Babeș Bolyai University

Doctoral School in Economics and Business Administration

Field Economy and International Business

PhD Thesis

The monetary policy of China in the Third Millennium

Summary

Scientific advisor

Prof. univ. dr. Ciobanu Gheorghe

PhD student

Manța (Șarlea) Mihaela

~Cluj-Napoca, 2015~

PhD Thesis Structure

Introduction

Chapter 1. The monetary policy at an international level – concepts, politics, forms

1.1 The necessity of an International Monetary System – the history of the monetary system until Bretton Woods
1.2 The role and importance of the coin along time for the monetary policy
1.3 Bretton Woods and the role played by USA and Great Britain in creating the IMS
1.4 The effects of the gold demonetization and exchange market generalization – Kingston 1976
1.5 The effects of the main economic zones evolution on the international monetary components
    1.5.1 The evolution and the role of the euro in the IMS today
    1.5.2 The evolution and the role of Japan in the IMS today
    1.5.3 The evolution and the role of China and Renminbi in the IMS
    1.5.4 The role of IMF and the World Bank for the IMS today
1.6 Modern tendencies in the IMS reforms
    1.6.1 The IMS after 2007
    1.6.2 The IMS today
1.7 Towards a stable IMS – the effects of inflation targeting as a monetary target

Chapter 2. The monetary policy of China- analysis from an internal economic policy point of view

2.1 The role of People Bank of China and the monetary policy

2.2. Considerations regarding the monetary policies of China

    2.2.1 The transmission mechanism of the monetary policy

    2.2.2. Monetary policy objectives in China

2.3 Monetary policy instruments

    2.3.1 Quantitative instruments

    2.3.2 Qualitative instruments

Chapter 3. The effects of the economic and monetary policies of China at an external level

3.1 The role of the economic growth plans

    3.1.1. The impacts of the unperformed loans

    3.1.2. The efficiency of the monetary policy of China analyzed through the Impossible Trinity perspective

List of graphs

List of tables

Key words: The role of the monetary policy within economic policies, financial stability, monetary policy instruments, currency and exchange rate stability, time series modeling, linear regression, multiple regression

Introduction

The title of the thesis "The monetary policy of China in the third millennium" was chosen for several reasons, out of which we can mention the ambition and personal determination to prove that an economy like that of China, through its impressive economic growth, has elements that can change the perception on the monetary policy and the role it can play in a globalized world. **The choice of the research topic** was based on the uniqueness of the economic growth of China and we believe that the challenge involves trying to modernize the domestic financial system. However, the way in which the monetary policy accomplishes the final objective has effects on both national and international level. The mirage of China's economic growth created the basis for a research aimed at identifying the elements that originated this " Chinese economic miracle" as we called it in a previous research [145A]. From here, the interest towards the economic policy that conducted to this development was only greater. Concentrating attention towards the analysis of the monetary policy was due to the importance and role that the monetary policy plays within guiding the principals of leading the economy. The recent financial crisis with its unique elements and the importance of the contagion element also contributed to this interest in developing an analysis of the entire International Monetary System and the monetary policy instruments along time. The evolution of China's economy and the majority of the economies either developed or developing presented an impressive dynamics to several international events – military, politic, economics. And the most important policy that responded to all this events was the monetary policy. Several economists [44B] think that, the Chinese economy became an important one in the global economy due to the fact that contributes with 15% to the world GDP which means that any local event in China can have international effects. The international pressures in order to reduce the external surpluses and the tendency to inject liquidity as answer to slow economic growth after the first half of 2015, contributes to speculative attacks with international effects. For more than a decade, raw material producers have tried to satisfy the high request from China due to the impressive growth. Once the statistical data was published in August regarding the industrial production, the fears of economic slowdown have fueled the ideas regarding the overcapacity that could undermine the effectiveness of the monetary policy [46B].

Regardless of the economic doctrines, the greatest economists of the world have outlined the role that the monetary policy plays within the economic policies of a state. Therefore, the role

of the state within the economy and its implications in elaborating the monetary policy was long debated. The last year though, has brought to the world's attention the importance of an independent monetary policy. Therefore, the idea that an independent Central Bank creates the institutional framework to conduct and implement the monetary policy. Maintaining a stable price level had become the main purpose of the monetary policy: "The situation in which the inflation is low and stable so that it doesn't exercise a material effect over the economic decision of the public is an essential precondition for wealth and growth potential of the economy"[1].

This conditions being accomplished, the other economic policies have the institutional basis necessary to intervene and apply the reforms necessary to reduce unemployment and increase the standard of living.

Based on this elements, the **scope** of this phD thesis is the analysis of the internal economic policies of China, the role that the monetary policy played in creating this economic growth.

In our analysis, we started from the idea that the monetary policy has all the necessary weapons towards guiding the economy in a sustainable growth model. Our premise based on the analysis of the Chinese economy is that a growth model that its not healthy creates a dangerous spin that can affect all the world economies. In our paper, we have insisted on identifying and analyzing the instruments that the monetary policy of a state can apply towards fulfilling the scope. Therefore, in our analysis, we have started from the studies of some economists like Friedman, Eichengreen, Modigliani, Bernake, Carol, Lardy that have proved the role of the monetary policy. Based on this concepts and using the international databases of International Monetary Fund, World Bank, National Bank of China, Bloomberg and other international statistical databases we have analyzed, from an empirical point of view, using Mathlab the role and importance of some macroeconomic variables towards fulfilling the final scope of the monetary policy. In order to fulfill the scope of this thesis and to obtain the objectives, in our research we have used a series of methods specific to scientific research in economics: statistical observation, correlation analysis, conceptual analysis, historic and logic. At the same time, we have analyzed the indicators by using the quantitative and qualitative method, and, in order to implement the model economic – mathematics, we used Mathlab program.

[1] Antohi D. Politica monetară și moneda. *Seminarul masa monetară și inflația. Teorie și practică*, București, 2012, p4

In order to realize our analysis, we have proposed a series of objectives aimed at creating the necessary basis in order to obtain the viable objectives for sustaining the scope. A first objective was to *identify the role that the monetary policy and the International Monetary System has played during the years* for all the economies. In this context, we have realized an analysis of IMS with an accent more on the critics it had. We have realized therefore an analysis of the major events that have marked the development of IMS, from the monetary system based on gold standard up until the fall of Bretton Woods, to excessive inflation, to the evolution of the monetary instrument used among different IMS. Also, we have analyzed the role that the monetary institutions play in implementing the reforms to sustain an economy today.

A second objective was to identify *the importance of the transmission mechanism of the monetary policy* with emphasis on China and the role that the internal economic policies of a state influence the economy. Therefore, we analyzed the role that the expansionary monetary policy conducted by China has effects on both internal and international level. Therefore, we have reached the third objective which each is identifying the *major economic effects on an external level* that the internal specific policies have produces.

The last objective was to *demonstrate the econometric variables that influences inflation*. We have considered the main elements that had a definitive role in outlining the economy of China today like monetary mass, consumption, savings rate and the exchange rate.

We can say for sure that the monetary policy can guide the development of an economy. Even though we can discuss the independence of the monetary policy in some states, undebatable remains the fact that it can guide the economy. Even if we discuss about direct measures or indirect ones like „window guidance" for instance, the monetary policy guides the economic environment towards an expansionary or restrictive environments by influencing the level of liquidity.

During the years, the globalization phenomenon was more and more debated including the need to unify the monetary and economic policy in order to achieve benefits for all member states. Based on the research conducted, we can say that the monetary policy of the countries of International Monetary System today are characterized of three major monetary strategies: exchange rate targeting, monetary aggregates targeting and inflation targeting. On the long run, the majority of the economist say that maintaining the level of the process should be the most important objective „the price stability is a scope and also a mean to monetary policy as

it contributes to realizing an sustainable economic growth and macroeconomics stability[2]. Adopting, as a strategy or monetary regime the inflation targeting due also to the importance of the information in the new IMS. The expectancies regarding inflation, the transparencies of the politics implemented can become elements that all the participants in financial market can report too. The transparency of the politics implemented by the Central Bank become an obligations but also a benefit due to the fact that it is a real and clear objective they can relate to.

The first chapter of the thesis analyzez the International Monetary System for over a century. From the principles that led the Bretton Woods system up to the ones that guide the IMS today by analyzing the financial international vulnerability, the economic crisis contagion to the need of reform. Creating a better IMS in the light of globalization means also understanding of all the elements that creates it. From the money market, to financial market, capital market, the institutions that intermediate the relationship economic and financial ones up until the instruments that the member use. In order to realize a true reform of IMS we consider that it has to be treated like an expression of economic cooperation between states and not a form of undermining the monetary system of every state.

Considered from the beginning as a cooperation form to draw the rules and principles of cooperation at a financial, monetary, economic level, the IMS had evolved and can become the cornerstone of long awaited globalization. Our premisis is that the new IMS needs to be built on the idea of equality between states and for that the volatility of the exchange rates has to be eliminated. Also, all the manipulations on the exchange rate in order to gain economic benefits. The concept of a performed IMS has to be treated as an objective above a country's own economic gains towards an equilibrium financial – monetary capable of anticipating economic crisis. The contagion effects observed after the financial crisis in 2008 has confirmed the necessity of modernizing the organism like the World Bank and International Monetary Fund. They need to have an answer towards the monetary policy that must be used in order to obtain financial stability on the long run. The recent financial crisis has also proved that all the states have to rethink the macroeconomic principles.

Based on the first monetary transmission mechanism of Keynes, the IS-LM model, in **chapter II** we have followed the monetary policy transmission mechanism of China. We have observed that the most important element in the majority of the states, the interest rate is not

[2] Bernake B. The benefits of price stability, *Princeton University speech* , New Jersey 2006"

important in guiding the economy in China. This is due to the specific elements of Chinese economy. We have identified several elements that contributes to the efficiency or inefficiency of a transmission channel, depending on the internal economic policies of the country.

Considering this uniqueness of the internal economic policies we have divided the analysis in the impact that it will generate at an internal and then external level.

Therefore, in **chapter III**, we have identified the effects that the internal economic policies have on China's external relationship. These policies will directly affect all the economies of the partner countries and then all the countries based on the domino effect. Also, these policies will determine the relationship that China will create with the commercial partners. Therefore, we have analyzed the relationship between China and some of the main commercial partners: Russia for being one of the main partner due to the connections in the politic, military and energy sector and USA for China's close interest to the USD. We have observed that, for a country that sustains a distance from the USD, makes huge efforts to sustain the supremacy of the American currency by maintaining the level of the Yuan. Due to the impressive foreign exchange reserves, higher than the GDP of some countries, China has proved that has the resources to sustain its own currency. The final objective is to promote the Yuan as a reserve currency and the next intermediary step is to include it in the basket of currencies that define DST.

