Database*, http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx, accessed on 14.05.2014.

[72] Horvitz, *Monetary Policy and the Financial System,* p.346; Goldfeld, *The Economics of money and banking,* p.482-485.

2.4.3. Actual lead of monetary policy

2.4.3.1. Monetary policy authorities

The term *monetary authority* refers to the institution, unit, or subject which is responsible for conducting monetary policy in a particular national or regional economy. Obligated to follow the individual monetary policy goals, this authority uses various tools and instruments which influence monetary aspects. In most countries, an entity which does that is a central bank, such as the Bank of Portugal, State Bank of Vietnam, Bank of Canada, or Czech National Bank. It may happen also, however, that similar function is run by other units like special monetary agencies, government institutions, or even some tasks fulfilled by commercial banks. In Singapore, for instance, monetary policy is conducted by Monetary Authority of Singapore, in Palestine – Monetary Authority of Palestine, whereas in Bhutan it is the Royal Monetary Authority[73]. Nevertheless, although differ with their names, those institutions possess eventually similar objectives in their status. Furthermore, a special case of monetary authority can also be identified with the European Central Bank. The ECB performs with special function of being a central bank to the 18 (in 2014) Eurozone member states and their national banks. As mentioned in the previous chapter devoted to the inflation issue, the Bank's primary goal is to maintain price stability and safeguard the euro currency's value. Central banks has precedent role in regard to commercial banks and therefore is often described as "bank of the banks". The consequences of such situation as well as monetary policy tools will be described in the following section.

2.4.3.2. Tools and instruments of monetary policy

Central banks (monetary authorities), after assessment of the economic environment, may use several instruments in order follow their goals and objectives. The main monetary policy tools are: reserve requirements, discount rate, and open market operations[74]. Still, there are also other appliances that can be used.

Reserve requirements

A reserve requirement ratio can be described as a minimum proportion of cash reserves comparing to deposits that commercial banks hold. Generally speaking, banks are obligated to possess at least the amount of cash that is required by central bank – they can hold naturally more but not less. It may indeed happen that their cash will fall below the required sum. In this case, they are forced in a given period of time to complement the missing amount. How exactly banks are going to do that depends usually on their computing of potential costs. Because commercial banks' main goal is to create profit, they would be looking for the cheapest way to conduct all the necessary operations. What is important in that

[73] Bank for International Settlements, Central bank and monetary authority websites, http://www.bis.org/cbanks.htm, accessed on 14.05.2014; OECD, *Monetary Authorities,* https://stats.oecd.org/glossary/detail.asp?ID=1675, accessed on 16.05.2014.

[74] Krugman, *Economics,* p.773-774.

case, however, is how the reserve requirements influence the money supply in the economy. With changing the reserve requirement ratio central bank, through commercial banks, may increase or decrease the money supply. Higher ratio means that banks will be obligated to possess higher amount of cash in their vaults and therefore their abilities to create new money through for instance credits and loans will decrease. On the other hand, with the lower ratio banks can hold less cash and therefore devote more sums for example on lending activities and creating new money supply in the economy[75]. Reserve requirements issue is a powerful instrument in hand of central banks, as even the small percentage change of the ratio may equals to big relatives sums of money that banks normally operate with.

Discount rate

Another tool of monetary control which is in possess of central bank is the discount rate, known also as base rate. The discount rate can be defined as the cost that commercial banks have to be aware of when it comes to borrowing money from central bank. The reason of why actually commercial banks would decide for such step can be somehow described on the example of required reserves issue. In a given banking system the amount of USD 5 billion is equal to 5% of required reserves. It means that banking system can create deposits on the sum of 20 times of reserves (USD 5 billion x 20 = USD 100 billion / 100%). At some point, however, the reserve requirements ratio increased to 10%. In such case, with the banking system of USD 100 billion, the system is obligated to hold at least USD 10 billion of cash, which states for 10% of total sum. The question here is where the money should therefore come from in order to meet the requirements. One way of solving the problem would be to borrow the rest of money from central bank. Here again comes the question of whether this step would be economically profitable for the commercial banks. For example, if the central bank's will is to reduce the general money supply in the economy the institution may be reluctant to serve as a lender for commercial banks. Subsequently, the discount rate can be set relatively high and it will probably discourage banks from taking loans. Instead, they would be looking for another solutions, for example by giving incentives to individuals for exchanging their cash to bank deposits, offering people higher interest rates from particular investments or by liquidation of banks' assets.[76] What's also relevant is the fact that economies function in the environment of changing prices, in rather inflationary surroundings. That creates additional problems since one should take into account while computing the nominal and real interest rates. The real interest rates are in fact more reliable since they are inflation adjusted, that means their performance comply changing prices factor. However, even though the exact trend of inflation remains usually unknown, the policy of interest rates is still presented in nominal values, especially with a short-time perspective when the inflation fluctuations should be relatively small[77]. Nevertheless, one while making potential statement whether interest rates are high or low in real terms should look at another factors, especially changing prices.

[75] Begg, *Economics,* p.391-392.
[76] Ibid., p.392; Horvitz, *Monetary Policy and the Financial System,* p.218-219.
[77] Goldfeld, *The Economics of money and banking,* p.514-515.

Open Market Operations

Central bank's ability to modify reserve requirements and the discount rate is a crucial part of the monetary policy management. The rapid development of the financial markets in the last few decades caused that monetary authorities must adjust their policy to the dynamic shifts on the markets quickly if they want to follow the monetary policy goals. Reserve requirements and the discount rate, however, are kind of tools that are used rather once in a while instead of permanent changing of their ratios. Monetary control needs preferably more frequent decision making process in order to catch up the every-day economic activities and monetary condition's fluctuations. Having that in mind, an open market operations tool is next to earlier mentioned monetary instruments a central bank's another way of conducting the monetary policy. Open market operations takes place when monetary authority, usually central bank, alters the money supply by selling or buying financial assets in the open market[78]. For example, at some point there is a slump of the economic activities on the markets and spectrum of recession becomes increasingly real. In this case, central bank which recognizes the worsening economic conditions decides to stipulate the economy through monetary policy, namely by open market operations. Governors of the bank choose to inject additional amount of 100 billion JPY in newly printed money by purchasing financial assets, like government securities, on the open markets. In a result, although there are fewer government securities on the markets (equal to the value of 100 billion JPY), the money supply has increased with the same amount. Various parts of this injected sum will be held in a different way. One share may go directly into circulation while other part might be deposited within the banking system, which in turn can subsequently begin expansion on the credit markets or make new investments. Although this example is a very general picture of open market operations, it shows somehow the main meaning of this particular monetary policy instrument.

There are two basic types of open market operations: outright purchases and sales, and purchases and sales under repurchase agreements. The first category means that transactions between both sides are final, neither buyer or seller is obligated to re-buy or re-sell the asset. Purchases and sales under repurchase agreements, as the name suggest, refer to transactions where participants agree to repeat (reverse) the same transaction at some point. This type of deals can be useful in a moments when there's a temporary need of increased money supply, for example during time before Christmas when currency is taken in increased amounts from banks. Furthermore, there might be several effects of the central banks' open market operations on the economy. Firstly, it's already said in the example the impact of money injection and its total amount in the economy. It is one of the most significant issue, since even the change of one money unit in depository institutions reserves can be equal to change of few more units in total money supply and potential further credit possibilities. Secondly, open market operations can also create particular expectation regarding the future economic policy and environment. For example, purchasing of the large amounts of government securities by central bank can make a belief among market participants that although easy monetary policy is currently dominant, yet in the future it may lead to increased inflation

[78] Horvitz, *Monetary Policy and the Financial System,* p.226-227.

pressures and therefore higher interest rates. In such situation, demand for securities can even decrease, money injection won't be successful, and stimulation of the economy by central bank will eventually fail. Finally, the open market operations, as in every free- market economy, base on demand – supply forces which form the price of particular goods. Private investors, by trading with central banks, will still be looking for potential profit from those transactions. For instance, price of government securities assets can also influence other assets which in turn affects broader part of economy[79]. Nevertheless, the actual effect of open market operations depends on many factors. Therefore, it is difficult to predict exactly a final result of such complex and broad economic activities.

Others

The three mentioned monetary policy tools of reserve requirements, discount rate and open market operations can be considered as one of the most important monetary instruments. Yet one should remember that there are in fact also other ways for monetary authorities to control and influence money supply in the economy. Firstly, central banks, because of their "bank of the banks" function are simultaneously a lender of last resort. The lender of last resort refers to readiness of monetary authorities to support financially commercial banks and other institutions if financial panic threatens the economy[80]. In practice, using that function can be noticed relatively rarely. However, one of the most meaningful support coming from central monetary authority took place during the last global recession. Because of the growing phantom of total financial cataclysm in the US economy, Federal Reserve decided to assist some financial institutions, for instance American International Group (AIG), Fannie Mae, or Freddie Mac, with money supply and other ways in order to diminish their probability of going bankrupt[81].

Furthermore, there is another aspect which sometimes is seen as central bank's possibility. Although often difficult to identify, sometimes monetary or government authority can give to public a suggestion what kind of policy they would like others to provide. In fact, the effects of such steps are usually very difficult to assess. On one hand, there is no legal obligation for commercial institutions to follow that suggestions. On the other, these statements have some weight and can be meaningful for market participants[82]. An example of such case, although its only a hypothesis, could be frequent reference of former US president George W. Bush in his statements to the "American Dream" term. In American culture it refers actually to many values and ideals yet Bush's understanding of "American Dream" was to be a holder of own and private house which every American family was supposed to deserve. Having that in mind, it was perhaps a way to influence the commercial banks and other financial institutions to expand their credit abilities and provide more mortgage loans on the markets. Still, identification and measure of such tools is extremely hard to understand, since many of those actions are not presented to public opinion at all.

[79] Goldfeld, *The Economics of money and banking,* p.299-300.
[80] Begg, *Economics,* p.393-394.
[81] Federal Reserve, *Actions Related to AIG, http://www.newyorkfed.org/aboutthefed/aig/,* accessed on 19.05.2014.
[82] Horvitz, *Monetary Policy and the Financial System,* p.243-244.

2.5. Globalization and macroeconomic performance

The issues of inflation, economic growth, unemployment or international trade that are primary concern of macroeconomics are very often controversial and questionable matters. The reason of that is because economics itself, as a social science which examines the behavior of numerous economic participants such as individuals, collectives and institutions in regard to their use of scare resources, creates an impact on billions of people around the world. Furthermore, economics, its phenomenon and influence seems to have no borders or limitations at the beginning of 21st century. These days the mutual interconnections between various economic partakers present on the globe are strong and tight as never before. The technological advance and overall development of most of the countries results in creating even more dense links between global market's participants and their decisions. In a consequence, the occurrence of those mutual interconnections and arising integration among countries creates an enormous impact on their national structure and performance basically on every field. Economic issue is naturally not an exception in this case. Therefore, in this chapter I will focus on the matter of globalization and its picture in regard to the countries and their economies. Globalization itself, as later showed, has definitely a tremendous impact on the macroeconomic performance of individual states. In order to possess a full understanding and sense of the topic, globalization has to be included while examining this dissertation.

Definition of the globalization

The term *globalization* has no one, fixed and universal definition or description. While studying the issue, one will find a great number of general on one hand, and more detailed on the other, specifications of globalization. Therefore, it can be portrayed with the following words:

"*The term globalization is generally accepted to refer to the process of steadily increasing interdependence of national economies via trade, production and financial market linkages*".[83]

"The process by which businesses or other organizations develop international influence or start operating on an international scale".[84]

"*Globalisation describes a process by which national and regional economies, societies, and cultures have become integrated through the global network of trade, communication, immigration and transportation"*.[85]

[83] Anderton, Robert and Geoff Kenny, ed., *Macroeconomic Performance in a Globalising Economy*, New York: Cambridge University Press, 2011, p.1.

[84] Oxford Dictionaries, *Globalization, http://www.oxforddictionaries.com/definition/english/globalization,* accessed on 4.4.2014.

[85] Financial Times Lexicon, *Globalization*, http://lexicon.ft.com/term?term=globalisation, accessed on 4.4.2014.

Having in mind those short phrases it is possible to conclude that globalization is a process of connection and integration of various countries or regions especially on the broadly defined field of economics. Due to the connections, those circumstances lead to increased interdependence between the actors. However, although economic linkages are an important share of globalization phenomenon, there are also other aspects of the globalization's effect. United Nations Educational Social and Culture Organization (UNESCO) presents a broader picture of the issue, saying that despite economic factors:

"*Globalisation is a multi-dimensional process characterized by:*

- *technological innovation and organizational change centered on flexibilisation and adaptability;*
- *the expansion of a specific form of social organization based on information as the main source of productivity and power;*
- *the reduction of the welfare state, privatization of social services, flexibilisation of labor relations and weaker trade unions;*
- *de facto transfer to trans-national organizations of the control of national economic policy instruments, such as monetary policy, interest rates and fiscal policy;*
- *the dissemination of common cultural values, but also the re-emergence of nationalism, cultural conflict and social movements."* [86]

As one can see, globalization can make an impact on practically every aspect of country's performance and functioning. It may influence both the ordinary citizen of the individual state as well as the whole countries or even international institution. Yet the consequences of the globalization are still not clearly defined. Moreover, the subjectivity in this case seems to play a huge role as the particular impact for some can have exclusively positive outcomes, while for the others the same example can be simply unacceptable. Nevertheless, globalization shapes current world in many aspects, including also the field of economics.

Globalization and economies

Because of the lack of an unequivocal definition of globalization it is actually difficult to create a clear time-framework for it. If we assume that globalization is a situation of an economic exchange between countries, civilizations or different cultures in a form of simple trade, we can probably say that it has been taking place already for hundreds of years. Another option for the analysis of since when globalization takes place is perhaps to apply the geographical range to those actions. Then we could adopt the requirement that in order to speak about economic globalization, the economic exchange has to take place between i.e. at least three different continents such as Europe, North America and Asia. Lastly, a reasonable approach would be perhaps also to ask how intensive and often should be those economic relations. Does the trade of goods as it was present in the 18th and 19th century or before

[86] UNESCO, *Globalization*, http://www.unesco.org/new/en/social-and-human-sciences/themes/international migration/glossary/globalisation/, accessed on 4.4.2014.

between already well-expanded part of the globe makes it rational to speak about globalization? Or perhaps the trade in that form was still too rare?

Regardless of the exact time and the origins, it is rather safe and careful to say that economic globalization may be considered as a historical progress, being a consequence of human innovation and technological advance. It can be applied to the strengthening integration of markets around the world. In fact, it refers not only to the movement of goods and services through borders, but also to the transfer of capital including knowledge and science (technology) as well as people (labor force). Having that in mind, some argue to look for the origins of the globalization not until the beginning of 20th century or even in its second half, after the World War II[87]. Although it was the end of the global conflict in 1945 that began to shape the mutual connections between the countries as they are today, the real acceleration and more common use of the term *economic globalization* appeared already in the 1980s. There were two fundamental factors that played particular role in that process. First of all, it was the already mentioned technological progress that has serenely diminished the costs of transactions, communication or transportation. At some point it became rational from the economic point of view for the firms to be involved with their production in other, even geographically distant countries. The other factor refers to the increasing liberalization of capital and trade that has been taking place since the end of World War II. Although with different pace in various parts of the globe, there has been general trend for the states to end up with protecting their markets from the foreign competitors. The tools of import barriers or export restrains have been gradually canceled which resulted in the occurrence of more numerous open-market economies. During the following decades since 1945 a special role has been assigned to the frequent international institutions that were established at different points. International Monetary Fund, The World Bank or the World Trade Organization – these are the main actors who promote free trade and move of capital instead of market protectionism. The promotion of efficiency and maximum productivity through competition and division of labor was an inseparable part of economic growth in global markets. Thereby, economies had an opportunity to involve potential work force into more diversified and bigger markets in the world. Consequently, global economy experienced *inter alia* larger flow of capital and advanced technologies, cheaper import and larger export possibilities[88].

It was precisely the issue of international trade which served as a core element of globalization. Import, on the one hand, gives a consumer a choice of broader diversity of goods and services, often at lower prices. This in turn should be a powerful incentive for domestic manufacturers and producers to lower their prices so they can remain competitive in domestic markets. Exports, on the other hand, frequently can become a source of economic growth and progress for numerous developing states. It leads in example to creation of more new jobs as the companies that are operating in the host countries have additional potential consumers of their products even abroad. Assuming that globalization is densely connected with economic openness, the empirical research of many East Asian countries such as People's Republic of China, Republic of Korea or Singapore seems to be a reliable proof that

[87] Anderton, *Macroeconomic Performance in a Globalising Economy*, p.1-13; IMF, *Globalization*, http://www.imf.org/external/np/exr/ib/2008/053008.htm, accessed on 4.4.2013.

[88] Soubbotina, Tatyana P., Katherine A. Sheram, , *Beyond Economic Growth,* Washington: World Bank 2000, p.66-72, http://www.worldbank.org/depweb/beyond/beyondco/beg_all.pdf, accessed on 5.4.2014.

mutual economic integration and increased linkages can greatly boost economic growth. Yet not every developing country is equally involved in globalization process or profiting from it. In contrast to relatively successful region of East Asia, there also states in other parts of the globe which do not gain from international trade as their counterparts in Asia. For instance, the vast areas in Africa and Latin America with their developing countries have been comparatively slow with the integration with the global markets. Moreover, for some states that are actively involved in the globalization process there is still a number of challenges and risks that they have to face with. This issue may include the need for appropriate balance of globalization's costs and gains for the domestic economy. Perhaps not everyone will be satisfied to have additional competitors from abroad who try to gain the piece of local market in a particular country. The profits from the international trade and globalization in general can also be limited to the small group within the state and therefore result with potential social dissatisfaction. Furthermore, some sectors of the domestic economy one can see as with particular meaning for the national interest, such as energy or infrastructure sector. In this case government will force the limitations for excessive participation of additional actors[89]. The overall costs and profits of international trade also often depend on various factors like the size of a particular country and its market, the size of natural resources or the geographical location.

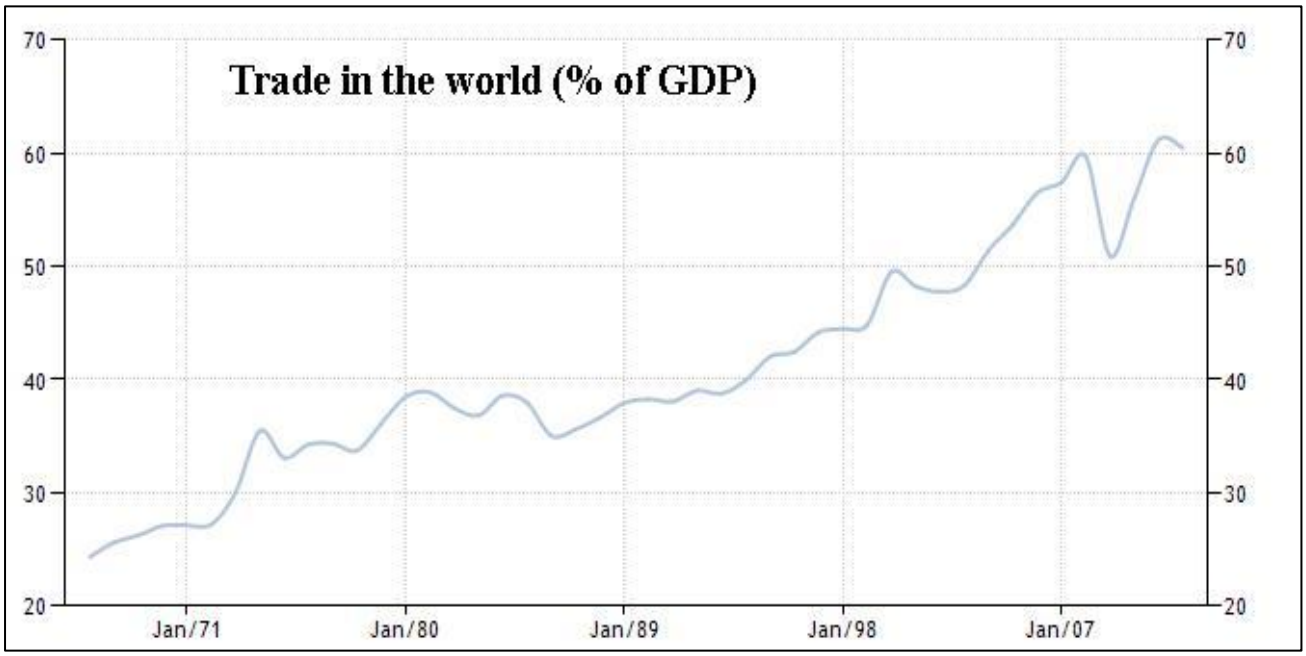


Figure 4. Trade (% of GDP) in World. ***Note:*** **Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product. Source: Trading Economics, http://www.tradingeconomics.com/world/trade-percent-of-gdp-wb-data.html, accessed on 5.4.2014.**

Figure 4. presents the share of trade in the world's GDP between 1967 and 2013. By reading the graph one can conclude that trade has been experiencing during that time gradual yet sustainable and generally impressive increase of its share in world's Gross Domestic Product, only with a major temporary slump between 2008-2009. The transfer of goods and services is therefore getting increasingly bigger role in the performance and growth of global

[89] Ibid., accessed on 5.4.2014.

economy. This, in regard to the performance of individual states on macroeconomic level, forces governments to take into account the potential outcomes of their decisions on both domestic and international level. With such many and intense mutual economic connections between different regions, especially in a form of trade, each step taken by the governments is may have immediate consequences not only for the national markets but also for the markets abroad.

East Asia

The term East Asia refers to the sub-region of the Asian continent and its geographical position on the globe's eastern hemisphere. In the geographical meaning, East Asia covers around 12,000,000 (million) km^2 which states for about 27% of the total area of Asia (44 million km^2) and around 17% of Earth's total land area (148 million km^2). Geopolitically and culturally, however, East Asia can be a subject of numerous classifications which in each case may lead to serious differences while designating the exact borders of the region. Some statistics include exclusively geographical factors while other take into account also other elements such as economic potential, political preferences or historic aspects. This, in turn, results in presenting unlike data regarding for example aggregate population, used area or total GDP output.

	International Monetary Fund	**United Nations**	**CIA World Factbook**
Countries	Used term of Developing Asia, including 29 states of East-, and Southeast Asia + Oceania[90]	Japan, Republic of Korea, DPR Korea, Mongolia, China (including Hong Kong and Macau)	Geographically covers East-, and Southeast Asia[91]
Population (million, 2013)	3,329	1,541	2,166
Area	~ 20,000,000 km^2	~ 12,000,000 km^2	~ 16,500,000 km^2
Nominal GDP (current $, billion) 2013	13.093	15.300 (excl. DPR Korea)	17.000

Table 5. East Asia classification. Data source: International Monetary Fund, United Nations, CIA World Factbook

[90] Composed of 29 countries: Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Indonesia, Kiribati, Lao P.D.R., Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nepal, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, and Vietnam (IMF).

[91] Composed of 21 countries: Brunei, Burma, Cambodia, China, Hong Kong, Indonesia, Japan, Korea (North), Korea (South), Laos, Macau, Malaysia, Mongolia, Paracel Islands, Philippines, Singapore, Spratly Islands, Taiwan, Thailand, Timor-Leste, Vietnam.

Table 5. presents selected indicators for the East Asia region according to the classification of the International Monetary Fund, United Nations and Central Intelligence Agency (CIA) World Factbook. In each case the grouping of East Asian states vary significantly which automatically affects the values of given indicators. For example, IMF in its grouping of the countries bases primarily on their economic potential and size. Therefore, the geographical meaning of East Asian region has been replaced with term *Developing Asia*, in regard to 29 states which in 2013 were considered to be developing states (measured by multiple factors including income per capita, gross domestic product, the rate of literacy, life expectancy, etc.). With this way of computing, in the group one will not find such countries like Japan or Republic of Korea who have been assigned to the advanced economies. United Nations, on the other hand, in its geographical composition divided the Asian continent on five sub-regions: Central, Eastern, Southern, Southeastern and Western areas. In a result, the group of East Asian countries consists of 5 states, comparing to IMF's 29. Lastly, the classification provided by the CIA seems to be a combination of the two previous. The grouping of the countries in the region actually merge two geographical regions of East and Southeast Asia into one with the total number of 21 states. It is relatively similar to the version presented by the IMF. Nevertheless, slight differences in the number of countries can be observed. For example, comparing to the IMF, CIA in its World Factbook does not define India, Sri Lanka or Oceania states as the countries belong to East and Southeast Asia. On the other hand, in CIA's grouping appear inter alia Japan, Republic of Korea and Democratic People's Republic of Korea. This, as already said, leads to differences while presenting selected indexes. For instance, in accordance with International Monetary Fund region's nominal GDP for 2013 was approximately 13.1 trillion USD. At the same time, strictly geographical grouping of the United Nations results in over 15 trillion USD of nominal GDP. An important aspect in this comparison is the fact that although IMF's sorting gives the total number of 29 countries and CIA only 5, the CIA includes high-income economies of Japan and South Korea which are missing in IMF classification.

Similar divergences can be observed while analyzing other indicators like total population of the region. In that case, variances are even higher as some of the high-populated countries are present in one classification and missing in another. For instance, 29 countries of IMF's Developing Asia group represent over 3,3 billion people what is around 45 percent of world's total population (7,2 billion in 2014 [92]). Simultaneously, United Nations geographical perception of East Asia suggest that the five countries which illustrate the region are inhabited by circa 1,5 billion people, or in other words, 20 percent of world's population. Eventually, according to the classification of CIA the region of East and Southeast Asia is a home for over 2,1 billion individuals and that is nearly 30 percent of the total number of people in the world.

Summarizing, as it has been showed, the differences coming from various classifications are notable. The exact definition and borders of East Asia are in many cases contractual and relatively flexible. Despite the definition of the region in a geographical sense, grouping of East Asian states may take many forms due to i.e. economic and political factors.

[92] World Meters, *Current World Population,* http://www.worldometers.info/world-population/#countries, accessed on 6.04.2014.

2.6. Global Financial Crisis

Origins of the Financial Crisis

In the period of last 100 years after the end of World War I the world has experienced a great number of economic slumps and shakes on various levels. In fact, those economic turbulences often came from different and indeed very diversified circumstances. Some of these impacts were created by numerous political factors, for example 1973 oil crisis, while other appeared clearly because of pure economic imbalances and interferences, such as the Great Depression and its recognizable Black Thursday on the New York Stock Exchange (NYSE) in 1929 and *Dot.com* Internet bubble in 2001. Nevertheless, despite the Great Depression of 1930s, each of those downturns moved to an end relatively quickly and many parts of the world, although with different pace, were able to experience the overall economic growth in a long-term. Even the worrisome events in Russia or Southeast Asia which took place in the first decade after the collapse of the Soviet Union eventually did not become a serious threat to the global economy's advance. Furthermore, one of the most impressive progress after the end of World War II was noticed in the countries that actually were defeated in the last conflict. In Europe West Germany became one of the main beneficent of the US support in a form of the Marshall Plan, whereas in Japan American government was represented by the Supreme Commander of the Allied Powers (SCAP). In the following decades after 1945 both West Germany and Japan experienced a time of unprecedented economic growth which is today known as the economic miracle. At the beginning of 21st century there was indeed no more sign of such impressive growth among advanced economies yet gradual expansion was possible to see till 2008. The crisis of 2008-2009 was definitely not the only economic turbulence since the Industrial Revolution in the 19th century but among many others it was one of the most severe and critical in many ways. Economic system as it is known today began to shape approximately around 1920s on the ashes of World War I. The international economic structure was subsequently in some way established on the Bretton Woods conference which took place in July 1944. The declarations and proposals which were founded at that time among 44 participated nations determined the international economic environment for many years. As a result of intense talks, common agreement regarding institutions and rules was set in order to monitor the international monetary framework. Participants of the conference set up *inter alia* the International Monetary Fund and the International Bank of Reconstruction and Development (IBRD). Although the Bretton Woods order eventually fell in 1971, its initial design and framework was not lost completely as some of the organizations created in 1944 such as IMF have been working even after 1971 till today[93].

In 2014, almost six years after the collapse of the Lehman Brother's investment bank in September 2008 there is still much unknown about the individual aspects of the last global recession. Actually, on the example of the Great Depression from the 1930s one could say it may even take few decades to understand the real and factual origins of the crisis. In the last

[93] Higgot, Richard. „The Theory and Practice of Global Economic in the Early Twenty- First Century." In *The Consequences of the Global Financial Crisis*, authorr: Wyn Grant, Graham K. Wilson, ed., p.15-29. Oxford: Oxford University Press, 2012.

few years, however, the knowledge regarding the issue has been gradually but steadily increasing. Because of the importance and relevance of the topic, not only for the field of economics but also for other sciences, is huge, numerous scholars devote their time to study the background of the Global Financial Crisis. Although with no precise date, the crisis is believed to begin at the turn of 2007 and 2008 in the United States. From the first quarter of 2008 the economy of the US had begun to experience contraction in the GDP and slump of economic activity in the following months which was subsequently classified as a recession in the business cycle. The damage caused by the crisis only in the United States was considerable. Yet economic downturn did not stop within the borders of the world's biggest economy but moved across the oceans to different parts of the globe including Europe and Asia and hit their markets with different degree. The issue of modern economic connections and mutual interdependences between the individual sectors within the state as well as between the whole countries was one of the main reason of relatively rapid move of the *virus*. In the era of global markets and mass media, Internet connection and large flow of capital economic disruptions were able to transfer among market participants quickly as never before in the history. In a result, in a relatively short period of time the crisis made an impact on nearly whole globe. At this point, despite from the details, many agree that one of the main and perhaps most important origins of the Global Financial Crisis was the imbalances in the US financial system, especially in regard to the real estate sector[94]. However, the mortgage problems were not an independent, self-created issue but they were initiated by the numerous incentives and distortions that took place together with the previous policy actions. Taking a closer look at the problem, one can designate three main economic causes present in the preceding years that led to the 2008-2009 events: low interest rates, increased risk toleration,

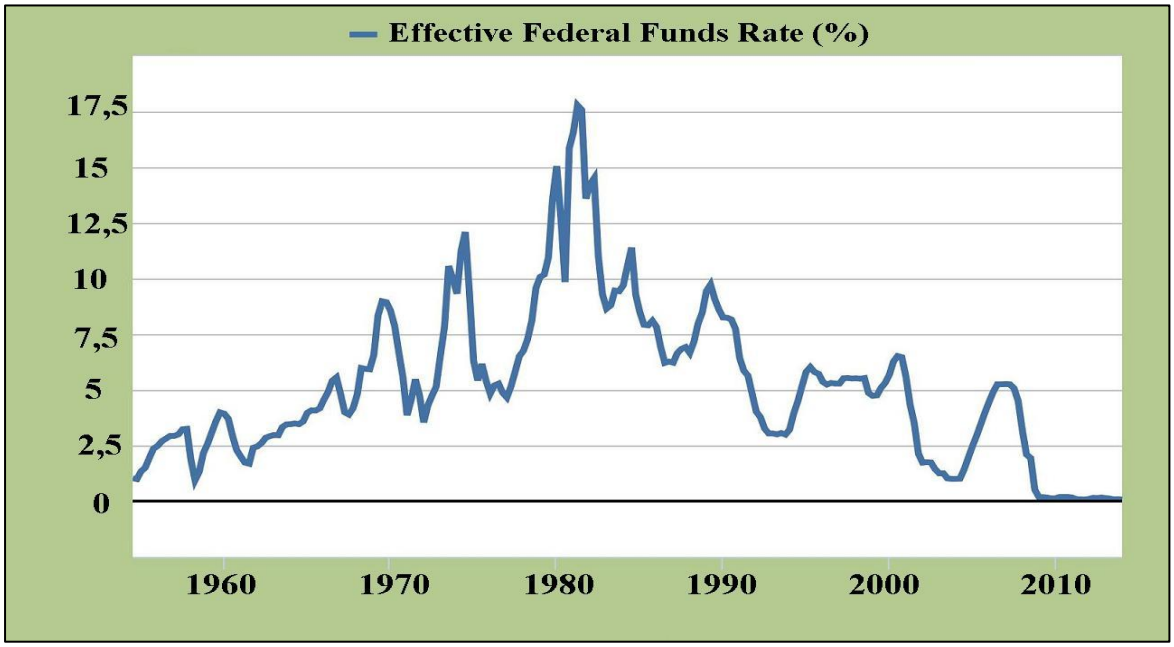


Figure 5. Effective Federal Funds Rate. Historical Data. Source: Federal Reserve Bank of St. Louis. http://research.stlouisfed.org/fred2/series/FEDFUNDS#, accessed on 20.04.2014.

[94] Blundel- Wingall, Adrian, et al., *The Current Financial Crisis: Causes and Policy Issues,* Financial Market Trends, OECD 2008, www.oecd.org/finance/financial-markets/41942872.pdf, accessed on 20.04.2014; Gup, Benton E., *The Financial and Economic Crises. An International Perspective*, Cheltenham: Edward Elgar, 2010, *Preface*.

and inappropriate addressing business cycle policy.

In the last few decades before the crisis global markets were experiencing rather high level of macroeconomic stability. In the 1980s many countries of Western Europe and the US entered the path of relatively stable economic growth. While in the 1970s there had been great concern regarding the high inflation and increased unemployment, the economic environment in the following decade began to improve. At the same time the fluctuations of business cycles were visibly reduced in the mid 1980s, especially in regard to the inflation rate and unemployment levels. This period of economic stability was therefore described as a Great Moderation. Nevertheless, the matter of low interest rates had its origins in number of factors. Having in mind the circumstances of the 1970s and the consequences of oil crises many central banks decided to pay special attention to the inflation targeting issue. Moreover, singular economic and political events such as the Asian Financial Crisis 1997-1998, attacks on the World Trade Center from September 2001 or the Russian crisis in 1998 also induced US Federal Reserve to stimulate the economy by manipulating the interest rates[95]. The tool of interest rates became successful in lowering future inflation expectations what subsequently resulted in a decreasing trend in changes of the interest rates[96]. Figure 5. presents base interest rate in the US between 1954 and 2013. The rate after reaching the maximum level of ca. 19% in 1981 was afterwards declining to the altitude below 2,5% after 2000.

The interest rates question is closely connected with another issue which can be considered as one of the main causes of the 2008 crisis, namely – higher risk acceptance. Because of the low interest rates, the borrowing costs for commercial banks and other institutions fell significantly. Yet at the same time the returns from treasury bonds were also clearly smaller than before. In this case, banks began to seek for another investments that would create a profit bigger than the potential one from the government bonds. On the other hand, low interest rates put the investors with risk adverse in a inconvenient situation. The hitherto investments in government papers and securities

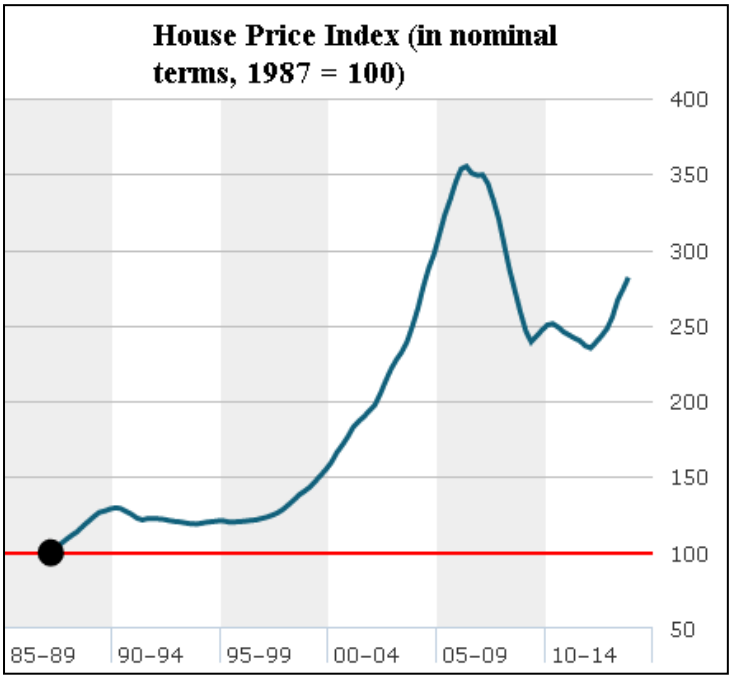


Figure 6. House Price Index in the USA. Source: The Economist. http://www.economist.com/blogs/graphicdetail/2014/02/us-house-prices, accessed on 21.04.2014.

