

**MONETARY AND ECONOMIC RESEARCH CENTER  
2<sup>ND</sup> ANNUAL CONFERENCE**

***ECONOMIC LESSONS,  
PERSPECTIVES AND  
CHALLENGES FROM THE  
BALKANS***

**13-14 October 2016**

**Sofia**





*The second annual scientific conference of the Monetary and Economic Research Center (MRC) was held from 13th to 14th of October 2016 at the University of National and World Economy (UNWE) in Sofia, Bulgaria.*

*Founded in 2014, MRC diffuses knowledge in monetary theory, history, policy and institutions, associating empirical researches, developing new statistical measurements, estimating quantitative models of economic behavior, assessing the economic effects of monetary policies, and projecting the effects from the work of alternative monetary organisations. The MRC is a nonprofit economic research unit within the department of UNWE.*

*Main accent on the 2<sup>nd</sup> Annual Conference conference was the learned lessons, perspectives and challenges from the Balkan Region. Researchers and professionals from more than 13 countries took part.*

*The present book consists papers in English, Bulgarian and Russian languages.*

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## The New Approach in the Integration of the Financial Markets. The Case of the Balkan Countries<sup>1</sup>

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**Abstract:** *The lack of tradition and financial culture for using of the financial markets as a medium for financing of business which is coming as a heritage from the past where the financial markets were non-existent is the main reason why the financial markets in the Balkan countries even in the post transition period are still undeveloped facing massive liquidity problems. Also, the difficulties are caused from the fact that each financial market in all the countries in the region is small not only in comparison with the world's main financial centres but also with average financial markets in the EU capitals. Taking into consideration the common problems and similar market preferences the best possible solution for the fragmented markets in the region would be an integration on the markets which will provide more opportunities for investors and in some way will help in solving the liquidity problem. In this respect, the three stock exchanges in the region, Bulgarian, Macedonian and Croatian stock exchange have decided to take a step in connecting of the financial markets in the countries by establishment of a company SEE Link with one main goal to increase turnover of the participating exchanges and potentially increase of their economic value. The aim of the SEE Link is to create regional infrastructure for trading of securities listed on the Macedonian, Bulgarian and Croatian market. Thus, the integration of the financial markets in the region will be achieved with lowest possible costs i.e. without merger or corporate integration but with using technology. This integration approach provides that the stock exchanges remain independent while providing investors with market access in all of the participating Stock exchanges. Four stock exchanges, Belgrade, Ljubljana, Banja Luka and Athens stock exchanges have also applied for membership in the SEE Link. This paper is going to present the current model of connecting the financial markets in the Balkan countries and will offer an analyses of the future prospects of the integration process.*

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<sup>1</sup> The paper is based on the author's presentation at the 2<sup>nd</sup> Annual Monetary and Economic Scientific Conference: Economic Lessons, Perspectives and Challenges from the Balkans, organised by Monetary Research Center, Sofia 13-14 October 2016. The last update on the data used in this paper is the conference day.

## Introduction

The financial market is in the core of the economic system. Due to different integration processes, regional and global, it is impossible to isolate the national financial markets from the global trends. Everything is interdependent while each move on one market has effects on the others. Usually, the financial markets have good information and what happens there shows what will follow in the real economy<sup>2</sup>. Well-developed financial market is *conditio sine que non* for well-functioning and good performance of the economy. However, it is still unclear whether advanced real sector creates sound financial system or is vice versa.

The lack of tradition and absence of financial culture for using of the financial markets as a medium for financing of business, coming as a heritage from the past where the financial markets were either non-existent or undeveloped, is the main reason why the financial markets in the Balkan countries, even in the post transition period, are still underperforming facing massive liquidity problems. While the EU financial markets are deeply integrated in all segments with ongoing reforms for further improvement of the market efficiency and creation of conditions for their resilience of crisis<sup>3</sup> financial markets in the Balkan region are quite fragmented. Also, the difficulties are caused from the fact that each of the financial markets in all the countries in the region is small not only in comparison with the world's main financial centres but also with average financial markets in the EU capitals.

The ability to cope with market pressures and the capacity for absorption of the consequences coming from different shocks on the markets is another strong difference between the financial markets in the Balkan countries and the financial centres in the EU. The inability for “recovery” is well illustrated during the period post 2008 crisis where differences might be underlined.

The paper will discuss the situation in the post crisis period as on the global financial markets as well as on the selected markets from the Balkan region (I) and will explain the possible solution to the problems facing the regional financial markets (II).

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<sup>2</sup> For the interaction between the real and financial sectors see: Konstantinos Tsatsaronis, Investigating the relationship between the financial and real economy, BIS Papers No 22, April 2005, pp. 1-4, available at: <http://www.bis.org/publ/bppdf/bispap22a.pdf>

<sup>3</sup> For the recent development in the financial integration in the EU and the current reforms see: ECB, Financial integration in Europe 2006, available at: <https://www.ecb.europa.eu/pub/pdf/other/financialintegrationineurope201604.en.pdf>

## I. Post 2008 recovery – what the main stock exchanges indices have to say?

The financial crisis in 2008 is perceived as the most severe one since the great depression from the late '20 of the last century. The start of the crisis was the US *subprime* credits crisis that had negative effects through the global financial system. The deep integration of the financial sector has contributed to spread the problems through the national borders of the developed countries. However, the recovery from the 2008 crisis has been different in the world financial centres in comparison to the local markets which are fragmented and less developed, as are the markets in the Balkan countries. The following part present data's from the global main stock indices (1) and the principle indices of the stock exchanges in Sofia, Skopje and Zagreb (2).

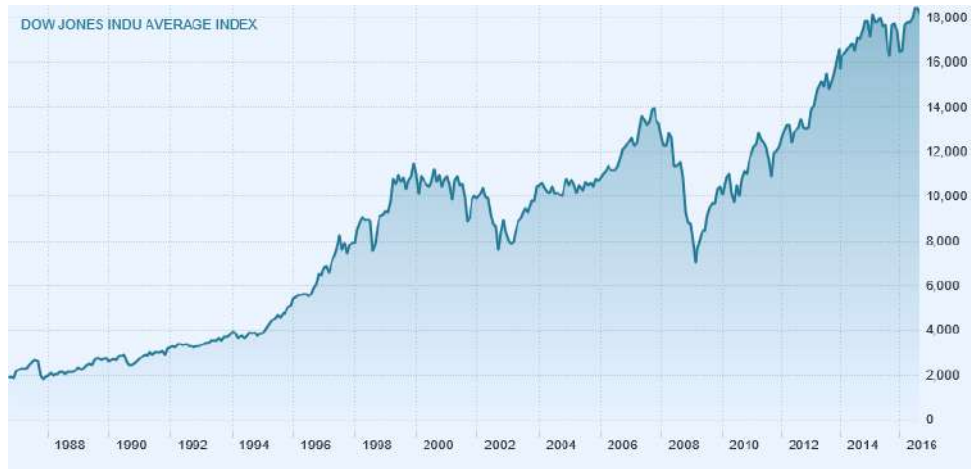
### *1.1. World's main stock exchanges indices*

The world's major stock indices have been recovered from the 2008 crisis and are now in historic high values. The principal lesson from the 1929 crisis, used as a remedy for the crisis in 2008, was that the aggregate demand should be supported in order a great depression to be prevented. There were many factors affecting the aggregate demand in this period, in different counties and in different times<sup>4</sup>. Thus, because of that strategy, now in 2016, the level of the public debt has significantly increased in all developed countries while the central banks principle interest rates are close or even below zero. This has led to negative interest rates in real terms on some of the most traded government bonds, as the German one, while the stock market indices are in historic high levels. Sometimes the values of the shares are not perceived adequate for the expected return. The cheap money and the low returns of the government bonds are pushing the stock prices to their historic heights, well above their values in the pick of the 2006 and 2007, years described as a bull market preceding the 2008 crash. The best score of the America's Dow Jones industrial average index are far beyond the level of 2006.

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<sup>4</sup> See, Ben Bernanke, *Essays on the Great Depression*, Princeton University Press, Princeton, New Jersey, 2000, pp. 6-26





Source : <http://markets.ft.com/data>

The American S&P 500 index also sets new records with more than 400 points above the level of 2007.