As we noticed, the monetary policy objective is to promote price and financial stability. **In chapter IV** we will insist on the elements that can influence the inflation based on some elements specific to China's internal economic policies like: monetary mass, consumption, savings rate and exchange rate.

In this chapter, following the identification of the elements that can influence inflation, we have analyzed three different economies from Asia, America, Europe. The scope of the analysis is to test the efficiency of the monetary policy and identifying the main elements that can be apply at a regional and global level. We have developed a macroeconomic model in Mathlab in order to test the way in which some macroeconomic variables crucial in determining the economic growth in some countries will be effective in other countries.

Through the conclusions based on the analysis conducted, we are trying to find answers to the question regarding the role of the monetary policy and China and its ability to answer to the

challenges of the modern world. The instruments that the monetary policy uses needs to be adapted to a modern IMS, based on the cooperation principles among countries in order to obtain on the long run the same objectives: sustainable economic growth and price stability. The efficiency of the monetary policy can demonstrate how healthy was the growth model adopted in China in the past years. The final mission of the People Bank of China is to assure the transition of the economy from an economy based exclusively on promoting the exports and industrialization towards a one more orientated into internal consumption. The new model will assume also reducing the consumption of raw materials and energy dependency. Based on the conclusions formulated and the future research topics, we will present a series of arguments aimed at presenting the overall picture of the Chinese economy in correlation with other states that have proved the efficiency of the growth model over the years.

A Summary of the Chapters within the PhD Thesis

Summary of Chapter I - The monetary policy at an international level – concepts, politics, forms

The global monetary policy has seen many changes both at the level of the role played, to the instruments available or even at the level of its autonomy.

The role of policy in the framework of the International Monetary System has evolved over time, the monetary policy instruments used during the monometalism and bimetallism have evolved over time after the collapse of the Bretton Woods system until the recent economic crisis.

In this first chapter, we noted that, for a modern, efficient and a IMS adapted to the globalization process, it is necessary to have a form of cooperation between states. Each state's monetary policy should be focused towards achieving internal financial stability of by applying international principles and tools in order not to affect the economic objectives of the others indirectly. The monetary policy of the individual States must ensure price stability and the financial environment to help ensure a sustainable model of economic growth without harming the interests of other States. By doing so, manipulation of the course of its own currency and exchange rates misalignments should be avoided.

The aim of the chapter is to provide a clearer picture on the elements that create the IMS today from the currency markets, capital markets, to the institutions that mediate the economic, monetary – financial relationships up to the role of the monetary instruments.

The importance of a quick response of the monetary policy by adopting the most appropriate tools to respond to various disturbances on national or international markets has been increasing over time. And this has been highlighted since the bimetalismului and the monometalismului. During the period of these monetary systems, the objective of monetary policy was to ensure the required amount of precious metals at the national and international level. As long as the forecast was assured, monetary policy might apply to other objectives such as the prevention of crises, management of panic or even to expand the monetary base if necessary.

The high level of inflation in the years after World War I and the great depression of 1929-1933 has brought into question the new powers that monetary policy should have. The danger

of speculative bubbles, of overproduction, but also the systemic risk has been proven during the great depression and that quick monetary policy measures to curb the increase in the price and decrease of asset value are the most important to restore the balance nationally and internationally.

Therefore, the stability of the financial market was always a monetary policy objective due to the role played by the instruments in all the time periods analyzed.

To be able to speak of a monetary policy adapted to the changes incurred by the third millennium, new measures to modernize the international monetary system are required. Here we can mention the increase in the efficiency of the reaction to economic crises and capacity of anticipation. This can be realized by maintaining the public debt at a reasonable level in order to reduce external imbalances and the competitiveness. We might add measures aimed at increasing the level of confidence of underdeveloped and developing countries in institutions like IMF or World Bank. New assistance programs need to be implemented with emphasis on structural reform rather than austerity measures. Reducing exchange rate volatility by diminishing the currency risk and the interest for financial speculations could be the milestone of a new and improved IMS. Also, eliminating currency manipulations in order to obtain economic gains should be an objective of a new IMS.

We believe that these imbalances at the level of the exchange rates shall continue due to the international situation in the trade market - financial markets are being receptive to political and military events around the globe. Moreover, national policies will facilitate short-term speculative attacks on the currency. Thus, the uncertainties of today's Greek economy draws attention to the ultimate speculators in regards to the euro. The low price of oil internationally, military pressures in oil-producing States and expectations of interest rate increase in lead to speculative attacks on the dollar's and euro address.

Analyzing all the problems, we consider that some solutions can create a more performed IMS:

- Reducing commercial imbalances between states;
- Reducing the dependency of USA from China regarding the financing. We can suggest here increasing the savings rate in USA;

- Eliminating the structural imbalances – maintain the budget deficit and public debt at a reasonable level;
- Reducing international reserves and the level of liquidity of financial assets. The alarming increase in international reserves could reduce the monetary policy efficiency[3]

[3] Horsefield JK. *The International Monetary Fund, 1945-1965*. Vol 3, documents. Washington: IMF, 1969

Summary of chapter II - The monetary policy of China - analysis from an internal economic policy point of view

In chapter II we have emphasized the analysis of the Chinese monetary policy in close connection to its internal economic policies. This purpose was to offer appropriate suggestions regarding the future of the monetary policy in China and the measures that we consider necessary to be adopted in order to create a modern financial system in China.

The final objective of the monetary policy is the final goal, quantifiable, made public. This can be:

- Price stability;
- Stimulating economic growth;
- Reducing unemployment rate;
- Financial system stability.

The monetary policy objective in China is to stimulate economic growth by maintaining the price level and the stability of the currency. Based on our research, we can say that the main monetary instruments used were the direct ones to control the monetary aggregates and the indirect ones to control the level of liquidity on the market:

- Instruments through which the Central Bank injects liquidity or absorbs the excess liquidity from the market (open market operation, refinancing, reserve requirements and reserves on loans/deposits)
- Instruments that affect directly the balance of the financial institutions (loans limits, establishing a report between own funds/loans, the control over the new titles on the open market, establishing new invoice rates for debts/credits, announcing of a minimum portfolio of financial titles).

The use of the minimum reserve requirements and open market operations have allowed a control over the liquidity level and also maintaining the stability of the financial market. Reducing the interest rate in order to increase liquidity on the market was recently used in 2015. Considering the lack of trust of the investors, this two instruments proved not sufficient in the short run to regain trust.

Using the open market operations was long debated especially considering their role in assuring financial stability. There were many discussions during the years on the excessive use of this operation and how it might affect the price stability. At the moment, we consider

that for China using this type of operations in order to control the liquidity level on the market is a step forward in order to develop the financial market and a diversification of the instruments. These operation lead to a better allocation of resources which lead to an improvement of the bank portfolio, therefore on the short run they are beneficial considering the level of the foreign exchange reserves. Moreover, the research on the level of the money supply in China have proved the necessity of maintaining it at the level targeted in order to avoid inflationary pressures. Also, our research have stated that the open market operations are affected because they can be implemented immediately. Since any movement on the interest rate level needs an approval from the government, the use of interest rate to control the level of liquidity in the market is more efficient on the long run.

Based on the research conducted, we can say that the Central Bank of China needs more autonomy and independence in order to implement the monetary policy. In this way, the Central Bank will have all the necessary means to guide the economy. Although we have emphasized that the interest rate should become an operational objective, the window guidance measures are on the sort run the fastest solution available to control the level of liquidity on the market. On the long run though, using the interest rate to control the level of liquidity and the credit level might be more effective though. And as a way to guide the bank behavior, the use of the window guidance measures are a solution. This measures could contribute to a more prudent behavior of banks in granting credits, a better risk management. A more prudent behavior during economic boom could lead also to better control inflation expectations.

The topic of the monetary instruments should be used in order to fulfill the objective was long debated. Therefore, we have analyzed the monetary policy instruments used during the crisis in order to identify measures that the monetary policy can take in the future in order to avoid such effects.

The monetary policy of each state had the difficult mission to stabilize the economy after the external shocks and the domino effect created by the fall of Lehman Brother. Many economists like Taylor [152A] have mentioned that the low level of the interest rate in USA has reduce the costs of borrowing. Even though we can assume that this low interest rate was sustained by the increase in productivity and the increase in the saving rate during the end of the 1990 and beginning of 2000. And the increase in the foreign exchange reserves of most developing states was the result of the lack of trustworthy assets in order to place the capital.

From here, we consider that we can mention three problems of the monetary policy conducted by the majority of the states:

- The lack of quick reaction in foreign exchange reserves and the lack of reaction in USA to the increase in the volume of the loans;
- Expectations regarding inflation play a critical role in elaborating monetary policy. Expectations regarding inflation were not correctly correlated being influenced by the low inflation volatility and the increase in output which distracted the attention from the increase in the value of the loans for example.
- The lack of a risk management – finding methods of restricting the risk credit, improving methods of identifying risk in loan granting.

Besides of measures of liquidity injection on the market, measures of increasing the exports by depreciating the value of the currency. Depreciation of the currency was a result of the expansionary monetary policy realized through conventional or unconventional instruments led by the states in order to increase the level of liquidity. This measure was adopted by USA and it is considered an expansionary monetary policy to promote national interests and a result to improve current account balance and not as an activity aimed at deliberately affecting the commercial balance of a partner.

This measures are considered unconventional, compared to the conventional measures of influencing the money supply or interest rate. These measures proved efficient in the majority of the countries and managed to fill in the necessary liquidity level through external loans. The loans however have affected the position of the governments by increasing the deficits which can lead to longer periods of recovering after crisis. After the recent economic crisis, we can say that the monetary policy needs to be modernized in order to be able to react to longer period of general instability. Otherwise, price stability is not sufficient in order to obtain financial stability.

Summary of Chapter 3. The effects of the economic and monetary policy of China at the external level

In Chapter III we have highlighted specific effects that China's economic policy has on monetary policy, economic policy and thus the effects that can externally. In the first part we discussed the role of China's savings rate and its effect on externally and the role of monetary policy in controlling the rate of saving and consumption levels.

We proved that years of economic growth have facilitated the growth rate of saving both households and the corporate and government under a level of consumption at low levels as a percentage of GDP, combined with low living standards. On a short- term, this high saving rate had beneficial effects in China. It help maintain high trend in investments in the reforms period, even in times when foreign capital flows were difficult to obtain and thus contributed to the shift from a planned economy with low incomes, to a market economy. Moreover, the high savings rate enabled the government to adopt policies of rapid growth - promoting exports has allowed the development of several industries and allowing to create the requirements for technological development.

We believe that, in China, due to high savings rate, boosting the credit policy and reducing the interest rate, is recommended as measures in monetary policy, for a better allocation of capital and increased consumption. Also, savings trends are dictated largely by low GDP / capita, thus CPI remains high because of this. Given the fact that the vast majority of the products sold by the Chinese exporters are final goods, the evolution of the CPI is the most important factor in the decision to sell internally or externally. Therefore, exports as the main engine of economic growth are determined in large part, in addition to fixed exchange rate, by the CPI developments. On contrast, most of the products imported by China are intermediate goods and products, thus the price is determinate by the IPP.