[95] Labonte, Marc, Makinen, Gail E., *Federal Reserve Interest Rate Changes: 2001-2008. Report for Congress 29 October 2008,* Congressional Research Service, p.2, fpc.state.gov/documents/organization/112465.pdf, accessed on 20.04.2014.

[96] International Organization of Supreme Audit Institutions, *The Causes of the Global Financial Crisis and Their Implications for Supreme Audit Institutions,* Stockholm, October 2010, p.17-18, www.intosai.org/.../gaohq4709242v1finalsubgroup1paper.pdf, accessed on 20.04.2014.

stopped to be economically attractive for them as well. Similarly to the banks, many individuals started looking for new type of capital expenditure, often accepting higher than usual level of risk. In this circumstances markets began to pay special attention to the real estate sector[97]. At this point it is important to mention several factors that stood behind that process and why that actually happened.

First of all, it was the huge demand for housing and the perception of comparatively low risk investment that played a crucial role. People tended to believe that the mortgage prices can nothing but increase. This way of thinking, however, should not be totally baseless. Figure 6. presents the US house price index between 1987 and 2013. The graph shows that till approximately 1996 the prices raised only slightly yet beginning with 1997-1998 they were truly skyrocketing until 2006 with the values more than tripled comparing to 1980s. The figure presented here describe only the price alteration in nominal terms yet many people often did not take into consideration the effects of inflation and therefore also calculated their every-day economic activities basing only in nominal terms. Still, such long time of growths may be completely enough to ensure one whole generation within the country that mortgage prices will continue to rise despite from the macroeconomic environment. In this case, with the prices rising the initial mortgage will be lower than the actual cost of the real estate what would eventually create a profit for the owner. Moreover, with the household income also growing people are able to afford higher mortgages which in turn enhances the demand for additional housing supply, changing it gradually to asset bubble. Asset bubbles can be described as a self- strengthening process when price rises push another rises. Yet at some level those prices begin to displace out of path of any economic fundamentals what eventually leads to the burst of the bubble.

The shift in composition of mortgage lending was another factor that contributed to the housing bubble. In general, this refers to the erosion of lending standards defined by the banks and other institutions which yielded loans for individuals. Looking for a good investment coming from the housing sector, institutions began to decrease the credit requirements for potential customers so increasingly more people were able to get the mortgage. The problem with this process was that the credits were going not only to the prime borrowers but also to the subprime individuals[98]. Subprime borrowers had often poor credit history and no fixed income which would allow them to repay the loan. In a consequence, the banks had more and more unpaid mortgages (later called as toxic assets) on their accounts what gradually caused freezing the credit markets, growing suspicion among market participants and problems with liquidity[99]. Finally, the inappropriate economic policy of the US central bank contributed significantly to the creation of the Financial Crisis. Federal Reserve took the decision of not responding aggressively to the sharp increase in credit and asset prices. The reason of doing so bases on the notion that at the time of most dynamic price

[97] Ibid., p.18-19.

[98] Note: The terms *prime* and *subprime* borrower refer to the individuals with defined credit taking ability, such as credit history or particular level of income. The exact definition of prime and subprime borrower varied, depending from the institution that provided a credit.

[99] Baily, Martin Neil, et al., *The Origins of the Financial Crisis. Fixing Finance Series Paper 3. November 2008,* Brookings Institution, p.11-13, http://www.brookings.edu/research/papers/2008/11/origins-crisis-baily-litan,
accessed on 21.04.2014

changes (2000-2006) the bank's representatives probably could not identify those shifts as an asset price bubble. Their perception of economic boom was therefore different from the actual condition of the national economy and its place on the business cycle variable[100].

In the end, although these are the main factors that stood behind the origins of the Global Financial Crisis, the topic itself is definitely more broad and complex. As previously mentioned, there is still much unknown in regard to the individual aspects of the last recession but even with the knowledge we possess today there would be surely enough material to cover few books.

Progress, spillover and consequences of the crisis

A key to understand the progress of the crisis is in the broadly defined globalization issue and mutual economic interdependences that are present nowadays between numerous countries. The recession, initiated in the real estate sector of the US economy, relatively quickly affected not only state's market as a whole but was also able to create with some degree damage to nearly every part of the globe. Regarding the internal turbulences within the United States the problem was mainly in the complexity of the financial system and its involvement in the housing market. Because of the high losses that many banks, including one of the biggest financial institutions in the country, experienced on the subprime mortgages and related matters, the mortgage troubles began to influence general condition of the US economy. However, the problem was that not only American banks were involved in the housing issues and doubtful practices of mortgage lending. Financial institutions in other regions especially in Western Europe were also involved in housing credits similar to their counterparts in the United States. Therefore, together with incoming negative information from the US markets European banks also began to experience initially slight yet gradually rising economic shocks. After some time many realized that the losses on the toxic assets that banks possessed were actually much bigger than anyone thought at the beginning. In the following months basically each new report informed about newly appearing losses which had not been taken into account in the previous evaluations.

[100] International Organization of Supreme Audit Institutions, The causes of the Global Financial Crisis and Their Implications for the Supreme Audit Institutions, p.17-18.

Biggest losses due to subprime mortgages (in billions USD, for 18 May 2008)				
Institution	Country	Writedown[101]	Credit loss	Total
Citigroup	United States	37.3	5.6	42.9
UBS	Switzerland	38.2	na	38.2
Merrill Lynch	United States	37	na	37
HSBC	UK	6.9	12.6	19.5
IKB Deutsche	Germany	16	na	16
Royal Bank of Scotland	Scotland	15.2	na	15.2
Bank of America	United States	9.2.	5.7	14.9
Morgan Stanley	United States	12.6	na	12.6
JPMorgan Chase	United States	5.5.	4.2	9.7
Credit Suisse	Switzerland	9.5	na	9.5
Washington Mutual	United States	1.1	8	9.1
Credit Agricole	France	8.3	na	8.3
Deutsche Bank	Germany	7.7	na	7.7
Wachovia	United States	4.6	2.4	7
HBOS	UK	6.9	na	6.9

Table 6. Losses due to subprime mortgages (for 19 May 2008). Note: na – not available. Source: Bloomberg, http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aK4Z6C2kXs3A&refer=home, accessed on 27.04.2014.

Tables 6. and 7. present fifteen institutions that recorded biggest losses and writedowns due to subprime credits in the two different periods. Table 6. shows the information for 18 May 2008, that means four months before the collapse of the Lehman Brothers in September the same year. Looking at the data one will see that many of the institutions that were involved in the mortgage and related issues and therefore experienced declines in their financial statements were based actually in the advanced Western economies, *inter alia* in the United States, Switzerland, United Kingdom, Germany and France. Looking now from the perspective of time, May 2008 was just a beginning of downfalls that many markets were about to experience in the near future yet the losses were already quite significant. Few months later, however, the costs of subprime mortgage practices for most companies continued to rise (table 7.). In August 2008 the same ranking has changed only slightly when it comes to list of the institutions but the values of total writedowns and losses are clearly higher than before.

[101] Writedown is defined as reducing the value of the asset in the company's financial statement because of its overvaluation comparing to the actual market value. Unlike the actual losses, writedowns do not mean the final wanes, yet the probability of asset's price declines is extremely high. Source: Business Dictionary, http://www.businessdictionary.com/definition/write-down.html, accessed on 27.04.2014.

Biggest losses due to subprime mortgages (in billions USD, for 12 August 2008)		
Institution	Country	Total writedowns & losses
Citigroup	United States	55.1
Merrill Lynch	United States	51.8
UBS	Switzerland	44.2
HSBC	UK	27.4
Wachovia	United States	22.5
Bank of America	United States	21.2
IKB Deutsche	Germany	15.3
Royal Bank of Scotland	Scotland	14.9
Washington Mutual	United States	14.8
Morgan Stanley	United States	14.4
JPMorgan Chase	United States	14.3
Deutsche Bank	Germany	10.8
Credit Suisse	Switzerland	10.5
Wells Fargo	United States	10
Barclays	UK	9.1

Table 7. Losses due to subprime mortgages (for 12 August 2008). Source: Bloomberg, http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a8sW0n1Cs1tY&refer=home#share, accessed on 27.04.2014.

Presented data in tables 6. and 7. give a brief picture of the banking situation only in 2008 but now it is known that the crisis lasted, depending from the classification and source, at least one more year. Regardless from the time framework, the next months were not much different than presented period. The panic that invaded markets at that time led to perhaps most meaningful event of the whole recession – already mentioned collapse of the Lehman Brothers investment bank on the 15th of September 2008. Lehman was one of the leading financial institutions in the United States, involved in investment banking and management. It's collapse was an important moment from the economic point of view, as it was the biggest bankruptcy in the United States history. Yet perhaps even more painful part for many market participants was the psychological factor that came out from this situation. The thought that even Lehman Brothers which was one of the largest financial institution in the country was allowed by the US government to go bankrupt gave public opinion clear message that there might be no company considered to be "too big to fail"[102]. On the other hand, US federal banking leadership did act in many cases in order to prevent substantial companies from bankruptcy, dealing with the cases of *inter alia* Bank of America, Merrill Lynch, Fannie Mae, Freddie Mac or AIG[103].

Nevertheless, financial channel was one of the main ways for the crisis to spread across the globe. Although the biggest financial grieves about the recession could be noticed

[102] The "too big to fail" term refers to the theory which says that some institutions, usually from the financial sector, are so crucial, mutually connected and therefore relevant that their potential failure would lead to fatal results for the whole economy. Consequently, there is a high chance that governments will try to support them if necessary regardless from the costs. Term popularized in 1984 by the U.S. Congressman Stewart McKinney. Source: Wikipedia, http://en.wikipedia.org/wiki/Too_big_to_fail, accessed on 27.04.2014.

[103] Gup, Benton E., *The Financial and Economic Crises. An International Perspective*, Cheltenham: Edward Elgar, 2010, p.15-19.

in North America and Europe, there were also other parts in the world which could feel the transmission effects within their economies, including also the region of Asia. In the modern, globalized world where economies are connected through various linkages, it would be rather difficult to be completely invulnerable to economic shocks. Last crisis showed in some way that the potential virus of recession or at least stagnation in economic activity is very likely to find its own way to transfer among different market participants. The region of East Asia is in this case a good example of such situation. Till recently, the financial sector of Asia has been relatively flexible and resilient in regard to sub-prime issues and their derivatives which in turn Western economies had to deal with. The reason of that is because financial institutions in the region of East Asia were practically not involved in the mortgage practices comparing to their western counterparts. Nevertheless, it does not mean that Asia's developing countries and high-income economies were completely safe from the prospect of crisis. As previously mentioned, with the world's financial structure strongly intertwined there is a high chance that any financial distress in advanced economies of Europe and North America will most likely create an effects on the rest of the globe. In the last decades Asian countries have taken steps to liberalize their financial markets and open domestic economies. While in the time of economic growth and prosperity it had created benefits for the local markets, later it also became a worrisome matter. The openness of economy stood not only for increased economic activity with other participants on world's markets but for higher vulnerability to external shocks and turbulences as well. That became especially visible during the Global Crisis when some of the region's financial hubs such as Singapore or Hong Kong experienced significant drops in their outputs. Comparatively, countries with less dependence on and connection with international financial assets noted slighter disruption of the growth's trend. Still, the overall impact of the financial factor on the region's economies was clearly smaller than in Europe and the US. In fact, East Asia could experience the most harmful impact of the crisis in other way – through the channel of trade. The crisis of 2008 and subsequent debt recession in the Eurozone influenced the region basically because of the fall of the demand coming from the developed countries, which in turned contributed to the collapse of economic growth. Although in the last two decades direction of trade clearly has been going in favor of the Asia itself (internal trade activities), the United States and European Union countries still possess a significant share of East Asia's total trade value. Furthermore, also within Asian continent the individual countries' characteristics vary among themselves. For instance, economies of Singapore, Thailand or Malaysia experienced bigger slumps in their GDP growth during the recession, whereas states with more domestic oriented economies, including Indonesia, India and Philippines, stayed in a relatively well economic condition[104].

In the end, the final impact of the Global Financial Crisis is in 2014 still difficult to estimate. At this point, however, one may give a conclusion that the recession hit nearly every part of the globe where individual regions experienced the crisis in various ways. Nevertheless, the common thing in nearly all cases was the collapse of general economic activity especially through financial and trade channels, and subsequent decline in GDP growth. However, what's also important, the crisis had severe social impact which often is

[104] Asian Development Bank, *How Can Asia Respond to Global Economic Crisis and Transformation,* Mandaluyong: Asian Development Bank 2012, p.1-16.

extremely difficult to measure. Having said that, Global Financial Crisis has basics to be called one of the worst economic event since the Great Depression of 1929.

2.7. Methodology of the research paper

First of all, the repetition of paper's title should be a helpful and useful step. The principal topic of this academic work is:

"Selected Indicators of Monetary Policy and Macroeconomic Performance after The Global Financial Crisis: Comparative Research of Japan and Republic Of Korea"

"Selected Indicators of Monetary Policy…"

This term refers to the chosen tools used by monetary authorities to influence and conduct monetary policy. Policy tools' results will be described primarily via individual indicators in which economists measure potential variables. Moreover, the monetary authorities' perception and assessment of global and domestic economic environment will be included. Hence those selected monetary policy's instruments are:

- The discount rate policy (base rate).
- Reserve requirement policy (average reserve requirement ratio).
- The assessments and reports made by respective monetary authorities in regard to current economic condition of domestic and international markets.

The reason of choosing these particular instruments, especially discount rate and reserve requirement policy, is in their indirect role in participation within the markets. Open market operations, which also play a vital role in monetary policy and yet I had decided to resign from, include somewhat more active role of monetary authorities within markets. In this case transactions become a direct channel between central banks and commercial institutions. Having said that, my main interest in the thesis goes to indirect monetary policy tools.

"… Macroeconomic Performance"

This expression refers to the three issues which help researchers to measure and portray the performance of an economy:

- Economic Growth (measured by GDP % change)
- Unemployment Rate (as % of total labor force)
- Inflation Rate (CPI % change)

Although limited to only three indicators, I strongly believe they can still give a relatively wide picture of countries' economic performance and general efficiency. All three indicators

appear on nearly every-day basis not only in selected professional reports but also in mass media and therefore there is a high probability for them to be most recognizable and understandable for majority of people.

"…after the Global Financial Crisis"

The exact time-framework of the last global recession has still not been exactly précised in the moment of writing the dissertation. In such case, however, I had decided to follow frequently used assumption that the crisis ended in 2009. Therefore, the topic's formulation *after the Global Financial Crisis* states for the period of 2010 - 2013 understood in terms of calendar years.

Having in mind the contents of the topic, the plan for the next chapters is as follows. After explaining the monetary policy and macroeconomic aspects in the theory part I will now try to apply selected issues to the cases of two East Asian countries – Japan and South Korea. Accordingly, the final part of the dissertation consists of two steps:

1. **A separate presentation of the examples of Japan and South Korea:**

Japan 2010 - 2013

a) **Monetary Policy**
   - Assessment of the economic environment
   - Discount Rate
   - Reserve Requirements

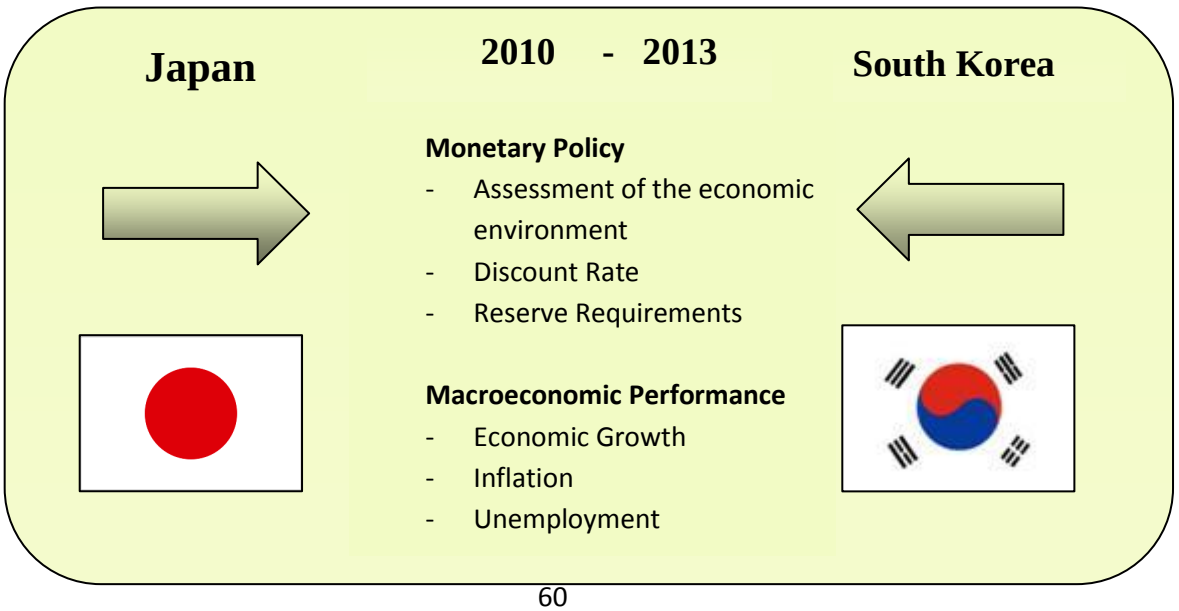
b) **Macroeconomic Performance**
   - Economic Growth
   - Inflation
   - Unemployment

South Korea 2010 - 2013

a) **Monetary Policy**
   - Assessment of the economic environment
   - Discount Rate
   - Reserve Requirements

b) **Macroeconomic Performance**
   - Economic Growth
   - Inflation
   - Unemployment

2. **Comparison of both cases:**



1. First step will be to present the matter of each country individually. State's description will be divided on two main sections – monetary policy part and macroeconomic performance part. First section's goal will be to show the use of selected instruments and general direction of the monetary policy with two main options possible: a) pursue to increase money supply in the economy (easy monetary policy) or b) pursue to decrease money supply in the economy (tight monetary policy). The macroeconomic performance part will include the presentation of the three mentioned economic indicators - economic growth (GDP), inflation rate, and unemployment rate.

2. After providing information for Japan and South Korea separately, I will subsequently move to the next part which sets both cases together. With comparative method of research the aim of this section will be to confront both countries' results of: monetary policy direction tendencies (1), and macroeconomic performance (2). Comparing macroeconomic performance of both countries have principles as follows:

    - Economic Growth (measured by GDP % change) – the higher the better.
    - Unemployment (unemployment rate) – the lower the better.
    - Inflation – performance of the rate in accordance to inflation goal stated by the countries' respective monetary authority; the closer value to the target, the better.

Correlation between monetary policy and macroeconomic performance will not be the case of study of the dissertation. The reason I had decided to avoid this step was the lack of consensus among the economists about the issue. There is no general agreement about the exact impact of monetary policy actions on countries' macroeconomic performance. Furthermore, there are in fact many other aspects which may influence economy's effectiveness yet precise wage of each factor is not clearly identified. In such case, a potential hypothesis can only be made that monetary policy does have some participation in results of economic performance and contributes at least partially to booms or slumps on the markets.

The data sources will include primarily information provided by the national monetary authorities and chosen international organizations such as International Monetary Fund, World Bank, and etc. Nevertheless, another data collection will be used as well.

2.8. Topic in the literature

In the time of writing this academic paper the main subject of the dissertation has been relatively weakly analyzed in the hitherto literature. The reason of such limited sources regarding Japan and South Korea's monetary policy and macroeconomic performance after the Global Financial Crisis could actually be explained with three circumstances. First of all, the topic itself is still new and fresh. The time framework of the last crisis has not been exactly identified yet even the short period between the most severe events during the recession and nowadays still make it difficult to provide deep analytical studies of the topic. If

we assume that the crisis took place in 2008-2009 and therefore want to analyze the post-crisis economic performance of 2010-2013 it would be actually very little time for researchers to ensure deep and detailed analysis. Secondly, East Asia came out as a region that was relatively weakly hit by the recession comparing to the advanced economies of Europe and North America. The economic slump was mostly visible in the Western countries of Europe and the United States and therefore these regions attracted often the biggest attention during 2008-2009 and shortly after. Lastly, this dissertation bases on the comparative research of chosen factors defined primarily by the author's personal preferences. Accordingly, the number of sources regarding the topic as a whole will become automatically reduced in the literature.

Nevertheless, the data regarding macroeconomic performance and monetary policy are regularly gathered and studied by the countries' national institutions, for example central banks as well as by the international organizations such as the IMF, the World Bank, OECD and others. Analyzing the issue of the dissertation one will find rather optimistic general perception regarding the subject, having in mind especially macroeconomic performance part. IMF, for instance, in its publication dated at the end of 2013 says that East Asia as a region emerged from the crisis strengthened and the area is expected to become the biggest economic zone over the next twenty years. It will be reflected most likely not only by high degree of integration and mutual connections with global financial and trading systems but also with increased internal development impetus. Because of the sound economic performance in the last years IMF predicts East Asia to enhance its influence in the world's financial and economic discourse. The organization points out that this trend in some way has been already taking place well as six (data for the 2013) of the Group of Twenty (G-20) economies are placed in the Asia- Pacific area[105]. Quite similar opinions come from the offices of the World Bank. In the first quarter of 2014 the institution, basing on various macroeconomic indicators, saw the region of East Asia and the Pacific as the world's fastest growing part of the globe and describes it as a remaining global growth engine[106].

However, at the same time there are voices which undermine and wipe the positive attitude and perception of both East Asian and global economic condition. Dr Pradumna B. Rana, researcher from the Rajaratnam School of International Studies (RSIS), Nanyang Technological University in Singapore, argues in his article from November 2013 that five years after the Global Crisis the world is still no safer place. To support his thesis Rana gives three arguments which in his opinion should lead to general concern among governments and public opinion. The first thing he defines as excessive complacency and self-satisfaction which is present these days among some states' leaderships. In 2008-2009, during the biggest turbulences caused by the recession credit markets were frozen and international trade fell sharply. At that time many governments with the circumstances of strong urgency agreed to increase their cooperation in form of fiscal and monetary policy, implement necessary economic tools and tackle the problems of downturn on the markets what eventually seemed to be a successful decision. Recently however, although financial markets are not in the peril

[105] International Monetary Fund, *Asia and the IMF*, http://www.imf.org/external/np/exr/facts/asia.HTM, accessed on 18.04.2014.

[106] World Bank, East Asia and Pacific Overview, http://www.worldbank.org/en/region/eap/overview, accessed on 18.04.2014.

they were few years ago the global economy is still far from full recovery. Countries and their economies are suppose to operate much below their full potential with significant unemployment being often a main and most intense issue. Policy coordination is as strongly required as it was in 2008 yet now it seems, according to the author, to be much more difficult to reach. Second thing which is believed to be an obstacle for ensuring greater economic development is the inappropriate structure and balance of power in the most important economic international organizations such as the International Monetary Fund. The organization, established at the end of World War II with the great support of the United States, does not reflect anymore the modern economic structure on the global scene. Indeed, in the first decades IMF helped to provide financial stability and unprecedented economic growth in many countries. Now, however, the organization seems to possess inadequate division of votes among its members, especially in regard to Brazil, Russia, India, China, and South Africa (so called BRICS countries). Having in mind their growing share in the global economy those countries should have more meaningful contribution and participation within the institution, says Rana. Yet some members are not keen and enthusiastic to admit that because, as often in the associations and groups, the founding members are looking forward to maintain major control over the organization. Finally, the last cause of weak advance in reforms can be found in the relatively limited cooperation and cohesion among the BRICS states themselves. Rana takes notice that establishing of the G20 as an answer for the global recession gave an opportunity for the BRICS and other states to increase their significance on the global arena. Debating and discussing at one table with member states of G7 is undoubtedly a big chance and important step towards forming the international economic policies on a broader scale. However, in many cases partnership and collaboration even between the BRICS seems to be not strong enough. All these mentioned factors became, according to the author, a serious obstacle for developing and implementing global reforms which would keep up the modern, dynamic activities and changes on the world's markets. Because of lack of those reforms the economic situation nowadays is actually not very different from the circumstances of the last economic turmoil. Rana argues that the risk of potential greed is currently the same or even higher as some of the market participants did not take any lessons from 2008-2009 period[107]. Therefore, half of the decade after the Global Financial Crisis the world including East Asia is not supposed to perform distinctly better in terms of economic aspects.

Eventually, the opposite perception of the subject to the one presented by Rana we can find in the discussion paper named "The Asian 'Miracle' after the Global Financial Crisis" created by John McKay from the Brenthurst Foundation, South Africa. In fact, author's positive idea about the East Asian economic performance even prompted him to create a statement that "*Global Financial Crisis also accelerated the movement of the centre of gravity of the global economic and political system towards the East, and it is clear that China in particular is advocating a quite different approach to development from that favored by the West*".[108] These words could lead to a conclusion that after the last global recession the

[107] Rana, Pradumna B., *Five years after the Global Crisis,* 15.11.2013, East Asia Forum, http://www.eastasiaforum.org/2013/11/15/five-years-after-the-global-crisis-the-world-is-no-safer/, accessed on 18.04.2014.

[108] McKay, John, „*The Asian 'miracle' after the Global Financial Crisis: Some Lessons for Africa*",

region continues to develop well and relatively better than advanced economies of Europe and the United States.

In the end, as explained at the beginning of the chapter, in the moment of writing the dissertation there is still limited number of sources which deal with the topic of the paper. The newness of the analyzed issue and other factors mentioned previously lead to the situation where most of the information come from the separate data collection of frequent national and international institutions and organizations. Furthermore, Internet sources also provide publications in regard to the macroeconomic performance and monetary policy of Japan and South Korea, although their number remains limited as well.

3. Japan and South Korea. Case study

3.1. Japan

3.1.1. Monetary policy

3.1.1.1. Assessment of the economic environment

Bank of Japan's annual *Outlook for Economic Activity and Prices* which was introduced at the beginning of 2010 gives pretty ambiguous picture about economic condition both in domestic and global terms. Still less than twenty four months after the symbolic collapse of Lehman Brothers, world economy's eyes were turned at that time toward the recession and its most severe events. The Bank's representatives noticed that global markets had been recovering from the sharp declines of 2008-2009 yet the process of returning to the pre-crisis degrees was far from its full potential. In some advanced economies including Japan the altitude of public debt had risen in the last years and created some worrisome issues for countries' leadership. Furthermore, the circumstances of the last recession accelerated discussions about financial supervision and regulation's critique. Additionally, Japan was facing its own problems related to demographic changes such as aging population and low birth rate which increased the possibility of shrinking population number in a long term. Nevertheless, beginning with the second half of 2009 Japan's economy kept emerging also in the following year. The amount of commodity production and export had been gradually rising. The Bank's noticed that significant contribution to the positive changes in export trends came from world's emerging economies. However, positive signs could be seen also on domestic markets, with relatively stable goods' consumption, new investments, and rising corporate profits. Domestic financial markets experienced at that time some positive results as well. The financial limitations and obstacles such as general suspiciousness and mutual distrust on the markets were gradually vanishing during 2010. Financial system in Japan which was now more stable comparatively to the European or American ones gave a stimulative effect on state's economic activity. Yet at the same time the report reflected the

Discussion Paper 2010/07, Brenthurst Foundation,

http://www.thebrenthurstfoundation.org/a_sndmsg/news_view.asp?I=118053&PG=288, accessed on 18.04.2014.

Bank representative's doubts about credit market which was supposed to remain weak in the near term.

Moreover, several risks had been taken into account which could potentially put in peril both national and international economic growth. First distress concerned recovery progress in advanced economies of Europe and the United States. At the beginning of 2010 bank lending process in these two regions remained sluggish. Insufficient and low credit activities put in doubts smooth functioning of their domestic markets and because of the size and economic meaning of the two areas this influenced whole global system. Slow recovery especially in the financial sector and private demand was an issue that by some was expected to stop further economic growths. Second risk included potential economic turbulences in the emerging economies. The high level of growth they had reached in the years preceding 2010 was supported strongly not only by the expansionary export tendencies but also as a result of increasing domestic demand policy. Combination of those two aspects was introduced to provide balance in their economies' structure. Considering the emerging states Bank of Japan focused on possible options regarding further events. First is that the economies would continue to rise in the future and Japan as an export oriented economy could gain from potential higher international demand. On the other hand, the economic policy of emerging states might lead in the next years to their overheat as well. In such situation the effect could be opposite and external demand would most likely slow down. Eventually, the Bank's representatives final dilemma was about global market participants' behavior and expectations in medium- and long-term future. The growth that world's economy had been experiencing since 2009 was believed to be too slow and flabby. Bank claimed there is a need especially for emerging economies not only to continue already started investments but also to begin with new ones with particularly high-added- value final products. The trust among market participants was a crucial aspect in this situation. If such step would be taken then "*firms medium- to long- term growth expectations could rise, and economic activity, particularly exports and business fixed investment, could turn out to be stronger than expected"*[109]. Nevertheless, if trials to address these issues within particular emerging countries would fail Japan with its strongly trade oriented economy would be especially vulnerable to potential external turbulences. At the same time the Bank's governors noticed that economy was experiencing slow deflation which was a negative situation according to the institution's inflationary goal[110]. Having in mind above matters one can see that although more positive than the last two years 2010 was still strongly marked by the recent events initiated by the crisis.

In 2011 economic situation in Japan was marked primarily by the Great East Japan Earthquake that took place on 11th of March. Already month after the disaster the Bank was able to recognize the great scale and seriousness of that incident and its possible effects in the short- term future. In general, the earthquake was expected initially to bring high downward pressures on the national economic activities particularly in regard to production facilities. Overtime, however, increased market mobility would dominate. That would be caused by

[109] Bank of Japan, Outlook for Economic Activities and Prices. April 2010, p.7, https://www.boj.or.jp/en/mopo/outlook/gor1004b.pdf, accessed on 22.05.2014.

[110] Ibid., p.1-16, accessed on 22.05.2014

individual market participants which should invest in and restore damaged capital and provide new supplies. Still, those effects could not be eventually sure especially when it comes to timing and scale. Therefore, the Bank of Japan's economic outlook dated on mid- 2011 was careful in assessing future scenarios and their risks. Prior to the natural catastrophe Japan's financial environment had been relatively stable comparing to 2010. Similar as year before the Bank's representatives were preferably looking more onto easing country's monetary conditions in order to boost growth. Although already required by the crisis' recovery circumstances, easy monetary policy was now even more desirable after the natural disaster. In its report the Bank recognized that demand for credit market at that time was likely to increase especially by small firms which faced aggravation of their economic condition due to the disaster. On the other hand, from the perspective of banks and their lending possibilities financial institutions were supposed to be fully prepared to meet the increased demand for credit as they generally had enough capital on their accounts to enable that. Nevertheless, some negative perception of the future economic progress could be noticed especially among the Bank's governors back then. The earthquake led to great losses within production capabilities on a national scale. The shortages of power had become additional supply-side pressure for the domestic market. In a result, manufacturing in some regions dropped sharply, hitting both overall exports potential as well as domestic sales. Furthermore, the issue at the Fukushima's nuclear power plant contributed to general negative uncertainties in regard to economic outlook. The accident was expected to have negative impact especially on private consumption and tourism where in both cases the rates were seen to decline. Yet, as mentioned, Bank's further baseline scenario predicted somehow better performance of the domestic economy overtime. After initial heavy sloping tendencies in the first half of 2011 Japan's economy was likely to emerge at faster pace in the second half. The statement was supported by the opinions that preliminary drops in production will be re-organized and adjusted to the earthquake circumstances and demand for restoring capital supplies would rise in the following months. When it comes to prices levels the circumstances were not much different from the year before. The rise of the inflation proceed between 2010 and 2011 and was taken by the Bank of Japan as a positive sign in regard to its monetary policy's goals.

Nevertheless, signals coming from global economy in 2011 were, according to the Bank's statements, also rather dubious and not fully desirable. The global growth's speed was supposed to be at least at the same 2010 levels, possibly slightly higher. Yet new issues which appeared worldwide could undermine further progress. In the United States there was a growing concern regarding sustainability and maintenance of the recovery. This was questioned by fiscal problems within the national economy. However, Bank of Japan believed US economy to continue to recover mainly through upward trends of export. Europe's growth in turn, continued pretty much at similar very modest pace. In the meantime, financial support to Greece was required as the country experienced sovereign debt problems. Moreover, there was growing perspective of Ireland and Portugal to be another countries which stood in the line for international help. Clearly different evaluation was in regard to Chinese economy. The Asian country was expected to keep developing with high growth based on increasing private consumption, strong housing and infrastructure investments, increasing household

incomes and continuing general urbanization[111]. Recognizing those circumstances, in 2011 Bank of Japan was forecasting to maintain easy monetary policy in order to support economic growth especially through aspect of increasing domestic private demand.

After unsecure and wobbly year 2011 Bank of Japan's prospect from April 2012 was slightly more positive in regard to domestic economic outlook. State's financial structure remained basically stable and had not been particularly affected by the European debt issue in the last twelve months. This situation was also not suppose change in the short- term future. That stability, according to the bank, had many causes where one of the most important one was powerful monetary easing provided by the monetary authority through numerous tools. At the same time credit demand had been gradually increasing with major part of the money classified as so-called working capital[112] which was seen as growing economic activity. With such circumstances Bank's representatives noticed that national economy was in process of shift toward more visible advance and development. In 2012 Japan was expected to move to moderate recovery pace in the following months. It would be supported mainly by promising performance of overseas economies, especially emerging ones, and reconstruction of the state after the earthquake from March 2011. Export was expected to follow an increasing path and continue to contribute strongly to general economic growth of Japan. Having said that, year 2012 was likely to record higher rate of growth comparing to the last year.

Looking at the international scene, since the end of 2011 global markets experienced some exerted problems mainly in regard to debt issue in Europe. Greece at that time was still believed to be in a most difficult position. Steps taken by its national government as well as international institutions led to restructuring of country's debts which were in a posses of *inter alia* private creditors. The debt restructuration and mutual agreements with state's loan holders allowed the International Monetary Fund and European Union to provide further financial support to the country. Within the EU some moves could be noticed in order to increase fiscal discipline among members and to enlarge organization's capacity for responding to similar issues in the future. Across the Pacific situation in the United States was, similar as in 2011, more promising comparing to Europe. The biggest economy in the world continued to recover yet still with rather humble pace. Nevertheless, many indicators forecasted stable improvement of the country's economic condition. For instance, one could see growth in private consumption, lowering unemployment or growing investments within the corporate sector. These information were interpreted by the Bank of Japan as appearance of positive signals not only for the region itself but for global economy as well. The price level aspect in Japan remained at that time rather unchanged. Namely, the year-on-year inflation rate continued its stagnated pattern with the rate fluctuating around 0 percent[113]. With such economic environment both in the country and abroad Bank of Japan saw the

[111] Bank of Japan, Outlook for Economic Activities and Prices. April 2011, p.1-20, https://www.boj.or.jp/en/mopo/outlook/gor1104b.pdf, accessed on 23.05.2014.

[112] Term "working capital" states for a financial specification that represents operating liquidity available to a business organization. Positive working capital is necessary to guarantee that company is able to perform its operations and has sufficient funds to cover expenses. Source: Wikipedia, *Working capital,* http://en.wikipedia.org/wiki/Working_capital, accessed on 24.05.2014.