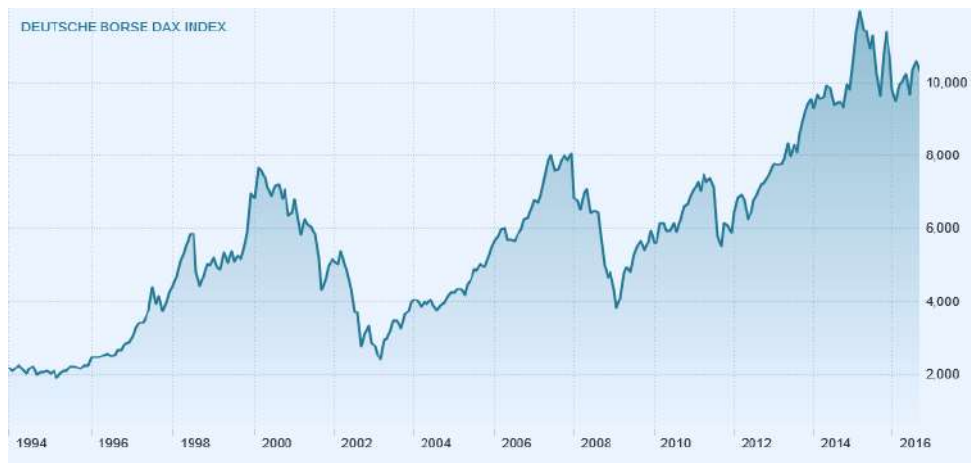


The situation is alike on the global financial centres in the European capitals. Even in a political turmoil of the referendum and now certain Brexit the London stock exchange markets are in record highs.



Source : <http://markets.ft.com/data>

The uncertainties for the future of the Eurozone and the burden of the possible slipovers of financial problems coming from other European countries into the German financial system are making principle German indexes volatile, however well above the level of 2006.



Source : <http://markets.ft.com/data>

Considering the well-known proverb that “trees do not grow to the sky while the Exchange is made of the same wood” the question is where is the limit of the current stock prices. Or, are we heading towards a new “Minsky moment<sup>5</sup>” when a slide increase of the central banks interest rates of the ECB and the FED will lead to a sharp decline of the Stock

<sup>5</sup> Minsky, Hyman P. Ph.D., "Can "It" Happen Again? A Reprise", Hyman P. Minsky Archive, Paper 155, 1982

market indices<sup>6</sup>. Will the remedy from the 2008 i.e. the cheap money that were used to support the aggregate demand, to avoid a severe recession and to prevent a possible depression has led us to a new bubble, bust this time not on the housing but on the financial markets? This is an open question....

### 1.2. Regional indices

The situation is completely different as far as the capital markets in the Balkan region are concerned. They are still not recovered from the 2008 crisis. The Macedonian The MBI 10 is far below its record of august 2007 then its value was above 10.000 points.

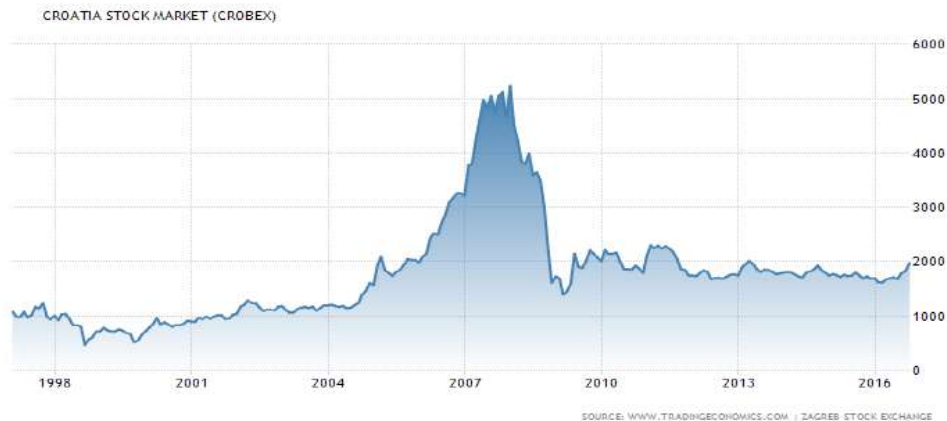


The Bulgarian SOFIX index is four times below its historic level of 1952.40 points in October of 2007.



<sup>6</sup> The latest signals from the FED's officials is that the increase of the rates is very probable in near future. See, The Wall Street Journal, Fed Sends New Signals About a Possible December Rate Increase, available at: <http://www.wsj.com/articles/fed-sends-new-signals-about-a-possible-december-rate-increase-1478109738>

The situation is alike in Croatia where the CROBEX is far below the level of 2007 even if in the meantime the country has become member of the EU.



It is evident that the three principle indices of the Bulgarian, Croatian and Macedonian stock exchanges are far from being recovered from the 2008 crisis. Common problems are looking for common solutions. That is why the three Stock exchanges started an enhanced cooperation for joint action which will improve the conditions on the capital markets in these countries. Integration of the markets will mean more opportunities for investors, risk sharing while the local stock exchanges may increase their economic value. The new model for integration of the financial markets that should connect the markets in the Balkan region is presented in the next part.

## II. The new model for financial market integration

There are several possibilities for market integration via different forms of stock exchange cooperation. Networks, alliances, creation of a joint stock exchange, merger of the existing stock exchanges even hostile takeovers etc.<sup>7</sup>. Each of the solutions brings high cost while there is no guarantee that the integration will improve the situation. Taking this into account the Bulgarian, Croatian and Macedonian stock exchanges have decided to integrate the regional equities markets without merger or corporate integration. The integration model is based on technology that will provide market access for investors for trading of securities listed on those markets while the stock exchanges remain independent.

Thus, the three stock exchanges: Bulgarian, Croatian and Macedonian stock exchange have established a limited liability company SEE Link organized and existing under the laws of the Republic of Macedonia with registered office in Skopje. There is an open possibility

<sup>7</sup> See, Ekaterina Dorodnykh, Stock Market Integration, An international approach, Palgrave Macmillan, 2014, pp. 20-25

for joining the framework by other interested stock exchanges which is going to be subject of approval by the founding members. At present, four stock exchanges, Belgrade, Ljubljana, Banja Luka and Athens stock exchanges have also applied for membership in the SEE Link.

The main goal of the company is to provide possibilities for trading on the participant markets in a most simple and efficient manner. This is going to be achieved with free market access on the participant stock exchanges for all investors coming from the participant country via integration between registered brokers in those countries. The brokers are taking the central stage in the investment process. Also, banks that are licensed to perform investment intermediary services might be admitted as members. They are both entitled with trading rights on the local markets. Two kinds of brokers are included in the SEE Link: originating and executing brokers. The model works as follows<sup>8</sup>. Originating brokers are taking orders from clients and are contacting with executing broker in the partner member state market where the executing broker is forwarding the order on the proper market. This model provides that brokers in one participant country is able to perform an order in other country market without having direct access i.e. without acquiring membership on the market. This makes the entire operation much cheaper and simple. Brokers who are trading members of the three exchanges may become executing or originating brokers in the SEE Link. When applying for membership they have to declare its preferred type of membership, executing broker or originating broker, or both. For the first two years there are no fees or charges for brokers. What has to be done is signing contracts between SEE Link and brokers and contracts between executing brokers and originating brokers.

Another very important issues arising for the trading on markets in different countries are the question of clearing and the question of supervision. The settlement and clearing is provided via the executing brokers that are providing originating brokers with all the necessary information through the SEE link system while the supervision is conducted by the supervision authority of the market where the transaction is made.

Even if the SEE Link system became fully operational on the annual conference of the Macedonian stock exchange held on 29.3.2016 in Skopje when the bells rang meaning that the new order-routing system was officially launched we are still lacking official data about the achievements of the newly created system. The unofficial data which one may obtain

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<sup>8</sup> All the details concerning tariff or fees, participating exchanges, SEE Link membership, order routing, data feed or about the operation of the SSE link in general is given in the Operational rules of the SEE Link, adopted by the Shareholders of the SEE Link, available at: <http://www.see-link.net/UserDocsImages/documents/SEE%20Link%20Operational%20Rules.pdf>

from the interviews with brokers directly involved with the trading on SEE Link is that for the time being it is very successful. Most of the orders are coming from Macedonian and Bulgarian investors while Croatian are lagging. This is expected result if one considers the fact that Macedonian investors are not allowed by law to invest in other foreign markets<sup>9</sup>. The sole possibility for investment abroad is via investment in Investment funds which are entitled for investments abroad. Thus, the SEE Link is another small window for diversification of the investments on the Macedonian investors and that is why the SEE Link is more than welcomed and broadly used by them.

## **Conclusion**

Different integration processes, regional and global have created an environment where it is impossible to isolate the national financial markets from the global trends. Integrated financial markets offer more opportunities for investors and more efficient allocation on the financial resources. The EU financial markets are deeply integrated in all segments while there are ongoing reforms for further improvement of the market efficiency and creation of conditions for their resilience on crisis. However, because of the lack of tradition and absence of financial culture for using of the financial markets as a medium for financing of business the financial markets in the Balkan countries are still undeveloped.

The difficulties are caused from the fact that each of the financial markets in all the countries in the region is small not only in comparison with the world's main financial centres but also with average financial markets in the EU capitals. The period post 2008 crisis has underlined the inability for "recovery" of the financial markets in the Balkan region. The analyses of the data of the principle stock indexes in Bulgaria, Macedonia and Croatia have shown that their values are far below the level prior to the crisis. On the contrary, the analyses shows that the world major stock indices are in historic high values.