However, China must take into account the negative effects of deflationary pressures that decrease PPI and CPI growth may generate. Indeed, in 2015 there was a decrease of IPP which was influenced largely by the drop in oil prices which affected exports at the same time. One of monetary measures that we believe can be applied to counter the deflationary effects as lowering reserve requirements that may support the domestic economy by increasing the number of loans and boosting consumption. That, in addition to measures adopted at the end of last year when it was lowered the monetary policy rate. Several factors are considered to present a risk to deflation in China:

- The deterioration of the economic situation al a global level;

- Domestic industrial overcapacity;

- Reduction in capital investment within the country;

- Inefficient investments, increase in credit defaults;

- Fall in oil prices worldwide.

All these factors have had a negative effect on prices in recent years and low consumption and high savings rate have deepened these fears of a possible deflation. Furthermore, a study made by Chen and Hardie in 2014 revealed that the influences that oil price shocks have on the price level in China is directly proportional. Such as the global fall in oil prices maintained under this model are chances to register the same effect in lowering the domestic price in China[4].

In the last part of this chapter we analyzed the perspective of China's currency to be included among the currencies included in the basket of currencies the IMF which will directly affect China's trade relations with all countries. The future of renminbi as an alternative to the dollar and euro on international financial markets will be determined only by China's ability to implement the reforms needed to create a sustainable growth model. And to reform the financial system, China needs an independent monetary policy able to afford the capital account liberalization and restrictions on domestic financial markets while maintaining price stability and allowing social reforms needed to boost consumption and reduce savings rate.

If these tasks are completed, China may start promoting convertibility of the national currency and to promote confidence among investors. All these reforms can be implemented but only gradually, which will make the prospects of renminbi to become a main trading currency on international markets long-term mission, perhaps decades. That's because there are numerous political and cultural restrictions. Thus, being a communist country, it is difficult to obtain the confidence of trading partners to use this money or to be used as a reserve currency for other countries. All the renminbi progress on the international market creates a sense of trust in the Chinese government, even if at this moment, increasing confidence was mainly due to the use of the renminbi at a regional level. Current issues related to loss of confidence investors have

[4] Chen S, Chen D, Hardle W. *The influence of oil price shocks on China's macroeconomy: A perspective of international trade.* SFB Economy risk, Berlin 2014

in China's economy following the economic slowdown and the drop in the stock market, together with the lack of positive reaction of the market as a result of monetary policy measures of depreciation of the currency, reducing the policy rate and reduction, will delay the process of internationalization of the Chinese national currency.

Throughout this chapter, we analyzed, however, real exchange rate developments in correlation with the saving rate which demonstrated the effort to maintain the monetary policy and exchange rate stability of the currency. The sustained efforts from the recent years to maintain the appreciation of the exchange rate has led to the gradual improvement of the business relationship with the US and hence the gradual reduction of the trade deficit with China. Findings remain timid and US deficit remains at a high level, which requires a large amount of foreign exchange reserves, the largest in the world. The issue of China's large foreign exchange reserves represents a threat to the stability of the entire financial system. That's because the reduction of foreign exchange the Chinese reserves in dollars can only be achieved by selling them which would lead to decreased value of the dollar themselves- can destabilize the entire financial market. Otherwise, gradually employ the decelerating their purchase, a trend that China seems to have begun to implement (in July, according to data from BCC, foreign exchange reserves in dollars fell by 40 billion of USD 3.69 reaching a billion dollars). Another solution could be the diversification of how they are used, thus promoting a diversification of their investment, turning them into capital that can be invested. This solution is however one that we consider that can reform the entire financial system in China and an innovative solution to a financial system where change is needed. But it could bring additional confidence in the national currency and could contribute to propelling renminbi as an international currency.

Summary of Chapter 4. Econometric analysis of the elements that influence monetary market in China

In this part of the paper, to highlight the role that various macroeconomic indicators may have on inflation in a country, we analyzed three different economies, with different principles of government and sizes, but which are considered models for various reasons. Thus, using an econometric model based on four macroeconomic variables we considered two-state model validation to generate considered relevant for further analysis. For this purpose we considered relevant analysis on the US economy, which is currently the world's largest economy, and a developed economy, and that of Denmark, an industrialized, open and stable economy. Considering the importance of monetary policy in a USA to create a sustainable model of growth, we started this analysis from the premise that the principles that are validated on two states considered relevant for the global economy could be applied in the case of other modern, powerful countries, governed by market principles.

Building on the monetary policy objective of most countries to maintain price stability, any inflationary pressure usually associated with a lack of development of financial variables can lead eventually to excessive credit growth and asset price growth[5]. European Central Bank data on 15 industrialized countries has shown that, when money growth is accompanied by credit growth and asset prices, then most likely there will be inflationary pressures[6].

In our approach we started from the truth that links between economic phenomena are characterized by a phenomenon or another under the influence of a complex range of factors, some of which are essential, and some of secondary importance.

If the complex relationship in which the dependent variable may be influenced by several independent variables, calculating the correlation cannot be limited to only one significant factor of influence, but must include other independent variables with significant influence on the dependent variable analyzed. The way these independent variables are affected by dependent indicators, is measured by using multiple correlation.

Also, within multiple links, factorial variables have different influences on variable outcome; some exercises an important action on the phenomenon effect and must be taken into account

[5] Bordo MD, Jeanne O. *Monetary policy and asset prices: does "benign neglect" make sense?".* International Finance Vol. 5, No. 2, pp.139-164, 2002

[6] Roffia B, Zaghini A. *Excess money growth and inflation dynamics*. European Central Bank, working paper series no 749, 2007

in the calculations of regression and correlation, while others have an action less important and can be neglected. Correlation methods have the effect of simplifying calculations and conclusions because it is impossible to quantify the causal factors acting on a socio-economic phenomenon or process.

The methods and statistical techniques to quantify, factor analysis, estimation and testing are represented by a large and varied crowd of statistical and mathematical methods and tools.

The most significant of these methods and tools are applied in one form or another, on the input data available in order to explain the factors and therefore obtain the information necessary to substantiate the decisions of action.

We initiated upon the basis that the inflation rate as dependent variable is influenced by broad money, the savings rate, consumption levels and the nominal exchange rate as independent variables. The developed model coefficients measured inflation in China between the years 1994-2011 on account of each of the four explanatory variables considered.

We started he modeling analysis of time series by simple regression and multiple linear regressions for Denmark using the following equation regression:

$y_t = ax_t + b + \varepsilon_t,$

Where yt = inflation rate (%) Note Infl;

xt = Money (USD million) not MoneySupply (1); Cons (2); Savings (3); Nominalexchangerate (4);

εt = residual variable

Based on the interpretation results of the regression we have identified that:

- An increase in money supply by one, Infl will increase by 0.000000000000792 units

- An increase in the rate of saving with one unit, inflation will rise in turn to 0.000000000022336 units

- An increase in the nominal exchange rate by one unit, the inflation rate will decline on average by 0.031206077639469 units

- An increase in consumption by one unit, inflation will increase by 0.000000000006300 units.

The results obtained after carrying out estimates in Matlab are:

Infl = 2.516542766461885 + 0.000000000001314 *MoneySupply – 0.000000000051086 *Cons + 0.000000000096378 *Savings – 0.013622456424386 *Nomianlexchangerate. (5)

The analysis undertaken yielded a correlation coefficient of 0.3414 in R^2 model, which shows that between exogenous variables and the endogenous analyzed, there is a connection of medium intensity. Clearly, when R^2 has values closer to 1, the better the regression model adjusted sampled data.

The random variables (waste) ε are normally distributed, there is no link between exogenous variables and the vector of residues at the population level, the errors are not auto correlated and the model is homoscedastic. Model parameters are significant.

Based on the regression equation for Denmark, we can draw the following conclusions:

- The money and the savings rate significantly influence the model. Such a variation thereof in a certain direction, inflation in turn will oscillate in the same direction, but with a lower value;

- The nominal exchange rate and the consumption significantly influence the model, but in the negative way. At the change of these two indicators inflation will evolve in reverse;

- Because of the correlation coefficient, the dependent variable, the average inflation rate is influenced by the four variables analyzed in 34.14% of cases. Based on this result, it appears that over 54% of the inflation rate is caused by other factors. Other potential explanatory variables that could express the rest of 0.6586 in shaping inflation and contained in vector waste could be interest rate, productivity, legislative changes in the labor market, changes in the level of GDP / capita level of government spending, which could be the subject of future research.

Modelling time series by simple regression and multiple linear regressions for the US then, using the same regression equation concluded the following results:

- An increase in the quantity of money in the economy will drive inflation will fall by 0.000000000000003 units.

- An increase in consumption by one unit, will rise the inflation rate with 0.000000000000020 units

- An increase in saving rate by one unit, the inflation rate will increase by 0.000000000000711

- A rise in the nominal exchange rate by one unit, the inflation rate will rise in turn to 0.002038079427913 units

After applying econometric model in Matlab, we obtained the following equation:

Infl = -1.064434007334435 - 0.000000000001542 * MoneySupply + 0.000000000002223 * Cons + 0.000000000001448 * Savings - 0.028951401064793 * Nomianlexchangerate. (5)

Based on data results from the US we shown that the correlation coefficient is $R^2 = 0.68482$, indicating the strong link between these four endogenous variable and the explanatory one. Clearly, the R^2 has values closer to 1, the better the regression model adjusted sampled data.

Based on the results from implementing multiple regression model we can draw the following conclusions:

- Variables used in our analysis to determine the inflation rate affect inflation in 68.48% of cases. This shows that the four independent variables have a dominant role in determining inflation and a shock can cause considerable imbalances;

- Money supply and nominal exchange rate significantly influences the pattern but in the negative way. Thus the dependent variable will evolve in reverse by comparison with the evolution of independent variables;

- Savings rate and consumption recorded positive coefficient, which will induce inflation to evolve in the same direction as in the case of independent variables

Modeling time series by simple regression and multiple linear regressions for the China then, using the same regression equation concluded the following results:

- At an increase of the money supply with 1 unity, inflation will drop by 0.000000000000058 units;
- At an increase of consumption with 1 unity, inflation will drop by 0.000000000001995 units;

- At an increase in the savings rate with 1 unity, inflation will drop by 0.000000000000920;
- At an increase of the nominal exchange rate by 1 unit, inflation will drop by 0.494347489101299 units.

The most important result after this analysis is the role played by the exchange rate over inflation. We can explain this by the fact that any increase in the exchange rate will lead to an increase in the money supply and in the end in inflation. There were many economists that have researched this idea, Roubini said that[7], referring to the new macroeconomic theories that any increase in the money supply will lead to an increase in inflation and the nominal interest rate will not have any effect on output, consumption, investments.