[113] Bank of Japan, Outlook for Economic Activities and Prices. April 2012, p.1-19, https://www.boj.or.jp/en/mopo/outlook/gor1204b.pdf, accessed on 25.05.2014.

probability of financial market's turmoil decreasing. Among advanced economies it was Europe that seemed to be in a most unfavorable situation. On the other hand, prospects for Japan and the US evidenced growing economic activity in those regions.

The economic forecasts for the last analyzed year of 2013 continued to improve. In regard to domestic situation, Japan, albeit reservedly, had been still recovering after the Global Financial Crisis. In its Economic Outlook report from October 2013 Bank of Japan notices that in the last months state's export followed the increasing trend as it had place already a year ago, yet now somewhat slower. At the same time domestic demand in Japan was classified as stable, giving still hopeful impression for potential future growths and progress. The composition of production demand, both in external and domestic terms had nevertheless varied. On the one hand, industrial production did not experience at that time any spectacular growths and its increase remained relatively moderate. On the other hand, visible change could be seen in the nonmanufacturing sector's activity, such as construction and services. In this case production was believed to perform even at higher rates overtime. Prospects for the short-term future presented similar situation on Japanese markets, with general expansion as main trend. Although domestic demand was expected to remain flat, it was the growing external demand which was believed to give strong incentives for Japan's economy.

Parallel to that, also overseas markets presented similar, rather positive economic picture. Generally, Bank's representatives expected global economy to remain stable, with very low possibility to experience any significant downfalls on the market. Major contribution to that assumption came first of all from major economic areas – the United States and Europe. In first case, country's economic growth was now even accelerating and reached one of the most promising levels since the market slumps at the beginning of 2009. In second case, European debt spectrum had decreased significantly, but did not disappear completely. Still, the perspective of visible economic growths in Europe began to crystallized overtime, as some improvements could be noticed for instance in households' and firms' future expectations. China, in turn, presented in fact similar picture as it was noticed in the *Economic Outlook* already in the previous years[114]. Namely; state's economy was expected by Bank of Japan to follow its stable and high growth in the short-term and no serious economic impediments were supposed to block that progress.

[114] Bank of Japan, Outlook for Economic Activities and Prices. October 2013, p.1-25 http://www.boj.or.jp/en/mopo/outlook/gor1310b.pdf, accessed on 27.05.2014.

3.1.1.2. Discount Rate

Another aspect which is going to be used later in a monetary policy comparison between Japan and South Korea is a discount rate (basic rate). As explained earlier in the theoretical part of the dissertation this particular tool is one of the most important implement in the hands of monetary authorities. With this instrument central banks can provide strong incentives for market participants to take such moves which should lead to increase or decrease money supply in the economy overtime. In general, the discount rate determines the cost of borrowing from monetary authority to commercial banks in a given economy.

As one will see, in Japan the pattern of the rate in the analyzed period followed the perception of the central bank's governors regarding economic environment (*Economic Outlook*) and seemed to be an answer of the institution to the circumstances present on the markets in that time.

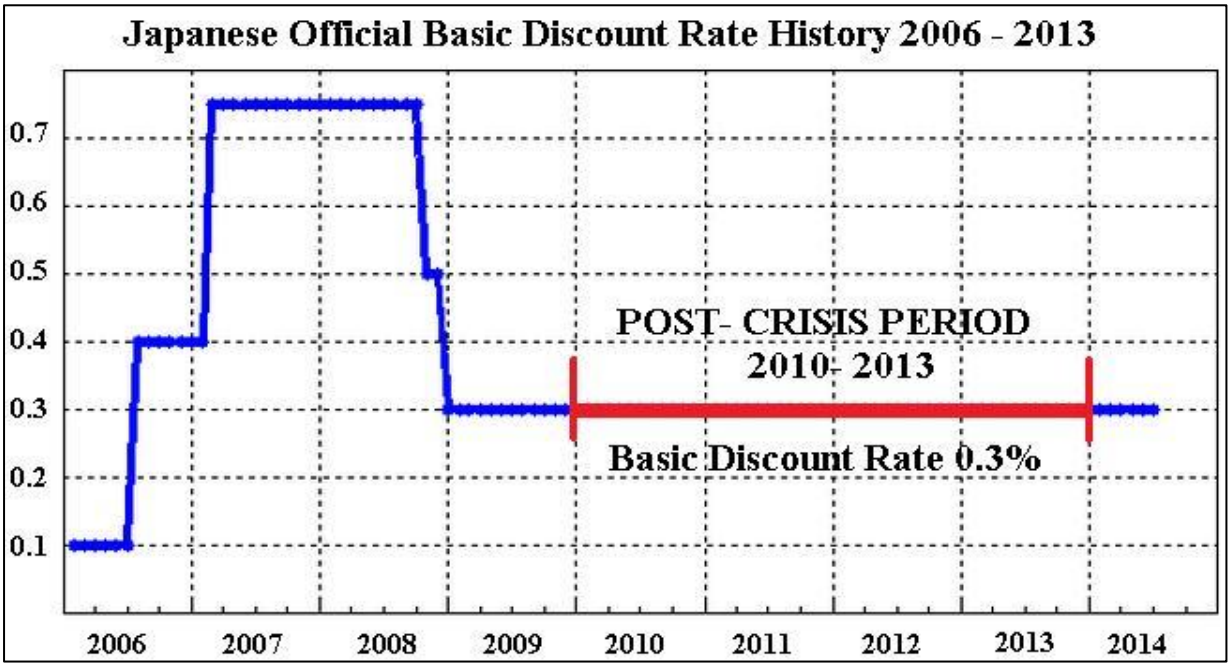


Figure 7. Japanese Official Discount Rate. Source: Bank of Japan, http://www.stat-search.boj.or.jp/ssi/cgi-bin/famecgi2?cgi=$graphwnd_en, accessed on 20.07.2014.

Between 2010 and 2013, as explained in the previous section, there were numerous events and activities which in fact shaped economic environment both in domestic and global terms. From the *Economic Outlook* reports which were presented in that specific time one could get a strong impression that the Bank's representatives were keen to pursue easy monetary policy. Having in mind given economic and monetary circumstances the opinions presented on the Bank's papers were subsequently followed by concrete acts like the use of basic rate. Figure 7. presents Japanese official basic rate between 2006 and 2013. Looking at the period of 2010-2013 which is actually the main focus of the dissertation it is possible to notice that the rate in practice remained unchanged. In all the years of 2010, 2011, 2012 and 2013 the value of the indicator was perfectly stable with the level of 0.3%. In order to find a possible explanation of this situation it would perhaps useful and necessary to go slightly beyond the topic's 2010-2013 time framework. As shown on the graph the last change of the rate was at

the end of 2008 which was the time of the most severe impact of the Global Financial Crisis. However, some consequences such as mutual distrust among market participants, weak credit market and reduced economic activities were possible to see also in the following years. Therefore, the reduction of the discount rate by Bank of Japan could be seen as a step to increase economic activity in the country through bigger money supply (money's lower cost) in the economy. The permanent and stable level of the rate can suggest two things. Firstly, in the whole analyzed period the Bank probably believed that this relatively low level of 0.3% was desirable and necessary to help the economy recover from the recession and provide high growth. Secondly, the discount rate effect could be seen not immediately but after some time. Consequently, there was probably no need to change the rate more frequently as the impact of 2009 change could come even after few years.

Accordingly, the monetary tool of basic rate was unchanged between 2010 – 2013 and its level of 0.3% was actually defined in the middle of the recession at the turn of 2008/2009. This particular level of rate could become a stimulative motive for domestic markets and their activities as the cost of money borrowed from the Bank of Japan was relatively low in that time.

3.1.1.3. Reserve Requirements

Reserve requirement policy similar to the discount rate is an alternative indirect monetary tool possessed and used by Bank of Japan. Manipulation of the reserve requirement ratio gives the Japanese monetary authority a possibility to create an impact in a narrow sense on the policy of commercial banks and in a broad sense also on the whole economy. With help of this monetary instrument the Bank presents detailed requirements to commercial banks and other financial institutions in regard to minimum amount of cash they should keep in the vaults instead of devoting that money i.e. for credits. Consequently, this influences money supply circulating in the economy. The effects of such ratio changes can be plural.

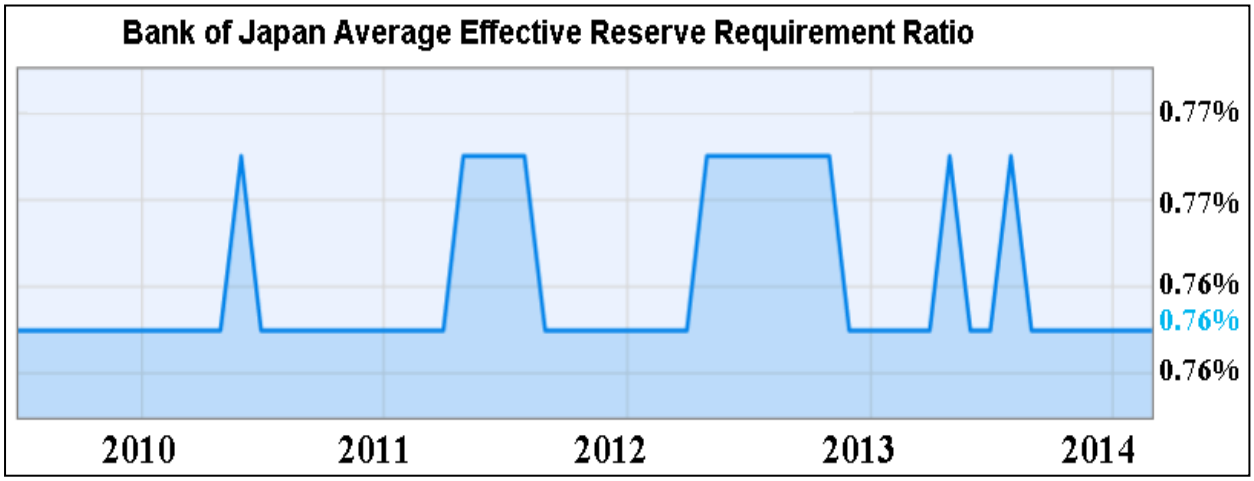


Figure 8. Bank of Japan Reserve Requirement Ratio. Source: YCharts. http://ycharts.com/indicators/bank_of_japan_average_effective_reserve_requirement_ratio, accessed on 2.06.2014.

Figure 8. presents the Bank of Japan reserve requirement ratio between 2010 and 2013. As one may conclude from the chart the ratio was basically unchanged during that time despite extremely minor fluctuations at few points. Setting this particular ratio we can assume that the Bank was rather sure about its positive impact on the economy. Furthermore, as it was said earlier in the theoretical section, monetary authorities usually decide to change the reserve requirements relatively rarely as every modification requires commercial banks to adjust their hitherto policy to the new monetary circumstances and requirements. Because the process takes some time it is therefore very likely that potential results of such shifts will appear overtime. Having that in mind, it is possible that the last decisive alteration of the requirements ratio took place before the dissertation's analyzed period, namely before 2010. In order to check that I had again decided to move slightly beyond the main interval of 2010-2013 and verify this assumption.

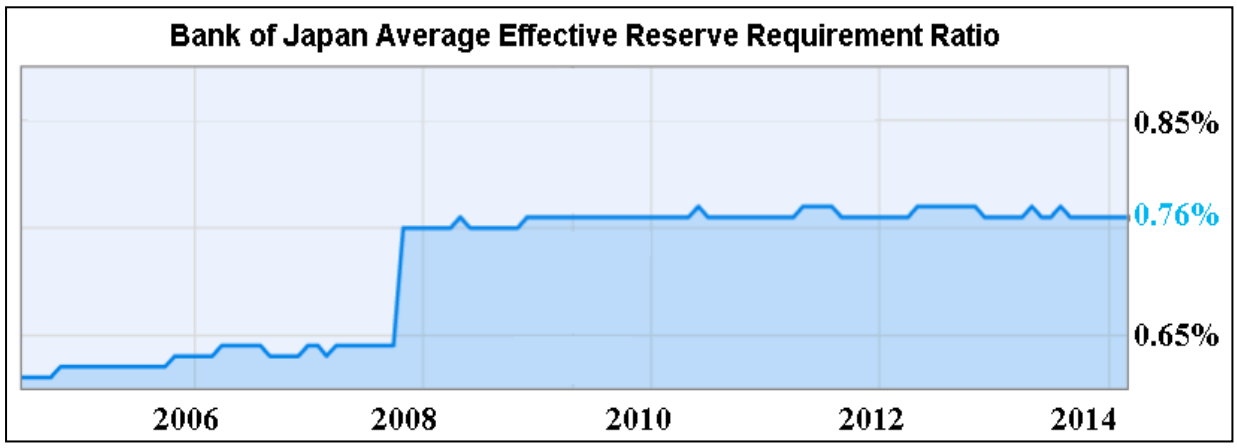


Figure 9. Bank of Japan Reserve Requirement Ratio 2004-2014. Source: YCharts. http://ycharts.com/indicators/bank_of_japan_average_effective_reserve_requirement_ratio, accessed on 2.06.2014.

Figure 9. shows the same indicator for the period between 2004 and 2013. In this case, the pattern of the indicator can be divided into two main periods reflecting particular time-intervals. First period is in regard to years between 2004 and the end of 2007. Second period refers to the phase since the end of 2007 till 2013 inclusively. Looking at the graph one will notice that the only major change in the ratio took place approximately at the end of 2007 when the indicator's value rose. Despite that shift there were basically only minor changes both before and after that time. The origins of such policy and reserve decisions are most likely closely connected to the economic circumstances created by the Global Financial Crisis. An argument which supports this hypothesis could be the particular time and direction of reserve changes. Since around mid- 2000s continuously more financial institutions around the world reported to be involved in toxic financial assets. In a consequence, the probability of falling liquidity within corporate sector was rising gradually yet constantly. Bank of Japan governors, looking especially at the American and European markets, could recognize the growing danger of potential bankrupts and therefore decided to increase the reserve requirements ratio in case of economic turbulences which might come in the future. With higher reserves commercial banks could more effectively "defend" themselves from i.e. bank-runs phenomenon.

3.1.1.4. Summary

After identification of the individual aspects of monetary policy – assessment of the economic environment, the discount rate, and reserve requirements – it is possible state a final conclusion that Japanese monetary authority, the Bank of Japan, was generally aiming to conduct easy monetary policy between 2010 and 2013. Actions and statements taken at that time by the central bank were pointed at increasing money supply in the economy. However, an interesting aspect can be emphasized in regard to some points of this particular monetary policy. As shown in the sections devoted to the economic environment assessments and discount rate, it is rather doubtless that these very actions were addressed strictly to provide easy monetary policy. On the other hand, increasing reserve requirements could be in turn taken as actually decreasing money supply. The explanation of this can be as follows. In the circumstances of the Global Financial Crisis and its effects like weak credit market, the Bank of Japan wanted to enhance economic activity among market participants. Therefore, the cost of borrowed money (base rate) from the monetary authority should remain low so the interest rates won't discourage potential borrowers. At the same time, having in mind liquidity problems in the American and European institutions, Japanese monetary authority could aim at promoting safe framework and fundamentals of whole financial sector. In such case increasing reserve requirements could be a way for to protect commercial banks and other respective institutions from possible liquidity problems. Nevertheless, the Bank's statements and subsequent decisions of the basic rate suggest that Japanese monetary authority was leading easy monetary policy in the analyzed time of 2010 and 2013.

3.1.2. Macroeconomic performance

3.1.2.1. Economic Growth

Although in every country economic growth is a crucial aspect in Japan it could have been even a more meaningful issue after the 2010. Firstly, the country, as many others, was struggling with the last recession which was believed to be the worst economic downturn since the memorable Great Depression in 1930s. The impact of the crisis was indeed very diversified when looking at particular states yet general results were clearly negative for the whole globe. Therefore, picking up from the recession's bottoms was for many an essential and primary goal. Secondly, which was more connected with Japan itself, country's leadership and public opinion had still in mind economically unfavorable decade of 1990s which by some was even called "*The Lost Decade*"[115]. With these circumstances, Japan seemed to have enough reasons to pursue high economic growth with additional persistence after the GFC.

Table 8. portrays selected indicators in regard to economic growth in Japan in the respective years. Having in mind the *Economic Outlook* assessments made by the Bank of Japan for this particular time, one should see that the individual values in the table often closely follow the economic pattern and expectations presented by the monetary authority's representatives. And so, year 2010, as said earlier, is considered to be the first year of the

[115] Wikipedia, *Lost Decade (Japan), http://en.wikipedia.org/wiki/Lost_Decade_(Japan)*, accessed on 1.06.2014.

post- crisis period, the beginning of economic recovery. Indeed, according to the data the economic growth in 2010 with year-on-year basis actually took place which could support the presumption of future upward trends and the general end of the crisis. The improvement of Japan's economic performance was possible to see through numerous indicators such as nominal and real GDP or GDP *per capita* expressed in a national currency and international dollar. Year 2011 was in turn, also as expected by the Bank, a time of an economic slump, most likely caused primarily by the Great East Japan Earthquake. Similarly, it was reflected in the individual indexes. In this case however there is one change comparing to 2009-2010. Despite decrease in most of the GDP indicators the GDP *per capita* counted by international dollar still rose. There could have been actually many reasons of such incompatibility where possible causes one should seek in a currency exchange basis and general counting of the international dollar. Currency exchange fluctuations can often lead to foggy and unclear picture of an issue. This in turn might distort final results. Nevertheless, GDP *per capita* counted by Japanese national currency still reflected the slight drop of the economy's total production in 2011/2010 time which in the end might give more reliable picture of an actual condition of the state. The data for the following years – 2012 and 2013 – become, however, consonant in all cases when it comes to portrays Japan's economic growth. On year-on-year basis both 2012 and 2013 experienced increases in the country's total production which was reflected not only by nominal, but also real Gross Domestic Product.

Economic Growth in Japan					
	2009	**2010**	**2011**	**2012**	**2013**
Real GDP (Yen, trillion, base year 2005)	489.5	512.3	510.0	517.4	525.3
Nominal GDP current prices (Yen, trillion)	471.1	482.3	471.3	473.7	478.0
GDP % change	-5,5	4,6	-0,4	1,4	1,5
GDP based on PPP per capita (current international $, thousands)	32.0	33.9	34.5	35.7	36.8
GDP per capita, constant prices (Yen, million)	3.82	4.00	3.98	4.05	4.12

Table 8. Economic Growth in Japan. Selected indicators. Source: IMF, http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx, accessed on 2.06.2014.

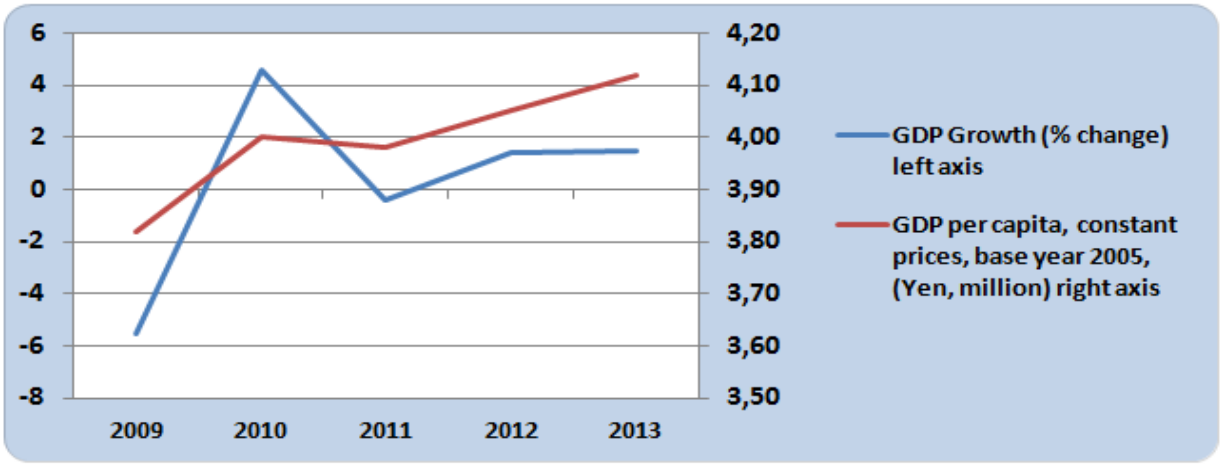


Figure 10. Japan's growth. Selected indicators. Source: IMF, http://www.imf.org/external/data.htm, accessed on 2.06.2014.

A worth mentioning aspect of the growth in case of Japan could be the correlation between GDP measured by percentage change and real GDP *per capita* which is presented in figure 10. In general, both indicators follow more or less the same patterns, yet in case of GDP *per capita* ratio the overall fluctuations are clearly less visible. For example, even though Japan's economy went into minor recession in 2011, falling from 4 % to -0,4 % growth, GDP *per capita* growth index did not react in the same way and experienced relatively smaller variation at that time. Reasons of such situation can be found in numerous aspects. For instance, Gross Domestic Product *per capita*, measured in the chart by real terms may estimate more reliable the wealth of Japanese, as the indicator is adjusted to price changes which occurred at that time.

3.1.2.2. Inflation

The Bank of Japan as an example of monetary authority is obligated to fulfill a number of tasks in regard to monetary policy. Those tasks can refer to various goals and objectives that the institution has to reach in order to provide possibly most optimal economic performance of the country, including for example high growth and low unemployment. Among those goals, one of the most important aim of monetary policy defined by the Bank is the price stability target. The Bank of Japan Act marks that the institution activities' purpose is to achieve price stability which is believed to contribute to advance and progress of the state's economy. Frequent and large change of price levels is perceived as a negative phenomenon and therefore the Bank's representatives pay particular attention to avoid or at least diminish in a most possible way the effects of those fluctuations. Recognizing the inflation's concept together with domestic and international special economic circumstances between 2010 and 2013 the Bank of Japan's price stability target measured by the CPI change with year-on-year basis was as follows[116]:

- 1 % between 2009 and 2012
- 2 % in 2013

[116] Bank of Japan, *Clarification of the "Understanding of Medium- to Long-Term Price Stability,* https://www.boj.or.jp/en/announcements/release_2009/un0912c.pdf, p.1; Bank of Japan, *Price Stability Target*, https://www.boj.or.jp/en/mopo/outline/qqe.htm/, accessed on 3.06.2014.

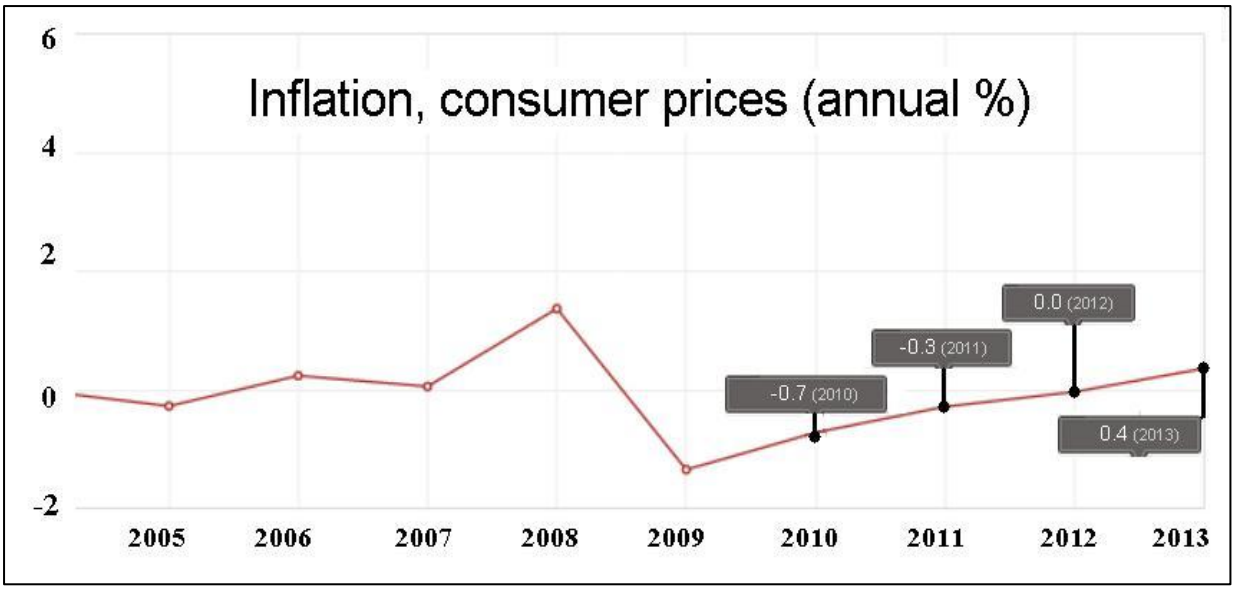


Figure 11. Japanese inflation. Source: World Bank, http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG/countries/JP?display=graph, accessed on 3.06.2014.

Figure 11. shows the average annual percentage change of the prices measured by the Consumer Price Index for Japan. The data for the analyzed period 2010 – 2013 show that despite particular actions taken at that time the Bank was still not able to reach price stability target which had been set before. During the first phase, between January 2010 and 2012 with inflation target of 1 %, the country's economy was actually experiencing deflation for most of the time (-0.7% and -0.3% in 2010 and 2011 respectively). According to the World Bank data the CPI changes for 2012 was quite closer to the established price objective when the annual inflation reached 0%. At the beginning of 2013 the Bank's governors decided to re-consider price stability goal with a final consensus for 2% annually. Although in 2013 Japanese economy was gradually moving away from the deflation's perspective also in this year the monetary policy goal was not eventually reached. The CPI increase for 2013 was at the level of 0.4% and that value was clearly below the Bank's expectations. Identifying the inflation level in the analyzed period the conclusion is that Japan's monetary authority did not reach its price stability target in all the years between 2010 and 2013.

3.1.2.3. Unemployment

It was said that monetary authorities conduct their policy in order to provide economically friendly environment which would support general economic performance of the countries. One aspect of the performance issue is the "right" level of unemployment which in fact may automatically cause some problems to governments and monetary policy makers. As explained before in the section devoted to the matter of unemployment there is no consensus in regard to optimal altitude of the ratio. One may argue that the best possible option is to take such steps which would reduce the index to 0%. In the end, individuals who stay without a job for a long time can lay foundations for some strong economical and social problems for the rest of the people and country as a whole. However, as it was said earlier in the dissertation, in the market economy it is practically impossible to get rid of unemployment

completely. There is always going to be some share of workforce whose labor potential will not be fully used within the country's economy. The question in this case is what's the minimum possible level of unemployment or what number of people staying without a job is acceptable for the individual states. Those are the issues that are in fact rather difficult to answer. Each of the countries may have specific conditions that determine the optimal or desirable ratio. In that situation, one response for the issue can be to take such steps which will reduce the unemployment rate as far as possible with no defined target at the same time. That's actually the way that Japan has been practicing. There are no official information which would set the unemployment rate target. Therefore, recognizing the unclear definition of the *right* unemployment level, it had been assumed in the dissertation that Japan's policy makers seek for such tools which would lower the unemployment to the minimum possible levels.

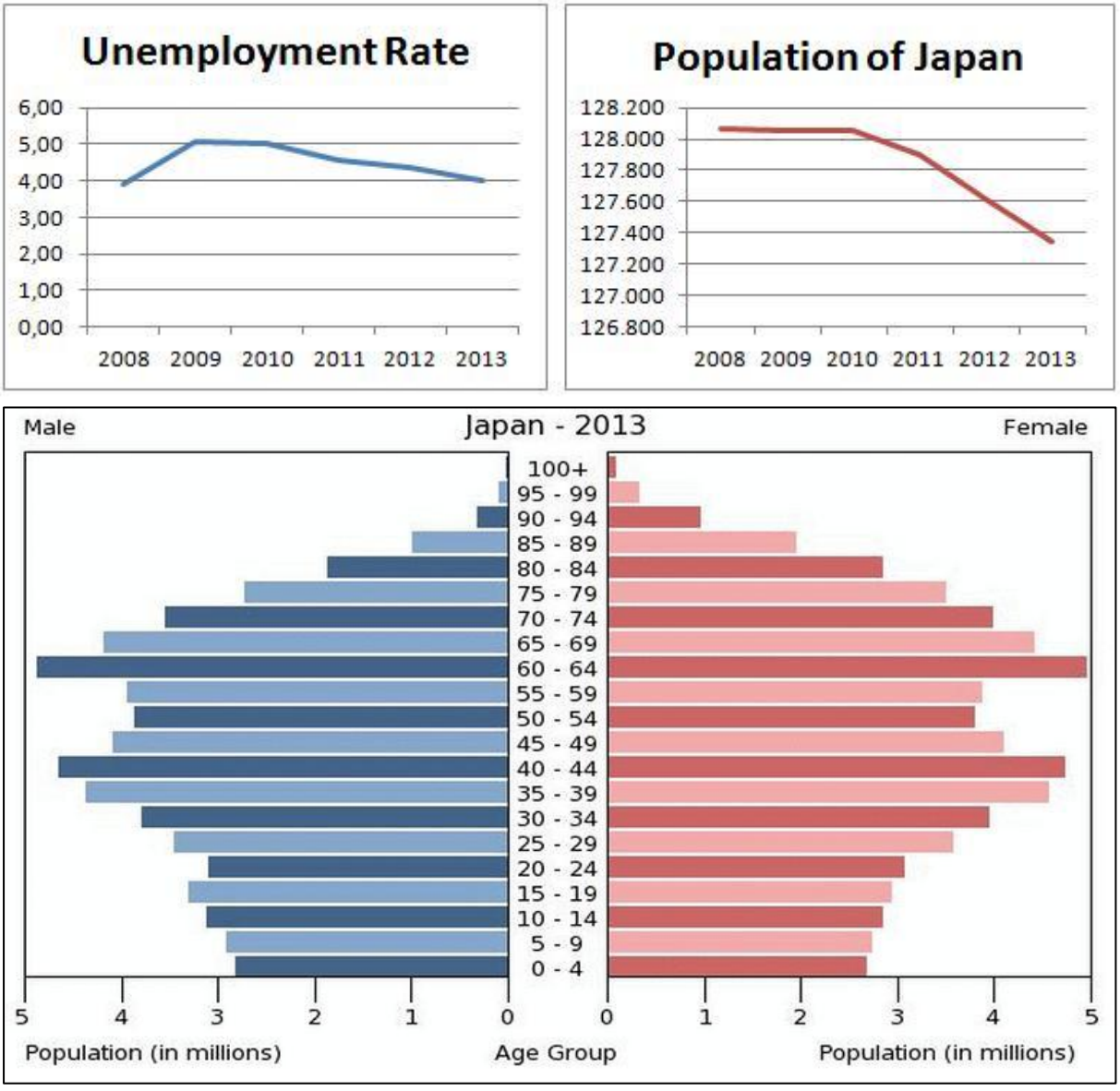


Figure 12. Japan's selected indicators. Source: IMF, http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx; CIA World Factbook, https://www.cia.gov/library/publications/the-world-factbook/geos/ja.html, accessed on 4.06.2014.

Figure 12. portrays the unemployment rate and other selected indicators for Japan. From the graph we can see that between 2010 and 2013, so during the period of dissertation's main focus, the country's unemployment was gradually falling after reaching the level of 5% during the Global Financial Crisis in 2009. In the following years the ratio decreased and eventually hit 4% in 2013. On the first sight this phenomenon could be positive from the economical point of view especially in the face of world's recession. Yet one should not forget about the potential reasons of such drops. There could be actually many grounds that influence the falling number of workforce in the economy where some of them would not have to be necessarily fully eligible, depending on the state's individual conditions. The other charts of figure 10. present Japan's total population and demographic structure. What was already noticed by the Bank of Japan and mentioned in the *Economic Outlook* reports, the world's third biggest economy (as for 2010-2013[117]) was struggling with some serious demographic changes that doubtlessly make a macroeconomic impact. Exact correlation and dependence between unemployment, demography and population requires surely deep analytical studies yet at this point some hypothesis can be provided which includes possible explanations. For instance, in case of Japan the unemployment rate was clearly decreasing between 2010 and 2013 but at the same time also population of the country fell by around 0.5 million people. Reduction of the total population can have many components, such as low fertility, migrations, deaths in natural or accidental circumstances. Consequently, in short-term, for example, lower fertility rate means less young people who could be classified as workforce (age between 15-64). This, in turn, is automatically favorable when computing unemployment rate since the amount of new, incoming unemployed people will be lower overtime.

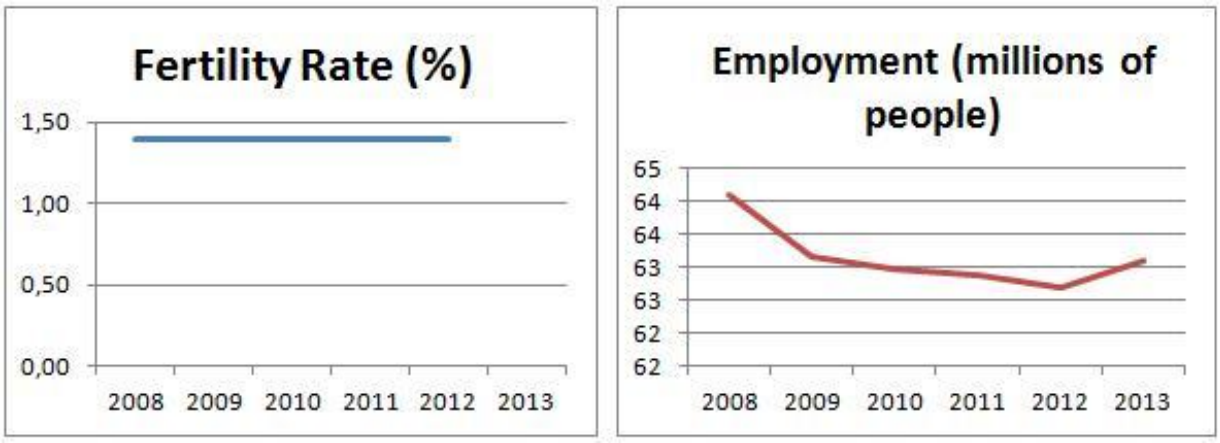


Figure 13. Japan's Fertility Rate and Employment. Source: World Bank, http://data.worldbank.org/indicator/SP.DYN.TFRT.IN?page=1, accessed on 4.06.2014.

[117] Wikipedia, *List of countries by GDP,* http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal), accessed on 4.06.2014.

Data showed in figure 13. in some measure confirm the difficulties and need of comprehensive studies when it comes to rely on the unemployment rate. As presented earlier, the unemployment ratio, understood as percentage of total labor force, between 2010 and 2013 was constantly decreasing. However, at the same time the number of employed people in the country was also lowering only with minor rise in 2013. This convergence may base on mentioned changes in demographic structures in the state which had been taking place in the last decades. Eventually, the 2008-2012 fertility rate stayed on the same level what surely influenced the economy in the next years, including its labor force.

Nevertheless, the main focus of this research paper's and its comparative methodology includes exclusively the unemployment rate itself. In such case, it seems that Japan was still successful when the indicator was gradually yet steadily falling after the Global Financial Crisis between 2010 and 2013.

3.2. South Korea

3.2.1. Monetary Policy

3.2.1.1. Assessment of the economic environment

Assessment and description of an economic environment made by South Korea's monetary authority, the Bank of Korea, is usually published twice a year in form of monetary policy reports. Those statements are presented *inter alia* in an electronic form available for the reader on the Bank's official website. The reports are referring to current condition of both domestic and global markets and include also some prognosis in regard to potential future economic and financial situation.