Common problems are looking for common solution. The stock exchanges in Skopje, Sofia and Zagreb have launched a process for market integration without creation of a joint stock exchange or merger of the existing stock exchanges. In the core of the new model is a

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<sup>99</sup> The current legal framework does not allow direct investments by Macedonian residents in foreign securities, shares or other financial instruments on the foreign stock markets. See: Law on Foreign Exchange Operations, Official Gazette of the Republic of Macedonia no. 34/01 and the Law amending the Law on Foreign Exchange Operations, Official Gazette of the Republic of Macedonia no. 49/01, 103/01, (32/03 - Decision of the Constitutional Court on repelling the amendments to this Law as published in "Official Gazette of the Republic of Macedonia no. 54/02), 51/03, 81/08, 24/11 and 135/11. Revised, unofficial text available at: [http://www.nbrm.mk/WBStorage/Files/WebBuilder\\_Law\\_on\\_Foreign\\_Exchange\\_Operations\\_03022012.pdf](http://www.nbrm.mk/WBStorage/Files/WebBuilder_Law_on_Foreign_Exchange_Operations_03022012.pdf)

limited liability company SEE Link organized and existing under the laws of the Republic of Macedonia with registered office in Skopje which should provide possibilities for trading on the participant markets in a most simple and efficient manner. The new integration model is based on technology that will provide market access for investors for trading of securities listed on those markets while the stock exchanges remain independent while brokers in one participant country is able to perform an order in other country market without having direct access i.e. without acquiring membership on the market. Two kinds of brokers, originating and executing brokers, are taking the central stage in the trading process.

However, there are no official data about the achievements of the newly created system. The unofficial data indicates that for the time being the SEE Link it is very successful. Most the orders are coming from Macedonian and Bulgarian investors while Croatian are lagging.

## References:

1. Ben Bernanke, *Essays on the Great Depression*, Princeton University Press, Princeton, New Jersey, 2000, pp. 6-26
2. ECB, *Financial integration in Europe 2006*, available at: <https://www.ecb.europa.eu/pub/pdf/other/financialintegrationineurope201604.en.pdf>
3. Ekaterina Dorodnykh, *Stock Market Integration, An international approach*, Palgrave Macmillan, 2014, pp. 20-25
4. Konstantinos Tsatsaronis, *Investigating the relationship between the financial and real economy*, BIS Papers No 22, April 2005, pp. 1-4, available at: <http://www.bis.org/publ/bppdf/bispap22a.pdf>
5. Law on Foreign Exchange Operations, Official Gazette of the Republic of Macedonia no. 34/01 and the Law amending the Law on Foreign Exchange Operations, Official Gazette of the Republic of Macedonia no. 49/01, 103/01, (32/03 - Decision of the Constitutional Court on repelling the amendments to this Law as published in "Official Gazette of the Republic of Macedonia no. 54/02), 51/03, 81/08, 24/11 and 135/11. Revised, unofficial text available at: [http://www.nbrm.mk/WBStorage/Files/WebBuilder\\_Law\\_on\\_Foreign\\_Exchange\\_Operations\\_03022012.pdf](http://www.nbrm.mk/WBStorage/Files/WebBuilder_Law_on_Foreign_Exchange_Operations_03022012.pdf)
6. Minsky, Hyman P. Ph.D., "Can "It" Happen Again? A Reprise", Hyman P. Minsky Archive, Paper 155, 1982
7. Operational rules of the SEE Link, adopted by the Shareholders of the SEE Link, available at: <http://www.see-link.net/UserDocsImages/documents/SEE%20Link%20Operational%20Rules.pdf>
8. The Wall Street Journal, *Fed Sends New Signals About a Possible December Rate Increase*, available at: <http://www.wsj.com/articles/fed-sends-new-signals-about-a-possible-december-rate-increase-1478109738>
9. Global Markets Data, FT, <http://markets.ft.com/data>
10. Regional Markets Data, TE, <http://www.tradingeconomics.com/>



## Development and Status of Social and Ethical Banks in Switzerland

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**Abstract:** *Social and ethical banking has become a more and more important issue due to the fact that in recent years many banks got a severe lack of such qualities and scandals about fraud, manipulation, tax evasion etc. were regular topics of the newspapers. Moreover for already many years responsibility of the banks for environmental protection and social rebalancing measures was requested by civil society organizations and concerned citizens. One reason of the current crisis was, that the old style cooperative or public banking, mostly local and bound to the real economy, lost many of its initial virtues and followed private and commercial banking in risky international investments. As an answer this led to the establishment of new social and ethical banks in Europe at the End of the last century and later on. In 2001 the European Federation of Ethical and Alternative Banks and Financiers (FEBEA) was founded and 2009 the Global Alliance for Banking on Values (GABV) started its work.*

*In Switzerland the new development startet around 1980 with the formation of the Freie Gemeinschaftsbank Genossenschaft FGB. Around 1990 the Alternative Bank Schweiz ABS was established and also other banks began to reflect on social and ethical values. The article presents an overview on the development and the status of these two banks and on the two formerly founded examples of Raiffeisen Bank Cooperatives and the WIR Bank which runs a unique complementary currency scheme for more than 80 years. A comparison of the different approaches of banking between these examles and the major differences to mainstream banking is shown. Further their success and relative importance in Swiss banking system are discussed. A final chapter about future prospects of social and ethical banking proposes six theses how this sector could advance and strengthen the success of its promised impact.*

**Key words:** *Banks, Cooperatives, Values, Ethics*

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## 1. Introduction

Social and ethical banking has become a more and more important issue due to the fact that in recent years many banks got a severe lack of such qualities and scandals about fraud, manipulation, tax evasion etc. were regular topics of the newspapers. Moreover for already many years responsibility of the banks for environmental protection and social rebalancing measures was requested by civil society organizations and concerned citizens. One reason of the current crisis was, that the old style cooperative or public banking, mostly local and bound to the real economy, lost many of its initial virtues and followed private and commercial banking in risky international investments. As an answer this led to the establishment of new social and ethical banks in Europe at the End of the last century and later on.

In Switzerland the new development startet around 1980 with the formation of the Freie Gemeinschaftsbank Genossenschaft (Free Community Bank Cooperative). Around 1990 the Alternative Bank Switzerland ABS was established and also other banks began to reflect on social and ethical values. The article presents an overview on the development and the status of these two banks and on the two formerly founded examples of Raiffeisen Bank Cooperatives and the WIR Bank.

In the discussions about social and ethical banking many more terms were used to describe an approach for a banking which is aimed to real values and real needs and is re-embedded in society as a serving institutional infrastructure:

- alternative,
- civic,
- development,
- environmental,
- ethical,
- social,
- solidarity,
- sustainable,

banking and finance or sometimes also called banking on values. In this article we use as a common denominator for all of it “social and ethical”. The article is also based on a lecture held at the University of Vienna in 2011 in a symposium called: Ethische Bankgeschäfte – ein neuer Geschäftsbereich bei Kreditgenossenschaften (ethical banking-business – a new business area for credit cooperatives). An article was later published<sup>1</sup> and was strongly revised and adapted to the situation 2016 for the MRC conference in Sofia.

## 2. Social and Ethical Banking

### 2.1 Historical Background

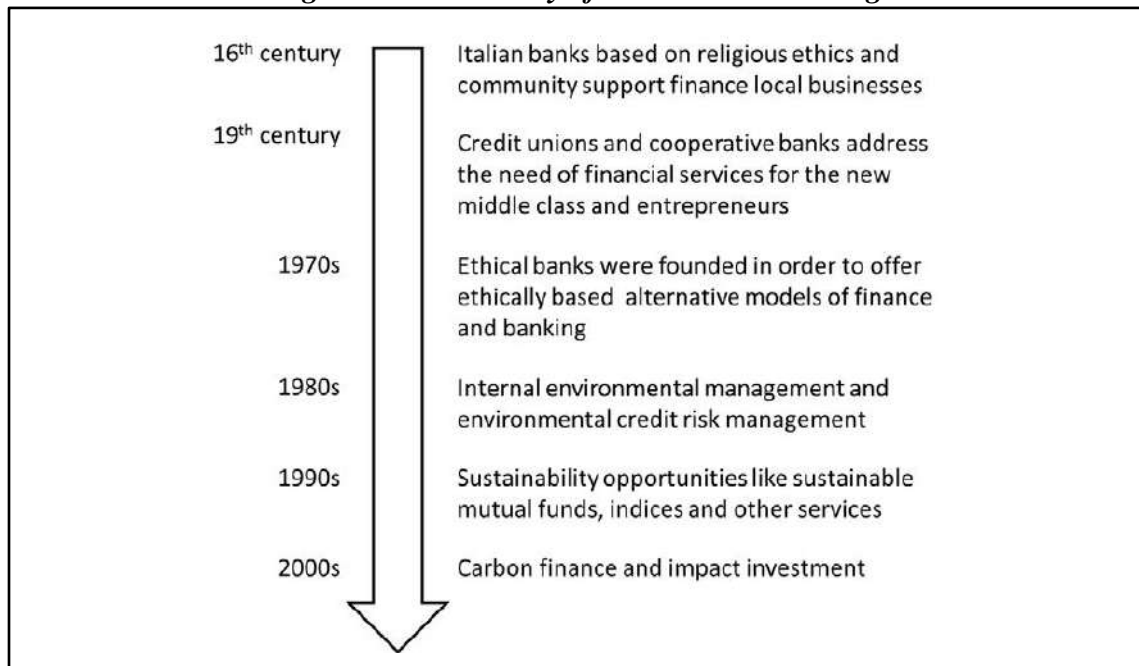
The idea of social and ethical banking is as old as banking itself. The idea of the very first bank of Europe, the *Monte di Pietà* (mountain of mercy) in Siena (Italy), founded by the initiative of Franciscan monks 1472, was to protect the poor and needy from the usury of the private money lenders and provide fair (minimal) loans against pledge of valuables: “By origin it is a fully secular institution, authorized from the beginning to charge an interest rate of 7.5%, thus not aspiring to any kind of speculation, but also avoiding having to make the interest-free loans recommended by the Franciscan Friars Minor, who supported the Monte dei Pietà. “Monte” (“heap”) in this case indicates a collection of money, offered or deposited and then distributed for purposes of welfare or charity.” This first institution was transferred to the nobles of Siena