After implementing the annual data during the years 1994-2011 using Mathlab we have found the following regression equation:

Infl = - 0.000000000001031*MoneySupply - 0.000000000014130*Cons + 0.000000000030315*Savings + 0.117832517348119*Nomianlexchangerate. (5)

Based on the result, we have concluded that the random variables (waste) ε are normally distributed, there is no link between exogenous variables and the vector of residues at the population level, the errors are not autocorrelated and the model is homoscedastic. Model parameters are significant.

The correlation coefficient of the model is $R^2 = 0.1814$, indicating that there is a connection between the variables analyzed, which is a week link. Therefore, in the case of China, the rate of inflation, the rate of inflation is explained by the four variables but only in a proportion of 18.4%, there are other factors that influence the variable. Therefore, we can say that the factors that the variables that influence the inflation demonstrated in the case of Denmark and USA are not proven for China due to the particularities of the Chinese economy and the monetary sector. China uses the exchange rate as an instrument but also as an objective of the monetary policy. Therefore, we should consider other economic and social variables like the increase in the price of oil for example that could better explain the model. According to the Chinese particularities, the high savings rate and the low level of consumption should have better explain the model. However any intervention in the monetary market was addressed to maintain the stability of the currency and to promote export growth.

[7] Roubini N, Backus D. *Lectures in Macroeconomics, Stern School of Business*. New York University, 1998

Based on the data resulted we could conclude that:

- The money supply and consumption negative influences inflation rate. Therefore, at an increase of the two variables, the inflation will drop proportionally with the value of the regression coefficient;
- The savings rate and the nominal exchange rate directly influences the model, the positive coefficient of the variables produces an evolution in the inflation rate in the same way with the modification in the exogenous variables.

Considering the low coefficient correlation, we can present a first conclusion that, compared to the modern economies the independent variables does not validate the model in China. Not even from the coefficient point of view, the Chinese system is not similar to the other two.

Even tough there is a general idea promoted that the Chinese economy is a free one that functions in accordance with the macroeconomic laws, there could be identified other elements that would contradict this idea like:

- A high level of state implication in the economy;
- The statistical data published by several international institutions prove a high level of discrepancy in regards to China (National Bank of China, Bloomberg, World Bank, International Monetary Fund);
- A reduce level of transparency regarding the economic date, besides the inflatrion targeting regime adopted.

In the last part of the chapter IV, we have analyzed the inflation in China in t moment considering the inflation in the previous year t-1 by modeling time series. We have chosen the modeling of a linear simple regression in t moment in the period 1971-2012 using inflation in t-1 during 1970-2011. The linear simple regression is a econometric method mostly used and the regression function represents the base of which the best macroeconomic and microeconomic analysis are realized. Over years, there were significant differences between the levels of inflation in China. If before the 1990, in China there was a highly volatile inflation regime, in the past years after 2000, inflation had registered low values and low volatility.

Inflation persistence is also an aspect that needs to be taken into consideration and its importance was more and more realized based on Friedman analysis that said that „ a high inflation is associated with a high level of un certainty and then, a high level of uncertainty

determines reduction in production and increasing the unemployment[8]. The uncertainty leads to an increasing mistrust among the population which can decide decreasing consumption and affecting production which might lead to unemployment. In anticipation of a high price level, the consumers will be reluctant to buy and the investors will abstain from new investments, waiting for more stable periods.

The linear simple regression is:

$$\mathbf{Infl_t = 1.5196 + 0.6766 * Infl_{t-1}}$$

Analyzing the result, we can say that the hypothesis regarding the method of least squares are verified. Also, the estimators of the model parameters are significant different from zero and reach a representation level of 5%, the model is also representative.

In this model, we can see that the rate of past inflation in ($Infl_{t-1}$) is an essential influential factor of variation in current inflation ($Infl_t$). The correlation coefficient was 0,4786, which confirms a bond of medium intensity between the endogen and the exogenous variable. The interpretation of the regression is: at an increase of inflation in $Infl_{t-1}$ with one unit, $Infl_t$ will increase roughly with 0,6766 units. If $Infl_{t-1}$ will not vary, then $Infl_t$ will increase with 1.5196 units.

Therefore, considering the results, we can say that the model, along with the analysis of the evolution tendency of inflation rate in the current year based on the one in the past year could represent the base to create an estimation as realistic as possible regarding the level of inflation in China. As a future research, we can anticipate the future level of inflation based on this result and also integrate expectation of inflation in future studies. If it is necessary that the inflation target to be increased from year to year from several reasons internal or external, then expectation regarding inflation will increase. However, as some economists[9] analyzed across the years, there is a tendency that, when the inflation target is higher, the financial policies of the government are more instable. And estimating as accurate as possible the level of inflation taking into account all the variables that can influence it is as important as overestimation of inflation causes more pressures in controlling it than anticipating it[10].

[8] Friedman M. *Inflation and unemployment*. J., Political Economy, 85: 451-472, 1977

[9] Fischer S, Modigliani F. *Toward Understanding of the Real Effects and Costs of inflation*. NBER, 1978

[10] Idem 8

Conclusion

The goal of this paper was to analyze the specific elements of the monetary policy in state, China. There are several reasons for which the evolution of this country was impressive and very important for the world economy. First of all, we can mention the specific elements that have contributed to the economic development the effects that the specific internal policies had in realizing the development.

The subject of the importance of the monetary policy in a state was debated for a long time, therefore the unique characteristic of Chinese monetary policy became of interest at an international level. The role of the monetary aggregates as an operational objective, the efficiency of the instruments, the efforts of maintain the course of the national currency by sterilizing methods are of an international interest due to the fact that can prove the efficiency of the monetary policy.

Internal and external deficits have always been analyzed for all the economies with impressive economic growth. As a solution to reduce the external deficits of China without affecting the economic growth could be reducing the current account surplus. The benefits for the commercial partners, especially USA will be increasing the exports. This could generate on a long run higher inflation, but also of credit, wages which could encourage consumption. The Balassa- Samuelson effect implies an increase in the real exchange rate in the same way like that of productivity of the goods destined to exports. Under the target of maximizing profits, the increase in productivity will determine increase in wages. Under perfect capital mobility, the wage level will increase, which would lead to an increase in prices and an appreciation of the real exchange rate. The Balassa effect in China assumes that an appreciation of the real exchange rate will lead to an increase in productivity and in prices. Therefore, in order to encourage consumption, China should allow an increase in inflation. The way in which this Balassa effect proves in China is debatable. First, exchange rate appreciation is a long difficult journey and the increase in productivity will not automatically lead to increase in wages and then consumption due to the specific elements of Chinese economy. The savings rate are increasing over time and the consumption remains relatively the same due to the underdeveloped social system. Adding here that one of the sources of the external imbalance is the high savings rate, we can say that allowing the inflation rate to increase might be a necessary harm. China needs a new and improved image on an external level and a proof that the monetary policy has all the tools necessary to reform the monetary,

banking and financial system. And all this reforms can be done only with sacrifices. It is to be seen in the following years what exactly can China sacrifice in order to achieve a sustainable growth model using its own resources without further deepening the external imbalances. The efforts of maintaining the exchange rate led to an impressive increase of the foreign exchange reserves which contributed to China's capacity to handle all the speculative attacks or avoiding currency wars. As long as the process of acquiring foreign currency was accompanied by selling of titles denominated into renminbi, the sterilization procedure was respected. However, by using this open market operations for several years, the level of the foreign reserves surpassed all the expectations. Therefore, at this level any attempt of selling these reserves could affect the international financial market. The opportunity cost brought by increasing the reserves was positive, it helped the economic growth, therefore for many years the price paid was considered acceptable. The question remains, for how long this price can be considered acceptable?

Considering the monetary policy objective of maintaining the price stability and the value of the currency, new methods of avoiding the effects of the "impossible trinity" must be identified. We argued that, for an IMS more developed and adapted to the changes of the III millennium, the monetary policy of each state has to be independent. In the same time though, the liberalization of the capital account needs to be maintained. The capital flux under a liberalized capital account can influence the monetary condition on the market even in the absence of a Central Bank intervention. For example, a large inward volume of capital fluxes for a long period of time could lead to a decrease of the interest rate for loans or deposits, therefore guiding the monetary behavior without a direct intervention. However, under an inflation targeting regime, the Central Bank has the capacity to intervene on the exchange rate maintaining still the monetary policy independence, because the intervention is in order to accomplish the ultimate objective.

Targeting of monetary aggregates is no longer necessarily a monetary policy regime, but rather a means to adjust the imperfections to achieve the objective of price stability. Therefore, the intervention on the exchange rate during manage floating exchange rate are usually expected as a response to the changes in the international market like increase in the oil price, military events, politics. In the light of the international current tensions, we can expect a certain control over the exchange rate by all the Central Banks.

The "impossible trinity" becomes the biggest challenge of China's monetary policy in the III millennium.

The analysis of the impact of each component will prove the role that monetary policy has on the economic policies of China and their efficiency. In the context of the named scope of including the renminbi in the basket of currencies that define the SDR, the capital account liberalization must be obtained. In order for this to happen though, China must allow its exchange rate to appreciate up to an equilibrium level and to adopt alternative measures of sustaining the economic growth due to the decrease in the level of exports. According to the "impossible trinity", if the Yuan will appreciate against the USD up to an equilibrium level, China should abandon the monetary policy independence. This however should be the objective on the short and medium run in order to regain confidence of the investors due the stock exchange fluctuation in August 2015. According to our analysis, the monetary policy in China does not have the possibility to promote its currency as an international one due to the control over the exchange rate. Currently, the control over the exchange rate is high the monetary policy is not entirely independent , therefore the capital account can not be liberalized. Taking into account that all the elements of the trinity can't be fulfilled at the same time, China needs to set its priorities. The way in which the monetary policy manages to realize the ties between the operational and intermediary objectives is an indicator of the monetary policy efficiency. Anticipating the best instruments that can be used in order to realize the operational objectives and anticipating the timeframe needed so that the market can react prove the effectiveness. Considering the intermediary objectives to control the monetary aggregates we have to analyze their future. There are already economist that pledge towards eliminating the intermediary target in case the final objective is inflation targeting, fulfilling the final objectives could be performed only by using the instruments.[11] Taking this into account, we consider that the monetary policy of China needs to be adapted to the new realities. The increase in the monetary mass along with the tremendous value of the foreign exchange reserves proves that the sterilization measures did not have the expected result. Using the monetary base as an operational objective is not a solution and the interest rate needs to become more important and to be used as an instrument. According to Keynes, the interest rate has to be the most important intermediary objective of the monetary policy in a free country. Based on this idea and our analysis, we consider that using the monetary

[11] Neupauerova M, Vravec J. *Monetary strategies from the perspective of the intermediate objectives.* Panoeconomicus, 2007, p220

aggregates, thus increasing the monetary mass is not a long term solution. The constant increase of the monetary mass and foreign reserves are proof that China's monetary policy is in need of reform. Any intervention on the interest rate can't be done directly by the Central Bank without an approval from the government. Therefore, at this moment we can't consider that China has an independent monetary policy. The need of reform is not only at the exchange rate level but at the entire instruments.