Beginning with the monetary policy report from March 2010 the Bank's attention was devoted primarily to the domestic and international recovery after the global recession of 2008-2009. In regard to overseas markets and general economic condition one could get an impression that the Bank's leadership was rather satisfied with the economic performance in the early months after the crisis. The reports says that economic growth around that time gives reasons to look rather hopefully in the future as: "*During the second half of 2009, the world economy exhibited a pattern of recovery in both advanced and emerging economies as each countries' expansionary fiscal and monetary policies to cope with the global financial crisis, took full effect"*[118]. The monetary authority of South Korea claims that nearly all world's major economic areas experienced improvement in their economic performance, although the pace of growth had indeed varied among individual countries and regions. On the top of that post- crisis' race there were supposed to be China and India particularly, but also other emerging Asian economies. For instance, the Bank of Korea noticed that already in September 2009, one year after the collapse of the Lehman Brothers, Chinese industrial production was able to get above the pre-crisis levels, whereas the same indicator in the main advanced economies – especially the United States and Eurozone – was still far below the levels that had been recorded before the Lehman incident. Furthermore, Asian economies

[118] Bank of Korea, *Monetary Policy Report. March 2010,* p.1, *http://eng.bok.or.kr/broadcast.action?menuNaviId=628,* accessed on 5.06.2014.

growth at that time was believed to be driven also by rising domestic trends in private consumption which stayed in opposite to poorly performing private consumption in Europe and North America. Still, in those two regions economic recovery after 2008-2009 was believed to take place yet at somewhat slower pace than in Asia. If in the United States the total economic growth was gradually boosting, basing primarily on slowly rising personal consumption and exports, it was the European countries that performed relatively most sluggishly comparing to the other regions. As the Bank of Korea evaluated, the growth ratio in Europe in fact fluctuated and sometimes appeared to be even barely positive. In the last mentioned country case – Japan- it was recognized by the Bank that at the beginning of second half of 2009 the growth had registered slight falls yet since that time the country was again expanding with growing export as an engine of the economic performance. Nevertheless, despite general hopeful information and data coming from the global markets one could still feel lasting uncertainty about the economic recovery and its progress in the next months. With such short time after the bottom levels of the crisis the maintenance of growth was continuously not guaranteed which reflected the general doubts about global economy in the short-term.

Domestic markets of South Korea stayed naturally not passive to these economic information coming from abroad. The recovery path, similarly as in many other countries, appeared already in the second half of 2009, says the Bank. Growing economic activity and productivity was reflected in the quarterly and annually data presented in the report. According to the national monetary institution the progress could be seen first of all in rising exports and improved conditions of private consumption. In both cases main focus went for *inter alia* cars, electronic components and other durables. Consequently, manufacturing production experienced increases especially in sectors of machinery or metal products[119].

In regard to monetary policy, having in mind above issues, in mid-2010 there was still pressure for providing easy monetary environment which was supposed to support economic recovery after the GFC. In the March 2010 report the Bank obligated itself to:

"*…operate the Base Rate in such a way as to help sustain a trend of recovery in economic activity, while consolidating the foundation for price stability. Given the uncertainties surrounding the future growth path, the strengthening of private sector growth momentum will need to be underpinned through maintenance of the financial easing stance.*"[120]

Nevertheless, at the same time it was emphasized to look for the reliable and careful assessment of the monetary policy, and to the possibility of potential imbalances which may appear as results of such policy. Inflation target and expectations remained a basic concern for the Bank. Therefore, the monetary policy should go in pair with inflationary target in a medium-, and long- term.

The next monetary policy report issued in March 2011 gives very similar overall picture of an economic environment, comparing to the same paper from the year before. In

[119] Ibid., *Monetary Policy Report. March 2010*, p.1-18.
[120] Ibid., *Monetary Policy Report. March 2010,* p.72.

regard to domestic economy, starting from the late 2010, there was basically continuation of the upward trends which had been already present during 2009 - 2010 period. Similarly to that time economic growth was accelerated by sequential increases not only in exports but also with steady development of domestic demand and private consumption. Analyzing the individual components of domestic private consumption, the Bank recognized especially automobiles and mobile phones share to rise significantly. Additional improvement one could see for example also in clothing sector. Similar effects could be noticed in exports of goods which was taken as an improvement in the global economy's recovery. Again, export expansion was led by cars and electronic devices, including especially significant growth in trade of communication equipment. Parallel to the increased domestic production capabilities there was an upward trend in commercial banks' loans especially to large companies. On the other hand, according to the report, also households were keen to make increased use of credits in the last twelve months, with the mortgage purposes in particular. As interest rates were maintained on relatively low levels, commercial banks decided to continue their policy of lending expansion[121].

With regard to global economy, hopeful and positive signals appeared as well. World markets seemed to remain on the recovery path and its effects would gradually recede the danger of renewal of the recession. As year before, the Bank of Korea recognized emerging economies, especially China, to best the most promising aspect for future growths. Chinese economy was supposed to keep its high growth in 2010/2011, even with appearing pressures for overheating the real estate market and arising inflation possibilities. The United States, although clearly less impressive than the case of China, also continued efforts to improve economic performance. With slow yet regular increases, *inter alia* in private consumption, it seemed that the biggest economy in the world was also on a positive track to leave the last recession completely. However, some issues were still problematic for the state's government and economists, including relatively flabby real estate activity and labor market circumstances with undesirable unemployment. In regard to the euro area, Bank of Korea identified previous year's continuation of preferably moderate recovery direction. In 2011 region's economic improvement became questioned when the markets were clearly concerned about the sovereign debt problems which took place in several countries. At the same time the Bank notices that severe events in Europe that happed at that time were kind of incentive especially for the local governments to develop greater fiscal policy which would go in favor of sound and transparent monetary policy of the whole European Union[122].

Detecting the issues presented above, the Bank of Korea emphasized in the 2011 report the fact that its further monetary policy would pay special attention to careful watch of market liquidity and eventual increase in rise prices. The hitherto relatively ease monetary policy would depend highly on the future circumstances yet it was becoming more evident at that time that inflationary pressures were about to enhance[123]. Therefore, precise direction of the monetary policy could not be provided at that time, as much was dependent on economic situation in the future both in global and domestic terms.

[121] Bank of Korea, *Monetary Policy Report. March 2011,* p.18-31, http://eng.bok.or.kr/broadcast.action?menuNaviId=628, accessed on 6.06.2014.
[122] Ibid., *Monetary Policy Report,* p.1-4.
[123] Ibid., *Monetary Policy Report. March 2011,* p.80-81.

As said, the monetary policy report of 2011 did not present any major changes in comparison to the same document from the year before. In 2012, however, this situation changed as some economic events in the meantime influenced eventually the whole global economy. At the beginning of 2012 the pace of economic recovery was seen to be clearly less evident than months ago. According to the Bank of Korea there were in fact many individual factors which combined created a strong challenge for the globalized economy. First of all, the problems related to public debt in Europe were not only unsolved but even enhanced. Beginning with 2011 some European countries and their economic policy had become a serious danger to the existence of the European Union. Although those states, such as Greece or Portugal, did not represent main economic force of the organization there was still growing concern that their troubles will spread on the other members which finally could put the EU existence in question. European issue, because of its economic size and significance, had automatically some effects on other regions. First of all, it was the psychological aspect which in fact plays an important role in economics. The Bank of Korea noticed that Eurozone problems were one of the main issues that boosted general uncertainty among global market participants in regard to economic environment. One way to explain that may be perhaps the perception of the European Union from the side of external observers. Beginning with the economic and political cooperation after the World War II many saw Western Europe as a leading example of mutual partnership and collaboration. Overtime, this concurrence not only deepened significantly, but also led to the creation of the biggest economic organization, overtaking even the United States themselves. However, after the Global Financial Crisis further performance of the EU was in peril. As explained earlier, in a modern globalized world there would be most likely serious results of potential collapse of the organization, which in fact are even hard to forecast. Nevertheless, despite psychological factor of EU turbulences, there was still an impact on the real economy. For instance, due to the European economic matters the emerging countries and their economies experienced relatively strong lessening of the growth pace. It was caused primarily by the declining export of goods and cut in domestic demand tendency. Furthermore, undesirable signals were coming from Japan's economy as a result of the Great East Japanese Earthquake which also influenced the condition of global trade. The Bank of Korea observed that China as well experienced somewhat lower level of growth in the last months which nevertheless still made it one of the fastest growing economies in the world. Among main economic regions, it seemed that only the United States improved its performance, comparatively to 2011[124].

In mid- 2012 South Korea itself was performing relatively less effective comparing to 2011 which was a similar case as the overseas markets. Beginning with late 2011 country's domestic economy productivity had slightly slowed which was seen as a result to external uncertainties and conditions, particularly in Europe. Exports and domestic demand – aspects which previously boosted economic growth – now caused that in some quarters GDP growth fell, as trade and private consumption ratios declined. For the Bank of Korea this was also a special case since private consumption trend recorded slump for the first time since early

[124] Bank of Korea, *Monetary Policy Report. April 2012*, p.3-6, http://eng.bok.or.kr/broadcast.action?menuNaviId=628, accessed on 7.06.2014.

2009. Having that in mind, the rising prices pressure in the whole 2012 was expected to ease, which was seen as a result of declining both external and internal demand due to general economic environment. However, high inflation expectations in a medium-term were still present and the Bank of Korea did not exclude further tighten of the monetary policy[125]. Therefore, comparing to 2011, 2012 was recognized by the Korean monetary authority as a year with enhanced challenges for domestic economy and its economic performance.

The Bank of Korea's last report which covers the dissertation's timeline came out in October 2013. Beginning with the assessment of the global economy, the Bank's representatives observed during 2012/2013 some visible improvements in markets' performance, comparing to the report from the year before. After gloomy and negative perception of economic environment in 2012 it was now possible to see gradual correction in many aspects especially among major advanced economies. While the United States' relatively well performance stayed the same as in 2012, it was the other major countries and regions that sent to the world more positive signals. For instance, the Bank of Korea noticed that over the last twelve months Japan made gradual progress when its pace of growth accelerated. Furthermore, difficult situation in Europe which was recently present due to debt problems seemed to be less risky for the European Union itself but also for the global economic environment. Still, on the other hand, at the same time there were countries especially among emerging ones which experienced slightly slower trend of growth. This situation could be noticed particularly in China and India, which according to the Bank of Korea were hit *inter alia* by lower internal and external demand[126].

Regarding domestic economic condition, the national monetary authority mentioned in the report that the country's economy was believed to grow faster, accelerating from the minor stagnancy before. Again, as previously, the Bank refers to the export which is believed to play an important role within the state's economy. Together with improving overseas markets and diminishing concern about the world's performance, especially among advanced economies, both demand at home and abroad was now gradually increasing and contributing to the growth in South Korea. In October 2013 the Bank's prospects for the domestic economy in the future were that clear recovery pattern which appeared at the beginning of the year will most likely be sustained. That should be supported by slowly yet steadily progress of an economic environment abroad, especially in the United States and Japan. Nevertheless, one should also remember about other factors that influence the global markets including especially Chinese market[127]. Having in mind arguments presented above it is possible to conclude that there was relatively positive perception of global and domestic economic condition in 2013.

[125] Ibid., *Monetary Policy Report. April 2012,* p.91-94, http://eng.bok.or.kr/broadcast.action?menuNaviId=628, accessed on 7.06.2014.
[126] Bank of Korea, *Monetary Policy Report. October 2013,* p.3-7, http://eng.bok.or.kr/broadcast.action?menuNaviId=628, accessed on 8.06.2014.
[127] Ibid., *Monetary Policy Report,* p.15-21.

3.2.1.2. Discount Rate

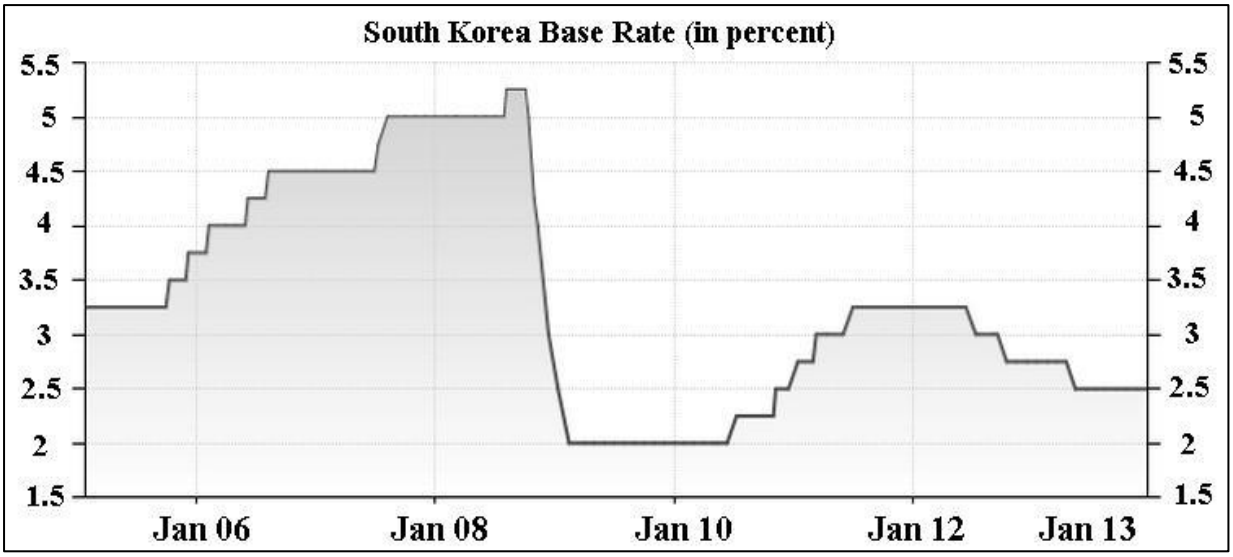


Figure 14. South Korea Base Rate. Source: Trading Economics, http://www.tradingeconomics.com/south-korea/interest-rate, accessed on 9.06.2014.

Figure 14. portrays South Korea's official base rate and its trends overtime from 2005 until 2014. Looking at the chart it is possible to see that during the dissertation's period of the analyze, between 2010 and 2013, the pattern of this particular monetary policy instrument's ratio changed frequently. In general, after initial often increases the index subsequently stayed on a given level over some time and eventually proceeded with declining pattern and stayed that way till the end of 2013. Now, having in mind the economic environment assessments provided by the Bank of Korea and presented in the previous section, short examination of possible correlation between those and basic rate will be shown.

As mentioned before, 2010 was believed by the Bank's governors to be the early phase of the economic recovery after the Global Financial Crisis 2008-2009. Although there were signs coming from both global and domestic markets about increasing economic activities, it was very presumably that majority of market participants, including public and private sectors, was still seriously concerned about possible return of the recession. The relatively low level of the basic rate in 2010, comparatively to the last years, might suggest that the national monetary authority was keen to decrease the cost of money in the economy. This was probably seen as one of the ways to encourage respective institutions to expand their credit policy and therefore give incentives, in example, to create new investments. Yet since the around the middle of 2010 the Bank of Korea decided to gradually increase the rate from the initial level of 2%. There could have been in fact numerous premises to adopt such steps yet one aspect could be decisive in that situation – potential inflationary pressures. Taking a look at the figure and analyzing the basic rate before 2010 we can see that the level of 2% present in late 2009 and early 2010 was a significant change in comparison to the previous 2005-2009 standard. A resolve of keeping the ratio at relatively very low level in order to boost economy could on the other hand lead to accelerate the increase of prices which would potentially bring monetary instability within the economy. Recognizing that threat together with assessing the global economic condition it could be reasonable for the Bank to rise the base

rate and try to reduce danger of economy's overheating. The process of rising the base rate and therefore increase the cost of money borrowed from the monetary authority kept going until around the middle of 2011. Over that time, in less than eighteen months, the Korean official base rate rose from the primitive level of 2% in early 2010 to 3.25% in the second half of 2011. After reaching the maximums the discount rate remained subsequently unchanged for about twelve months. In June 2012, however, the Bank of Korea decided again to pursue easy monetary policy as the rate began to decrease in the next months.

Having in mind the Bank's manipulation of the rate together with the monetary policy reports and their economic assessments it would be possible to suspect that the fluctuations of the indicator closely followed the global and domestic economic circumstances present at that time. The first two years after the crisis – 2010 and 2011 – were generally seen by the Bank's representatives as rather positive time in regard to economic performance of South Korea and overseas markets. There were naturally aspects which supported the monetary leadership with some concerns yet there were preferably minor and not serious issues, comparing to general economic condition. With improving economic environment it seemed reasonable for the Bank to take such steps which would provide stability on the markets and prevent them from overheating due to i.e. inflation. In such case, increasing the base rate would be an option to adjust monetary policy to specific economic circumstances that happened back then. Nevertheless, as it was reported in the monetary policy notification from April 2012, since the late 2011 softly and beginning with the next year somewhat more firmly, the recovery pace in the individual regions of the globe started to slow down. A number of minor reasons lead to relatively poorer economic performance at that time, yet all together they were able to influence the markets all around the world, including South Korea. Recognizing the issue, the Bank of Korea's concerns regarding sustained economic growth in the future could be reasonable and become a prerequisite to provide easier monetary policy, through i.e. reducing of the base rate. And so, beginning with June 2012 the country's monetary authority decided to lower the rate partly in the following months from the initial level of 3.25% to final 2.5% at the beginning of 2013. Eventually, that position remained till the end of the year.

3.2.1.3. Reserve Requirements

The reserve requirement system is another tool used by the Bank of Korea to conduct monetary policy. According to the Bank's information presented on the official website, the monetary institution "…*can adjust liquidity in the markets and promote financial stability by changing financial institutions' funding through adjustment of the reserve requirement ratio"*[128] . At the same time it seems that in the last decades its usage has somewhat decreased and been substituted with other instruments. It is said that "*reserve requirements are still regarded as an important monetary policy tool in a number of major countries including Korea, although used less frequently than in the past as the monetary base-focused orientation of monetary policy has shifted to an interest rate-focused orientation around the*

[128] Bank of Korea, *Reserve Requirements,* http://eng.bok.or.kr/broadcast.action?menuNaviId=1907, accessed on 10.06.2014.

world from the 1980s"[129]. Nevertheless, the instrument is still mentioned among other monetary policy instruments of Bank of Korea and, as will be shown, is taken into consideration while conducting economic policy.

Initially, a certain issue should be explained before going more detailed into the subject. In case of South Korea's reserve requirement the problem appeared to be in access to and reliability of individual sources. The data presented in this section base primarily on information coming from the official websites of Bank of Korea, The Korea Herald, and The New York Times. If the first source one could recognize as solid and rather credible, some doubts may however appear in regard to the last two of them. Although both The Korea Herald and the New York Times allegedly refer to information coming directly from the Korea's monetary institution, their veracity can be still questioned by some. In general, most recent data (for 2013) come from the Bank of Korea, while historical data presented below have their origins in respective articles of Korea Herald and The New York Times[130]. Nevertheless, I had decided to use them as sources for the dissertation because, as I believe and will try to prove, those information are still consistent, rational, and in accordance with the Bank's database.

As already explained earlier reserve requirement tool and manipulation of the ratio is nowadays used relatively rarely. Therefore while analyzing the period of 2010-2013 it is once again necessary to step slightly beyond those years and examine the policy in the previous months.

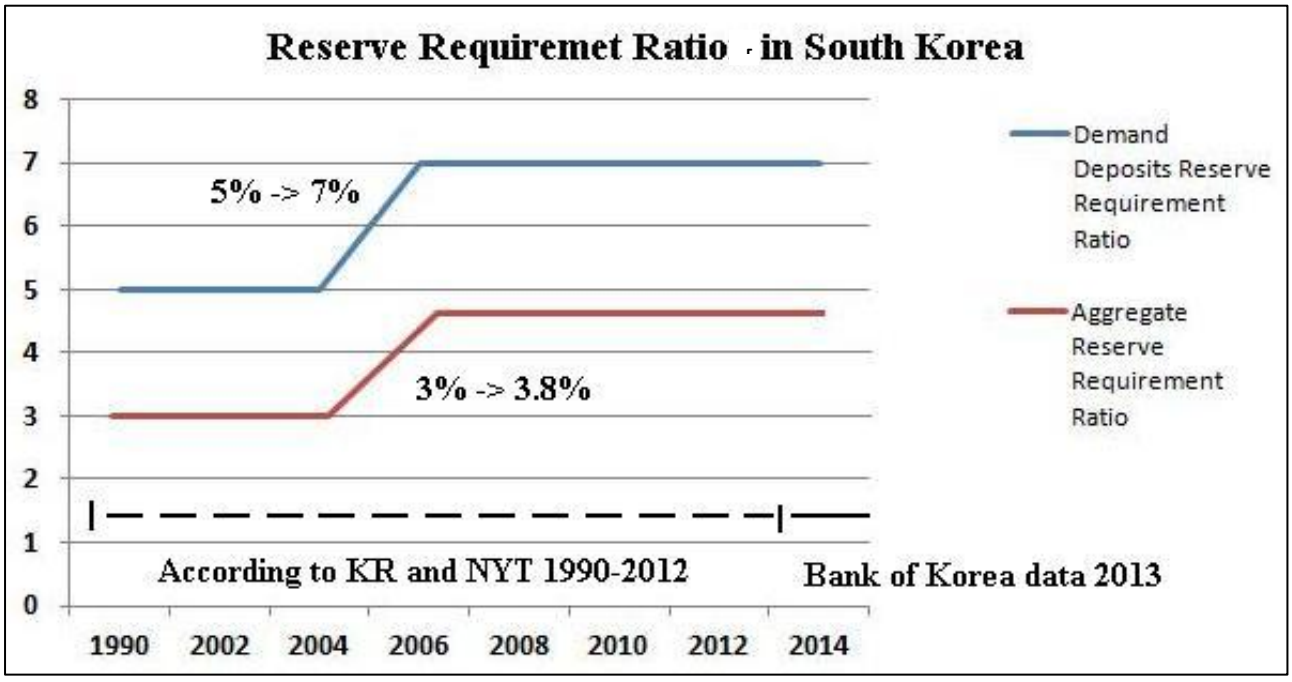


Figure 15. Reserve Requirement in South Korea. Source: Bank of Korea, The Korean Herald, The New York Times.

[129] Ibid., accessed on 10.06.2014.

[130] Yang Sung-jin, *BOK mulls hike in bank reserve requirement.* The Korea Herald, January 9, 2012, http://www.koreaherald.com/view.php?ud=20120109000889; Choe Sang-Hun, *Central Bank of South Korea moves to curb lending,* New York Times, November 23, 2006, http://www.nytimes.com/2006/11/23/ business/ worldbusiness/23ihtbok.3641970.html?_r=1&, accessed on 10.06.2014.

Figure 13. portrays reserve requirement rate in South Korea. The graph's timeline has been divided on two parts; first consists of period 1990-2012, which states for the information about the index provided by The Korean Herald and The New York Times, and second part including 2013 with Korean monetary authority's official evidence. Having that in mind, the data present as follows.

In the dissertation's period of the analyze 2010-2013 the Bank of Korea maintained the level of the reserve requirements on a stable, unchanged level of 3.8% in aggregate terms and 7% for demand deposits. Those levels were actually kept since 2006, so in advance to the Global Financial Crisis. Before that point levels the of aggregate reserve ratio and demand deposits reserves requirement were at 3% and 5% respectively, following the information provided by the Korean Herald and New York Times. If for 2013 we assume the Bank's information to be truthful and reliable, for 2010-2012 it is necessary to base on the two other mentioned sources. However, in this case there are arguments which support combination of various sources. Firstly, as explained earlier, reserve requirement ratio is an instrument which fluctuates rather rarely, counting in years or even decades. If the shift of the indicator was in 2006 it is therefore very remote that another modification would happen in the near future, between 2007 and 2013. The previous phase of one and steady reserve requirement rate lasted nearly 17 years and was between February 1990 and 2006 when the aggregate reserve rate stayed on the mentioned level of 3% [131]. Secondly, data and level of the indicators provided by all the sources meet and fit precisely at one point in March 2013, as the official Bank of Korea information is dated. When in January 2012 The Korea Herald said that "*The BOK raised the average cash reserve ratio from 3% to 3.8% in 2006. Since then, it has not opted to use the tool as it used rate-setting monetary policy to achieve its target inflation growth"*[132], it can be concluded in total with the Bank of Korea data, that no change of the reserve requirement ratio in fact took place between 2006 and 2013.

Summarizing, the reserve requirement monetary policy tool did not record any changes during the dissertation's researched time of 2010-2013. The aggregate level of 3.8% was maintained since 2006, after the previous increase from 3%. 2006 was already a time of incoming signals about increasing economic turbulences based on toxic assets, and manipulation of the reserves ratio at that time could be a monetary authority's way to support the liquidity of the commercial institutions and therefore to provide higher stability of the whole financial system. As already said, this particular monetary instrument has been of smaller usage in South Korea in the last decades. Consequently, also still accounted to one of the main tools while conducting the monetary policy, it could be substituted by other, for example more monetary base- oriented, economic strategies.

[131] Choe Sang-Hun, *Central Bank of South Korea moves to curb lending,* New York Times, November 23, 2006.
[132] Yang Sung-jin, *BOK mulls hike in bank reserve requirement.* The Korea Herald, January 9, 2012.

3.2.1.4. Summary

Chapter 2.2.1. presented selected issues of monetary policy in South Korea after the Global Financial Crisis between 2010 and 2013. The purpose of the section was to identify the direction of the monetary policy with two options possible: purse of increasing money supply in the economy (easy monetary policy), and pursue of decreasing money supply in the economy (tight monetary policy). However, after presenting individual matters – assessment of the economic environment, base rate, and reserve requirement – choosing one option only could possibly lead to false results and would not fully reflect the actual situation in South Korea. Namely, between 2010 and 2013 the country's monetary authority took actually steps to conduct both relatively easy and tight policy at various points, most likely adjusting to the timely economic circumstances explained in the respective monetary policy reports from individual years. No universal monetary policy could be noticed especially while looking at the trend of the base rate which experienced upward trends until 2012 and subsequently returned on somewhat lower levels, being close to the ones from beginning of 2010. Therefore, the direction of the monetary policy in South Korea 2010-2013 can be defined as mixed, having both characteristics of easy and tight policy.

3.2.2. Macroeconomic Performance

3.2.2.1. Economic Growth

Economic Growth in South Korea					
	2009	**2010**	**2011**	**2012**	**2013**
Real GDP (Won, billions, base year 2005)	981,625	1,043,666	1,082,095	1,104,213	1,134,853
Nominal GDP current prices (Won, billions)	1,065,036	1,173,274	1,235,160	1,272,459	1,337,781
GDP % change	0.3	6.3	3.6	2.0	2.7
GDP based on PPP per capita (current inter. $, thousands)	27.5	29.4	30.9	31.9	33.2
GDP per capita constant prices (Won, thousands)	19,959	21,122	21,737	22,082	22,597

Table 9. Economic Growth in South Korea. Selected indicators. Source: IMF, http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx, accessed on 11.06.2014.

Table 9. presents selected indicators of economic growth for South Korea between 2009 and 2013. Measured by GDP and its respective derivatives, country's economy was generally expanding during all those years. The economic growth was experienced permanently both in real and nominal terms, although its pace differed in the individual years. In regard to percentage change of GDP, South Korea had sluggish 0.3% growth in the last year of the crisis 2009 yet since then the same indicator rose in the next years and reached 6.3% - record growth in 2010 and subsequent relatively lowest 2% growth in 2012. The upward trends one could see at the same time with GDP *per capita* indicators expressed in the national currency and international dollar. Between 2009 and 2013 the index measured by international dollar increased from the initial level of 27,500 to more than 33,000. Same pattern referred to the indicator expressed in national currency - won – where in the meantime GDP *per capita* increased from 19.9 million won to 22.5 million won.

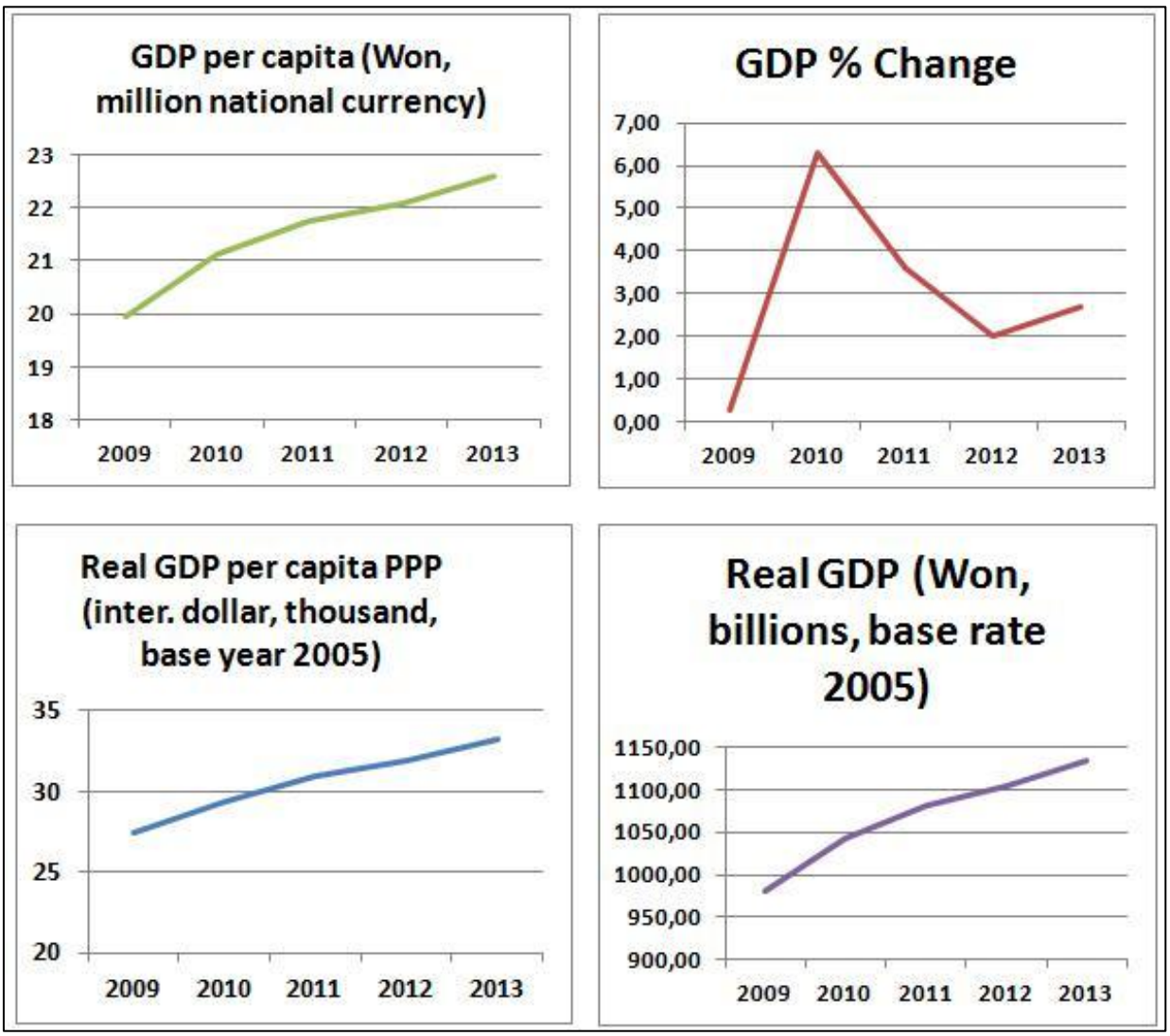


Figure 16. Economic growth in South Korea. Selected indicators. Source: IMF, http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx, accessed on 11.06.2014.

Presented data and charts portray that South Korea was able to experience, although with different force, an economic growth in the following years after the Global Financial Crisis (figure 16.). Having in mind monetary reports of the Bank of Korea, economic environment both in global and domestic terms was not necessarily favorable during the time which makes this aspect of the country's performance even more impressive. Although in 2010 and 2011 the Bank was rather positively evaluating the global and national economic condition which favored the post-crisis recovery, it was the year 2012 where some increased concerns appeared about future performance and efficiency of markets. Nevertheless, with those circumstances South Korea could still experience positive economic growth of 2% and avoided going into recession, despite some disadvantages for world's economy including European debt problem and weaker growth in China. 2013 was continuation of the recovery with the result of 2.7% growth on year-on-year basis and other rises of GDP index's derivatives.

3.2.2.2. Inflation

The Bank of Korea base rate and its pattern presented in the previous chapter might suggest that price level fluctuated relatively strongly overtime between 2010 – 2013. The Bank, similarly to other monetary authorities, adopted inflationary target for its monetary framework and policy. According to the institution, this target is set as a medium-term objective, for three years period, after consultation with the government[133]. However, the Bank of Korea target varied during the dissertation's time framework and was modified between 2010 and 2013. Consequently, the values set by the Bank's governors were as follows:

- 2010 – 2012 – inflationary target of 2% to 4% change of CPI (year-on-year)[134]
- 2013 – (2015) – inflationary target of 2.5% to 3.5% change of CPI (year-on-year)[135]

The price stability target is actually a main goal of Korean national monetary authority. The Article 1 of the institution's main statute clarifies that "*The Purpose of this Act* [Bank of Korea Act] *shall be to establish the Bank of Korea and to contribute to the sound development of the national economy by pursuing price stability through the formulation and implementation of efficient monetary and credit policies"* and that "*The Bank of Korea shall pay attention to financial stability in carrying out its monetary and credit policies"*[136]. Recognizing the importance of price stability in South Korea inflation issue will be now presented.

[133] Bank of Korea, *Inflation Targeting,* http://eng.bok.or.kr/broadcast.action?menuNaviId=1612, accessed on 13.06.2014.

[134] Eunkyung Seo, *South Korea Inflation Rate Rises to Two-Year High,* Bloomberg, March 2, 2011, http://www.bloomberg.com/news/2011-03-01/south-korea-inflation-rate-rises-to-two-year-high breaching-bok-s-target.html, accessed on 13.06.2014.

[135] Bank of Korea, *Inflation Targeting,* accessed on 13.06.2014.

[136] Bank of Korea, *Bank of Korea Act*. *Article 1*, http://eng.bok.or.kr/broadcast.action?menuNaviId=824, accessed on 13.06.2014.

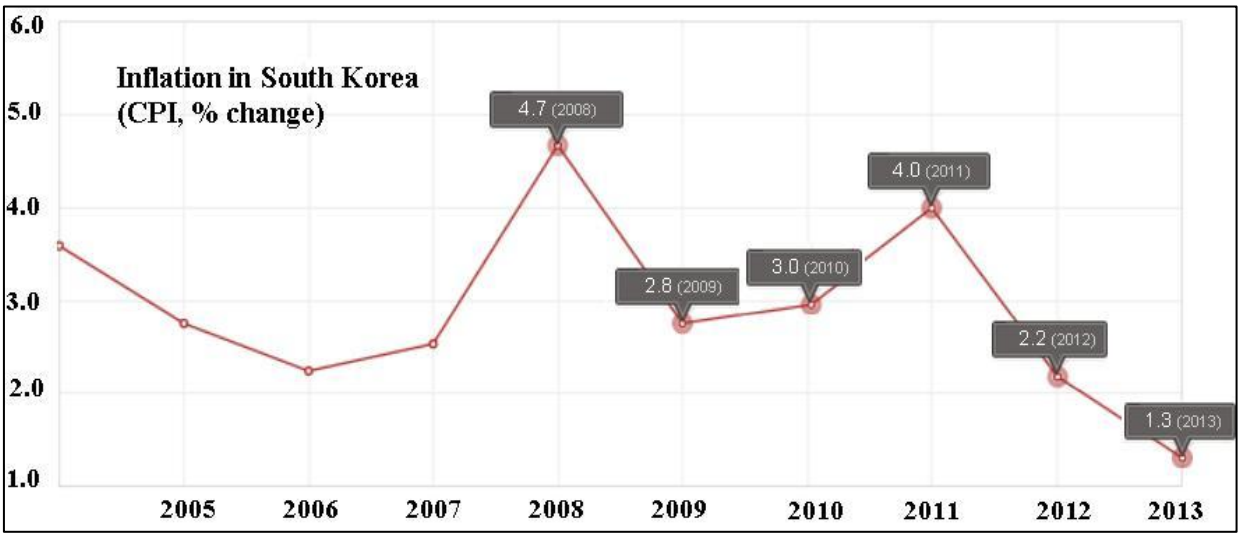


Figure 17. Inflation in South Korea. Source: World Bank, http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG/countries/KR?display=graph, accessed on 13.06.2014

As suggested before, the price level in South Korea was clearly changing in the individual years between 2010 and 2013 (figure 17). In case of first inflationary target period 2010-2012 with the goal set to 2% to 4%, the inflation rate initially was at the level of 3% and 4% (2010 and 2011 respectively) . In the following year 2012, however, the altitude of the ratio decreased expressly to only 2.2%. Year 2013 as a second phase of the time framework with updated inflationary target to the range between 2.5% and 3.5%, was a continuation of the downward trend which began in 2012, with the result of 1.3% on year-on-year basis.