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<sup>1</sup> Edited by the „Fachbereich für Genossenschaftswesen des Institutes für Betriebswirtschaftslehre der Universität Wien und vom Forschungsverein für Genossenschaftswesen“. See Martignoni (2012).

later and became 1624 the *Monte Dei Paschi Di Siena* as it is still known today<sup>2</sup>. Its altruistic core vanished through the times and 1999 the bank went to stock exchange and followed by a series of fraud and scandals and had to be saved by the Italian government during the financial crises after 2008 and again 2016 with €20bn rescue fund<sup>3</sup>. Looking to this and many other scandals and busts in banking history, it could be postulated as a rule in financial matters and especially in banking, that successful existing institutions tend to become greedy, unfair, unalterable and “too big to fail” and therefore fresh new institutions have to be founded which keep up the virtues of truth, fairness and solidarity again. If this rule is reasonable or not would need a separate investigation but in practical terms the repeating initiatives for a fair and usury or speculation-free banking through the ages do support the idea. Olaf Weber (2012) provides a good overview about the history of ethical, socially responsible and sustainable banking.

**Figure 1: The History of Sustainable Banking**



Source: Weber, O., 2012, p. 3

The long strive for a more just banking, serving the needs of the whole society instead of the sole profit of a few, changes over the centuries along the new problems popping up in history. A main trigger for the upcoming of “another banking” was the environmental crisis starting in the 1970ies combined with development topics of the “third world” and the needs for investing money in trusted and meaningful “good cases”. For the question “why and how did social and ethical Banks emerge?” the brief answer for our time could be:

- As a general reply to un-social and un-ethical situations in the area of money and finance.
- As a specific instrument to provide more fairness and care for a better world.

The first “alternative” bank in this sense was the German GLS Bank founded 1974. The initiative to establish such a bank had a strong background in the anthroposophical social sciences where the role of money and its link to society was a research topic since Rudolf Steiner<sup>4</sup> gave his lectures on world-economy 1922<sup>5</sup>. A somehow parallel movement in the Netherlands led

<sup>2</sup> See the homepage of the bank: <http://english.mps.it/aboutus/the-bank/Pages/default.aspx> (accessed 06.10.16)

<sup>3</sup> The Guardian: Italy to bail out Monte dei Paschi di Siena bank with €20bn rescue fund, <https://www.theguardian.com/business/2016/dec/21/italys-20bn-bailout-fund-to-rescue-monte-dei-paschi-di-siena>, accessed 08.02.17

<sup>4</sup> 1861-1925, founder of the anthroposophical movement

<sup>5</sup> Steiner, Rudolf (1972)

1980 to the foundation of the Triodos Bank, which later expanded to Belgium, the UK, Spain and Germany. More foundations in many European countries and overseas had taken place since.

## 2.2 Challenge and Need

Let us take a briefer look at the problem situation today, which is particularly evident in the context of the financial crisis and the euro crisis. The bank, or rather the banks, remained in the background of history for a long time with their activities of providing the monetary-system for the society. This monetary-system determines the economy to a very large degree. Since the subprime crisis in 2008, however, the banks and their business have definitely been brought into the spotlight and questions are being raised as to whether they are doing their work really responsibly.

For an even longer time, since the 1970ies, banks are blamed by civil society and non governmental organisations as responsible for supporting criminal activities. Some of this on-going accusations are:

- Hiding assets of despots
- Supporting global tax evasion
- Selling of intransparent speculative scrap paper
- Supporting bets on state bankruptcy
- Accepting the expulsion of people in favor of dams or other monster projects
- Allowing transfer of money for weapons to dictators and countries in war

Is it therefore legitimate to critically address the role of the banks on all these difficult issues and to weigh their share of the responsibility for the relevant grievances? The answer of the people and the movement behind social and ethical banks is of course yes. It is an important motivation for them to postulate and work on “another” banking, closer to their needs and ideals.

## 2.3 Ideas for another Banking

The handling of this postulate is also significant due to the fact that banks are given power over the money flows. This in turn requires corresponding responsibility. Responsibility here means in particular: consideration for the weaker (= less-money owners), fairness and vision of the whole (society and the environment, sustainability). Other points that characterize social and ethical banks but not necessarily all implemented, include<sup>6</sup>:

1. Strong community orientation
2. Access to banking services also for the poor or disabled
3. Primacy of the region above the global
4. Sustainability, environmental protection and social mission
5. Independence, democratic decision-making structures
6. The greatest possible transparency of cash flows
7. Rejection of pure financial optimization
8. Speculation prohibition
9. Taking an educational assignment towards money and finance
10. Perception of a progressive role as a political actor in financial issues
11. Openness against criticism of today's money system and support for the search for possibilities for improvement
12. *Triple Bottom Line Approach*<sup>7</sup> for the simultaneous consideration of multiple success criteria

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<sup>6</sup> See European Federation of Ethical and Alternative Banks and Financiers FEBEA <http://www.febea.org/en/content/commitment-ethical-finance> (16.06.2015) and 10 point *Visionspapier der Bank fuer Gemeinwohl* [https://www.mitgruenden.at/sites/www/files/bfg\\_vision1.1\\_12-2014.pdf](https://www.mitgruenden.at/sites/www/files/bfg_vision1.1_12-2014.pdf) (Dec.2011), both accessed 09.02.2017

<sup>7</sup> An accounting framework with three parts: social, environmental / ecological and financial.

In fact, every bank that has to be considered as a social and ethical bank has its own background, philosophy and main focus. So a general definition of social and ethical banking is not available. The Institute for Social Banking admits: *We acknowledge that a generally accepted definition of “Social Banking” does not exist, and – given the variety of its historic origins and underlying values – arguably cannot exist. But we believe that there is a common denominator of many organisations that can be subsumed under this notion of social banking, which we define as follows:*

Then the first part of the description of the Institute for Social Banking, Germany is:

**Social Banking** describes the provision of banking and financial services that consequently pursue, as their main objective, a positive contribution to the potential of all human beings to develop, today and in the future.<sup>8</sup>

Another brief description given by Frans de Clerck is the following:

*The main feature of [such] banks is that money is used as a tool for human and social development, and is not an end in itself. Their focus is on people, planet and prosperity, serving the Real Economy, long-term relationships with all stakeholders, resilience and shock-resistance, transparent and accessible to everyone.*<sup>9</sup>

A good description is also given by the FEBEA (European Federation of Ethical and Alternative Banks and Financiers) in their Charta<sup>10</sup>. By looking on the case studies now we can add the example of how such banks do look like today, which will allow us to have more distinct picture as well.

### 3. Historical Development in Switzerland

#### 3.1 General Development

After these preparatory words, we will have a look at the historical and then current situation in Switzerland. Surprisingly, there are no Christian or trade union-motivated banks left over in Switzerland today, which usually also had an ethical foundation (see also section 3.6). We have identified four case studies of banks which are in or close to the social and ethical banking:

- Raiffeisen Banks (Cooperatives)
- WIR-Bank Genossenschaft (Cooperative)
- Freie Gemeinschaftsbank Genossenschaft (Free Community Bank Cooperative) FGB
- Alternative Bank Schweiz AG (Switzerland Ltd.) ABS

Raiffeisen as a conglomerate of today around 300 local banks and WIR can be regarded as ethical banks of the first generation. In today's strict sense, however, only the Alternative Bank and the Freie Gemeinschaftsbank would be explicitly referred to as ethical banks. In the following, the four mentioned examples, which we nevertheless accept as representatives of ethical banking in Switzerland, are considered in more detail.