The monetary policy needs to prove its efficiency to contribute directly to fulfill the macroeconomic objectives and ensuring a sustainable growth. Therefore, besides the exchange rate liberalization, we consider that interest rate liberalization and using it as an operational objective is to be desired. We might add here a different approach of the window guidance measures, used as a sterilization measure. Even though they are considered an unconventional monetary policy and a form of state intervention in the economy, we suggest a new approach. Considering the consumption habit of Chinese population, we can propose an innovative approach of these measures by using the window guidance through the banks in order to boost consumption. Creating a tighter bond between the banking sector, economic agents, population could contribute to changing the behavior consumption by making the loans more attractive. We have notices that one of the main obstacles in boosting consumption was the mentality of the population that can be overcome by these persuasive measures. The reforms in the monetary and financial system can be easily implemented by strengthening the role played by the banks in the system. Increasing the faith in the banking sector will contribute to increase the faith of the population and the economic agents in the health of the financial system. Educating the consumption behavior is not an easy task, but it can be the milestone of the entire system reform. Modernization of Chinese economy can be realized therefore through an economic model based on consumption boosting, capital account liberalization and a stable currency at a level guided by the market.

We believe that liberalization of the capital account will contribute to a more efficient use of resources and will assist in the transfer of technology and know-how, to reduce information asymmetry and higher capacity stabilization through the sharing of risks and diversify portfolios due to greater access to international capital.

Increasing financial integration will most likely lead to a lower stability of the exchange rate which will affect the main engine of economic growth thus far, namely exports. Thus, the

obligation to modernize economic growth engines and a diversification of them becomes necessary.

The analysis undertaken to investigate the role that specific elements of China's economic policies have on the inflation has contributed to several questions about the sustainability of the model of economic growth of China. The analysis in Mathlab by modeling time series using liniar and multiple regression of the macroeconomic variables monetary mass, consumption, savings rate and nominal exchange rate proved a week link between the variables and inflation rate in China. The same model though proved a tighter link in the case of other economies considered stable, market orientated USA and Denmark. Our premises were that the internal economic policies of China – demographic, social, political that have contributed to the current level of savings rate and consumption should have an impact over inflation.

Considering the monetary policy objective to maintain the price stability the unclear results brings new questions. Taking into account that the model was proved on other two economies that have the level of consumption and savings rate normal compared to the size of the economy. Therefore, the model should have been proven also in the case of China. The analysis demonstrated that the independent variables does not validate the model on China even though the elements considered had an important role to play over time in defining the economic growth. Based on this analysis we can conclude that the monetary policy of China needs sustainable reforms, aggressive at the beginning because it will change the entire growth fundamentals. Allowing the capital account to liberalize and increase the capital mobility will generate outflows of capital due to the increase of the interest rate and a surplus in the balance of payment, also an appreciation of the national currency. Increasing the prices in foreign currency will determine a decrease in competitiveness of the import products and the appreciation of the national currency will lead to a decrease in exports. Along with the increase in imports the external deficit should be expected.

Based on the results of the model we suggest as a future research topic an analysis of inflation evolution from the perspective of the global inflation. Other future research topic based on our findings we can mention:

- The analysis of the effects that the inflation rate in China can have on other economies. A study realized by Muntaz and Surico [117A] demonstrated the fact that, starting with 1995, the world factors contribute to variation in inflation between 0-

10% for the advanced economies. This aspect needs to be taken into consideration due to recent events. The development of Chinese economy has brought many positive effects in the commercial relationship – the increase in exports and lower prices for import due to the low price level at manufacturing products in China. The global demand has increased due to the low production prices and the international competition. We have to analyze though if this macroeconomic effects have affected the external prices in a positive or negative way. If the positive effects over inflation rate are quantitative important, on the long run we need to follow the transmission mechanism of inflation in China because any shock in demand or offer in China can affect the prices in other states. If the percentage that this shocks can have in international inflation is high, then every state should take this into consideration when establishing the monetary policy;

- The analysis and anticipation of the effects that domestic factors determinants of inflation in China can have at an international level. At the beginning of 2000, several studies have proved that China exports deflationary pressures in other states due to the exchange rate mechanism and the manufacturing sector[12]. The fixed exchange rate at a competitive level has contributed to exports at lower prices than compared to USA for example which led to a downward pressure on prices. China has developed an impressive surplus in the manufacturing sector which led to a decrease in prices of such products. Once the economy opened, the threat of deflation is more present.

Taking these aspects into account and the fact that China has an inflation targeting regime we consider that anticipating the dynamics and the persistence of inflation in China must become an objective.

Going further with the analysis, as other points of future research we propose an econometric analysis of the role that the exchange rate fluctuations may have on economic growth, production and other indicators of economic efficiency. Considering the fact that most countries of the world, with the adoption of a floating exchange rate adopted as an objective of monetary policy targeting inflation contributes more to reinforce the idea that the analyses relating to inflation must take into account the exchange rate. Also, study on the volatility of the exchange rate, a feature of IMS States today, it is perhaps more important.

[12] Willard T. *Does inflation in China affect USA and Japan*? IMF, 2006, https://www.imf.org/external/pubs/ft/wp/2006/wp0636.pdf, p 4-7

An increase exchange rate volatility over the period of one year can affect the inflation expectations which can make the inflation targeting regime more difficult. Analyzing the developing countries, Calvo and Reinhart (2000)[13] have concluded that the volatility of the exchange rate is dangerous for exports because they become more competitive due to the lack of liquidities of the forward market. This will contribute to an increase in inflation, especially in the absence of a perfect capital mobility. This analysis extended for China for several decades from the moment that China have adopted the inflation targeting regime can prove how sensitive is the market to the exchange rate movements. Considering the critics regarding the undervaluation of the Chinese Yuan the analysis regarding the influence of the exchange rate over inflation could be helpful in about 50 years after adopting the inflation targeting regime.

Considering the need of reform in the current IMS, the independence of the monetary policy and in the light of the inflation targeting regime we consider that transparency needs to be the most important element of the monetary policy in the XXI century. Therefore, the statistical data need to reflect with accuracy the economic reality, not to be subjective interpreted and to be based on the results of a stable and market orientated economy.

Most of the studies gave proved a positive relationship between floating exchange rate and inflation. Therefore, since 2005, since China adopted manage floating exchange rate towards USD, in theory the level of inflation should have been higher. Considering the exchange rate and a time period of at least 20 years, we can estimate the influence that the volatility of the exchange rate can have over inflation. This idea of volatility was strengthen in 2015 once with the decision of devaluing the Yuan which led to a decrease in the value of the Yuan with 4,4% in August (2% in one day). This decision was aimed at boosting exports in the context of the economic slowdown. Yuan devaluation though has fulfilled two targets: encouraged the exporters and took the currency one step close to the internationalization [41B].

This measure though will lead to deepening the US deficit and to further turbulences on the European and other stock markets, in the light of the further decrease in the raw material prices. Once again, China uses he exchange rate in order to promote economic growth.

We can say that, through the internal politics regarding the exchange rate, China uses its own currency as an instrument of power. Through the internal actions on the internal market,

[13] Calvo G, Reinhart C. *Fear of floating*. NBER, working paper no. 7993, National Bureau of Economic Research, November, 2000

China exports deflation which threatens the world market. The fears of deflation are intensified by the decrease in the PPI, the fear of overproduction and the decrease in the raw material price. The negative effects of deflation can be: liquidity trap, decrease in salaries and the decrease in the aggregate demand on an internal level. At an external level, without a high level of productivity deflation can lead to a decrease in the asset prices, which be heightened by the high level of public debt in more and more countries. China, being a net creditor for several partner, in case of deflation can worsen the commercial position of the partner countries. Therefore, the deflation threat is real and combined to an excess in production can lead the Chinese economy in a deflationist spiral dangerous for both the internal economy and the rest of the world. The answer offered by using an expansionary monetary policy by depreciating the national currency and reducing the interest rate should be able to surpass the deflation effects, policy that proved helpful for USA in the past. However, the low consumption level and the low level of GDP/capita can make this measures not that affected. The proof is that the stock market did not have a positive and immediate response to the measures adopted. China needs more effective instrument, maybe even a restrictive monetary policy rather than expansionist which could generate the necessary results. We have proved that, due to specific elements of the Chinese economy, some policies might be effective for some countries but not for others.

The economic slowdown in China in 2015 have brought to the discussion how effective is the monetary policy in China and how able it is to react to such downfalls. By using a monetary policy mostly focused on the exchange rate, the objective to maintain the low price level are in contradiction with the macroeconomic laws and the Balassa effect. Therefore, artificially maintaining the level of the currency proves the fact that Renminbi is used as an instrument of power, by which China maintains its place in the international market.

The decrease of the raw material prices at an international level is a determinant factor of the inflation in China due to the dependency of resources. The pressure of decreasing prices was fueled also by the rumors that FED will increase the interest rate in USA which will lead to a more powerful dollar and lower prices for the raw materials. The constant increase in prices has determined also pressure on the stock exchange which can determine the retreat of some investors and increase in the unemployment. We have to follow though the effects that the decrease in the raw material prices and economic slowdown in China will have on China partners. According to an analysis performed by Bloomberg [1B], the turbulences in China has fueled the interest of the investors for placements in Central Europe, especially Poland or

Romania. The yields on government bonds have decrease in the region following the quantitative easing measures implemented by the European Central Bank in order to stimulate economic growth and the low connections with China. Therefore, all this turbulences in China can be effective for Romania which could attract more investors. Moreover, if USA will delay further the increase of interest rate the investors will be even more interested in the region. Considering the current problems in the world economy, we consider that FED will further delay increasing the interest rate because it will affect the exporters which might contribute to a decline in the economic growth. Therefore, the investors will pay attention to the events in China, the Europe answer to the immigration crisis, to the sovereign debt crisis.

Based on our research, we can say that the forces are similar at an international level because China it is considered one of the world major power due to its impressive economic growth in the past decades, but only at a superficial level. At an internal level, China proves that has problems in creating a sustainable growth model on the long run guided by market forces. The solitary attitude in several international occasions has brought her a reputation of a great economic power interested only in its personal gains. Recent decisions of lowering the value of its own currency in the context of a current raw material crisis, specially natural resources – coal, oil, copper, aluminum- has fueled the idea of solitary battle that China conducts in 2015 in order to obtain its own interests. Although the specialists estimation say that China will become the most powerful economy in the world by 2020, the same studies mention that India will become the most powerful economy in the world by 2030[14]. Meanwhile, USA struggles with a low level of the economic rise and still tries to overcome the effects of the financial crisis is still a powerful economy, with an economic growth model that proved its efficiency. The only difference is that its current growth is slower compared with other economic partners.