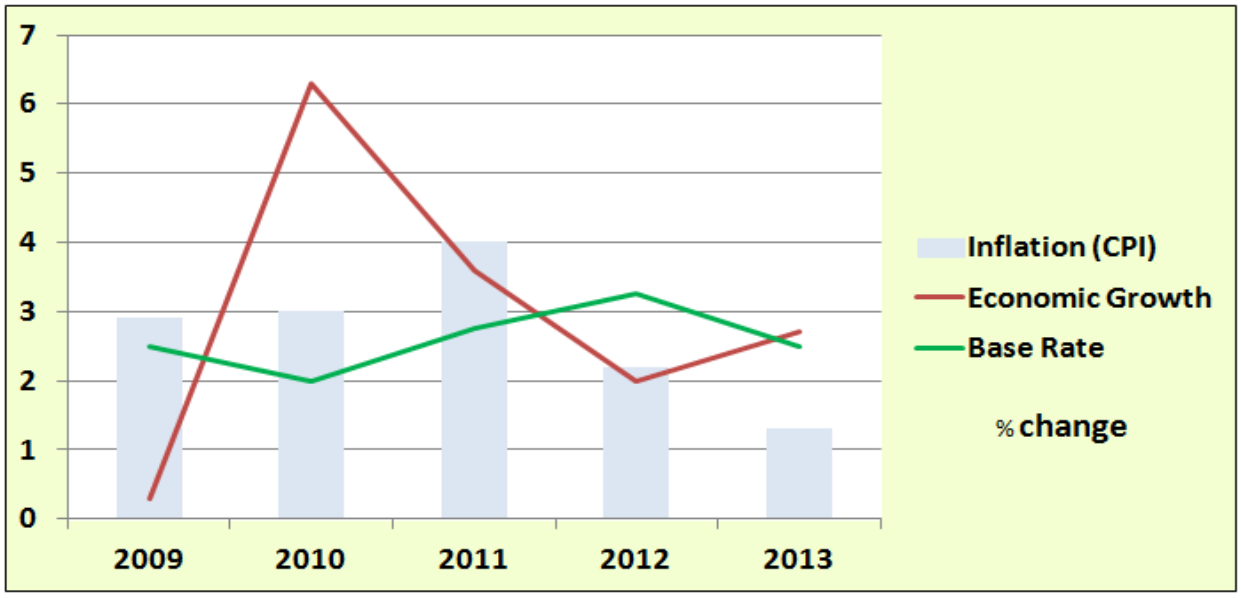


Figure 18. Selected economic indicators of South Korea. Source: World Bank, Trading Economics.

Figure 18. presents combined indicators of inflation, economic growth (GDP) and Bank of Korea's base rate between 2009 and 2013. An interesting aspect in this case could be the possible mutual correlation that appears between individual indexes. For instance, at the beginning of the dissertation's analyzed period in 2010-2011 the economic growth measured by GDP percentage change was relatively high, comparing to nearly stagnated year 2009. At the same time inflation in South Korea was rising and reached 4% in 2011. It is possible that

increased economic activity which appeared in the early post-crisis recovery period influenced the overall price levels and somewhat accelerated the inflation. Parallel, the Bank of Korea recognized the inflationary pressures and decided to gradually rise the base rate, probably in order to cool down the pressures. Yet because the effects of shifting the base rate show up with some delay its impact was believed to already come in the following months. Looking at the graph, this actually happened in 2012 and 2013 as all the indicators were changed in regard to the 2010-2011 levels. On the one hand the economic growth slowed down significantly and remained under 3%, where inflation also decreased visibly to only 1.3%. Monetary policy of the Bank together with other factors of domestic and global economy made the country's national economy growth to slow down. This, in turn, could reduce the inflationary pressures and lessen the increase of CPI rate. Simultaneously, the monetary authority which now was aware of weaker inflation could again lower the base rate and take most likely other steps that lead to bring down the cost of money and increase its amount in the economy. By doing that, the Bank could boost the economy in the future.

Summarizing, the Bank of Korea inflationary target was reached during most of the time of 2010-2013. Inflation rate change, measured by CPI, was indeed diversified in the particular years yet at the same time it remained generally in range of which was previously set by the monetary authority. In 2013 exclusively this trend was broken, as the inflation dropped to the level of 1.3% when the range was expected to be between 2.5% and 3.5%.

3.2.2.3. Unemployment

The last aspect of the analyze of macroeconomic performance is unemployment. In case of South Korea the monetary authority does not refer directly to setting the unemployment rate on one, desirable level. Yet because the matter of "*sound development of the national economy"* can be actually broadly interpreted it may include the question of unemployment as well, which in fact also undoubtedly influence the overall macroeconomic performance of the state. Still, because no exact rate has been defined by the monetary institution itself, the paper's assumption is that the lower the unemployment rate is, the better. It is a very general approach to the issue. Still, in the situation of no official framework provided by the Bank and knowing the characteristics of unemployment question in the free market economy this way seems to be rational while using the data for the comparative research with other country.

	2009	2010	2011	2012	2013
Unemployment Rate (%)	3.6	3.7	3.4	3.2	3.1
Employment (millions of people)	23.50	23.82	24.24	24.68	25.06
Population (millions)	49.18	49.41	49.77	50.00	50.22

Table 10. South Korea Selected Indicators. Note: light blue cells include estimated data. Source: IMF, http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx, accessed on 14.06.2014.

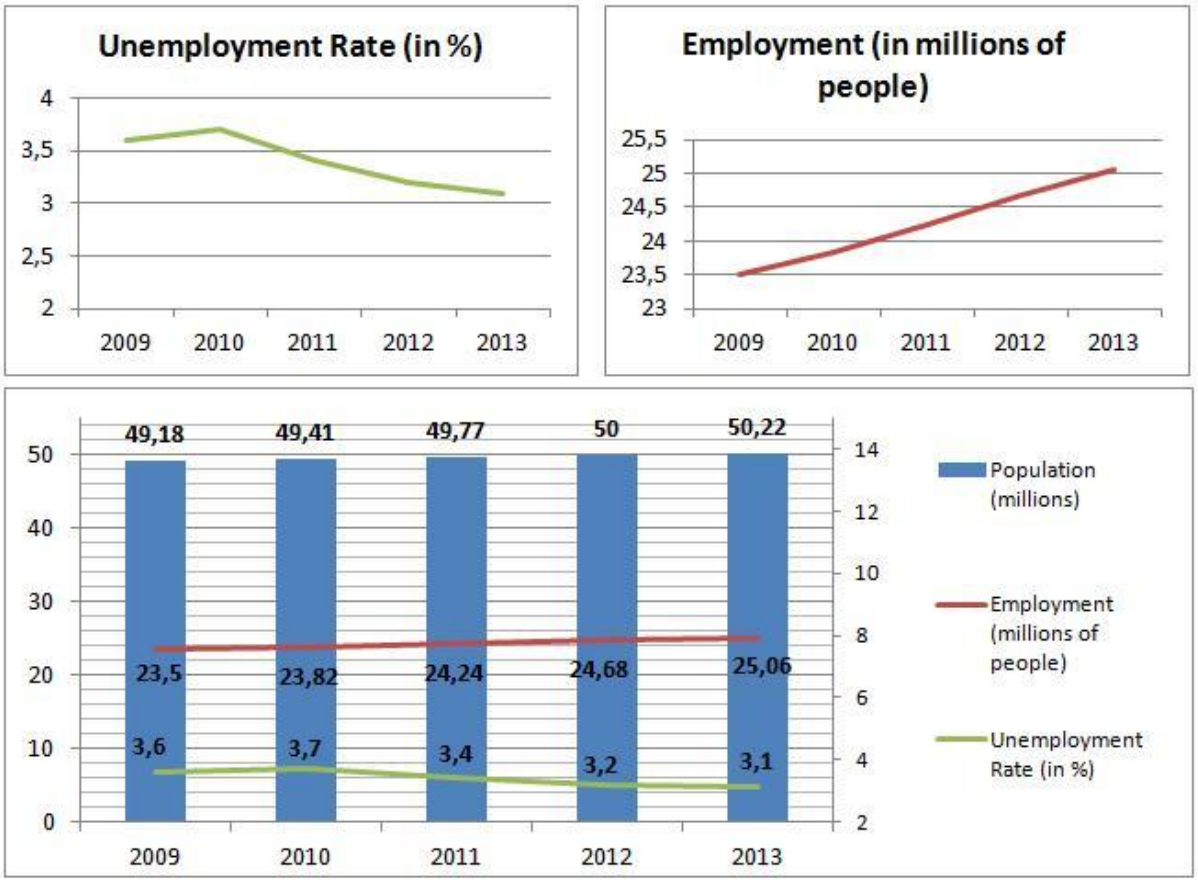


Figure 19. South Korea selected indicators. Source: Own graph based on IMF data.

Table 10. and figure 19. present the information regarding selected indicators for South Korea. According to the International Monetary Fund between 2010 and 2013 the number of people which were classified as unemployed was dropping each year. In 2010 the value was highest and reached 3.7% whereas the following years presented 3.4%, 3.2% and 3.1% (2011, 2012, and 2013 respectively). Assuming that the natural rate of unemployment in the free market countries should oscillate around 2% we can say that with the result of 3-4% South Korea was performing relatively well at this time, having in mind especially the specific post-crisis environment. However, the this index looks even more impressive if we take into account other aspects which influence matter as a whole. Namely, despite permanently decreasing unemployment ratio, the number of people employed was rising at the same time. The previously unemployed workers probably found a job and became now employed. It is crucial because it suggests that instead of leaving the labor force group and therefore stopped being counted as unemployed those people were determined to keep looking for a job and finally found it. In a result, they not only contributed to decrease the unemployment rate, but also increased the overall number of employees in the country. Furthermore, also population of South Korea had been gradually rising between 2010 and 2013. Following the IMF, over those four years the population of the country rose approximately by 1 million people, although the data for 2012 and 2013 present only estimated values. Nevertheless, looking at the issue and having in mind other aspects – state's population, total employment, and natural unemployment rate – one could say that Korea's unemployment rate was at rather low level during that time. With the post- Global Financial Crisis disputable economic circumstances, the country managed to keep the rate at level close to the natural rate of 2%, which as presented in the theory part, was considerable.

4. Comparison of Japan and South Korea

As explained previously in the methodology part, this chapter's purpose is to compare the selected monetary and macroeconomic issues of Japan and South Korea. In chapter 3. chosen matters have been picked up and presented separately in regard to the two East Asian countries. Now, those both cases will be set together. In a consequence, one will be able to see and compare the economic performance among the two states after the Global Financial Crisis. It was already said earlier that due to some difficulties and general discord in regard to exact time framework it has been assumed that the most recent global recession ended in 2009. Therefore, the "…*after the Global Financial Crisis"* term that is a part of the dissertation's main topic refers in fact to four years between 2010-2013. In such case, comparison of the selected issues will be based on the data coming from those years exclusively.

4.1. Monetary policy

4.1.1. Assessment of the economic environment

Comparison of Japan and South Korea will be started with monetary policy issues and being more precise, with an assessment of the economic environment. In the previous chapter it was shown that between 2010 and 2013 the countries' national monetary authorities were regularly publishing special reports and statements, in which economic situation both in global and domestic terms was presented and analyzed. The *Outlook for Economic Activities and Prices* in Japan and *Monetary Policy Report* in South Korea included information referring to the most recent time on the global markets and described particular chosen aspects of economic state of affairs. Furthermore, both Bank of Japan and Bank of Korea, the institutions that stood behind those reports, tried not only to briefly summarize the world's economy of the last couple of months, but also presented possible predictions of potential future events. Taking into account the hitherto occurrences and combining them with virtual risks that may take place in the short-term, the two monetary authorities often made attempts to create various scenarios which could develop afterwards. As it will be shown later in some cases the both institutions' assessments from the given time were relatively similar, whereas at some points the they presented rather different perception of the same topic. Moreover, it did happen as well that for one country a given matter was of big importance, while the second state barely paid attention to that problem and sometimes even did not include it in the assessment reports at all.

Having that in mind, comparison of the assessments and perception of the economic environment should help to illustrate and visualize the main aspects that the monetary authorities of Japan and South Korea paid attention to. One may argue that the reports of *Economic Outlook* and *Monetary Policy* give only general picture of the issue. Still, using the statement's concise data we may specify the matters that according to the monetary institutions were worth mentioning in the rare-published reports and therefore undoubtedly made an impact on the monetary policy and macroeconomic performance.

Assessment of the national and international economic and related matters. Comparison of key points from the central banks' perspective.		
	Japan (Bank of Japan)	South Korea (Bank of Korea)
2010	• Global markets' gradual yet slow economic recovery since the Global Financial Crisis • Japan: Anxiety about high public debt, weak credit market both in the country and abroad and adverse demographic changes, deflationary pressures • Concern about economic situation in Europe and United States, especially financial sector and private-demand • Mutual distrust among market participants, potential troubles in emerging economies, followed by general uncertainty on the markets	• Economic recovery after the Global Financial Crisis, rather positive impression of the mid-2009 – mid-2010 global and domestic performance • Still, diversified pace of the upward trend; East Asia as a leading region, followed by the United States, Japan and Europe • Relatively favorable condition of domestic economy, improving of the economic activity • Continuously present uncertainty about the future growth both in global and local terms
2011	• Great concern on domestic market regarding the earthquake and its consequences: downward pressures on economic activities, Fukushima accident issue, uncertainty about future progress, continued deflation • Still weak recovery in Europe, sovereign debt problem of continent's peripheral states • Continuously growing issue of public debt in world's advanced economies	• World: Comparatively stable continuation of the economic recovery after the crisis • Concern about sovereign public debt in some European countries • South Korea itself followed the positive trend of economic expansion (particularly export) • Signals of inflationary pressures in domestic economy, easy monetary policy in the future questioned.
2012	• Japan's relatively stable economic condition and reconstruction after the Great East Japanese Earthquake • Pursue of easy monetary policy in the following months, due to negative inflation • Expectations for Japan's higher economic growth in 2012 • Enhanced general debt problem in Europe, particularly in Greece, Portugal or Ireland • Continuously recovering economy and markets in the United States	• Enhanced concern about economic turbulences in Europe, related to sovereign debt problem • Somewhat slower growth rates among most of the major economies, including Eurozone and China; on the other hand – US performing well • Somewhat bigger concern about the pace of economic growth in the future • South Korea's performance follows the global trends; economy's growth is believed to be slower for the total 2012
2013	• Continued recovery and back on the growth paths after the global recession both in Japan and overseas economies • Continuation of domestic monetary policy and inflation goal • Although not complete, yet significant decrease of European public debt issue, comparatively to the last years • Improved expectations in regard to future economic environment	• Improved economic situation and condition of global markets, especially in major economies, comparing to 2012 • The peril of European debt problem diminished • South Korea's economic growth expected to accelerate, especially due to promising signals regarding external demand • General positive perception of future global and domestic situation

Table 11. Assessment of the economic environment. Key points of Japan and South Korea. Source: Own table.

Year 2010 is considered to be the first year of the post-crisis period. Although the most severe impact of the global recession had already disappeared at that time, 2010 was still highly marked by the unfavorable economic circumstances that had happened in the last two or three years. Nevertheless, both Japan and South Korea's monetary authorities recognized that their economies entered the recovery track and now tried to step on the new growth-path. At the same time, however, the perception of the recovery trend itself, especially in regard to its pace, varied among the two East Asian states. Looking at the Japan's *Economic Outlook* statements and South Korea's *Monetary Policy* reports it seems that the second state was somewhat more positive about the post-crisis recovery process. The Bank of Japan's representatives noticed that although there were incoming signals of growing economic activity at this particular time, yet the speed of that phenomenon was still quite modest and gradual. On the other hand, the Bank of Korea's governors presented restrainedly more positive impression of the recovery around 2009/2010 months and that referred both to global and domestic economy. Another common thing that was mentioned in the two economic assessments was the point of unequal and irregular pace of particular region's improvement. For instance, both Japanese and Korean monetary authority initially paid attention to the European markets which were believed to struggle especially strongly with the consequences of the crisis. Eventually, the last aspect that appeared to be common for both countries in regard to 2010 was the general uncertainty present at this point on global markets. Bank of Japan and Bank of Korea were aware that in such short time after the recession many still presented strong distrust and mutual suspiciousness regarding other market participants. With those circumstances, continuation of future economic progress and improvement could slow down or, what's definitely more undesirable, stop at all.

Key economic issues in 2010		
Japan	**South Korea**	**Common (Japan and South Korea)**
• Anxiety about high public debt • Adverse demographic changes within the society • Deflationary pressures in the national economy	• Relatively favorable condition of domestic economy	• Entering the recovery path • Uncertainty regarding future growth • Diversified pace of the upward trend in the individual world's regions

In the following year of 2011 the differences in assessing the economic priorities for both countries were clearly bigger than in 2010. For Japan one of the biggest concern appeared to be the Great East Japan Earthquake which caused significant damages on various levels to the national economy. In a consequence, the world's third biggest economy at that time was forced to *inter alia* struggle with strong downward pressures on economic activities within national markets and deal with the results of the Fukushima nuclear power plant disaster. There was also a continuation of deflation process which was in opposite to the monetary goal which had been set by the monetary authority. Eventually, the Japanese governors were aware of an extremely high level of the sovereign public debt which was also an important psychological aspect. The Bank of Korea's governors, however, recognized at

the same time relatively stable continuation of the economic recovery after the crisis. What's meaningful is that this statement was referring not only to the domestic market, where the expansion of export was a crucial factor but also generally to the situation in the world. Parallel, nonetheless, the Bank's representatives began to receive first signals regarding inflationary pressures within the Korean economy. In such case, easy monetary policy that was recently in favor was now somewhat questioned. Keeping the cost of the money on the very low levels and further increasing the money supply could lead to overheating of the economy and provide number of negative effects. Despite mentioned differences in perception of key economic issues between the two countries, there was also a matter that both central banks referred to in their economic reports from 2011. Namely, both Bank of Japan and Bank of Korea paid attention to the mulifactorial unfavorable economic circumstances, especially the sovereign debt points in some European countries. In general, the recovery of the whole continent was going rather sluggishly yet some so-called *peripheral* states including Greece, Ireland or Portugal were particularly in an adverse situation. Although their economic share was relatively small in overall European and global economy, the problem in this case was a potential chain effect that could take place afterwards. Some believed that the debt matters of these small economies could spread onto other European Union members which represented the core of the institution. In a worst scenario the debt virus could even lead to collapse of the European organization. Eventually, it would possibly create a tremendous impact on the whole global economic structure, influencing East Asian countries as well.

Key economic issues in 2011		
Japan	**South Korea**	**Common (Japan and South Korea)**
• Concern regarding the Great East Japan Earthquake and its consequences • Rather negative perception of short-term economic growth • Continuously growing issue of public debt in Japan and other advanced economies	• Rather stable continuation of the recovery after the crisis (both in global and domestic terms) • Incoming inflationary pressures within the national economy	• Concern in regard to the economic recovery in Europe, especially due to sovereign debt problems

While taking a look at year 2012 and individual economic assessments presented by the Japanese and Korean monetary authorities one would probably see that the roles slightly changed over the last twelve months. If in 2011 it was Korea that had relatively better perception and predictions regarding future events among the two compared East Asian states, in 2012, on the other hand, it seemed that Japanese economists were somewhat more positive with their statements. According to the country's monetary authority, Japan was now experiencing relatively stable economic condition which was primarily caused by the consequent reconstruction of the state after the memorable earthquake from the year before.

Additionally, the Bank of Japan was keen to purse the easy monetary policy which was believed to be one of the answers to the negative inflation. Finally, expectations regarding the economic growth on year-on-year basis were now higher as the state's economic activity was gradually increasing. In opposite to that stood South Korea. After very promising economic growth in 2010 and 2011 the pattern of the indicator continued to decline, which was supposed to be *inter alia* an effect of global trends. In fact, it were the statements regarding the world economy that appeared to be a common thing in the assessments provided by the two East Asian monetary authorities. Bank of Korea as well as Bank of Japan recognized the enhanced economic problems in Europe. The continent's markets were supposed to keep struggling with the sovereign debt issues, as some countries were in face of going bankruptcy. At the same time, according to the Japanese and Korean monetary governors, there was also the world's biggest economy – the United States – that comparing to the other regions was performing relatively well. Still, it seemed that global economic growth in total would gently slow down in 2012, as many factors influenced negatively a number of regions in the globalized world's economy.

Key economic issues in 2012		
Japan	**South Korea**	**Common (Japan and South Korea)**
• Stable economic condition and reconstruction after the 2011 earthquake • Possible higher economic growth in 2012 • Pursue of easy monetary policy	• Possible slower growth of national economy • Concern regarding future economic trends	• Enhanced worry about the European states and their debt problems • Recognized relatively well performance of the US • Doubts regarding sustainability of the global growth

Year 2013 is the last of the twelvemonth that is going to be considered in the dissertation's analyze. Similar as before, this year brought changes in assessing the economic situation by the monetary authorities. This time, however, both countries seemed to have much more in common while presenting their statements. First of all, Japan as well as South Korea noticed a significant improvement in dealing with the debt issue within some European countries. Although the danger and circumstances of an excessive debt levels were not resolved completely, clear progress was made by the European states in order to solve that particular issue. Furthermore, despite Europe, also other regions in the world were expected to perform relatively better than in 2012. For Japan and South Korea, as for strongly export-oriented economies, it was indeed very promising message. Finally, general perception regarding world's economy and its performance was now visibly favorable. It seemed that the global economy, although being still rather close to the most painful time of the Global Financial Crisis, was able to stepped firmly on the path of the recovery and began to experience new gradual growth which should shortly leave the last recession behind. Consequently, both East Asian countries had back then higher expectations of their own economic growth on year-on-year basis. Moreover, the predictions for the future economic circumstances also evolved to be now more promising, as still few years ago.

Key economic issues in 2013		
Japan	**South Korea**	**Common (Japan and South Korea)**
• Continuation of easy monetary policy and inflation goal • Possible higher growth as year before	• Country's economic growth expected to accelerate on year-on-year basis	• Reduced peril of the European debt issue • Improved economic condition of global markets, especially in major economies • Basically positive and promising perception of future economic circumstances both in global and domestic terms

4.1.2. Discount rate

Another content of the research paper's main analyze is the discount rate question. In this subsection I will compare the performance of main base rate in Japan and South Korea between 2010 and 2013. Although this particular monetary policy instrument is only one among many others, its importance in the last decades increased, giving it sometimes even priority while forming the monetary policy. Having said that, one should keep it mind that the base rate changes have usually valid impact on the general policy direction of the country's monetary authority and can subsequently determine the economic performance of the state.

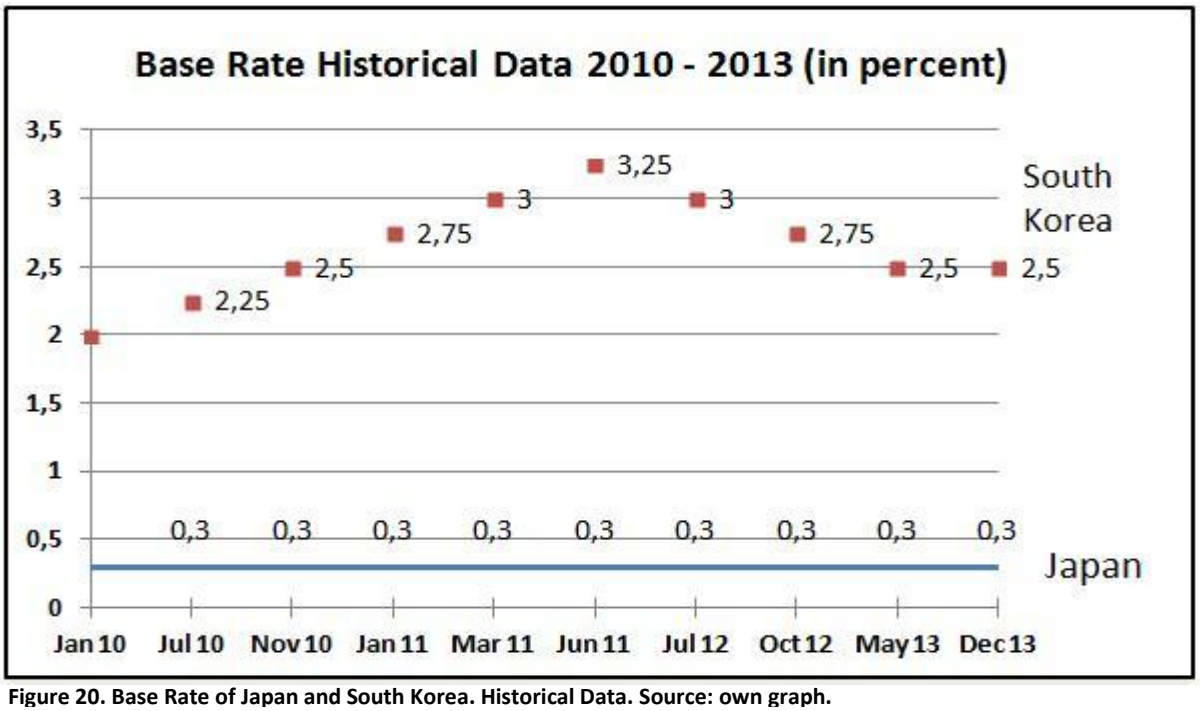


Figure 20. Base Rate of Japan and South Korea. Historical Data. Source: own graph.

Figure 20. portrays the pattern of the base rate in Japan and South Korea between 2010 and 2013. In the case of Japan, looking at the graph, one could easily notice that the trend of the index remained inactive basically through all the researched years. Beginning with 2010 and going throughout the next years until 2013 the discount rate set by the Bank of Japan did not changed at all and stayed on a stable level of 0.3%. On the other hand, another conclusions can be taken from the example of South Korea where the path of the index was changing regularly. At the beginning of 2010 the level of the indicator was 2%. Yet already in the same year the Bank of Korea took several decision that resulted in rising the index to 2.75%. Afterwards, after reaching the level of 3.25% in 2011, the base rate was gradually declining and remained with the value of 2.5% at the end of 2013.

Summarizing, comparing the discount rate of Japan and South Korea in a given period of time resulted in setting the two opposite trends in the direction of the index. In the first case, the rate represented precisely inactive role through four analyzed years; it remained stable, on the same level. In the second case, the rate in South Korea was manipulated frequently. Furthermore, between 2010 and 2013 it changed its directions, as the index went initially upwards, just to decline in the following months. In a consequence, the pattern of the discount rate created a shape of a pyramid, whereas in case of Japan the same indicator was flat. As already briefly explained in the last chapter's case study of each country, such policy of a base rate could actually have several reasons. It is possible that in some ways the monetary policy – including using the discount rate – is defined by global factors that with some strength influence a number of economies in the world. However, manipulation of the rate is also, perhaps even primarily, strongly connected with domestic situation in each country. In such case, both Bank of Japan and Bank of Korea, in order to provide possible most optimal monetary environment in the respective states, can set the value of the rate on a completely different levels. By doing that, individual circumstances are taking into account and therefore define the direction of the country's monetary authority.

4.1.3. Reserve Requirements

The last content of the dissertation paper's analysis in regard to monetary policy is the issue of reserve requirements. It was explained already earlier that currently this particular monetary instrument has somewhat lost its significance in the last few decades in some economies, including both Japan and South Korea. Over time since the 1980s some major states have decided to transform their economic policy into more interest rate- oriented policy. In a consequence, the usage of reserve requirements was gradually substituted by other monetary policy tools, for instance the discount rate. Nevertheless, the specific level of reserves required by monetary institutions regarding commercial financial institutions is still in practice and monetary authorities, although perhaps relatively less frequently than before, continuously decide to manipulate with the rate. By doing this, they seek their ways to reach the monetary policy goals which had been previously adopted.

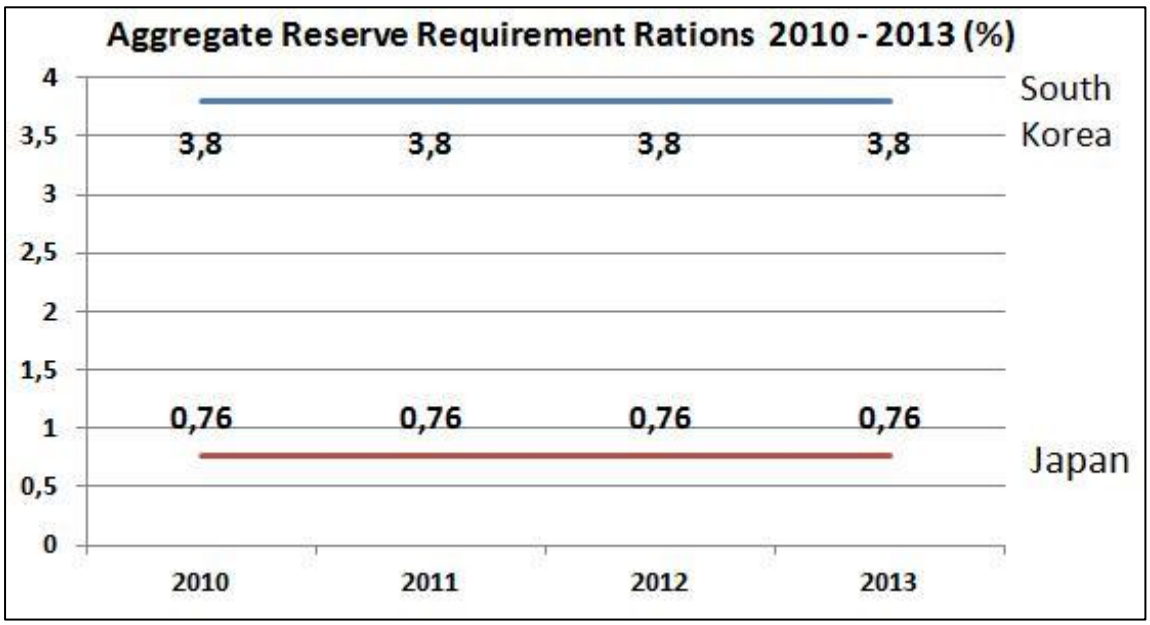


Figure 21. Aggregate Reserve Requirement Ratios for Japan and South Korea 2010 - 2013.
Source: Own graph.

Figure 21. presents the data of the aggregate reserve requirements ratios for the two East Asian countries between 2010 and 2013. Basing on the information provided already in chapter 2. and presentation of each country separately, we were able to see that both Japan and South Korea remained inactive in manipulation of the rate in this particular period and the level did not change overtime. In the case of Bank of Japan the ratio was permanently with the value of 0.76 percent and was clearly lower than in the Asian counterpart case. Namely, at the same time the Bank of Korea was keeping the aggregate reserve requirement ratio at the level of 3.8 percent. Although the quantity of the rates was stable in the paper's defined post crisis period there is still an interesting matter with the issue of this particular monetary tool. In order to notice that, one should once again go beyond the 2010 – 2013 time framework and take a look at the years before. By doing this, it is possible to see that both Japan and South Korea recently changed their reserve requirement expectations in a relatively close time, approximately in a distance of 2 years, after quite long period of being inactive. Furthermore, both countries manipulated with the rate already in the circumstances of the Global Financial Crisis, although on different stages of the recession. Regarding the Republic of Korea, its monetary authority increased the aggregate reserve requirements from the initial 3 %, the value that was present through whole 1990s and later on until 2006, to 3.8%. On the other hand, Japan took a similar move in a relatively similar time, as the Bank of Japan increased the rate from approximately 0.65% to 0.76% at the end of 2008. The Korea's manipulation in 2006 was taken at a time when there were ascending incoming signals about the possible financial recession. Japan, however, decided to adjust the ratio some months later, already with the Global Financial Crisis present on the markets, which was dated, due to various sources, on 2008-2009 period. Nevertheless, having in mind the post- crisis period, both East Asian countries did not record any fluctuations in their aggregate reserve requirement ratios and between 2010 and 2013 had 0.76% and 3.8% for Japan and South Korea respectively.

4.1.4. Summary

Chapter 3.1. presented the comparison of the selected monetary policy aspects in regard to the two East Asian countries – Japan and South Korea – for the post- crisis period of 2010 – 2013. In the comparison I have decided to include three monetary tools that define and affect the general direction of the country's economic (monetary) policy. The first content of the comparison was the assessment of the economic environment provided by the state's monetary authority. In this case I wanted to recognize the main and general perception of the main events (both global and domestic ones) that affect countries' economies, especially monetary policy and macroeconomic performance. As seen, the comparison in this situation brought relatively varied results. In fact, it sometimes happened that both countries presented relatively similar attitude in regard to particular event. Yet there were indeed also other outcomes of assessment's comparison, where for example one country paid great attention to the specified incident, whereas the other was barely interested in it (like Great East Japan Earthquake). In the end, setting the economic assessments and opinions of the two central banks was supposed to help to understand the general economic situation and how it influence the trends of monetary policy in the specific time.

Secondly, the monetary policy collation included the main base rate (discount rate) between 2010 and 2013. As previously explained, this monetary tool has gained much importance in the last few decades and currently it stands as one of the most important instruments in hand of monetary authorities. After presenting the information in this subsection we could see that the paths of basic rates in both countries very clearly different from each other. In case of Japan, the base rate was perfectly stable during all the analyzed time and did not record a single change overtime. In the second case of South Korea, the discount rate was manipulated frequently, being adjusted to the particular economic circumstances that were present in the respective months. Parallel, the general trend of the Korean base rate was rather difficult to define. There was initially a time when the ratio was increasing, reflecting probably tightening of the monetary policy direction. Yet the same index decreased in the last months of the post- crisis period, giving the researcher arguments to see in that situation the process of easing the monetary policy.

Eventually, the comparison of the selected monetary tools included the issue of reserve requirements ratio. By initial identifying the two countries' rates, I subsequently wanted to compare the case of the states together. The results of this step should help to give a final answer in regard to trend of monetary policy direction (tightening or easing the monetary policy).

After analyzing the three mentioned questions, I believe it is possible to conclude that from the two East Asian countries that performed their monetary policy in the post- crisis period between 2010 and 2013 it was Japan that provided relatively easier monetary policy, comparing to South Korea. In the case of Bank of Korea, the monetary policy steps where in fact mixed, reflecting sometimes intentions to increase money supply in the economy, and sometimes a will to decrease the supply. At the same time, the economic circumstances forced Japan and its monetary authority to run an easy monetary policy.

4.2. Macroeconomic Performance

First part of the research paper's analysis was devoted to the monetary policy of Japan and South Korea. After examining both cases separately I subsequently decided to compare their policy together. In a consequence, respective conclusions could be taken from analyzing the selected issues. Going further, chapter 4.2. will present the second part of the main analysis and will refer to the individual matters of macroeconomic performance. Similar as in the case of monetary policy, the macroeconomic performance of the two East Asian states has been already presented separately in the previous subsections of the dissertation. Now, I will set the chosen questions together and compare them.