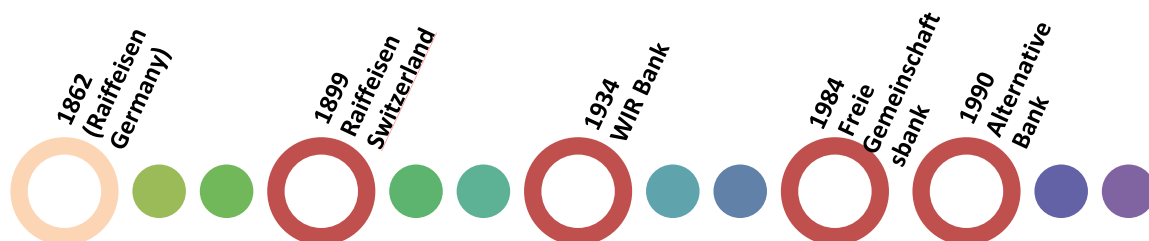
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<sup>8</sup> [http://www.social-banking.org/uploads/media/ISB\\_Social\\_Banking\\_Definition\\_English\\_110614.pdf](http://www.social-banking.org/uploads/media/ISB_Social_Banking_Definition_English_110614.pdf) (accessed 06.10.2016)

<sup>9</sup> de Clerck, Frans (2015): Movement in the Banking Sector, Mondiaal Nieuws and L'Echo, <http://www.gabv.org/opinions/movement-in-the-banking-sector> (accessed 06.10.16)

<sup>10</sup> <http://www.febea.org/en/content/commitment-ethical-finance> (accessed 08.02.2017)

Figure 2: Timeline of bank foundations in Switzerland: four case studies



Source: author

### 3.2 The Raiffeisen Banks

Friedrich Wilhelm Raiffeisen, mayor of Heddesdorf in the Rhineland, Germany, founded 1862 the first Raiffeisenbank against the strong capital concentration of his time. There was not enough credit for small businesses and no saving structures and possibilities in rural areas. Regular banks failed to help. Raiffeisen emphasised the idea of self-help as a remedy to the deficiency. Capital was made available where it was worked out, locally and in the villages. Raiffeisen consequently built on cooperative principles and thus established local and regional savings banks. Soon, Raiffeisen's idea of self-help was taken over in other European countries. Switzerland was one of the later followers as by the initiative of Rev. Johann Traber, the first Raiffeisen Savings Bank was founded in Bichelsee TG.

#### Time scale<sup>11</sup>

- 1899 First Raiffeisen Savings Bank in Bichelsee
- 1902 Foundation of the Swiss Raiffeisen Association by ten already existing institutes
- 1936 Settlement of the association in St. Gallen, where it is still at home today
- 1995 Start of a massive merger between Raiffeisen banks, decrease from 1'034 to less than 300 independent cooperatives today
- 2016 Third largest bank (group) in Switzerland

The Raiffeisen Bank cooperatives can be regarded as a major impetus for ethical banking in the modern era in Switzerland. It helped a lot to develop the disadvantaged countryside. As the problems of access to the savings and payment system and to credits are no longer burning items in Switzerland, especially the Raiffeisen Association, as the central bank, became more and more a normal bank and even started competing investment banking and wealth management by the acquisition of the private bank Notenstein (today Notenstein La Roche<sup>12</sup>) in 2012.

Indicators of Raiffeisenbanks today:

- Democratic structures (cooperatives)
- Network of local cooperatives
- “Some” solidarity and self help of citizen and businesses still in practice
- New impulses, e.g. ecological thoughts were only partially accepted
- Image does not include “social + ethical bank”

<sup>11</sup> Obrecht/Salvisberg (2000), p.116 ff.

<sup>12</sup> <http://www.nostenstein-laroche.ch>

### 3.3 The WIR Bank

The world economic crisis, which began in 1929 with its peak in 1934, was the starting-point for the founding of the WIR Wirtschaftsring cooperative. The problem for small and medium sized businesses (SME's) was the very difficult liquidity and credit situation. Regular banks rejected or failed to help again. According also to Silvio Gesell's theory of economics<sup>13</sup>, the aim was to counteract the scarce supply of money and the disturbed circulation of money as a result of hold-back money. The idea came from the Ausgleichskassen-movement in Germany and similar initiatives in Denmark and the Baltic States and was a new non convertible currency (complementary currency) issued by a cooperative for their members. This very interesting system allowed an independent "monetary policy" and helped to establish a kind of secondary market for the members whom all have to be SME businesses.

#### Time scale<sup>14</sup>

- 1934 Founding of the WIR cooperative by Werner Zimmermann, Paul Enz and 14 other members
- 1936 After a long political discussion, subordination to the Swiss banking law<sup>15</sup>
- 1952 distance from the Gesell's theory and the beginning of paying interest rate for the cooperative capital
- 1998 Replacement of the name "WIR Wirtschaftsring-Genossenschaft" by WIR-Bank and establishment of all normal banking functions in Swiss Francs (CHF)
- 2004 The complementary currency WIR receives the ISO code *CHW*
- 2016 Major relaunch with adapted rules for the WIR currency

The WIR bank had a strong growth in the past decades, especially in the CHF part. The WIR-Franken (CHW), on the other hand, is predominantly propagated as a marketing instrument and promotion of sales and had its peak in 1995 with a 2.5 Billion CHF turnaround. By its limited and transparent market, the bank has a high social and ethical standard, but does not promote these values.

Indicators of the WIR bank today:

- Self help among businesses, network and additional social activities
- Democratic structures (cooperative)
- Dual bank with complementary currency (CHF-CHW)
- Image does not include "social + ethical bank"

### 3.4 The Freie Gemeinschaftsbank (FGB)

The origin of the Freie Gemeinschaftsbank (Free Community Bank) is closely linked to the GLS Group in Germany<sup>16</sup>, which was founded earlier by anthroposophical circles in Germany. Dr. Gisela Reuther, co-founder of GLS-Treuhand eV, came to Dornach in 1977 as a member of the board of directors of the anthroposophical society and brought to the already existing foundations a decisive impulse to found a guarantee cooperative. Later, the Freie Gemeinschaftsbank Genossenschaft (FGB) was established.

#### Time Scale<sup>17</sup>

- 1978 Establishment of a guarantee cooperative in Dornach
- 1980 Establishment of a working group to set up a bank

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<sup>13</sup> Gesell (1938)

<sup>14</sup> see Dubois (2014)

<sup>15</sup> Similar initiatives in Germany (Wära) and Austria (Wörgl) were banned by intervention of the respective national banks.

<sup>16</sup> The GLS Community Bank e.G., Bochum and its linked institutions, GLS Treuhand e.V. and GLS Beteiligungs AG work closely together. [www.gls.de](http://www.gls.de)

<sup>17</sup> [www.gemeinschaftsbank.ch](http://www.gemeinschaftsbank.ch)



- 1984 Receipt of the approval of the Swiss Federal Banking Commission for the opening of the Freie Gemeinschaftsbank BCL in Dornach
- 1999 Moving of the headquarters to Basel
- 2001 Foundation of the Stiftung Freie Gemeinschaftsbank for the administration of donated funds and promotion of initiatives
- 2016 Building of a new headquarter in Basel

The Bank grew slowly and still is one of the smallest banks of Switzerland. Its speciality are the so called “personal credits” for artists and small initiatives without liable assets. Many of its ethical goals, which in and of themselves are far-reaching, are still waiting to be implemented. Still it has a unique stile and successfully provided credit to many important projects which otherwise never would be able to get banking money. The FGB is also a main pillar of the Rudolf-Steiner school movement and the Demeter farming and food movement. The bank does not pay any dividend on its shares but supports cultural activities instead.

Indicators of the FGB today:

- Support of individual and cultural initiatives
- Democratic structures (cooperative)
- Project support by interest reduction
- Credit-transparency (all names of borrowers)
- Image builds on “social + ethical bank”

### 3.5 The Alternative Bank Schweiz AG (ABS)

In the 80s of the 20th century, voices in Switzerland became more and more popular to reject the uncritical assumption of flight capital from dictators and potentates, the financing of environmentally disturbing large-scale projects and stop the various financial scandals. Another problem were the missing investments in ecology, renewable energy and socially just businesses. In the circles of NGO’s and alternatively adjusted groups, concepts were then drawn up as to whether a bank could be established. Various civil society organizations, e.g. The Berne Declaration (EvB)<sup>18</sup>, relief organizations and environmental organizations as the WWF supported these efforts. Although the initiators mainly came from a cooperative scene, the decision was taken to set up a limited company (Ltd. / AG in Switzerland) instead of a cooperative. The reason for this was that the banking law allowed the legal form of the cooperative only with a very restricted business activity<sup>19</sup>. However, another reason might have been that the founding organizations were very interested in using the new bank as an instrument for their activities within civil society and wanted to keep control. Correspondingly, a special share category was created for these organizations, which allowed the same right to vote with one-tenth of capital employed as the regular shareholders. The bank has changed the initially consciously taken self-restriction and now pays dividend on its shares.