The monetary policy measures implemented in the current economic turbulences in China brought by the economic slowdown and the stock market crisis become the most discussed topics concerning the future of the world economy. The prompt answer offered by China by lowering the interest rate and the minimum reserve requirement did not have the answer expected. The Shanghai stock exchange closed with -8.7% in august 2015[15], the lowest level since 2007, the effects spread on other stock markets. The panic through the investors spread

[14] Raport PWC- http://www.pwc.com/gx/en/issues/the-economy/assets/world-in-2050-february-2015.pdf, p 19

[15] Investment tools, http://www.investmenttools.com/equities/world/china_shanghai_composite.htm

rapidly to other states because the effect in China pressures the raw material prices, already at a low level. All of this along with the uncertainties regarding the interest rate in USA, the political problems in Greece and Turkey create the fears of a possible global stock fall which can lead to new recession periods. The global market volatility to Chinese problems is more and more speculated in the waiting of the FED new session. An increase of the interest rate will lead to capital exit from China attracted by the higher return rate in USA which will further affect the world turbulences. Acquisition of American bonds will be reduces which might create financing problems for USA, China being the most important creditor for USA. The domino effect will be the risk of deflation, reducing the demand, reducing the profits which will affect the majority of the emerging countries dependent of capital inflows on the short run like Turkey, Russia or Brazil [48B].

The efficiency and independence of a monetary policy can be really tested by the answers given during recession period. The world Central Banks will have to prove their efficiency in coordinating the monetary policy toward counter the effects of crisis waves. At the moment, we can't say for sure if the world economy is heading towards a new economic crisis, but the market capability of self- regulation seems more and more difficult. The massive injection liquidities in the past years in order to overcome the effects of the economic crisis in 2008 have created speculative bubbles that helped the external debt burden. The lack of prompt answers and efficient to the sovereign debt crisis and even the immigration crisis in 2015 proves that the world states are not prepared to react properly to the events of the past decade [45B].

Takins this into consideration, we consider that 2015 is a crucial year in order to establish the role of the monetary policy in anticipating economic crisis. The monetary events during the fall of 2014 will create the new principles of the new International Monetary System adapted to the financial, social and military events in the past years.

Bibliography

A. Books and specialty articles consulted

1. Adams GF. *Macroeconomics for business and society- A developed/developing country persepctive on the new economy*. World Scietific Publishing Co, 2002

2. Aghion P, Bacchetta P, Ranciere R, Rogoff K. *Exchange rate volatility and productivity growth: The role of financial development*. Journal of Monetary Economics, 56(4), 494–513, 2009

3. Allen F, Beck T, Carletti E, et al. *Crossborder banking in Europe: implications for financial stability and macroeconom ic policies* Londra, CEPR, 2011

4. Ando A, Modigliani F. *The Life Cycle Hypothesis of Saving: Aggregate Implications and Tests*, American Economic Review 53, no. 1: 55-84, 1963

5. Andreson M, Masuch K, Schiffbauer M. *Determinants of inflation and price level differentials across the euro area countries*. ECB Working paper series no 1129, 2009

6. Antohi D. Politica monetară și moneda. *Seminarul masa monetară și inflația. Teorie și practică*, București, 2012

7. Assenmacher-Wesche. *Understanding the link between money growth and inflation in the euro area*, CEPR Discussion Paper No.5683, 2006

8. Bachman R, Berg TO, Sims E. *Inflation expectations and readiness to spend: cross sectional evidence.* American Economic Journal: Economic policy 2015

9. Bachmeier LJ, Swanson NR. *Predicting inflation: does the quantity theory help*? Economic Inquiry, Vol.43, No.3, pp.570-585, 2005

10. Baharumshah A, Thanoon M, Rashid S. *Saving dynamics in the Asian countries*. Journal of Asian Economics, 13(6), pp. 827-845, 2003

11. Balino T, Sundararajan V. *Monetary policy instruments: Design of instrument mix and coordination of instrument design, Instruments of Monetary Management*. Issues and Country Experiences, IMF 1997

12. Barro R, Lee JW. IMF programs: who is chosen and what are the effects?. aprilie 2003, https://digitalcollections.anu.edu.au/bitstream/1885/40130/3/wp-econ-2003-09.pdf

13. Barth R, Lea M, Li T. *China housing market- is a bubble about to burst?* Milken Institute, dec 2012

14. Bayoumi T, Tong H, Wei S. *The Chinese corporate savings puzzle: a firm-level cross-country perspective*. NBER Working Paper no. 16432, 2010

15. Bergsten F. *Correcting the Chinese exchange rate: An action plan*. Peterson Institute of Economics, 2010

16. Bernake B, Gertler M. *Agency Costs, Net Worth, and Business Fluctuations*, American Economic Review 79, no. 1 (March): 14-31, 1989

17. Bernake B, Gertler M. *Inside the black box: The Credit Channel of Monetary Policy Transmission*. Journal of Economic Perspectives, 9(4): 27-48, 1995

18. Bernake B. *A perspective on inflation targetting*, Annual Washington policy conference of the National Association of Business economists, Washington, 2003

19. Bernake B. The benefits of price stability, *Princeton University speech* , New Jersey 2006

20. Bhagwati J, Brecher R. *The Paradoxes of Immiserizing Growth and Donor-Enriching 'Recipient-Immiserizing' Transfers: A Tale of Two Literatures*. Political Economy and International Economics: The Essays of Jagdish Bhagwati, edited by Douglas Irwin. Cambridge: MIT Press: 214–231, 1984

21. Binder M, Bluhm M. On the conditional effects of IMF program participation on output growth. 2010,
http://www.hof.uni-frankfurt.de/macro/images/jmp/marcelbluhm/imf_binder_bluhm.pdf

22. Biroli P, Mourre G, Turrini A. *Adjustment in the euro area and regulation of product labour markets- An empirical assessmen*t. CEPR discussion paper series no 8010, 2010

23. Blanchard O. *Macroeconomics 3rd edition*. Londra, ed. Prentice Hall, London, 2002

24. Blundell-Wignall A, Atkinson P, Hoon Lee S. *The Current Financial Crisis: Causes and Policy Issues*. Financial Market Trends, OECD, 2008

25. Bofinger P, Reischle J, Schachter A. *Monetary policy goals, institutions, strategies and instruments*. Oxford University Press, 2001

26. Bordo MD, Jeanne O. *Monetary policy and asset prices: does "benign neglect" make sense?".* International Finance Vol. 5, No. 2, pp.139-164, 2002

27. Bordo MD. *A long term perspective on the euro*. New York, Cambridge University Press, 2010

28. Boughton J. *Why White, not Keynes- Inventing the postwar monetary system*. IMF working paper 02/52, 2002

29. Britton E. Consumption- new key to chinese growth în China Business Review.
http://www.chinabusinessreview.com/consumption-new-key-to-chinese-growth/

30. Brockmeijer J. *Liberazing capital flow and managing outflows.* IMF, 2012, pp 30-31

31. Calvo G, Guillermo A. *Capital Flows and Capital-Market Crises: The Simple Economics of Sudden Stops*". Journal of Applied Economics 1 (1): 35–54, 1998

32. Calvo G, Reinhart C. *Fear of floating*. NBER, working paper no. 7993, National Bureau of Economic Research, November, 2000

33. Carney M. *Restoring faith in international monetary system.* Bank for International Settlement, Canada 2010

34. Caroll C, Overland J, Weil D. *Saving and growth with habit formation.* American Economic Review, 2000 p6

35. Carroll C, Weil D. *Saving and Growth: A Reinterpretation*. Carnegie-Rochester Conference Series on Public Policy, 40, p 133–192, 1994

36. Chen S, Chen D, Hardle W. *The influence of oil price shocks on China's macroeconomy: A perspective of international trade.* SFB Economy risk, Berlin 2014

37. Chengsi Z, Osbom RD, Dong HM. *Observed inflation forecast and the new keynesian Phillips Curve*. Discussion Paper Series 0801, Institute of Economic Research, Korea University, 2008

38. China knowledge press. *Financial services in China- The past, the present and future of a changing industry*. Singapore, China knowledge press private limited, 2005

39. Ciobanu G, et al. *Tranzacții economice internaționale*. Cluj-Napoca, ed. Risoprint, 2009, p 440

40. Claessens C, et al. *Crisis management and resoution, early lessons from the financial crisis*. IMF, august 2012

41. Cleveland H, Van B. *The International Monetary System in the Interwar Period*. New York, University Press, 1976

42. Cline W. *Estimates of Fundamental Equilibrium Exchange rates*. Peterson Institute of Economics, 2013

43. Cohen B. *The Future of Global Currency: The Euro Versus the Dollar*. Londra, ed. Routledge, 2010

44. Costică I. *Politică monetară*. București, ed. ASE, 2004

45. Costică I. *Regimuri valutare și organizarea financiară internațională*. suport de curs Relații Monetare Internaționale, ASE

46. Croitoru L. *Politica monetară: Ipostaze neconvenționale*. București, ed. Curtea veche, 2012

47. Dahlhaus T. *Monetary policy transmission during financial crises: An empirical analysis*. Bank of Canada 2014

48. Dai GY. *Open Market Operation - Practice and Experience in China*, Volume 2003, Number 1, Beijing: 55-65, 2003

49. Dardac N, Barbu T. *Moneda, Bănci și Politici monetare*. București, ed. Didactica și Pedagogica R.A, 2005

50. Davis G, Bryce K. *On Measuring the Effect of Inflation Uncertainty on Real GNP Growth*. Oxford Economic Papers, 48: 163-175, 1996

51. De Grauwe P, Polan M. *Is inflation always and everywhere a monetary phenomenon?* Scandinavian Journal of Economics, Vol.107, No.2, pp.239.260, 2005

52. Dew E, Martin J, Giese J. *China's changing growth pattern.* Bank of England, 2011

53. Dickinson D, Liu J. *The Real Effect of Monetary Policy in China: An Empirical Analysis*. China Economic Review, 2007

54. Dolțu C. *Sisteme monetare comparate.* Ed Economica, p 37, 1997

55. Douglass L. *Capital account liberalization and the role of the renminbi*. Peterson Institute for international economics, 2011

56. Driffill J. *Beyond the Dollar: Rethinking the International Monetary System.* Chatham House Report, 2010

57. Duang Z. *The relationshiop betwee house prices and inflation, output.* The journal of quantitative and technical economics, 2007, p 12

58. Eichengreen B, Dincer . *Central bank transparency and independence: updates and new measures.* University of California, department of economics 2011