From the numerous aspects of macroeconomic performance I took three points that will help to create a framework for confronting the two states:

- Economic Growth (measured by GDP % change) – the higher the better.
- Unemployment (% of total labor force) – the lower the better.
- Inflation – performance of the rate (CPI) in accordance to inflation goal stated by the countries' respective monetary authority, the closer value to the target, the better.

Those three issues supported by the respective indicators are commonly used while identifying the macroeconomic performance of various states in the world. Therefore, considering those indexes to be relatively universal, it would be reasonable and helpful to provide a reliable comparison of the two countries and their economies.

4.2.1. Economic Growth

First aspect of the three compared is an economic growth. The issue of the economic growth is usually a lively debated question among the policy- makers as well as public opinion. Various individuals and groups seek to create such economic environment which would provide highest growth possible and at the same time would not influence negatively other aspects of macroeconomic activity. However, one should remember that growth itself is only a mean and instrument to reach the final goals. Those final goals and objectives can vary significantly, depending from individual countries. Nevertheless, it is rather safe to say that one of the goals of economic growth, basically for all of the countries and economies, is increasing the average level of wealth within the society. In theory, increasing the average wealth through economic growth leads to the situation where people's general standard of leaving rises. An example of relatively very high economic growth we could see after the World War II in some countries of Western Europe such as West Germany, France, Great Britain or Italy. In some cases, the phenomenon of such impressive progress was even called *an economic miracle*.

Having said that, this particular macroeconomic issue is still in request and both Japan and South Korea are looking forward to perform with a circumstances of high economic growth, especially after the Global Financial Crisis.

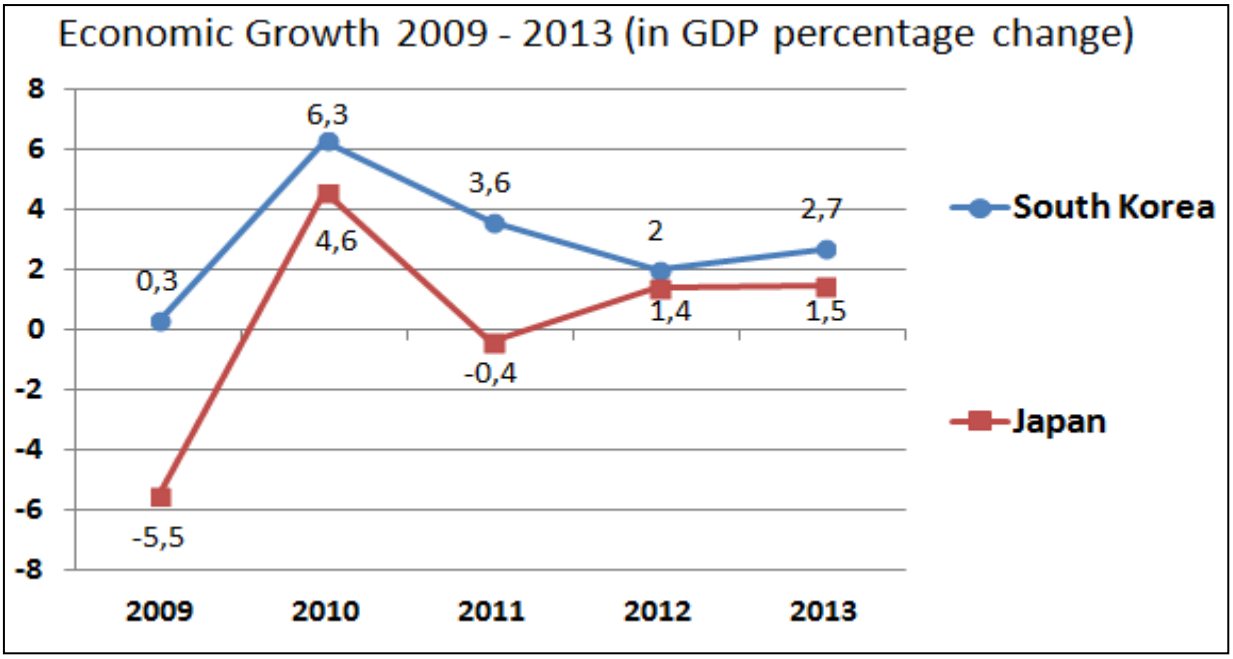


Figure 22. Economic Growth in South Korea and Japan 2009 - 2013. Source: Own graph.

Economic Growth (GDP percentage change)					
Year	**2009**	**2010**	**2011**	**2012**	**2013**
South Korea	0.3	6.3	3.6	2.0	2.7
Japan	-5.5	4.6	-0.4	1.4	1.5

Table 11. Economic Growth (GDP percentage change). Note: green cells for the country with higher value in the respective year. Source: Own table.

Figure 22. and table 11. present the comparison of the economic growth measured by GDP percentage change between 2009 and 2013. During the post- crisis period – from 2010 till the end of 2013 – both countries experienced indulgently heavy fluctuations with their economic growth trends. In the first of the analyzed years Japan as well as South Korea recorded their highest results of growth, reaching 4.6% and 6.3% respectively. In the following years both states experienced decline in their economic expansion, whereas in case of Japan the move was more severe as the country went into a minor recession (-0.4% in 2011). At the same time, Korean economy developed with a pace of 3.6% on year-on-year basis. Year 2012 brought some changes of the trends in both countries. In this twelvemonth South Korea continued its downward pressure for growth, falling further to 2% growth annually. On the other hand, Japan stepped out from the short crisis and again recorded the GDP growth with the result of 1.4%. In the last analyzed year 2013 both East Asian economies could experience increase of their economic progress, where South Korea had faster expansion than Japan (2.7% and 1.5% respectively).

Despite the differences in fluctuations and trends in the pattern of economic growth one should be able to see that from the two Asian countries which are the subject of this dissertation it was South Korea that had invariably better results in that particular issue of macroeconomic performance. Basically, through all the years that were considered to be the time framework of the post- crisis period Korean economy was experiencing with clearly higher rates of economic progress (GDP % change) and did not go beyond 2% increase at any time. Japan, on the other hand, comparing to South Korea, was performing visibly worse in this very aspect. Furthermore, its economy went even into a small recession in 2011 as the country experienced -0.4% growth on year-on-year basis. Having said that, we can undoubtedly say that after the Global Financial Crisis it was South Korea that was performing better in terms of economic growth.

4.2.2. Inflation

Another aspect which is going to be considered while comparing the macroeconomic performance of Japan and South Korea will be the matter of inflation. It has been already described in chapter 2. devoted to the individual cases of both countries that their monetary authorities pay great attention to the level of prices. In fact, this particular question of economic efficiency is one of the most important issues that Bank of Japan and Bank of Korea are responsible for. In order to provide an economically friendly and stable environment both institutions are obligated to oversee a number of factors, where the inflation matter is among the most crucial ones. However, having in mind diversified circumstances that each country is functioning on every-day basis, Japanese and Korean central bank decided to follow different strategies in regard to their inflationary goals. Although the final objective seems to be similar – the long-term stability of price levels – it was possible for the two countries to follow separate routes in regard to inflationary target.

Inflationary goal 2010 -2013 (CPI % annual change)				
Year	**2010**	**2011**	**2012**	**2013**
Bank of Japan	1%	1%	1%	2%
Bank of Korea	2% - 4%	2% - 4%	2% - 4%	2.5% - 3.5%

Table 12. Inflationary goal in Japan and South Korea. Source: own table.

Table 12. sets together the data for the inflationary goals of the central banks of Japan and Korea. Looking at the information it would necessary to recognize especially two main things. Firstly, it is possible to see that in case of Japan the desirable levels of inflation are clearly lower comparing to its Asian counterpart. As already said earlier, since the 1990s there were moments when Japanese economy had been experiencing the phenomenon of

negative inflation – deflation. Even before the Global Financial Crisis, when the prices on global markets were increasing in many cases, the Bank of Japan still had to struggle with the inflation fluctuated around 0%. In such case, recognizing the difficulties with setting the desired level of price stability, the monetary authority was aiming at relatively low inflationary goal. Therefore, the target for Japan which should be reached in regard to inflation CPI annual changes was 1% between 2010 and 2012 and 2% for 2013. Bank of Korea, on the other hand, decided to seek for higher rate of inflation. In general, the inflationary target defined by the central bank was between 2% and 4% for 2010-2012 period and between 2.5% and 3.5% for the last analyzed year of 2013.

Second worth mentioning thing is the difference in defining the inflationary goal values themselves. Namely, for each the Bank of Japan year set one, wished rate of inflation that should be reached in a short- to medium-term (1% and 2% in the respective years). Bank of Korea, however, instead of implying the same strategy, provided the scope for the desired changes in CPI. Therefore, as the table data inform, the range for 2010, 2011 and 2012 was 2% (2% min. and 4% max.) and subsequently decreased to 1% in 2013 (between 2.5% and 3.5%).

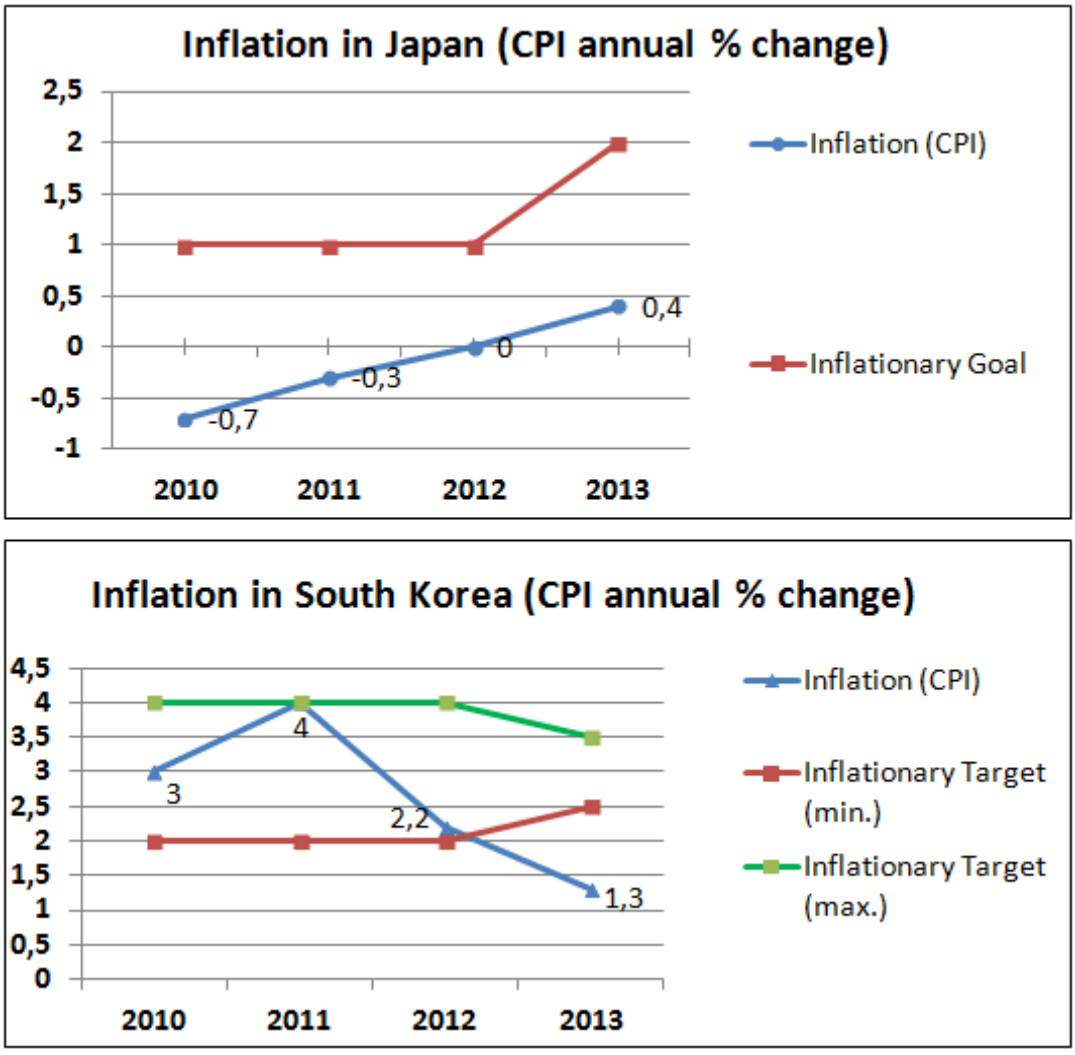


Figure 23. Inflation in Japan and South Korea. Historical data. Source: Own graph.

Figure 23. portrays the inflation trends and fluctuations in the two East Asian states. Furthermore, the graph draws the inflationary- target points for each of the post-crisis years. Analyzing the information one will notice that in case of Japan the inflation rate was continuously going beyond the target which had been previously set by the country's monetary authority. Inflation rates, measured by CPI annual percentage changes, did not follow the values desired by the Bank. They were permanently lower than the wished standards, representing even the deflation process in the first two years (-0.7% and -0.3% in 2010 and 2011 vs. 1% target). In a consequence, this particular issue of macroeconomic performance did not meet the expectations given by the Japanese monetary authority and its policy at any time.

The other picture comes out when we look at the performance of the inflation rate in South Korea. Between 2010 and 2012 the inflationary goal's range was between 2% and 4%. Consequently, during all those three years the inflation ratio met the expectations of the Bank of Korea (3%, 4%, and 2,2% in the respective years). However, in the last year of 2013 the scope of the inflationary target was changed. While the minimum desired value was now at the level of 2.5%, the inflation rate dropped to only 1.3%.

Inflation rate and target 2010 -2013 (CPI % annual change)					
Green color – inflation in accordance with the inflationary goal Red color – inflation not in accordance with the inflationary goal					
		2010	**2011**	**2012**	**2013**
Japan	**Inflationary goal**	1%	1%	1%	2%
	Inflation rate	-0.7%	-0.3%	0%	0.4%
South Korea	**Inflationary goal**	2% - 4%	2% - 4%	2% - 4%	2.5% - 3.5%
	Inflation rate	3%	4%	2.2%	1.3%

Table 13. Inflation rate and target. Source: Own table.

To summarize, from the four analyzed year of the post- Global Financial Crisis period of 2010 - 2013 South Korean inflation rate was performing comparatively more effective (in accordance with the inflationary goal) than in Japan. In three out of four years the inflation ratio followed the expectations of the Bank of Korea and was in the range set by the monetary authority. In Japan, however, not a single year in regard to price stability level took place as planned.

4.2.3. Unemployment

The last part of the chapter devoted to macroeconomic performance in South Korea and Japan includes comparison of the unemployment rates in both countries. Beside the economic growth and inflation issues, employment is one of the main and most crucial aspects for conducting the economic policy within the state. However, as explained on previous pages of this research paper, studying the unemployment matter itself could be a remarkably tricky task. Having in mind the case of Japan (chapter 3.) we could see that in order to understand the process of workforce and all the related questions in total, it is necessary to take into account many aspects coming from numerous problems. For example, there was situation in the country when in a given time framework both unemployment rate and employment rate were dropping. Although such process requires deep analytical and reliable studies, we can still make a hypothesis that at the time of this phenomenon there were taking place some shifts in the structure within the society. For instance, it might possibly happened that some group of people decided to leave the labor force and therefore became stopped counted as unemployed or employed individuals. Nevertheless, due to complexity of the issue and limitation of the research paper, I have decided to take into account and compare only the unemployment rates. In the end, this index still gives useful information and appears relatively broadly not only in professional materials referring directly and narrowly to economics but also in mass media on nearly every-day basis.

Moreover, it was already mentioned that in regard to both East Asian countries I could not find any official information defining unemployment rate target. Therefore, I have decided to follow the formula saying that the lower the unemployment ratio stands for more positive effect for the country's economy.

Unemployment Rate 2010 - 2013				
Green color – country with lower rate				
Year	**2010**	**2011**	**2012**	**2013**
Japan	5.0%	4.5%	4.3%	4.0%
South Korea	3.7%	3.4%	3.2%	3.1%

Table 14. Unemployment rate in Japan and South Korea. Source: Own table.

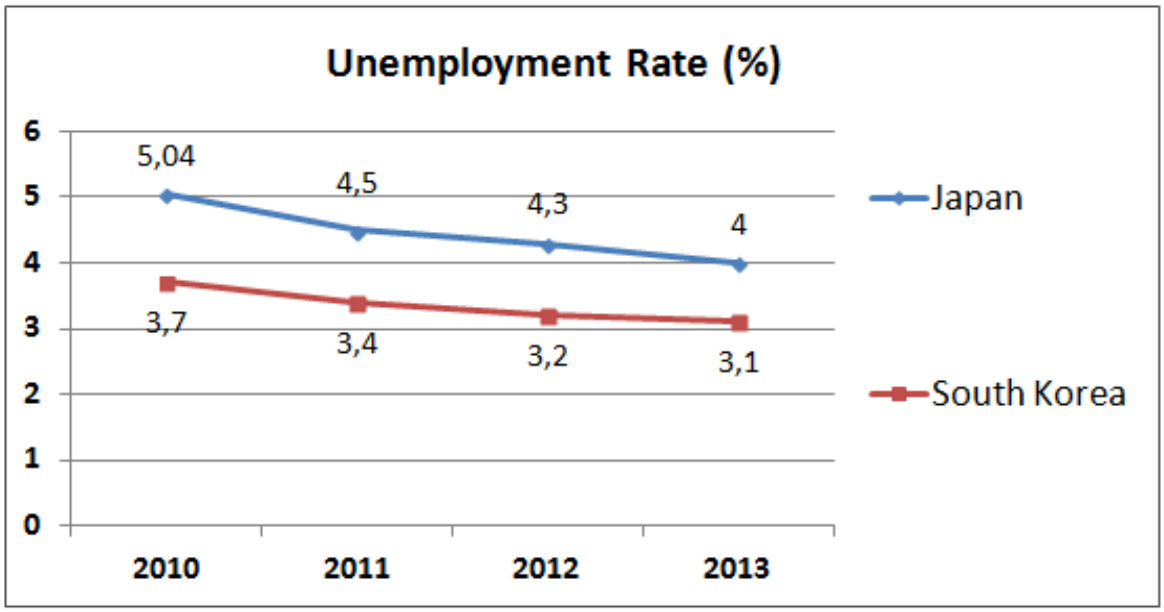


Figure 24. Unemployment Rate in Japan and South Korea. Source: own graph.

Analyzing the data for unemployment rates of Japan and South Korea between 2010 and 2013 (table 14. and figure 24.) and comparing both countries together it is possible to conclude that it was the Korean economy that was performing relatively better in that time. During all the analyzed years the unemployment rate was permanently below the level of 4%. In the initial year of 2010 the ratio was 3.7% and subsequently declined gradually to only 3.1% in 2013. In regard to Japan, one could actually notice a similar trend of the index. Namely, through the twelvemonths the unemployment rate was also slowly falling. In case of the world's third biggest economy, however, the values were somewhat less positive than in its Asian counterpart. In 2010 the rate was over 5%, so approximately 1.3% higher than in South Korea. Similar in the following years this situation did not really change. The rate in Japan was continuously above the line drawn by the same points in Korea.

Having said that, after comparing the specific aspect of macroeconomic performance – unemployment (rate) – we could rather undoubtedly say that in this very case the Korean economy was performing more effective than in case of Japan. Although both countries experienced declining unemployment ratios it was South Korea that could experience also lower share of labor force that stays for unemployed people.

4.3. Conclusion remarks

The Global Financial Crisis 2008 - 2009 was for world's economy a substantial and extremely relevant time. The recession that originated in the United States' real estate market transferred subsequently on the other sectors of the country's economy and afterwards spread beyond the borders onto another parts of the globe. The exact time framework of the crisis was in the moment of writing this dissertation in 2014 still a topic for lively debate. Nevertheless, there are arguments saying that the depression and its basic stages ended already in 2009 and since then the global economy has been operating with the post-crisis circumstances.

Having that in mind, this dissertation focused on the cases of two East Asian countries – Japan and South Korea – and their economic performance in the post- crisis environment of 2010 - 2013. The main concentration in the research paper went to the selected issues of monetary policy and macroeconomic effectiveness of the states. After initial identifying the required data and information of the two countries separately I subsequently decided to confront the results together. The outcomes of the research were supposed to help to understand the fundamental directions of monetary policy of Japan and South Korea, recognize their macroeconomic performance shortly after memorable events of the Global Financial Crisis and portray the cases in a form of comparison The answer for that question is as follows. In the post-crisis period of 2010 – 2013 the acting and operation of the two Asian countries was still highly marked by the 2008-2009 recession. The information provided by the respective monetary authorities clearly suggested that the effects of the depression were still present in the following years. Furthermore, although it is extremely difficult to define precisely the connection between monetary policy and macroeconomic effectiveness of an individual country, we may rather say without any doubts that these two matters are still connected and therefore influence each other on various basis. However, there are still other aspects that contribute to possible trends and tendencies in both of the questions. For instance, combining the issues above with the complexity of modern globalization will create an exceptionally complicated and deep topic to analyze. The results of the comparison introduced in the thesis illustrated actually both similarities and differences within the two countries. Regarding both the monetary policy and macroeconomic performance one could find numerous aspects that were present in Japan and South Korea, as well as specific issues typical for only one of the country.

In a conclusion, the author of the research paper is aware that this compact study may serve as an introduction to the complex and extensive subject of monetary policy and macroeconomic performance in Japan and South Korea. In fact, the intricacy of the individual factors within the topic make it only more interesting for further analyzing and providing more detailed outcomes. Moreover, the relevance of this particular subject seems to be extremely important especially now, after such harmful incident which was the Global Financial Crisis. As already said, the monetary policy undoubtedly contributes to the macroeconomic efficiency on an individual country. This, in turn, has a fundamental implications in general. Because of the modern mutual connections between the countries the condition of particular states can influence also others on the global scene. Consequently, the importance of economics in every-day life may lead to the situation where nearly all the people in the world will be somehow affected by distant decisions taken from other regions of the world. Japan and South Korea are not exceptions in this case. Their economic openness to the global economy and its effects make these countries vulnerable to even minor turbulences on the markets. That’s why it is such an important matter to understand in a most possible way the questions coming out from monetary policy and macroeconomics.

Appendix 1. Figures and Tables.

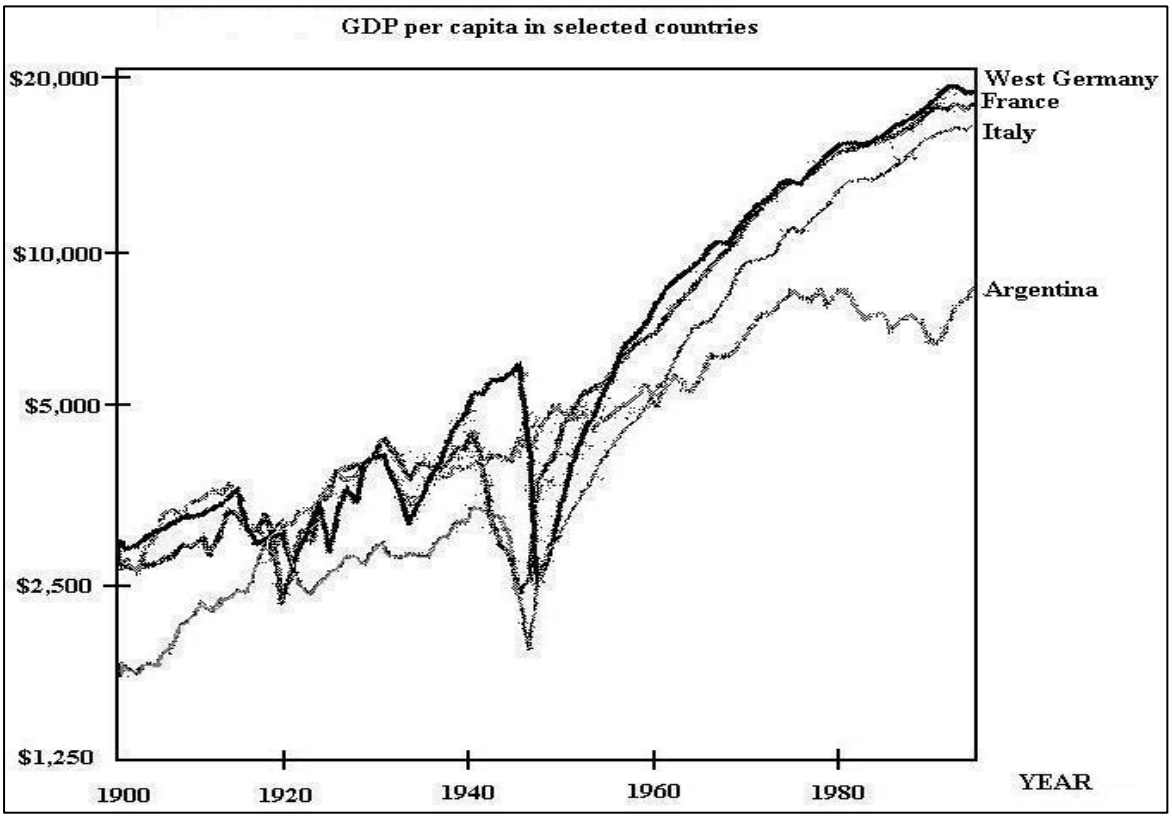


Figure 1. GDP per capita in selected countries (page 17)

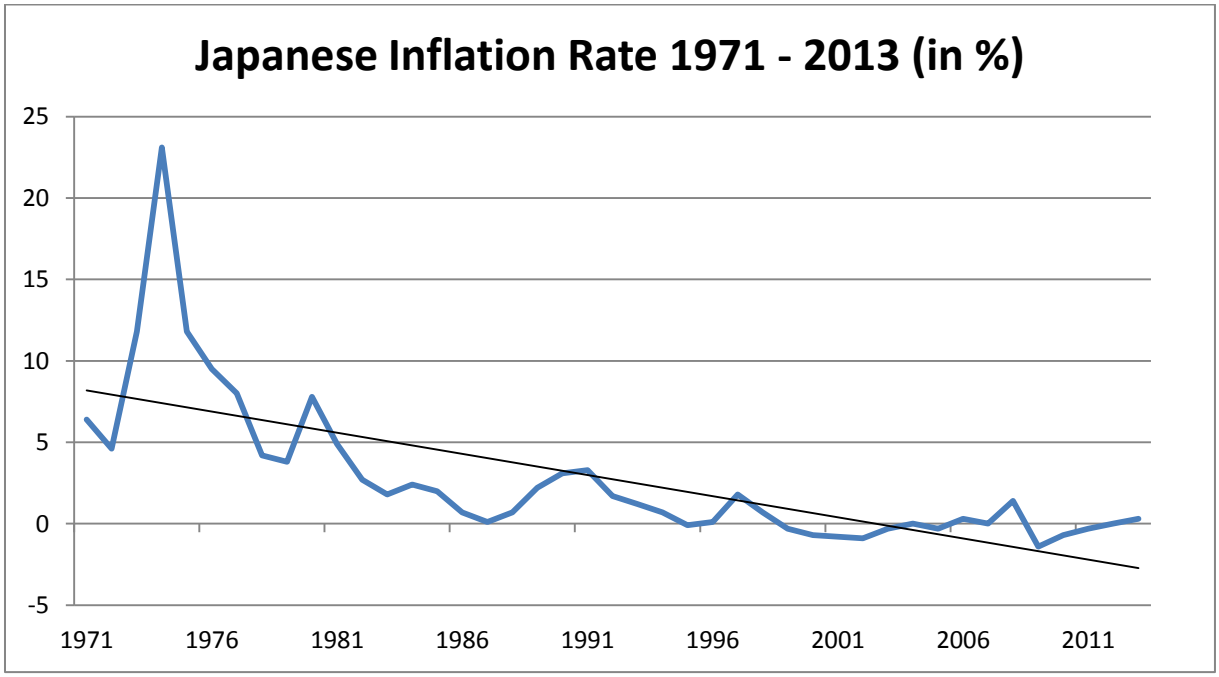


Figure 2. Japanese inflation (page 22)

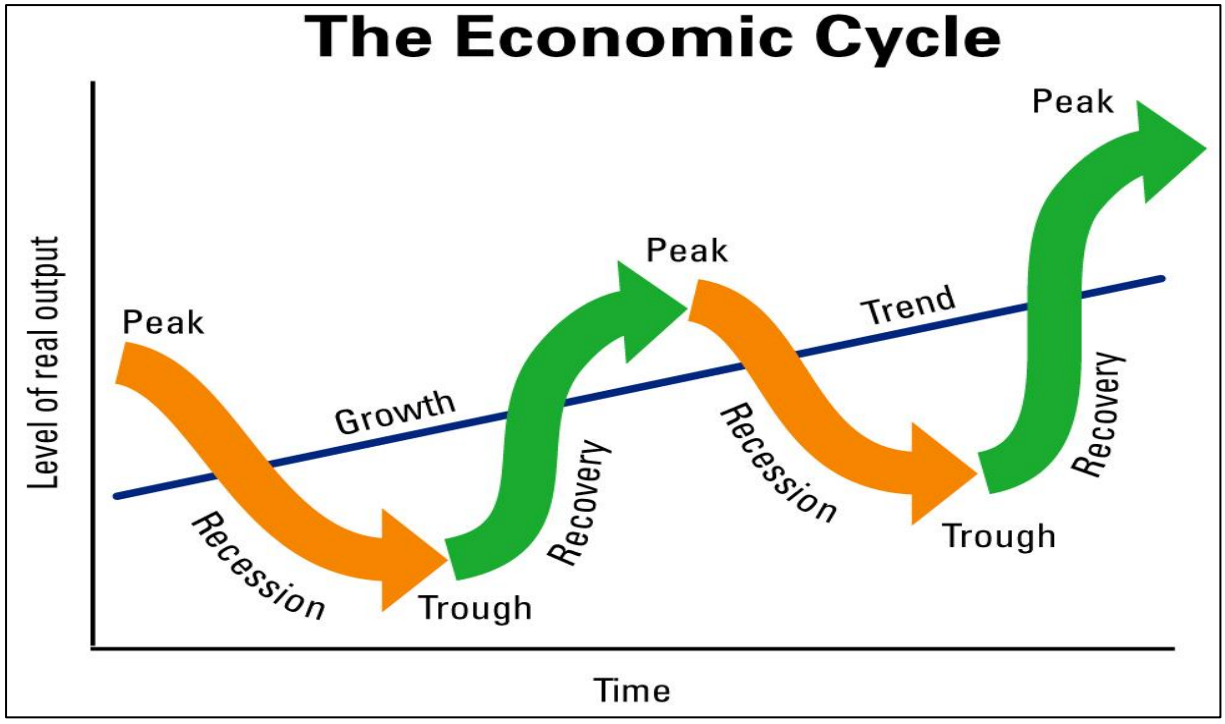


Figure 3. The Economic Cycle (page 25)

Calculating of nominal GDP		
Year	Price of Blu-ray	Quantity of Blu-ray
2010	100 $	1000
2011	105 $	1100
GDP in 2010	100 $ x 1000 = 100,000 $	
GDP in 2011	105 $ x 1100 = 115,000 $	

Table 6. Calculating of GDP (page 30)

Real GDP	
Real GDP (year 2010 as base year)	year 2010: 100 $ x 1000 = 100,000 $ year 2011: 100 $ x 1100 = 110,000 $
GDP Deflator (year 2010 as base year)	year 2010 = 100 year 2011 = 100 x (year 2011 nominal GDP) / (year 2011 real GDP) = 100 x (115,000/110,000)= 104,5(45)
Deflating nominal GDP	Real GDP in 2011= nominal GDP/GDP deflator 115,000 $/1.045 ~ 110,000 $

Table 7. Calculating real GDP (page 30)

Labor Force in Australia (February 2014)			
	Number (thousands)	Share of Labor Force (percent)	Share of Population
Employed workers	11 502.2	94	50,7
Unemployed workers	733.7	6	3,2
Labor force (employed and unemployed workers)	12,230	100	53,9
Not in labor force	10,470	-	46,1
Population	22,700	-	-

Table 8. Labor Force in Australia (page 32)

6. Basket of goods:

- **3 pencils** - **2 onions** - **1 cinema ticket**

7. Price of each individual good in the analyzed years.

Year	Price of pencil	Price of onion	Price of cinema ticket
2011	2 €	1 €	5 €
2012	2,5 €	1,25 €	6 €
2013	3 €	1,5 €	7 €

8. The cost of the basket for each year.

2011 (3 pencils x 2 €) + (2 onions x 1 €) + (1 ticket x 5 €) = 13 €
2012 (3 pencils x 2,5 €) + (2 onions x 1,25 €) + (1 ticket x 6 €) = 16 €
2013 (3 pencils x 3 €) + (2 onions x 1,5 €) + (1 ticket x 7 €) = 19 €

9. The base year and calculation of the consumer price index.

2011: (13 €/13 €) x 100 = 100
2012: (16 €/13 €) x 100 = 123
2013: (19 €/13 €) x 100 = 146

10. Computing the inflation rate.

2011: base year
2012: 100 x (123 - 100)/100 = 23 %
2013: 100 x (146 - 100/ 100 = 46 %

Table 9. Computing the CPI and the inflation rate (page 34)

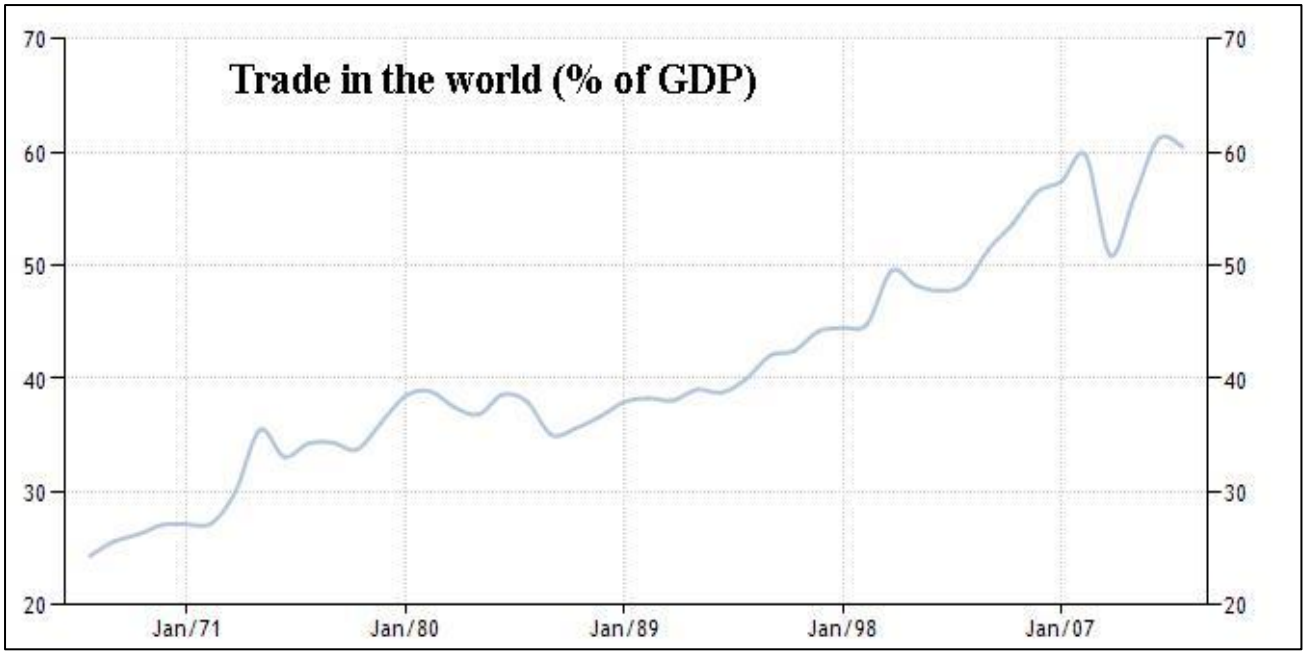


Figure 4. Trade in the world (page 48)