#### Time scale

- 1985 Elaboration of a project for the establishment of an alternative bank
- 1990 Authorization from the Swiss Federal Banking Commission, opening of the bank in Olten
- 2002 The ABS begins with the distribution of long-term investment funds of Bank Sarasin
- 2005 Dismissal of the ethical council in favor of a purely ethical control center
- 2006 Joining the European Association of Ethical Banks FEBEA
- 2010 20-year anniversary: Balance Sheet Exceeds 1 Billion CHF

Indicators of the ABS today:

- Sustainable Development Goals
- Civil society organisations as holders
- Project support by interest reduction

<sup>18</sup> Berne Declaration, today called Public-Eye, <https://www.publiceye.ch/en/>

<sup>19</sup> See Koenig/ Waespe (2006), p. 7/8

- Credit-transparency (all names+sums of borrowers)
- Image builds strongly on “social + ethical bank”

### 3.6 Other Banks

In Switzerland there were 2014 around 283 banks registered of which about 63 were smaller regional banks<sup>20</sup>. None other of them is actually announcing itself as social or ethical bank. The former central bank of the consumer cooperatives and the trade unions founded 1927 as a cooperative<sup>21</sup> was transformed into a company 1970 and sold to another bank 1999. Today this bank still has the name *Bank Coop* but does not rely on the founding values anymore.

The 2011 founded Globalance Bank<sup>22</sup> is a private bank which promotes a kind of lesser impact of investment on the environment and more sustainability and promises to be *the pioneer of a new culture and total transparency in banking*<sup>23</sup>. But this transparency is only used in the ratings and fees for the investments. Even an annual business report is not published online and wealth optimization is the main target. Therefore it cannot be considered as a contributor of real social and ethical banking.

### 3.7 International Associations

FEBEA: European Federation of Ethical and Alternative Banks and Financiers<sup>24</sup> was founded in 2001 and is located in Bruxelles, Belgium. It promotes the concept of ethical banking as well as some interbanking support. It has 26 members in 13 European countries, representing total assets of 30.5 billion euros<sup>25</sup>. The ABS is the only Swiss member of this association.

A second organization, which operates worldwide, is the 2009 established GABV (Global Alliance for Banking on Values) *an independent network of banks using finance to deliver sustainable economic, social and environmental development*<sup>26</sup>. The ABS as well as the FGB are both members of this association which *comprises 39 financial institutions and hold up to \$110 billion USD of combined assets under management*<sup>27</sup>.

From Eastern European countries the following institutions were members of the above associations:

- ebanka - Cooperative for Ethical Financing, Croatia<sup>28</sup> (FEBEA)
- MagNet Hungarian Community Bank, Budapest, Hungary<sup>29</sup> (GABV)
- Sklad05 - Foundation for Social Investment, Kranj, Slovenia<sup>30</sup> (FEBEA)
- TISE SA - Social and Economic Investment Company, Warszawa, Poland<sup>31</sup> (FEBEA)

## 4. Comparison and Status

Figure 3 gives a general indicator that social and ethical or at least local and not unethical banking provides a more stable and desirable development. The two biggest Swiss banks, the internationally positioned CS (Credit Suisse) and the well known UBS (Union Bank of Switzerland) showed both a strong asset inflation from 2003-2007. This was a part of the

<sup>20</sup> [http://www.schweizeraktien.net/wp-content/uploads/2015/06/Branchenanalyse-Regionalbanken\\_Präsentation\\_Branchentalk\\_150206.pdf](http://www.schweizeraktien.net/wp-content/uploads/2015/06/Branchenanalyse-Regionalbanken_Präsentation_Branchentalk_150206.pdf), accessed 08.02.2017

<sup>21</sup> It was named bevor: *Genossenschaftliche Zentralbank*

<sup>22</sup> <https://www.globalance-bank.com/en>

<sup>23</sup> <https://www.globalance-bank.com/en/about-us/globalance-story.html>

<sup>24</sup> [www.febea.org](http://www.febea.org)

<sup>25</sup> <http://www.febea.org/en/febea/news/our-numbers>, accessed 08.02.2017

<sup>26</sup> <http://www.gabv.org>, accessed 08.02.2017

<sup>27</sup> <http://www.gabv.org/about-us>, accessed 10.02.2017

<sup>28</sup> <http://www.ebanka.eu/en>

<sup>29</sup> [www.magnetbank.hu/en](http://www.magnetbank.hu/en)

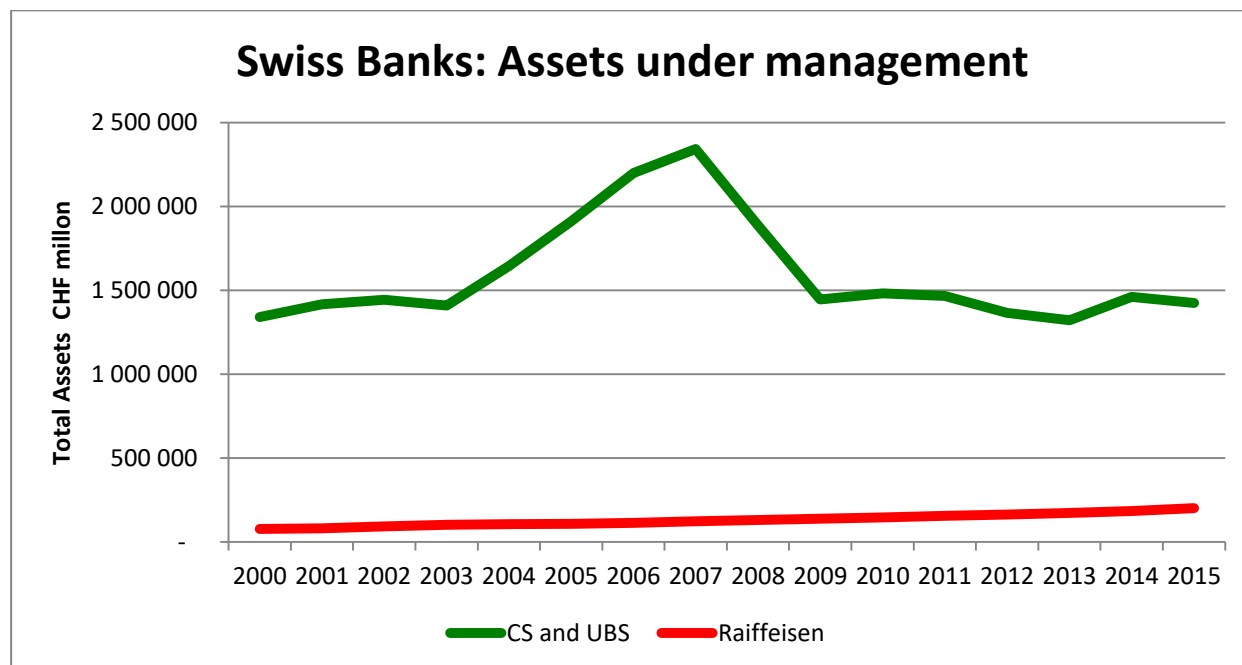
<sup>30</sup> [www.sklad05.si](http://www.sklad05.si)

<sup>31</sup> [www.tise.pl](http://www.tise.pl)

worldwide financial bubble and imploded 2008. After 2009 these banks, by the generous help of the Swiss taxpayers, were back where they started.

At the same time the Raiffeisen Bank cooperatives, without having “invested” their money in speculative exploitation, continued in their steady development.

**Figure 3: Comparison of the asset-development of the big international Swiss banks CS and UBS to the local Swiss Raiffeisen Banks**



Source: Swiss National Bank <https://data.snb.ch>

The situation of ethical banks in Switzerland had, as for banks in many places, in 2008 a turning point. If there was a moderate growth before, the "crash of the subprime market" and its corresponding consequences led to a massive migration of customers among internationally active big banks. Many of these customers also chose their new bank based on ethical considerations and the fact that they were stable and not involved in any of the “bad things”. The Raiffeisen Banks cooperatives, the WIR-Bank but in particular the ABS got a strong increase of new customers and a larger publicity. The FGB was the only one not to generate substantial growth from the boom. Fears about rapid organizational growth, a lack of publicity and an extremely conservative investment policy may have played a role.

On the other hand, as a result of the crisis, the regulations for banks were severely tightened, which made the work of the ethical banks unnecessarily difficult. In spite the fact that they self-regulated themselves by their own ethical guidelines much stronger than any of the conventional banks, the authorities treated them equal as other banks.