59. European Commission. *ECFIN Economic Brief*, issue 22 Aprilie 2013

60. Fazio A. *The International Monetary System*. Kluwer Academic Publishers, 1998

61. Fischer S, Modigliani F. *Toward Understanding of the Real Effects and Costs of inflation*. NBER, 1978

62. Fondul Monetar Internațional. *Article IV of the Fund's Articles of Agreement: An overview of the legal framework. L*egal department, 2006

63. Fondul Monetar Internațional. People Republic of China, 2011 Article IV

64. Fondul Monetar Internațional. *World economic outlook*. Washington, DC: IMF Press, 2005

65. Frankel JR. *New Estimation of China's Exchange Rate Regime*. Pacic Economic Review, 14(3):346-360, August, 2009

66. Fratianni M, Hauskrecht A. *From the gold standard to a bipolar monetary system*. Kluwer academic publishers, 1998

67. Friedman BM. *Target, instruments and indicators of monetary policy*. Journal of Monetary Economics, nr.1, 1975

68. Friedman M. *Inflation and unemployment*. J., Political Economy, 85: 451-472, 1977

69. Gang Y. conferință de presă Beijing, http://epochtimes-romania.com/news/china-urmareste-sa-adauge-yuanul-in-cosul-de-rezerve-valutare-al-fmi---231355, 2015

70. Geiger M. *Instruments of Monetary Policy in China and Their Effectiveness: 1994-2006*, United Nations Conference on Trade and Development, 2008

71. Geiger M. Monetary policy in China. 2008 http://mgeiger.wordpress.com/strategy/

72. Goncalvez SC, Salles JM. *Inflation targetting in emerging countries: what do the data say?* Journal of Developement Economics 85 (2008) 312-318, 2006

73. Grier K., Perry M. *On inflation and inflation uncertainty in the G7countries.* J. Int. Money and Finance, 17: 671-689, 1998

74. Guo K, Diaye M. *Determinants of China private consumption: an international perspective.* IMF Working paper, no 10/93, 2010

75. Harrod R. *The life of John Maynard Keynes*. WW Norton & company, USA, 1951

76. Hiro I, Menzie C. *East Asia and Global imbalances: saving, investment and financial developement.* NBER working paper 13363, National Bureau of Economic reasearch, 2007

77. Hong N. Milestone for yuan marks rise for China. The Wall Street Journal http://online.wsj.com/news/articles/SB10001424127887323623304579056704113253902

78. Hongo J. *Despite mounting debt, yen still a safe haven.* Japan Times, p3, 2011

79. Horsefield JK. *The International Monetary Fund, 1945-1965*. Vol 3, documents. Washington: IMF, 1969

80. Howard D. *Personal Saving Behavior and the Rate of Inflation. The Review of Economics and Statistics*. MIT Press, 60(4), 547-554 (1978).

81. Hsiao C, Huang YH. *Money and Monetary Policy in Chin*a. New York: Columbia University Press, 1971

82. Hung J, Qian R. *The evolving role of China in the global economy*. Venice Institure of Economics, 2010

83. Hung PM. *Impossible trinity, capital flow market and financial stability*. Hong Kong Baptist University, 2008

84. International Monetary Fund. *World economic outlook*. Washington, DC: IMF Press, 2005

85. Isărescu M. *Reflecții economice- Politici ale Băncii Naționale a României*. vol II, Academia Română, Centru român de economie comparată și consens. București, ed. Expert, 2006

86. Ito T, Mishkin F. *Two decades of japanese monetary policy and the deflation problem*. National Bureau of Economic Research, Cambridge 2004

87. Jentzsch N. *An Economic Analysis of China's Credit Information Monopoly*. China Economic Review 19 (4): 537–50, 2008

88. Jha S, Prasad E, Terada-Hagiwra A. *Saving in Asia and issues for rebalancing growth*. ADB Economics Working Paper Series, no 161, May, Manila, 2009

89. Johnson D. *The effect of inflation targeting on the behavior of expected inflation: Evidence from an 11 country panel*. Journal of Monetary Economics, 49, 1521–1538, 2002

90. Kagami N. *Japan and the International monetary system*. Londra, Intereconomics Maya, 1980

91. Katz R. *Lessons for us from Japan's banking system.* The oriental economist alert, 2009

92. Keynes JM. *The collected writings of John Maynard Keynes*. Volume IX, Essay in Persuasion, Vol XXI, Activities: 1931-1939, World crisis and policies in Britain and America, edited by Moggridge D, Shaping the Post – War World: Bretton Woods and reparations, vol XXVI, activities: 1941-1946

93. Keynes JM. Tratat asupra reformei monetare. http://delong.typepad.com/keynes-1923-a-tract-on-monetary-reform.pdf, pp 80-82, 1923

94. Kindler HB. *Exchange rate policy in China- The renminbi as an instrument of power politics*, epubli GmbH, Germany, 2010

95. Kirițescu C. *Moneda- mica encicopedie*. București, ed. Științifică și Enciclopedică, 1982

96. Kiritescu C. *Relațiile valutar financiare internaționale*. București, ed. Științifică și Enciclopedică, pag. 88-89, 1978

97. Krugman P. *The Myth of East Asian Miracle*. Foreign Affairs 73 (No. 6 1994): 28-44, 1994

98. Kugis L. *How will China's savings-investment balance evolve?* World Bank policy research working paper 3958, 2006

99. Kuijis L. *The hamster wheel*. The Economist, october 2009

100. Kutner K.N, Mosser PC. *The monetary transmission mechanism: some answers and further questions,* Economic policy review, Federal reserve of New York, issue May, page 15-26, 2002

101. Lajugie J. *Les doctrines economique*. Paris, ed. PUF, 1974

102. Lardy D. *Capital account liberalization and the role of the renminbi*. Peterson Institute for international economics, 2011

103. Laurens B, Maino R. *China: Strenghtening monetary polcy implementation*. IMF, january 2007

104. Lee S. *Money Growth Uncertainty and Real Output: Trivariate VAR GARCH-M Model*. Korean Economic Review 1994

105. Lindert PH. *Key Currencies and Gold, 1900–1913*. Princeton Studies in International Finance, vol. 24, Princeton University, 1969

106. Lugauer S, Mark N. *The role of household savings in the economic rise of China*.

NBER 2011

107. Luo D, Yao J. *World Financial Crisis and the Rise of Chinese Commercial Banks: An Efficiency Analysis Using DEA*, Journal of Applied Financial Economics, *2010*

108. Ma G, Yi W. *China's high saving rate: myth and reality*. BIS Working Paper no. 312, 2010

109. Marcos D, Chamon ES, Prasad E. *"Why Are Saving Rates of Urban Households in China Rising?," American Economic Journal: Macroeconomics.* American Economic Association, vol. 2(1), pages 93-130, 2010

110. Mishkin FS, Schmidt-Hebbel K. *Does inflation targeting make a difference?* NBER Working Paper 12876, 2007

111. Mishkin FS, Schmidt-Hebbel K. *One Decade of Inflation Targeting in the World: What do we Know? What do we Need to Know?* NBER WP 8397, 2001.

112. Mohieldin M. director executiv Banca Mondială, http://www.worldbank.org/ro/news/press-release/2012/09/13/rethink-role-state-finance-says-world-bank

113. Mokyr J. *Successful Small Open Economies and the Importance of Good Institutions.* SKS, Helsinki, 2006

114. Moore BJ. *Horizontalists and Verticalists: The Macroeconomics of Credit Money.* New York:Cambridge University Press, 1988

115. Morrison M, Labonte M. *China currency economic issues and options for US trade policy*. CRS report for congress, 2008

116. Morrison W. *China-US trade issues*. Congressional research service, 2011

117. Muntaz H, Surico P, *Evolving international inflation dynamics: evidence from a time-varying dynamic factor model.* Bank of England, 2008

118. National Bureau of Statistics of China, *China Statistical Yearbook 2011*. Beijing: China Statistics Press, 2011

119. National Bureau of Statistics. *A Collection of Sixty Years' of Historical Statistics of the People's Republic of China*. Beijing: China Statistical Press, p 21, 2010

120. Naughton B. The new common economic program: China's eleventh five year plan and what it means. China Leadership Monitor, no 16, available at http://media.hoover.org/sites/default/files/documents/clm16_bn.pdf

121. Neely CJ. *An Introduction to Capital Controls*. Federal Reserve Bank of St. Louis Review, p 13–30, 1999

122. Neupauerova M, Vravec J. *Monetary strategies from the perspective of the intermediate objectives.* Panoeconomicus, p220, 2007

123. Ocampo JA. *Why Should the Global Reserve System Be Reformed?.* Friedrich Ebert Stiftung, Dialogue on Globalization, Jan 2010

124. Øverland I. *Chinese Perspectives on Russian oil and gas*. Londra, ed. Routledge, 2009

125. Pami D. *Determinants of inflation in an open economy Phillips Curve framework the case of developed and developing asian countrie*s. Global research group-ICICI Bank, p 10-15, 2009

126. Panckhurst P. China Bank Bad-Loan Ratio Jumps Most in at Least a Decade. 2015 http://www.bloomberg.com/news/articles/2015-01-23/china-bank-bad-loan-ratio-jumps-most-in-at-least-a-decade

127. Păun C. Inflația și cauzele ei monetare. ASE București, http://www.finint.ase.ro

128. Pelinescu E. Competitivitatea economică și cursul de schimb în România. http://www.ipe.ro/RePEc/WorkingPapers/cs5-2004-1.pdf

129. Peng Z. China energy import dependency – status and strategies. http://www.esi.nus.edu.sg/docs/event/zhou-peng.pdf

130. Petersen A, Barysch K. *Russia, China and the Geopolitics of Energy in Central Asia*. pp.42-43 , 1992

131. Popa C. The globalization and the international financial institutions. Munich Personal RePEc Archive, 2008, http://mpra.ub.uni-muenchen.de/24523/1/MPRA_paper_24523.pdf

132. Radulescu E. *Inflatia, marea provocare*. București, Editura Enciclopedica, 1999. Pag 37

133. Rautava J. *Russia Economic policy and Russia-China economic relations*. FIIA report, 30, 2012, p44

134. Razin O, Collins M. *Real exchange rate missalignments and growth*. NBER 6174, 1997

135. Roffia B, Zaghini A. *Excess money growth and inflation dynamics*. European Central Bank, working paper series no 749, 2007

136. Rojas R. The World Bank and the IMF- Time Magazine, 25th July 1994 http://www.rrojasdatabank.info/capital9.htm

137. Rongrong S. *Does Monetary Policy Matter in China? A Narrative Approach*. Schumpeter School of Business and Economics, Germany 2012

138. Rose AK. *A stable international monetary system emerges: Inflation targetting is Bretton Woods, reversed*. Journal of International Money and Finance 26 , 663e681, 2007