	International Monetary Fund	United Nations	CIA World Factbook
Countries	Used term of Developing Asia, including 29 states of East-, and Southeast Asia + Oceania	Japan, Republic of Korea, DPR Korea, Mongolia, China (including Hong Kong and Macau)	Geographically covers East-, and Southeast Asia
Population (million, 2013)	3,329	1,541	2,166
Area	~ 20,000,000 km^2	~ 12,000,000 km^2	~ 16,500,000 km^2
Nominal GDP (current $, billion) 2013	13.093	15.300 (excl. DPR Korea)	17.000

Table 10. East Asia classification (page 49)

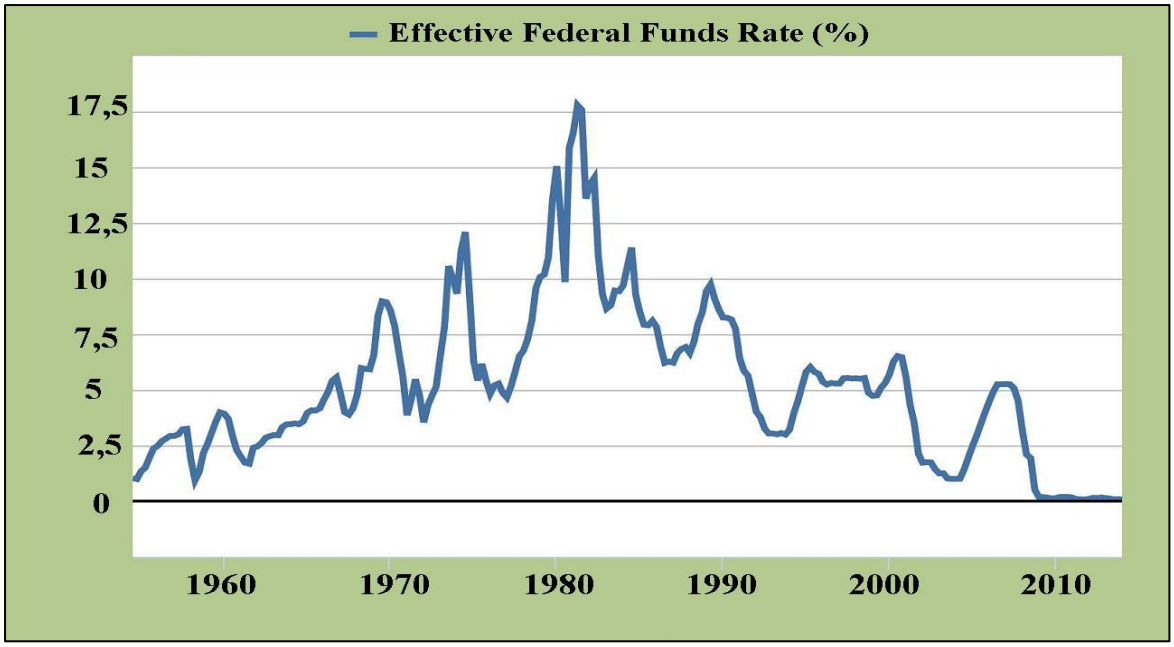


Figure 5. Effective Federal Funds Rate. Historical Data (page 52)

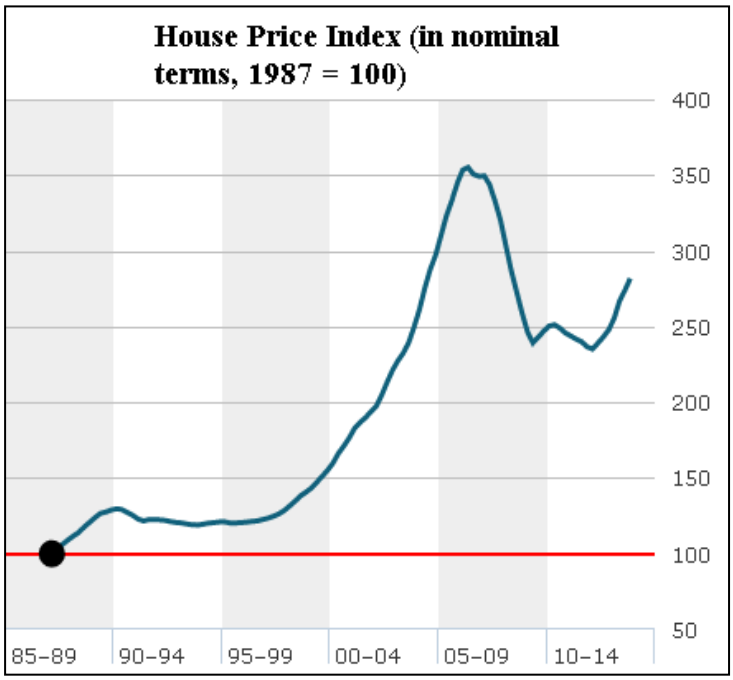


Figure 6. House Price Index in the USA (page 53)

Biggest losses due to subprime mortgages (in billions USD, for 18 May 2008)				
Institution	Country	Writedown	Credit loss	Total
Citigroup	United States	37.3	5.6	42.9
UBS	Switzerland	38.2	na	38.2
Merrill Lynch	United States	37	na	37
HSBC	UK	6.9	12.6	19.5
IKB Deutsche	Germany	16	na	16
Royal Bank of Scotland	Scotland	15.2	na	15.2
Bank of America	United States	9.2.	5.7	14.9
Morgan Stanley	United States	12.6	na	12.6
JPMorgan Chase	United States	5.5.	4.2	9.7
Credit Suisse	Switzerland	9.5	na	9.5
Washington Mutual	United States	1.1	8	9.1
Credit Agricole	France	8.3	na	8.3
Deutsche Bank	Germany	7.7	na	7.7
Wachovia	United States	4.6	2.4	7
HBOS	UK	6.9	na	6.9

Table 6. Losses due to subprime mortgages (page 56)

Biggest losses due to subprime mortgages (in billions USD, for 12 August 2008)		
Institution	Country	Total writedowns & losses
Citigroup	United States	55.1
Merrill Lynch	United States	51.8
UBS	Switzerland	44.2
HSBC	UK	27.4
Wachovia	United States	22.5
Bank of America	United States	21.2
IKB Deutsche	Germany	15.3
Royal Bank of Scotland	Scotland	14.9
Washington Mutual	United States	14.8
Morgan Stanley	United States	14.4
JPMorgan Chase	United States	14.3
Deutsche Bank	Germany	10.8
Credit Suisse	Switzerland	10.5
Wells Fargo	United States	10
Barclays	UK	9.1

Table 7. Losses due to subprime mortgages (page 57).

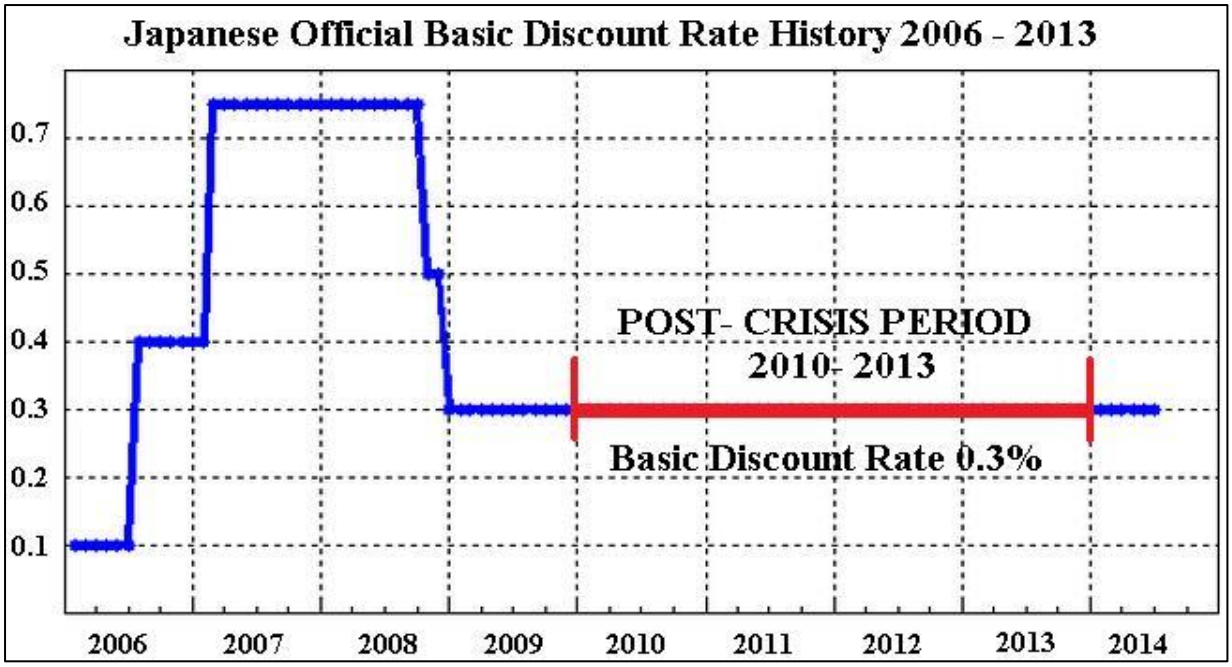


Figure 7. Japanese Official Discount Rate (page 69)

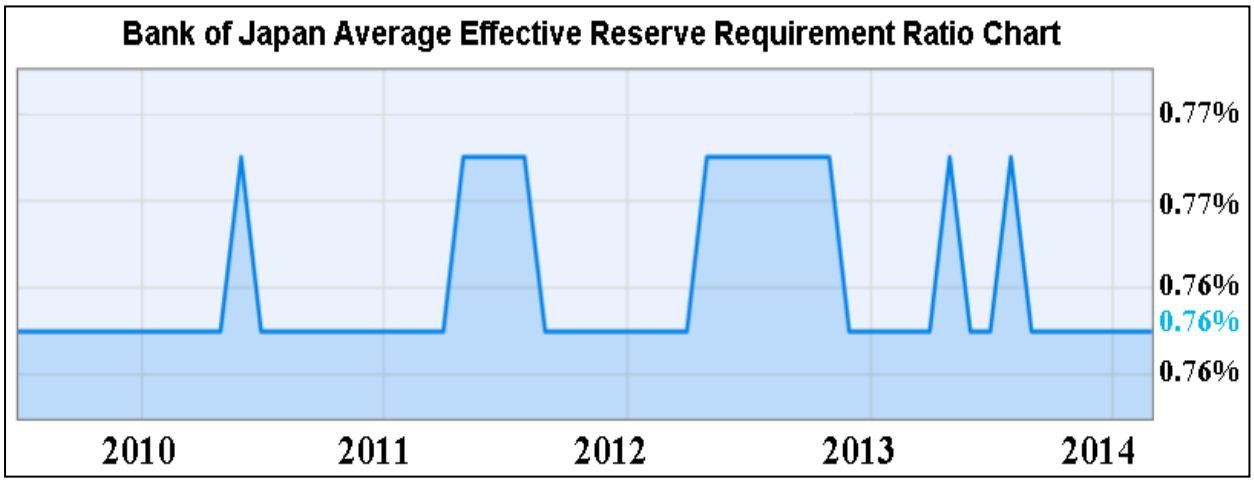


Figure 8. Bank of Japan Reserve Requirement Ratio 2010- 2014 (page 70)

Figure 9. Bank of Japan Reserve Requirement Ratio 2004-2014 (page 71)

Economic Growth in Japan					
	2009	**2010**	**2011**	**2012**	**2013**
Real GDP (Yen, trillion, base year 2005)	489.5	512.3	510.0	517.4	525.3
Nominal GDP current prices (Yen, trillion)	471.1	482.3	471.3	473.7	478.0
GDP % change	-5,5	4,6	-0,4	1,4	1,5
GDP based on PPP per capita (current international $, thousands)	32.0	33.9	34.5	35.7	36.8
GDP per capita, constant prices (Yen, million)	3.82	4.00	3.98	4.05	4.12

Table 8. Economic Growth in Japan. Selected indicators (page 73)

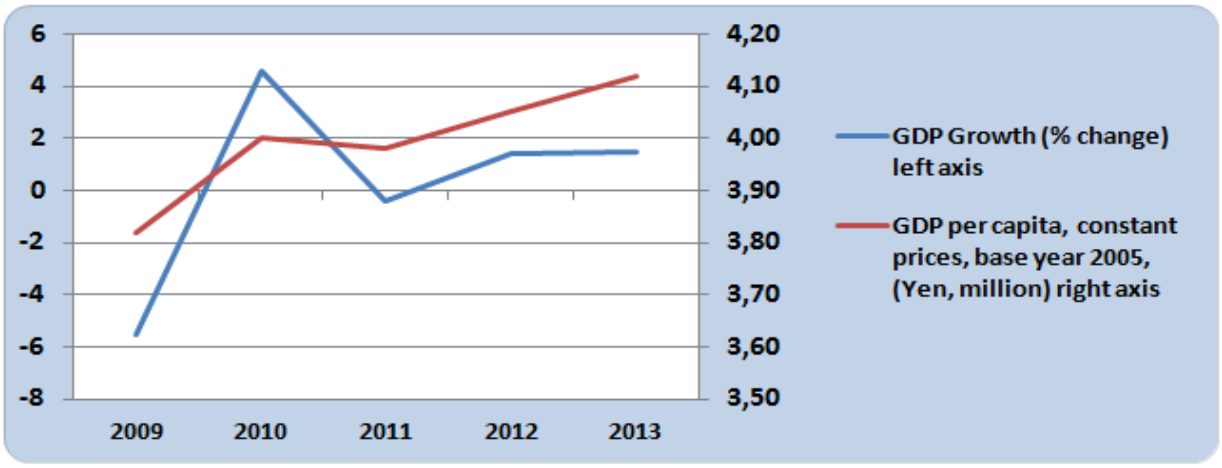


Figure 10. Japan's growth. Selected indicators (page 74)

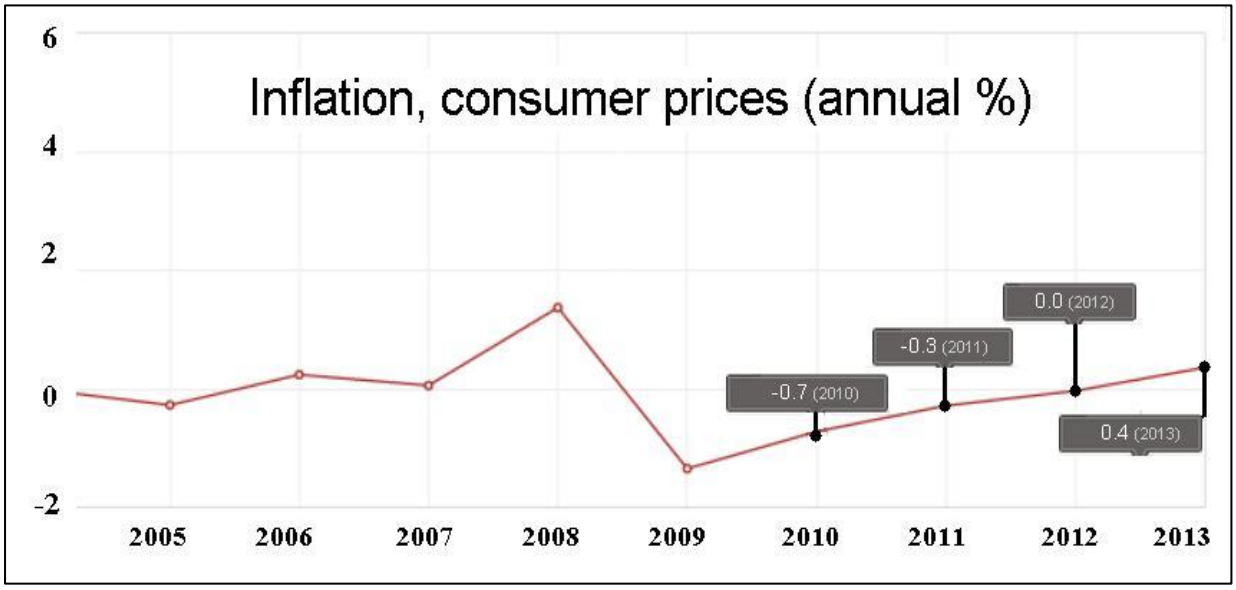


Figure 11. Japanese inflation (page 75)

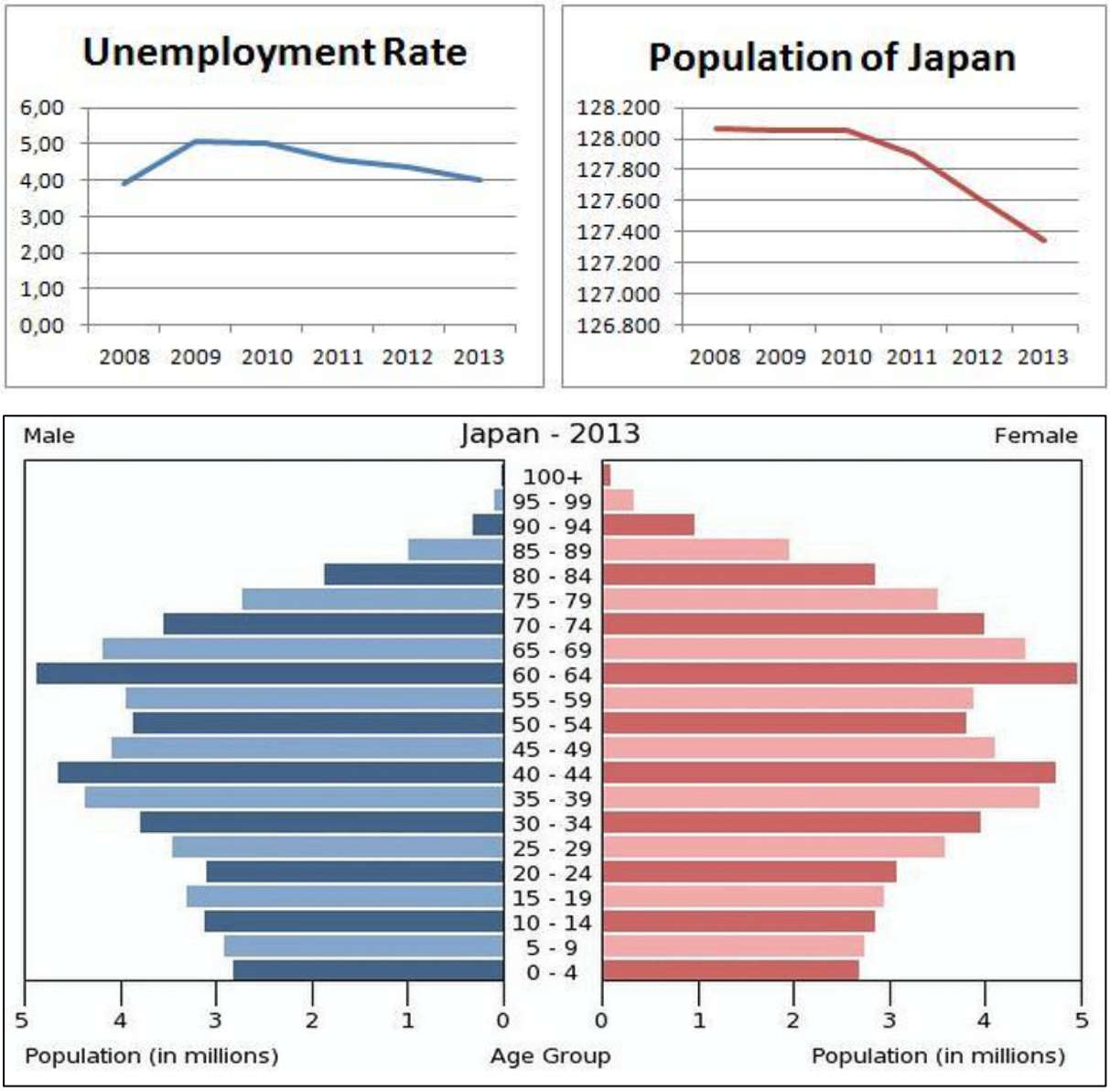


Figure 12. Japan's selected indicators (page 76)

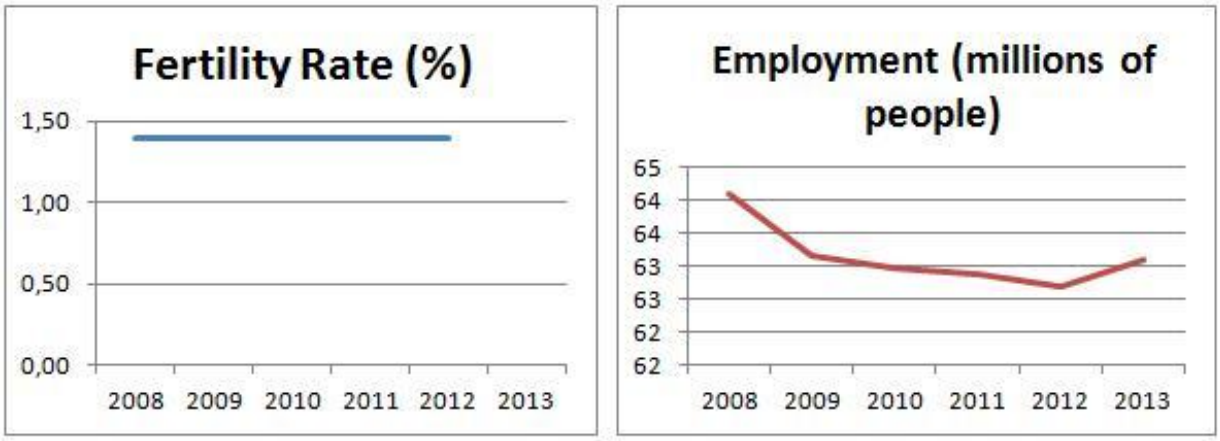


Figure 13. Japan's Fertility Rate and Employment (page 77)

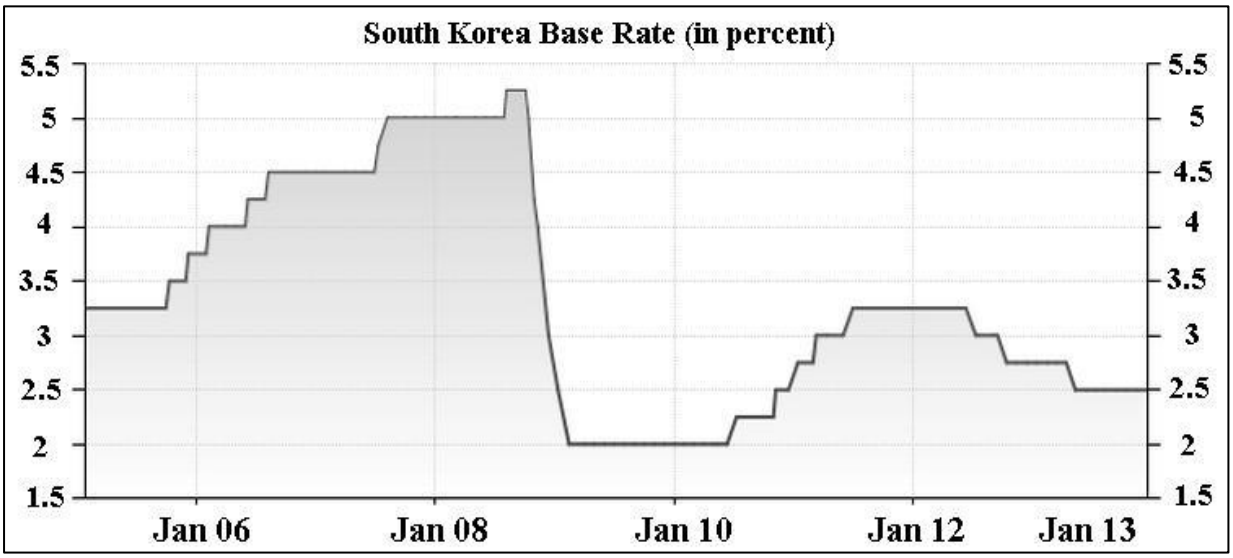


Figure 14. South Korea Base Rate (page 83)

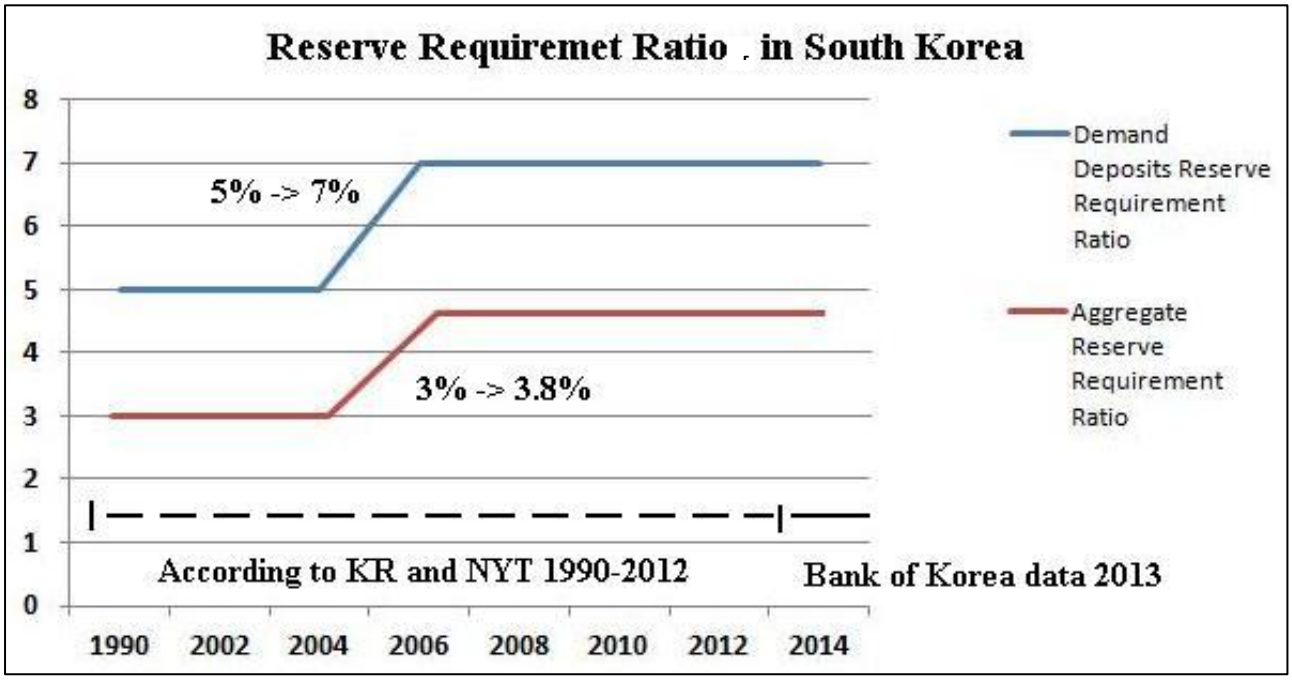


Figure 15. Reserve Requirement in South Korea (page 85)

Economic Growth in South Korea					
	2009	**2010**	**2011**	**2012**	**2013**
Real GDP (Won, billions, base year 2005)	981,625	1,043,666	1,082,095	1,104,213	1,134,853
Nominal GDP current prices (Won, billions)	1,065,036	1,173,274	1,235,160	1,272,459	1,337,781
GDP % change	0.3	6.3	3.6	2.0	2.7
GDP based on PPP per capita (current inter. $, thousands)	27.5	29.4	30.9	31.9	33.2
GDP per capita constant prices (Won, thousands)	19,959	21,122	21,737	22,082	22,597

Table 9. Economic Growth in South Korea. Selected indicators (page 87)

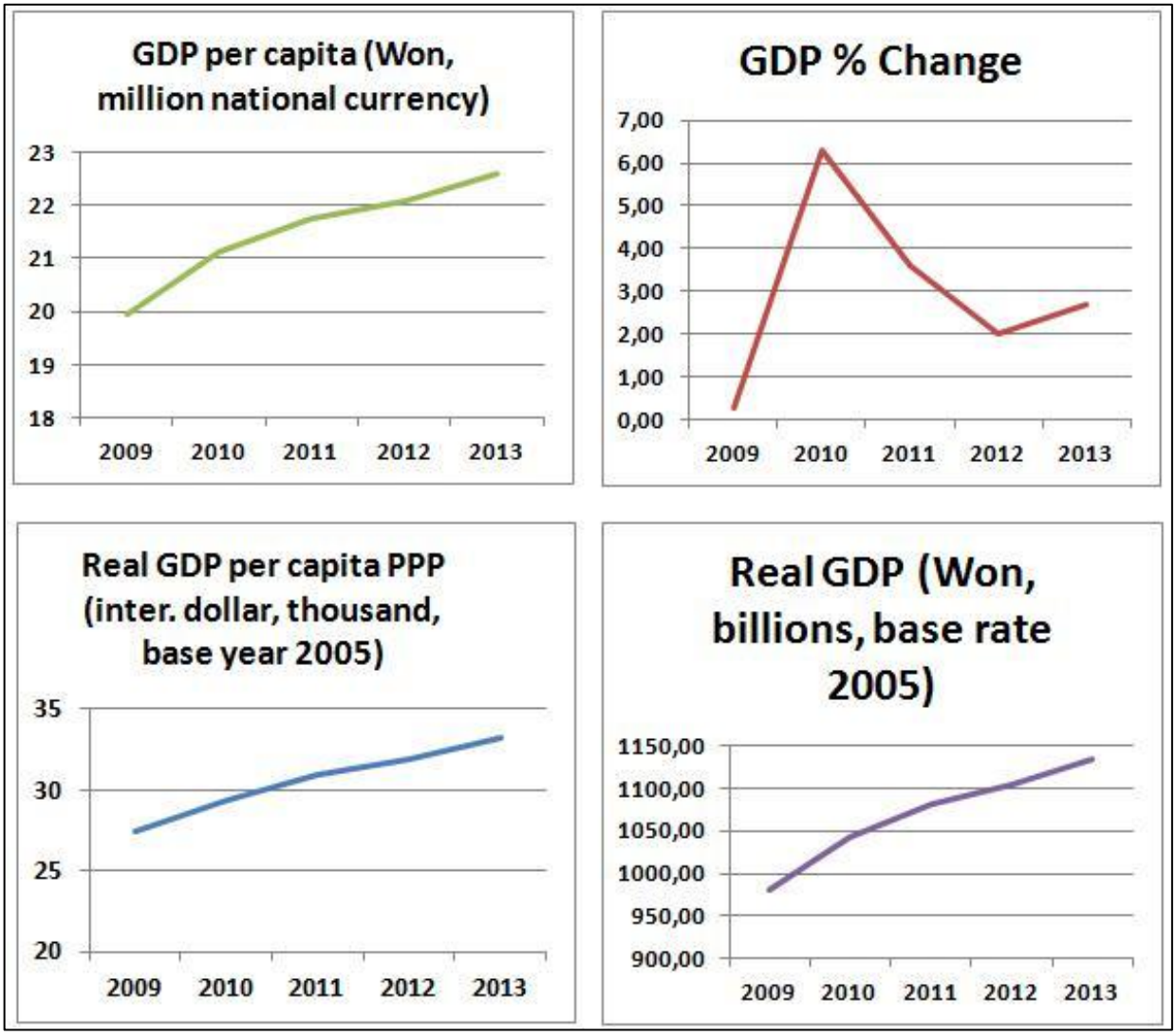


Figure 16. Economic growth in South Korea. Selected indicators (page 88)

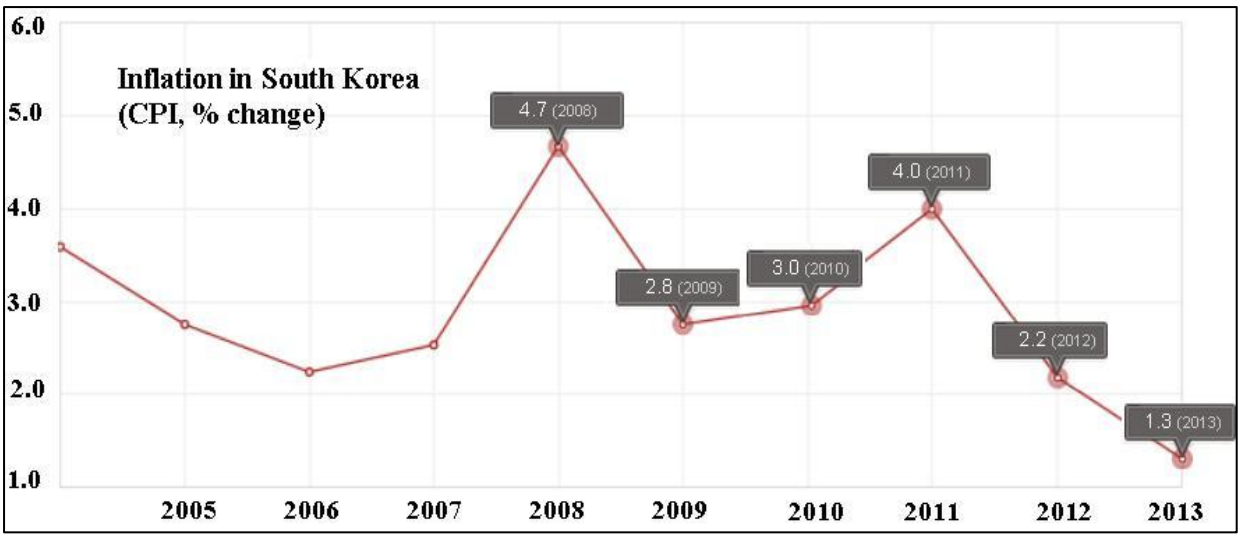


Figure 17. Inflation in South Korea (page 90)

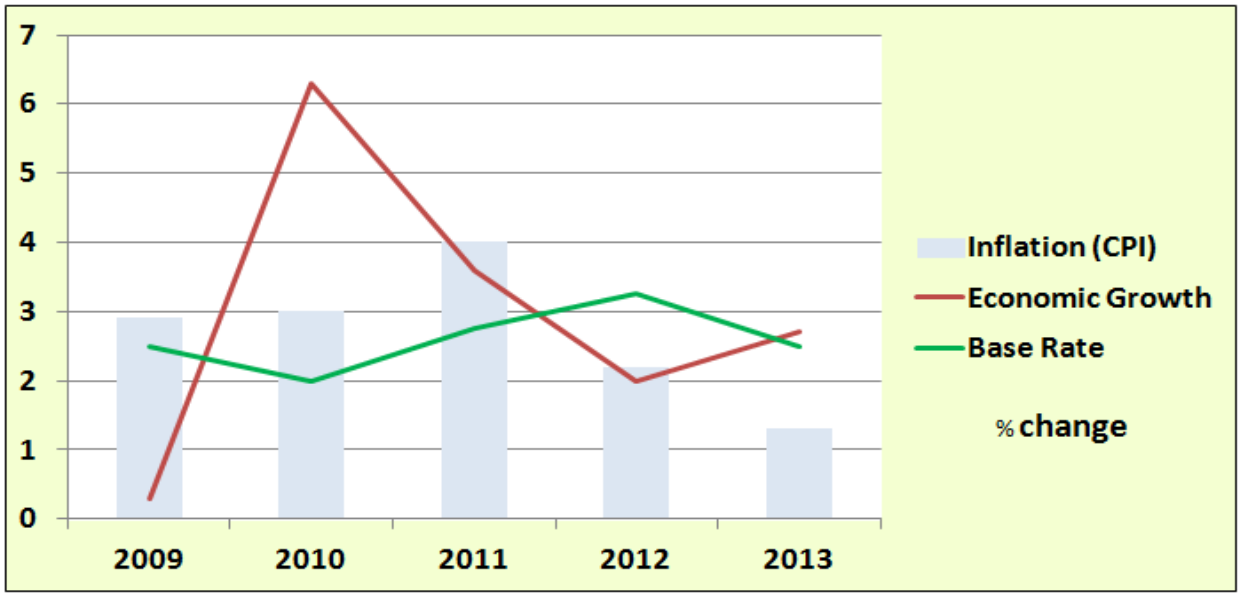


Figure 18. Selected economic indicators of South Korea (page 90)