The extremely low interest rates in the following years until the present reduced the main source of revenue, and strongly put even more pressure on these banks.

#### 4.1 Success in Numbers

**Table 1: Success in numbers**

Per end of 2015	Raiffeisenbanks	WIR-Bank	ABS	FGB
Number of Clients	3.7 million	100'000	30'617	4'742
Number of Cooperative Members / Shareholders	1.9 million	n/a	5'212	2'297

Number of Banks	270	1	1	1
Number of Branches	977	9	4	1
Employées	11'053	243	96	22
Assets CHF millions	214'000	4'421	1'590	267
Assets CHW millions		779		
Market Share Swiss Banks	8.6%	0.2%	0.1%	0.0%
Rating (Moody's)	Aa2	n/a	n/a	n/a
Asset per client (CHF)	57'838	52'000	51'932	56'224

*Sources: Annual Reports 2015 and information from company-websites Oct.2016*

## 4.2 Is it really a success?

In the conventional sense, all four banks can be attested to have a very successful business activity. The figures look good to shiny, all banks have also a good image in the public. Many projects have been realized, which are important from a regio-economical, social and ecological point of view, thanks to their help. The ethical banking model has thus proved its worth:

- Very successful business of all 4 Banks
  - Steady growth, crisis-proof
  - Important contribution to the real economy
  - But still financially and as a concept marginal in the country
- However, there are also questions to ask today:
- Are the ethical banks shut down politically by the steadily increasing regulations of FINMA (Swiss banking authority)?
  - Where is the indignation and criticism of the policies of the big banks by the ethical banks? Have they already been so system-compliant that they are mostly silent?
  - Escape charges and tax evasion are top themes and a dreary chapter of Swiss banks. There is, however, no clear statement or even proposals for measures by the ethical banks.
  - Why are research and initiatives for a new and more stable money system not supported by these banks?
  - Why are there hardly any new ideas and innovations among the ethical banks to develop in the future? They seem stuck on the old initial ideas?
  - What will be their answer to the fintech revolution in data management?

## 5. Future Prospects and Six Theses

Ethical banking in Switzerland has reached a good level. However, the many open questions show that there is a great need for action. In particular, the innovative capacity of ethical banks leaves something to be desired. The initial ideas of the founders are to a large extent realized, but new, contemporary ideas seem hardly be accepted any more. This is especially tragic, because, despite the success of the ethical banks, the state of the financial-economy in Switzerland is much worse today than, for example, 30 years ago. Stability and trust are continuing to be reduced, wealth inequality has intensified, and speculation has worsened.

How could it go on? Or better, how would it have to go so that the crisis of the banks would be overcome and social and ethical banking become the rule? Here six main ideas for a consistent further development of the concept are very briefly described and proposed<sup>32</sup>:

### **Six Theses**

1. Reintroduce the idea of a cooperative society: Strengthen a cooperative structure with democratic decision making and reinvest the main part of profits in cultural and societal initiatives
2. Fight the grievances of big „bad“ banks, divide from them: Clearly indicate the illnesses of today's banking, in particular, speculation, tax evasion, redistribution from poor to rich.
3. Establish a separate regulation with a reduced banking supervision and own value based stock exchange: an important point to be considered is the separation from the existing irreversibly entangled system.
4. Support research for a better monetary system: the existing deficient money system must be challenged and, if necessary, be replaced.
5. Enter into complementary currencies: such initiatives are everywhere that enable regional and sustainable business. Through the support of a bank, such a system can soon become a serious alternative for a better economy<sup>33</sup>.
6. Learn to treat money as a commons: money itself must be recognized and treated as a "community ownership", only with this a stable economy can be achieved. Ethical banks should have an enlightening and educational effect in this direction.

## **6 Conclusion**

Ethical banking in Switzerland has developed strongly over the last 20 years - mostly parallel to the European surrounding area - and has now reached a high level. Existing banks, if one wants to add also Raiffeisen Bank cooperatives and the WIR bank, cover about 20% of the banking turnover in Switzerland. Ethical banking in the narrow sense, however, is operated only by the Alternative Bank Schweiz and the Freie Gemeinschaftsbank. Together with these two institutions, we are well below one per cent of banking turnover in Switzerland. This is certainly sobering, in the face of today's problem situation, which could be solved in long distances by ethical banking.

Even the existing ethical banks still have potential for development. In many cases only the ideas of the founders are implemented and little new developments are visible. In the second part of the article, therefore, possible paths to the future of ethical banking are outlined and the idea of a cooperative society is once again acknowledged. The general information given here for ethical banking in Switzerland can, for the most part, also be applied to the situation in other countries of Western Europe. In each country, however, other conditions, whether legal or cultural, which have a decisive effect on the design of ethical banking, are to be observed. Especially for Eastern Europe other effects, as the bad image of cooperatives due to the socialist era, or the generally higher corruption have to be considered. Are social and ethical banks needed in the Balkans? The answer is yes, they are needed everywhere, because only by getting transparency, trust and ethical values back into these central economical institutions, the economy is able to serve all the people.

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<sup>32</sup> compare the five theses Martignoni (2011), p. 31

<sup>33</sup> An example of this is the Chiemgauer in Bavaria, the largest regional system in Germany supported by regional banks and the GLS Community Bank [www.chiemgauer.info](http://www.chiemgauer.info)

## References:

1. de Clerck, Frans (2015): Movement in the Banking Sector, Mondiaal Nieuws and L'Echo, <http://www.gabv.org/opinions/movement-in-the-banking-sector> (accessed 06.10.16)
2. Dubois, Hervé (2014): Faszination WIR – Resistent gegen Krisen, Spekulation und Profitgier, Faro Verlag, Lenzburg
3. Dohmen, Caspar (2011): Good Bank – Das Modell der GLS Bank, orange-press, Freiburg
4. Felber, Christian (2010): Gemeinwohlökonomie – Das Wirtschaftsmodell der Zukunft, Deuticke, Wien
5. Gesell, Silvio (1938): Die natürliche Wirtschaftsordnung, 8.Auflage, Verlag Genossenschaft Freiwirtschaftlicher Schriften, Bern
6. Institute for Social Banking (2016): 10 Years ISB, Annual Report 2015, Institute for Social Banking e.V., Witten
7. Kennedy, Margrit. Lietaer, Bernard A.; Rogers. John (2012): People Money - The promise of regional currencies. Axminster, Devon
8. Kerler, Rolf (2011): Eine Bank für den Menschen – Von den Anfängen und Impulsen der GLS-Treuhand und GLS-Bank, Verlag am Goetheanum, Dornach
9. König, Mario; Wespe, Aglaia (2006): Die Geschichte einer aussergewöhnlichen Bank – <sup>[1]</sup>Die Alternative, Alternative Bank ABS, Olten
10. Lietaer, Bernard / Arnsperger, Christian / Goerner, Sally / Brunnhuber, Stefan (2012): Money and Sustainability, A Report from the Club of Rome – EU Chapter, Triarchy Press, Axminster
11. Martignoni, Jens (2012): Entwicklung und Stand des ethischen Bankings in der Schweiz, In: Brazda, Johann / Blisse, Holger (Hrsg.): Ethische Bankgeschäfte – Ein neuer Geschäftsbereich bei Kreditgenossenschaften, Forschungsverein für Genossenschaftswesen Heft 33, Wien
12. Müller, Kaspar (2004): Ethische Anlagen im Finanzbereich, ein Widerspruch in sich?, Referat an der GEF-Mitgliederversammlung, in Gesellschaft für ethische Fragen, Arbeitsblatt 2004, Nr.45, Baar
13. Obrecht, Sibylle, Salvisberg, Jürg, Raiffeisen: Menschen, Geld, Geschichten, Huber, Frauenfeld, 2000.
14. Purtschert, Robert (2005): Das Genossenschaftswesen in der Schweiz, Haupt-Verlag, <sup>[1]</sup>Bern  
Remer, Sven/ Weber, Olaf (ed.)(2011), Social Banks and the Future of Sustainable Finance, Routledge, Oxford
15. Scott, Brett (2013): The Heretic's Guide to Global Finance – Hacking the Future of Money, Pluto Press, London
16. Steiner, Rudolf (1972): World-Economy - The Formation of a Science of World-Economics, Fourteen lectures given in Dornach, 24th July-6th August 1922, 3rd Edition, Rudolf Steiner Press, London
17. Weber-Berg, Christoph A. (2007): Mehrwert Ethik – Added Values in Wirtschaft und Management, Versus Verlag, Zürich
18. Weber, Olaf (2012): Sustainable Banking – History and Current Developments, Working Paper, School of Environment, Enterprise and Development (SEED) University of Waterloo Waterloo, ON, Canada, Available under <http://ssrn.com/abstract=2159947>
19. Verein kritischer Aktionärinnen und Aktionäre der Schweizerischen Bankgesellschaft (Hrsg.) (1991): Zwischen Ethik und Rendite – Über die Möglichkeiten der Kapitalanleger, mit ihrem Geld Einfluss zu nehmen, Eigenverlag, Zürich

# **Reshuffling the monetary and financial system: lessons from the social and solidarity economy**

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## **Introduction**

Current monetary and financial system has some systemic faults which should be addressed properly in order to achieve a sustainable and fair economic system. Money creation as bank credit = debt which is prone to be pro-cyclical (more credits are given during the economic boom, quite often ending up with churning out bubble economies, while credits are crunched during the recession, making it even harder for debtors to service what is due. The compound interest, which grows exponentially rather than linearly, forces economies to grow more and more just in order to avoid bankruptcies, similar to the musical chair in which somebody is to fail to get a seat and there lose the game, on top of discounting future assets and making them less attractive for investors.