139. Roubini N, Backus D. *Lectures in Macroeconomics, Stern School of Business*. New York University, 1998

140. Roubini N. *China's bad growth bet. 2011*

141. Roubini N. This "perfect storm" of threats could slam the economy by 2013. http://articles.businessinsider.com/2011-06-13/markets/30034041_1_global-economy-private-debt-weak-growth

142. Ruby D. The Life-Cycle Hypothesis and the Rate of Time Preference. 2003 http://www.digitaleconomist.org/lch_4020.html

143. Sachs JD. *The Current Account and Macroeconomic Adjustment in the 1970s*. Brookings Papers on Economic Activity 1: 201–68, 1981

144. Salvatore D. *Exchange rate missalignments and the present international monetary system.* Department of economics, Fordham University, New Yorl, Journal of Policy Modelling 34 (2912) 594-604, 2012

145. Șarlea M, Stănculescu O. *Imperiul economic chinez.* olimpiada Națională a Studenților Economiști AFER, Ploiești 2009

146. Șarlea M. *The threat of nonperforming loans in China in lights of the recent crisis.* University of Constanța Annals, 2012

147. Schenk C. *The global gold market and the International Monetary System from the late 19th century to present*. Londra, ed. Macmillan Publishers Limited, 2013

148. Seoud MS. *The effect of interest rate, inflation rate and GDP on national savings rate*.

Global Journal of commerce and management perspective, june 2014

149. Serletis A. *The Demand for Money. Theoretical and Empirical Approaches*. New York, ed. Springer ediţia II, 2007

150. Shafer J, Loopesko B. *Floating exchange rates after 10 years*. Booking papers on economic activity 1:1-70, 1983

151. Sheng L. *Did China diversify its foreign reserves.* Journal of applied econometrics, WileyOnline Library, 2011. wileyonlinelibrary.com

152. Stulberg A, Well N. *Oiled Diplomacy*. Albany: State University of New York Press, 333p, 2007

153. Suleman D. *An empirical investigation between money supply, government expenditure, output and prices.* Europeam Journal of Economics, finance and administrative science, pag 60-68, 2009

154. Suslov V. *RMB internalisation and its implications for China.* Russia Economic Cooperation, Economic Research Institute, Russia, 2014

155. Taylor J. Housing and monetary policy. NBER Working paper series 13682, 2007

156. Teulon F. *Sistemul monetar internațional*. Iași, ed. Institutul European, 1997

157. The economist Intelligence unit. *China's stimulus package: a six-month report card*. Lonfra, pp 25, 2009

158. Toader V. *Analiza inflației în România din perspectiva adoptării euro*. Cluj-Napoca, ed. Risoprint, 2009

159. Topal E, Shafiee S. *An overview of global gold market and gold price forecasting, Ausralia 201*. Resources policy 35- 178-189 , 2010

160. Triffin R. *Gold and the Dollar Crises*. New Haven: Yale University Press, 1960

161. United States Gold Commission. *Commission on the Role of Gold in the Domestic and International Monetary System Report*, 1982

162. Van Der Wee H. *Prosperity and upheaval- the world economy 1945-1980*. Londra, 1986

163. Vascu T, Dardac N. *Moneda și credit modul 2*,

164. Voskressenski A. *Russia and China: A Theory of Inter-State Relations*. Londra, Ed RoutledgeCurzon, 2003, 279p

165. Walsh R. *Monetary Theory and Policy*. The MIT Press , 1998

166. Walsh R. *Optimal monetary policy with the cost channel*. Journal of monetary economics 53, pag 199-216, 2006

167. Weinstein D, Broda C. *Exporting deflation? Chinese exports and Japanese prices*. Federal Reserve Bank of San Francisco, 2008

168. Willard T. Does inflation in China affect USA and Japan? IMF, 2006, https://www.imf.org/external/pubs/ft/wp/2006/wp0636.pdf, p 4-7

169. Wong C, Bird R. *China's fiscal system: a work in progress*. Cambridge University Press, 2008

170. Wright E. *The exchange rate system: lessons of the past and options for the future*. IMF, Washington, 1984

171. Xiaochuan Z. Exclusive Interview with the People's Daily. China daily, 2005

http://www.bis.org/review/r050511b.pdf

172. Xiaoyang L. Cross country effects of inflation on national savings. december 2014, https://smartech.gatech.edu/bitstream/handle/1853/52867/Cross-Country%20Effects%20of%20Inflation%20on%20National%20Savings(ECON3161).pdf

173. Xie P, Zhang X. *The coordination between monetary policy and exchange rate policy in an open economy in transition. A case study on China from 1994 to 2000*. Journal of Asian Economics 14, 327—336, 2003

174. Yang D, Kuttner K. *Monetary policy and bank loan supply in China*. William College, Massachusets, 2010

175. Yang D, Zhang J, Zhou S. *Why are savings rate so high in China, Institute for the study of labour*. 2011

176. Yang Tao D. *Aggregate savings and external imbalances in China*. Journal of Economic Perspectives, vol 26, nr 4, 2012

177. Yao W. *The risk to Chinafrom rapid credit growth*. Societe generale Hong Kong, 2014

178. Yifu LJ, Zhou L, Cai F. *The China miracle- Developement strategy and economic reform*. Ed, Chinese University Press, 2003

179. Zeppernick R. *Effects of the euro on trade, capital markets and the International Monetary System*, Intereconomics, 1999

B. Internet sources consulted

1. Asian banking and finance http://asianbankingandfinance.net/lending-credit/in-focus/fitch-warns-bad-debt-tsunami-overwhelming-china%E2%80%99s-banks
2. ASE, departamentul de cibermetică, http://www.asecib.ase.ro/Roman/am/cap2.pdf
3. *Biblioteca online ASE - www.ase.ro/upcpr/profesori/165/RMFI6.ppt*
4. Asia Times- Bad loans haunt China's banks, http://www.atimes.com/atimes/China_Business/MD12Cb01.html
5. Australia- department of foreign affairs and trade http://www.dfat.gov.au/publications/stats-pubs/australias-exports-to-china-2001-2011.pdf
6. Banca Centrală a Chinei- http://www.centralbanksguide.com/peoples+bank+of+china/
7. Banca centrală a Chinei, Taiwan http://www.cbc.gov.tw/ct.asp?xItem=29876&ctNode=859&mp=2
8. Banca Centrală a Chinei - PBC - China Monetary Policy Report, Quarter Four, 2006. People's Bank of China, www.pbc.gov.cn/english/xinwen, Beijing, 2006
9. Banca Centrală a Chinei- China Monetary Policy Report, Quarter 4, 2006, http://www.china.org.cn/business/laws_regulations/2007-06/22/content_1214826.htm

10. Banca Mondială- Banca Mondială- http://www.worldbank.org/ro/news/press-release/2012/09/13/rethink-role-state-finance-says-world-bank
11. Biroul Național de statistică- Indicele prețurilor de consum, http://www.statistica.md/public/files/Metadate/IPC.pdf
12. Bloomberg- http://www.bloomberg.com/news/articles/2015-01-23/china-bank-bad-loan-ratio-jumps-most-in-at-least-a-decade
13. Bloomberg http://www.bloomberg.com/news/articles/2015-04-08/china-s-deflation-threat-what-to-look-for-beyond-the-headlines
14. Business Today- http://businesstoday.intoday.in/story/indian-economy-stanchart-china-us-brazil-brics/1/15984.html
15. China Banking Regulatory Commission- http://www.cbrc.gov.cn/english/index.html
16. China business review- http://www.chinabusinessreview.com/consumption-new-key-to-chinese-growth
17. China daily- http://www.bis.org/review/r050511b.pdf
18. Comisia ONU 2008 http://www.un.org/esa/desa/papers/2011/wp104_2011.pdf
19. Digital Economist http://www.digitaleconomist.org/lch_4020.html
20. Dobrescu E- Criza financiară actuală și intervenția statului în economie, http://www.caleaeuropeana.ro/criza-financiara-actuala-si-interventia-statului-in-economie/
21. Economist Corporate Network- The 12th five year plan: China's Economic Transition, http://www.finnode.fi/files/39/The_12th_Five-Year_Plan_China_s_Economic_Transition.pdf
22. Energy Information Administration- http://www.eia.gov/oiaf/aeo/tablebrowser/#release=IEO2013&subject=0-IEO2013&table=6-IEO2013&region=0-0&cases=Reference-d041117
23. Eurostatics- http://ec.europa.eu/eurostat/statistics-explained/index.php/Balance_of_payment_statistics/ro#Contul_curent
24. FMI, https://www.imf.org/external/np/exr/facts/fcl.htm,
25. FMI, https://www.imf.org/external/pubs/ft/wp/2010/wp10275.pdf
26. FMI, https://www.imf.org/external/np/exr/center/mm/eng/mm_cc_01.htm

27. Hong Kong statistics http://hong-kong-economy-research.hktdc.com/business-news/article/Hong-Kong-Industry-Profiles/Import-and-Export-Trade-Industry-in-Hong-Kong/hkip/en/1/1X000000/1X006NJK.htm
28. Investment tools, http://www.investmenttools.com/equities/world/china_shanghai_composite.htm
29. Investopedia - http://www.investopedia.com/terms/s/seigniorage.asp,
30. Kitco statistics, http://www.kitco.com/charts/historicalgold.html
31. Kushnir statistics http://kushnirs.org/macroeconomics/household_consumption_expenditure/household_consumption_expenditure_denmark.html
32. Research Institute of Economy, IAA- http://www.rieti.go.jp/en/china/06102701.html,
33. McKinsey Global Institute- http://www.mckinsey.com/insights/mgi/research
34. Ministerul de Comerț din China- http://english.mofcom.gov.cn/article/statistic/foreigninvestment/
35. National peopleţs Congress of the People Republic of China http://www.npc.gov.cn/englishnpc/Special_12_2/2014-03/12/content_1852674.htm
36. OECD statistics- http://stats.oecd.org/Index.aspx?datasetcode=FDIINDEX,
37. OECD- National Accounts of OECD Countries 2009, -Volume II, Detailed Tables, OECD Publishing,http://dx.doi.org/10.1787/na_vol_2-2009-en-fr, 2009
38. OECD- China Economic Survey 2010, http://browse.oecdbookshop.org/oecd/pdfs/product/1010061e.pdf
39. PWC report- *The world in 2050*, http://www.pwc.com/gx/en/issues/the-economy/assets/world-in-2050-february-2015.pdf, pag 19
40. Research Institute of Economy, Trade and Industry- *Should China Keep its Exchange Rate Stable Against the Dollar? - Mundell as a Nobel laureate versus Mundell as a young economist*, 2006http://www.rieti.go.jp/en/china/06102701.html
41. SAFE – State Administration of Foreign Exchange, http://www.safe.gov.cn/wps/portal/english/
42. US Treasury statistics, http://www.treasury.gov/ticdata
43. Wall Street Journal http://online.wsj.com/news/articles/SB10001424127887323623304579056704113253902