	2009	2010	2011	2012	2013
Unemployment Rate (%)	3.6	3.7	3.4	3.2	3.1
Employment (millions of people)	23.50	23.82	24.24	24.68	25.06
Population (millions)	49.18	49.41	49.77	50.00	50.22

Table 10. South Korea Selected Indicators (page 86)

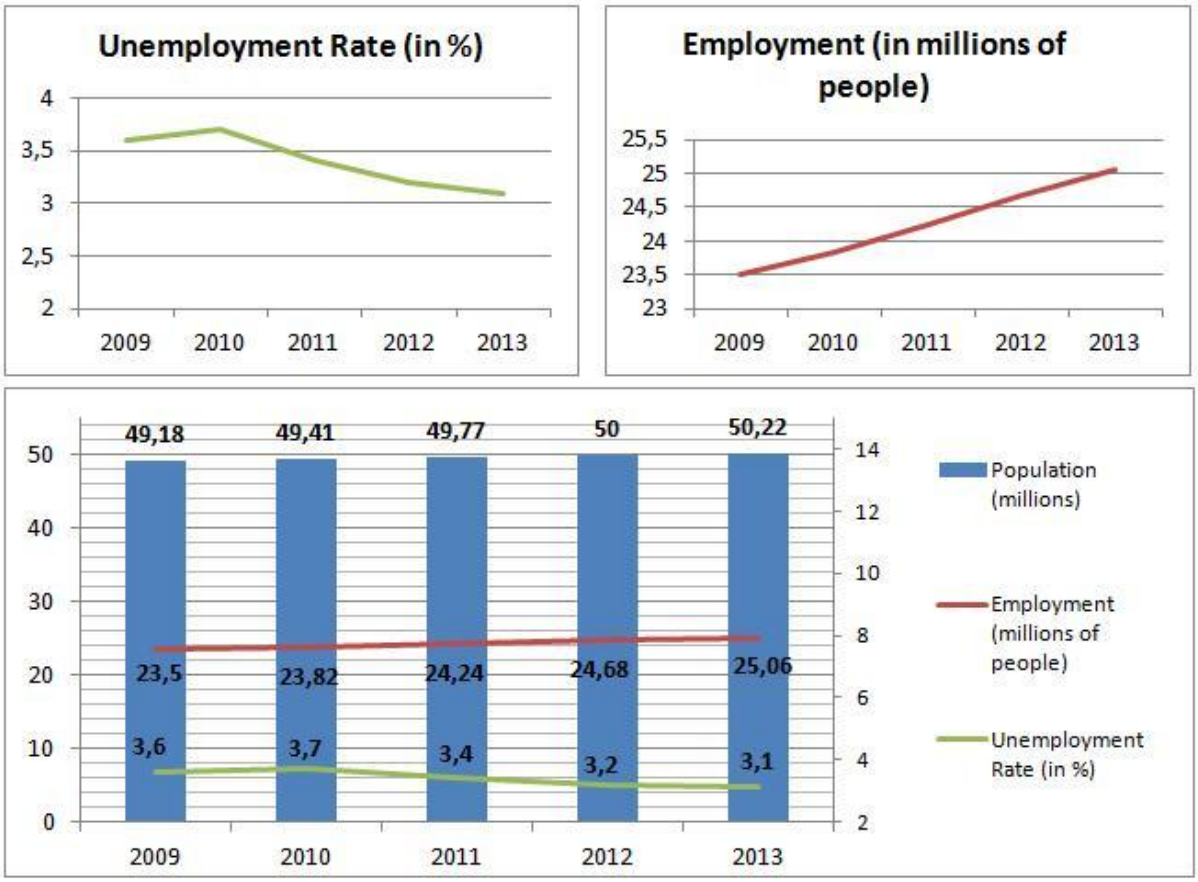


Figure 19. South Korea selected indicators (page 92)

Assessment of the national and international economic and related matters. Comparison of key points from the central banks' perspective.		
	Japan (Bank of Japan)	South Korea (Bank of Korea)
2010	• Global markets' gradual, yet slow economic recovery since the Global Financial Crisis • Japan: Anxiety about high public debt, weak credit market both in the country and abroad and adverse demographic changes, deflationary pressures • Concern about economic situation in Europe and United States, especially financial sector and private-demand • Mutual distrust among market participants, potential troubles in emerging economies, followed by general uncertainty on the markets	• Economic recovery after the Global Financial Crisis, rather positive impression of the mid-2009 – mid-2010 global and domestic performance • Still, diversified pace of the upward trend; East Asia as a leading region, followed by the United States, Japan and Europe • Relatively favorable condition of domestic economy, improving of the economic activity • Continuously present uncertainty about the future growth both in global and local terms
2011	• Great concern on domestic market regarding the earthquake and its consequences: downward pressures on economic activities, Fukushima accident issue, uncertainty about future progress, continued deflation • Still weak recovery in Europe, sovereign debt problem of continent's peripheral states • Continuously growing issue of public debt in world's advanced economies	• World: Comparatively stable continuation of the economic recovery after the crisis • Concern about sovereign public debt in some European countries • South Korea itself followed the positive trend of economic expansion (particularly export) • Signals of inflationary pressures in domestic economy, easy monetary policy in the future questioned.
2012	• Japan's relatively stable economic condition and reconstruction after the Great East Japanese Earthquake • Pursue of easy monetary policy in the following months, due to negative inflation • Expectations for Japan's higher economic growth in 2012 • Enhanced general debt problem in Europe, particularly in Greece, Portugal or Ireland • Continuously recovering economy and markets in the United States	• Enhanced concern about economic turbulences in Europe, related to sovereign debt problem • Somewhat slower growth rates among most of the major economies, including Eurozone and China; on the other hand – US performing well • Somewhat bigger concern about the pace of economic growth in the future • South Korea's performance follows the global trends; economy's growth is believed to be slower for the total 2012
2013	• Continued recovery and back on the growth paths after the global recession both in Japan and overseas economies • Continuation of domestic monetary policy and inflation goal • Although not complete, yet significant decrease of European public debt issue, comparatively to the last years • Improved expectations in regard to future economic environment	• Improved economic situation and condition of global markets, especially in major economies, comparing to 2012 • The peril of European debt problem diminished • South Korea's economic growth expected to accelerate, especially due to promising signals regarding external demand • General positive perception of future global and domestic situation

Table 11. Assessment of the economic environment. Key points of Japan and South Korea (page 94)

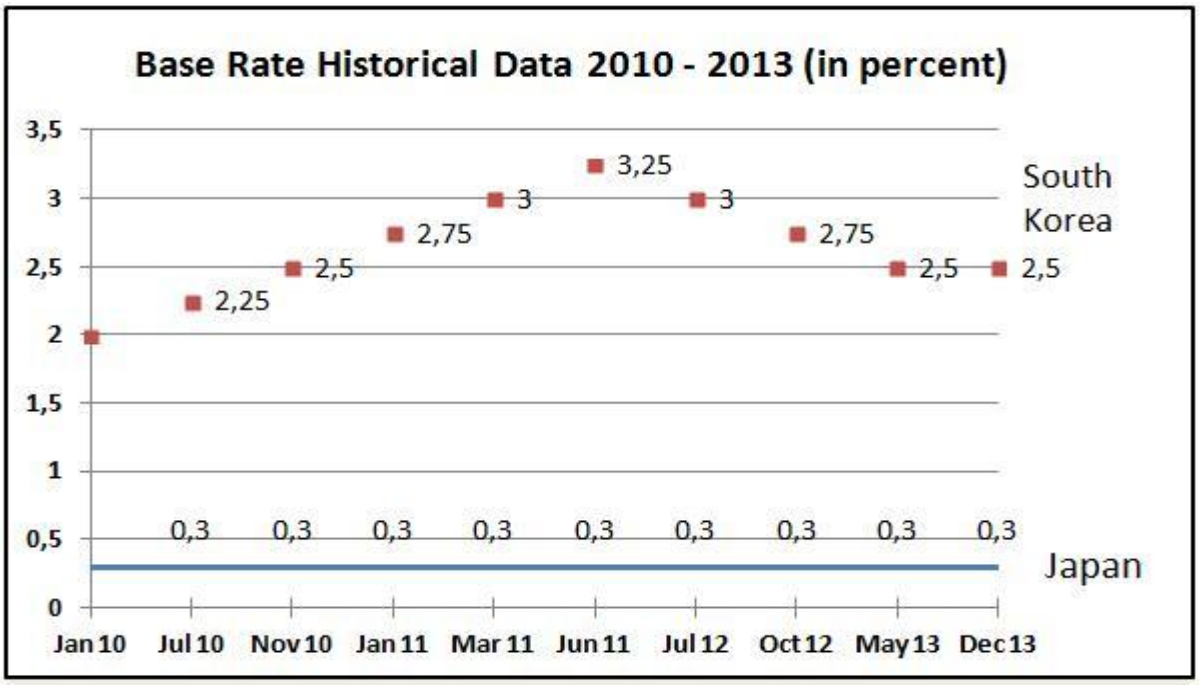


Figure 20. Base Rate of Japan and South Korea (page 98)

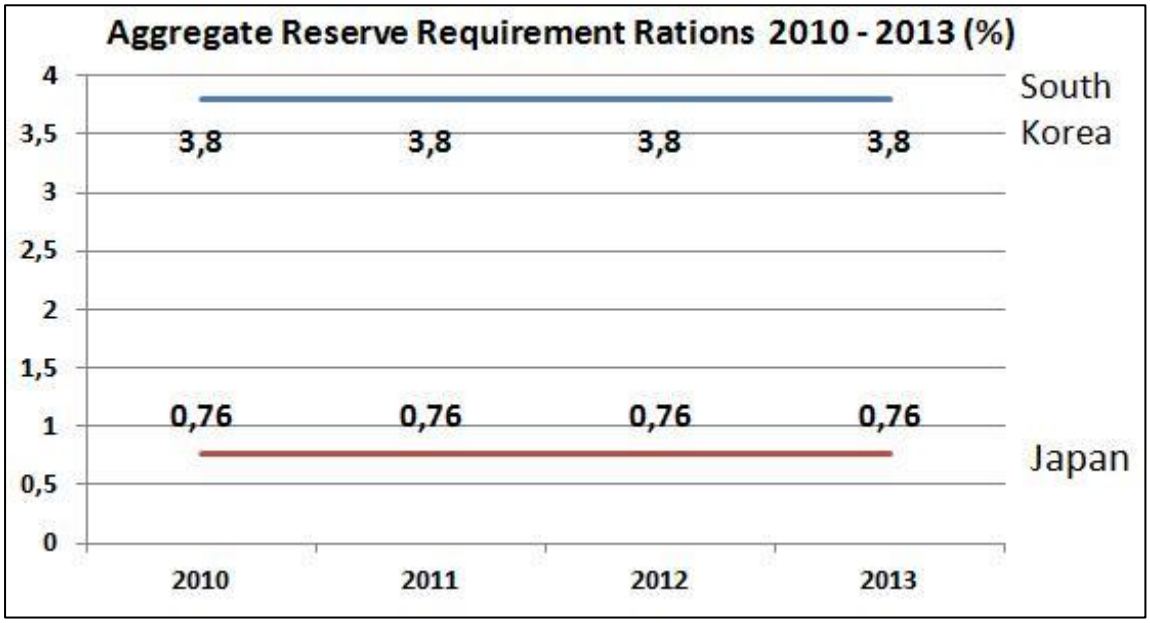


Figure 21. Aggregate Reserve Requirement Ratios for Japan and South Korea (page 100)

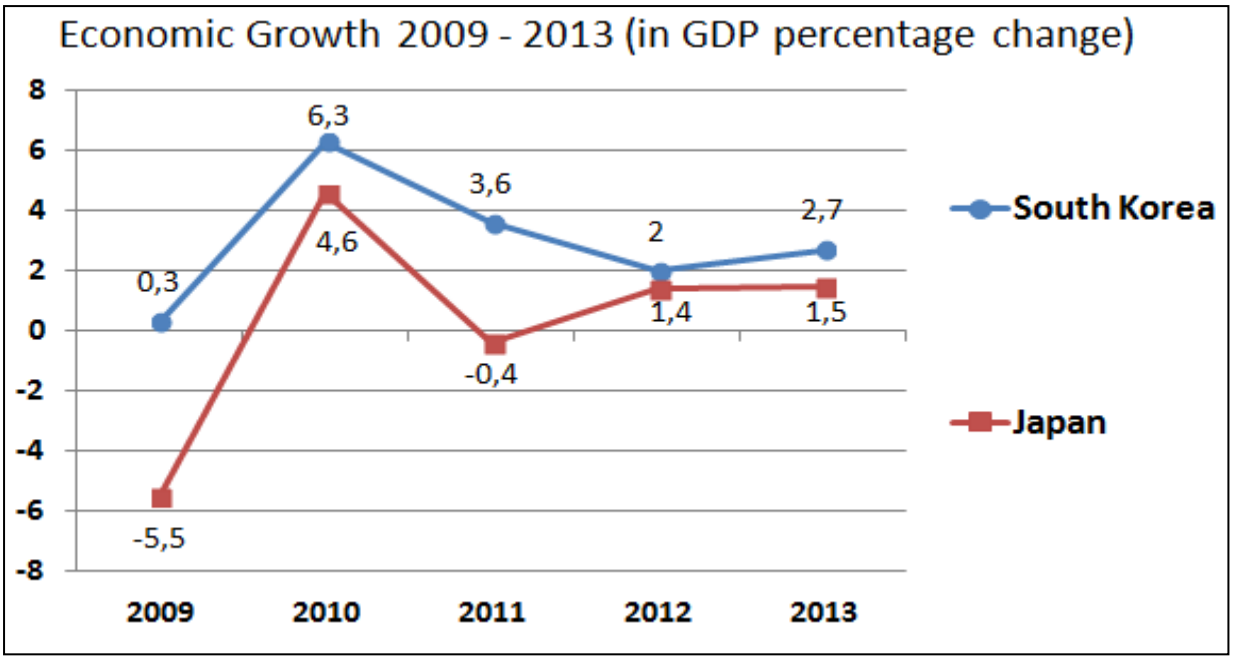


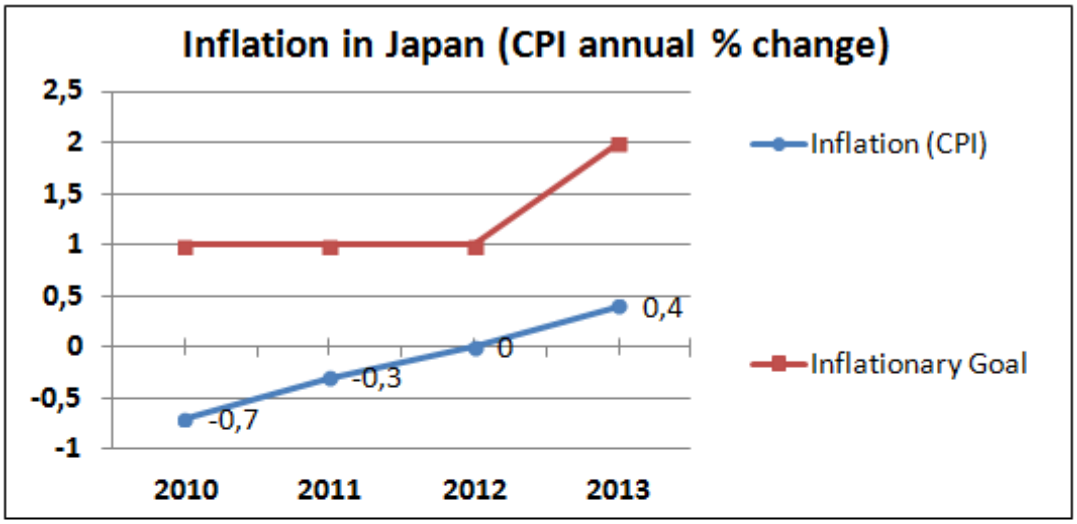
Figure 22. Economic Growth in South Korea and Japan 2009 – 2013 (page 103)

Economic Growth (GDP percentage change)					
Year	**2009**	**2010**	**2011**	**2012**	**2013**
South Korea	0.3	6.3	3.6	2.0	2.7
Japan	-5.5	4.6	-0.4	1.4	1.5

Table 11. Economic Growth (GDP percentage change) (page 103).

Inflationary goal 2010 -2013 (CPI % annual change)				
Year	**2010**	**2011**	**2012**	**2013**
Bank of Japan	1%	1%	1%	2%
Bank of Korea	2% - 4%	2% - 4%	2% - 4%	2.5% - 3.5%

Table 12. Inflationary goal in Japan and South Korea (page 104)



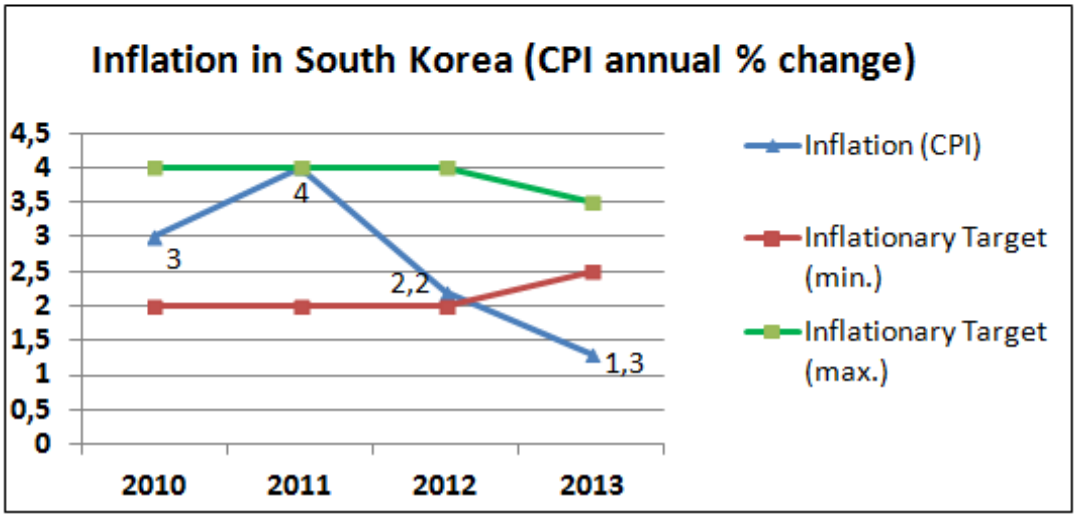


Figure 23. Inflation in Japan and South Korea. Historical data (page 105)

Inflation rate and target 2010 -2013 (CPI % annual change)					
Green color – inflation in accordance with the inflationary goal Red color – inflation not in accordance with the inflationary goal					
		2010	**2011**	**2012**	**2013**
Japan	**Inflationary goal**	1%	1%	1%	2%
	Inflation rate	-0.7%	-0.3%	0%	0.4%
South Korea	**Inflationary goal**	2% - 4%	2% - 4%	2% - 4%	2.5% - 3.5%
	Inflation rate	3%	4%	2.2%	1.3%

Table 13. Inflation rate and target (page 106)

Unemployment Rate 2010 - 2013				
Green color – country with lower rate				
Year	**2010**	**2011**	**2012**	**2013**
Japan	5.0%	4.5%	4.3%	4.0%
South Korea	3.7%	3.4%	3.2%	3.1%

Table 14. Unemployment rate in Japan and South Korea (page 107)

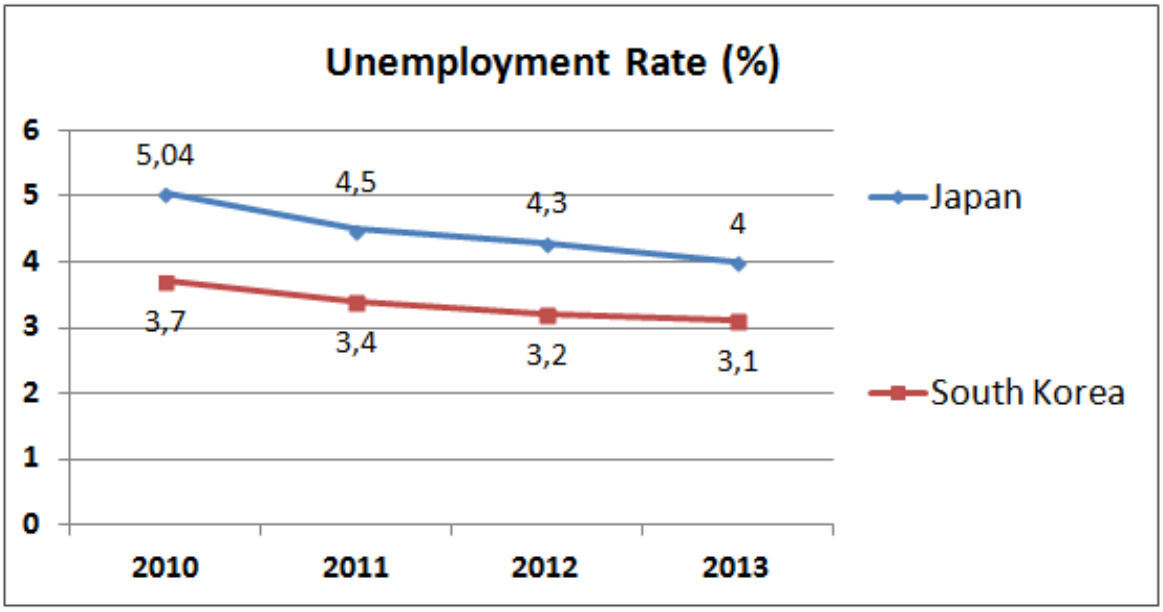


Figure 24. Unemployment Rate in Japan and South Korea (page 108)

Appendix 2. Abstract

English

This dissertation deals with the selected aspects of the monetary policy and macroeconomic performance of Japan and South Korea between 2010 – 2013. The dissertation focuses on the presentation of both countries' cases and their subsequent comparison. Basing on the individual questions of monetary policy and macroeconomics in a form of comparative method, this research aims to provide clear picture of the two East Asian economies and their general direction and efficiency in this particular issues. Having that in mind, in regard to monetary framework the author's main focus goes towards the assessment of an economic environment, discount rate policy and reserve requirement policy. In the macroeconomic performance part, however, economic growth, unemployment and inflation were taken into consideration.

Deutsch

Diese Dissertation beschäftigt sich mit ausgewählten Aspekten der Geldpolitik sowie der makroökonomischen Leistung von Japan und Südkorea im Zeitraum 2010 – 2013. Die Dissertation konzentriert sich auf die Präsentation der Zustände beider Staaten sowie deren anschließender direkter Vergleich. Basierend auf den individuellen Fragen der Geldpolitik und Makroökonomik, ist es das Ziel dieser Arbeit, mit einer Methode des Vergleichs, ein klares Bild der beiden asiatischen Wirtschaftsräume abzuliefern, sowie deren generelle Richtung und Effizienz in den jeweiligen Problemen. Dies im Sinn habend, lag des Autors Hauptaugenmerk, im Bezug auf den monetären Rahmen, auf der Bewertung des wirtschaftlichen Umfelds, der Leitzinspolitik und der Mindestreserveanforderungspolitik. Im Makroökonomischen Teil jedoch lag der Focus auf Wirtschaftswachstum, Arbeitslosigkeit und Inflation.

Appendix 3. Curriculum Vitae

Lukasz Stefan Malecki

E-MAIL lukasmalecki@hotmail.com BIRTH DATE 12.11.1990

Education

September 2012 …	**Master of Arts, East Asian Economy and Society**, University of Vienna, Austria.
September 2009 - June 2012	**Bachelor, International Relations**, Polish Naval Academy in Gdynia, Poland, specialization: local governance in the EU countries, final thesis: "The Marshall Plan and the economic development of West Germany".
September 1997 - June 2009	**Primary and Secondary Music School** of Felix Nowowiejski, Gdansk, Poland saxophone class.

Professional Experience

November 2013 - January 2014	**United Nations Office on Drugs and Crime**, Vienna, Austria, internship, Programme Support & Oversight Unit, Integrated Programme and Oversight Branch, Division for Operations.
March 2013 - September 2013	**United Nations Industrial Development Organization**. Vienna, Austria, internship, Asia and Pacific Programme of the Bureau for Regional Programmes of the Programme Development and Technical Cooperation Division.

Bibliography

Abel, Andrew B. and Ben Bernanke. *Macroeconomics*. 2nd edition. Reading: Addison- Wesley, 1995.

Anderton, Robert, Geoff Kenny and ed. *Macroeconomic Performance in a Globalising Economy*. New York: Cambridge University Press, 2011.

Arnold, Roger A. *Economics*. Mason: South- Western Cengage Learning, 2008.

Asian Development Bank. *How Can Asia Respond to Global Economic Crisis and Transformation?* Mandaluyong: Asian Development Bank, 2012.

Australian Bureau of Statistics. *Labor Force, Australia, February 2014*. n.d. 29 March 2014. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0>.

Baily, Martin Neil and et. al. "The Origins of of the Financial Crisis. Fixing Finance Series Paper 3. November 2008." n.d. *Brookings Institution.* 20 April 2014. <http://www.brookings.edu/research/papers/2008/11/origins-crisis-baily-litan>.

Bank for International Settlements. *Central bank and monetary authorities websites*. n.d. 14 May 2014. <http://www.bis.org/cbanks.htm>.

Bank of Japan. *Outlook for Economic Activites and Prices. April 2011*. n.d. 23 May 2014. <https://www.boj.or.jp/en/mopo/outlook/gor1104b.pdf>.

—. *Outlook for Economic Activities and Prices. April 2010*. n.d. 22 May 2014. <https://www.boj.or.jp/en/mopo/outlook/gor1004b.pdf>.

—. *Outlook for Economic Activities and Prices. April 2012*. n.d. 25 May 2014. <https://www.boj.or.jp/en/mopo/outlook/gor1204b.pdf>.

—. *Outlook for Economic Prices and Activities. October 2013*. n.d. 27 May 2014. <http://www.boj.or.jp/en/mopo/outlook/gor1310b.pdf>.

Bank of Korea. *Bank of Korea Act. Article 1*. n.d. 13 June 2014. <http://eng.bok.or.kr/broadcast.action?menuNaviId=824>.

—. *Inflation Targeting*. n.d. 13 June 2014. <http://eng.bok.or.kr/broadcast.action?menuNaviId=1612>.

—. *Monetary Policy Report. April 2012.* n.d. 7 June 2014. <http://eng.bok.or.kr/broadcast.action?menuNaviId=628>.

—. *Monetary Policy Report. March 2010.* n.d. 5 June 2014. <http://eng.bok.or.kr/broadcast.action?menuNaviId=628>.

—. *Monetary Policy Report. March 2011.* n.d. 6 June 2014. <http://eng.bok.or.kr/broadcast.action?menuNaviId=628>.

—. *Monetary Policy Report. October 2013.* n.d. 8 June 2014. <http://eng.bok.or.kr/broadcast.action?menuNaviId=628>.

—. *Reserve Requirements*. n.d. 10 June 2014. <http://eng.bok.or.kr/broadcast.action?menuNaviId=1907,>.

Begg, David, Stanley Fischer and Rudiger Dornbusch. *Economics*. 6th edition. Berkshire: McGraw-Hill, 2000.

Blanchard, Olivier. *Macroeconomics*. 2nd edition. New Jersey: Prentice- Hall, 2000.

Blundel- Wingall, Adrian and et. al. "The Current Financial Crisis: Causes and Policy Issues. Financial Market Trends 2008." n.d. *OECD .* 20 April 2014. <www.oecd.org/finance/financial-markets/41942872.pdf>.

Business Dictionary. *Macroeconomics*. n.d. 7 March 2014. <http://www.businessdictionary.com/definition/macroeconomics.html>.

Domitrovic, Brian. *Forbes*. n.d. 17 Juli 1990. <http://www.forbes.com/sites/briandomitrovic/2013/02/05/the-worst-economic-crisis-since-when/>.

European Central Bank. *The definition of price stability*. n.d. 14 March 2014. <http://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html>.

Eurostat. *Frequent out-of-pocket purchases (FOOPP)*. n.d. 30 March 2014. <http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Frequent_out-of-pocket_purchases_(FROOPP)>.

—. *Harmonised unemployment rate by sex*. n.d. 29 March 2014. <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=en&pcode=teilm020&tableSelection=1&plugin=1>.

—. *Unemployment rates, seasonally adjusted, January 2014*. n.d. 9 March 2014. <http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:Unemployment_rates,_seasonally_adjusted,_January_2014.png&filetimestamp=20140228082240>.

Federal Reserve Bank of St. Louis. *Effective Federal Funds Rate. Historical Data*. n.d. 20 April 2014. <http://research.stlouisfed.org/fred2/series/FEDFUNDS#>.

Federal Reserve. *Money, Interest Rates, and Monetary Policy*. n.d. 14 March 2014. <http://www.federalreserve.gov/faqs/money_12848.htm>.

—. *What is the money supply?.* n.d. 11 May 2014. <http://www.federalreserve.gov/faqs/money_12845.htm>.

Financial Times Lexicon. *Globalization*. n.d. 4 April 2014. <http://lexicon.ft.com/term?term=globalisation>.

Goldfeld, Stephen M. and Lester V. Chandler. *The Economics of Money and Banking*. New York: Harper & Row Publishers, 1986.

Gup, Benton E. *The Financial and Economic Crises. An International Perspective*. Cheltenham: Edward Elgar, 2010.

Gupta, Kulwant R. *Macroeconomics*. Delhi: Atlantic, 2008.

Higgot, Richard. "The Theory and Practice of Global Economic in the Early Twenty- First Century." Grant, Wyn, Graham K. Wilson and ed. *The Consequences of the Global Financial Crisis*. Oxford: Oxford University Press, 2012. 15-29.

Horvitz, Paul M. *Monetary Policy and the Financial System*. New Jersey: Prentice-Hall, 1963.

International Monetary Fund. *Asia and the IMF*. n.d. 18 April 2014. <http://www.imf.org/external/np/exr/facts/asia.HTM>.

—. *World Economic Outlook Database*. n.d. 25 April 2014. <http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx>.

—. *World Economic Outlook Database*. n.d. 8 March 2014. <http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/weoselagr.aspx>.

—. *World Economic Outlook Database. Selected macroeconomic data*. n.d. 14 May 2014. <http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx>.

International Organization of Supreme Audit Institutions. "The Causes of the Global Financial Crisis and Their Implications for Supreme Audit Institutions." Stockholm, October 2010. 20 April 2014. <www.intosai.org/.../gaohq4709242v1finalsubgroup1paper.pdf>.

Krugman, Paul. *Economics*. New York: Worth Publishers, 2008.

Labonte, Marc and Gail E. Makinen. "Federal Reserve Interest Rate Changes: 2001-2008. Report for Congress 29 October 2008." n.d. *Foreign Press Service. US Department of State.* 20 April 2014. <fpc.state.gov/documents/organization/112465.pdf>.

Mankiw, Gregory N., Robin Wells and Kathryn Graddy. *Principles of Economics*. Canale: Thomson Learning, 2006.

McKay, John. "The Asian ´miracle´ after the Global Financial Crisis: Some Lessons for Africa. Discussion Paper 2010/07." n.d. *Brenthurst Foundation.* 18 April 2014. <http://www.thebrenthurstfoundation.org/a_sndmsg/news_view.asp?I=118053&PG=288>.

Mill, John Stuart. "Project Gutenberg Ebooks." n.d. *Principles of Political Economics.* 11 May 2014. <www.gutenberg.org/files/30107/30107-pdf.pdf>.

National Bureau of Economic Research: Burns, Arthur F.; Mitchell, Wesley C. *Measuring Business Cycles*. 1947. 22 March 2014. <http://www.nber.org/chapters/c2981.pdf>.

OECD. *Monetary Authorities*. n.d. 16 May 2014. <https://stats.oecd.org/glossary/detail.asp?ID=1675>.

Oxford Dictionaries. *Globalization*. n.d. 4 April 2014. <http://www.oxforddictionaries.com/definition/english/globalization>.

—. *Macroeconomics*. n.d. 7 March 2014. <http://www.oxforddictionaries.com/definition/english/macroeconomics>.

Polish Financial Supervision Auditory. *Foreign Supervisory Organs*. n.d. 1 March 2014. <https://www.knf.gov.pl/o_nas/urzad_komisji/przydatne_linki/index.html>.

Quandl. *GDP as Share of World GDP*. n.d. 25 April 2014. <http://www.quandl.com/economics/gdp-as-share-of-world-gdp-at-ppp-by-country>.

Rana, Pradumna B. *Five years after the Global Crisis*. 15 November 2013. 18 April 2014. < http://www.eastasiaforum.org/2013/11/15/five-years-after-the-global-crisis-the-world-is-no-safer/>.

Rate Inflation. *Japanese Inflation Rate History*. n.d. 14 March 2014. <http://www.rateinflation.com/inflation-rate/japan-historical-inflation-rate>.

Samuelson, Paul A. *Economics*. 19th Edition. New Delhi: Tata Mc-Graw Hill, 2010.

Sang-Hun, Choe. "New York Times." 23 November 2006. *Central Bank of South Korea moves to curb lending.* 10 June 2014. <http://www.nytimes.com/2006/11/23/>.

Seo, Eunkyung. "Bloomberg." 2 March 2011. *South Korea Inflation Rate Rises to Two-Year High.* 13 June 2014. <http://www.bloomberg.com/news/2011-03-01/south-korea-inflation-rate-rises-to-two-year-high>.

Soubbotina , Tatyana P.; Sheram, Katherine A.; World Bank. *Beyond Economic Growth*. 2000. 5 April 2014. <http://www.worldbank.org/depweb/beyond/beyondco/beg_all.pdf>.

Statistics Bureau of Japan. *Coverage for Employment Survey*. n.d. 29 March 2014. <http://www.stat.go.jp/english/data/shugyou/2012/a1.htm>.

Stiglitz, Joseph N. and Carl E. Walsh. *Economics*. New York: W.W.Norton & Company, 2006.

Sung-jin, Yan. "The Korea Herald." 9 January 2012. *BOK mulls hike in bank reserve requirement.* 10 June 2014. <http://www.koreaherald.com/view.php?ud=20120109000889>.

Tanner, Kristi. "Detroit Free Press." 21 July 2013. *Detroit's unemployment rate over the last decade.* 9 March 2014. <http://www.freep.com/article/20130721/OPINION05/307210033/Raw-Data-Detroit-s-unemployment-rate-over-last-decade>.

U.S. Department of Labor. *Youth and Labor. Age Requirements*. n.d. 29 03 2014. <http://www.stat.go.jp/english/data/shugyou/2012/a1.htm>.

UNESCO. *Globalization*. n.d. 4 April 2014. <http://www.unesco.org/new/en/social-and-human-sciences/themes/international-migration/glossary/globalisation/>.

Wessels, Walter J. *Economics*. New York: Barron's Educational Series, 2006.

Wikipedia. *General Motors*. n.d. 9 March 2014. <http://en.wikipedia.org/wiki/General_motors#Financial_results>.

—. *List of National and International Statistical Services*. n.d. 29 March 2014. <http://en.wikipedia.org/wiki/List_of_national_and_international_statistical_services>.

—. *Lost Decade (Japan)*. n.d. 1 June 2014. <http://en.wikipedia.org/wiki/Lost_Decade_(Japan)>.

—. *Too big to fail*. n.d. 27 April 2014. <http://en.wikipedia.org/wiki/Too_big_to_fail>.

World Bank. *East Asia and Pacific Overview*. 25 March 2014. 18 April 2014. <http://www.worldbank.org/en/region/eap/overview>.

—. *Least Developed Countries*. n.d. 8 March 2014. <http://data.worldbank.org/region/LDC>.

World Meters. *Current World Population*. n.d. 6 April 2014. <http://www.worldometers.info/world-population/#countries>.