It is worth paying attention to the emergence of social and solidarity economy (SSE), a series of non-capitalist and non-communist economic activities which aim at building sustainable and human-friendly economy. Initiatives pertaining to this economy thrive all over the world and some countries (Ecuador, France, Mexico, Portugal and Spain) have approved a law on this economy to reflect such socioeconomic, cultural and environmental values into their own policies, although the grade of involvement varies significantly from country to country. SSE includes some experiences in the financial (such as ethical bank and microcredit) and monetary fields (social and complementary currencies) as well, suggesting how the current money system can be altered to help us accomplish sustainable development.

This article begins with showing how poorly our current system is designed on achieving the sustainable development. Then SSE's vision is studied on the basis of different sources to determine what its goals are, followed by examinations on how its philosophy is reflected on

its financial and monetary practices. Islamic banks are also studied briefly from their anti-interest viewpoint, which can be shared with SSE, although differences with SSE are highlighted too. Last but not least, an analysis will be conducted from the SSE's viewpoint on the proposal of Chicago Plan / Positive Money, which is to allow governments to restore monetary sovereignty by forbidding private banks to issue money and the governmental institution (either the central bank or a monetary institute) to do so, highlighting the commonalities as well as discrepancies.

### **1: Our monetary system against the sustainable development**

A good starting point for this paper would be the definition of sustainable development: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations: 1987). This concept was later incorporated into the Millennium Development Goals, sanctioned in 2000, and has evolved into the Sustainable Development Goals<sup>1</sup> which were adopted in 2015. The recent one has 17 pillars and different specific goals, and 1.4, 2.3, 5a and 9.3 mention the universal access to financial services from the viewpoints of Zero poverty, farming, gender equality and small businesses while 8.10 refers to the importance to empower financial institutions to improve their financial services for such sectors.

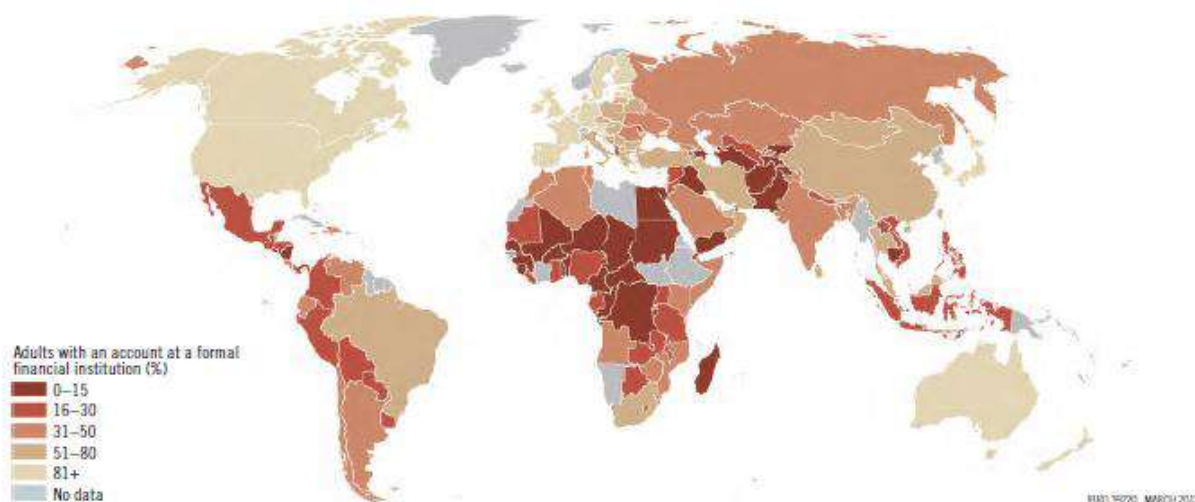
We can see that all these goals are against the financial exclusion, defined by the European Commission (2008) as “a process whereby people encounter difficulties accessing and/or using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong.” Though the percentage of people without bank account tends to be higher in the developing countries, EU is not foreign to this phenomenon, as only 78% of adult population in Greece, 74% in Lithuania, 73% in Hungary, 71% in Italy, 70% in Poland, 53% in Bulgaria and 45% has a bank account (Demirguc-Kunt and Klapper: 2012). Graphic 1 shows how many people are financially included per country.

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<sup>1</sup> Source: [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/70/L.1](http://www.un.org/ga/search/view_doc.asp?symbol=A/70/L.1) (Last accessed: 08<sup>th</sup> October 2016)



*Graphic 1: Adults with an account at a formal financial institution<sup>2</sup>*



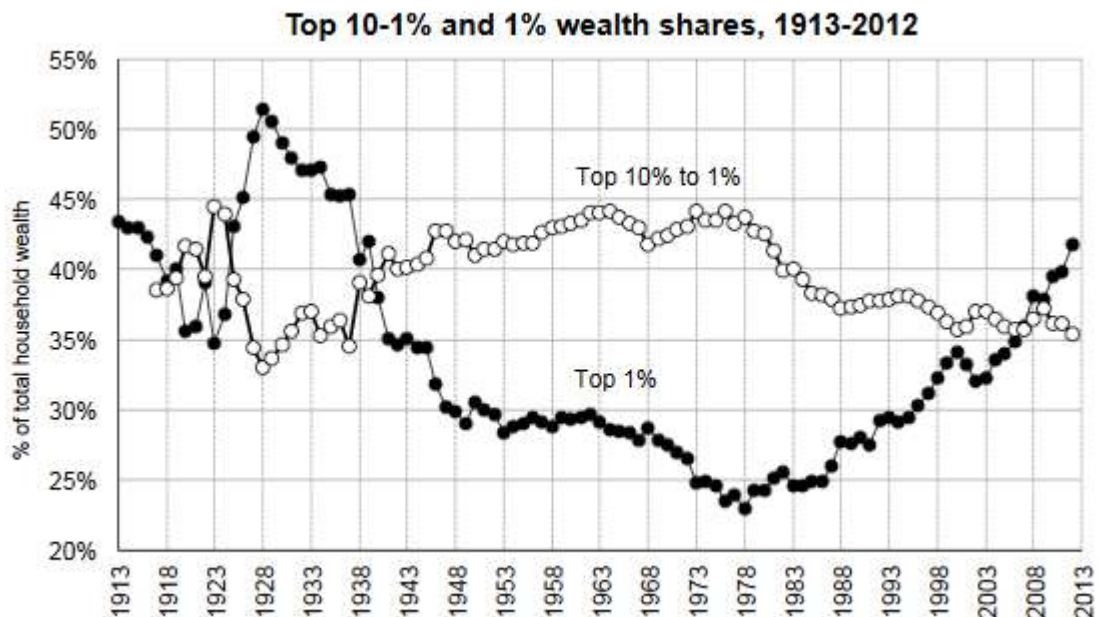
On top of that, Lietaer et al (2012) shows five structural problems of our current money system which are unsustainable:

- 1) **The pro-cyclical tendency of money creation and flow:** Most money is currently created as credit when private banks provide loans (Greco: 1990, Douthwaite: 1999, Lietaer and Belgin: 2012, Jackson y Dyson: 2012). This fact is admitted by Bank of England as a bank “credits their bank account with a bank deposit of the size of the mortgage. *At that moment, new money is created*” (McLeay et al: 2014) and this process is accelerated during the boom, quite often for speculative purposes, while it is slowed down once the economy gets into a recession. The overheated speculation creates manias with “*a reversal between the objective and the process*” whereby “(t)he lenders became so enthusiastic about the process that they failed to appreciate the end game and provide an answer to the question of where the borrowers would get the cash to pay the interest if the lenders stopped providing them with the cash in the form of new loans” (Kindleberger and Aliber: 2005).
- 2) **Short-termism:** The compound interest increases future assets, for instance, with 5%/annum interest rate, 10,000 € in 2016 will be 10,500 € in 2017 and about 16,289 € ( $10,000 \times 1.05^{10}$ ) in 2026. This fact, however, also means that an asset to be valued as 10,000 € in 2026 is discounted exponentially to about 9,523 € ( $10,000 / 1,05$ ) in 2025 and about 6,139 € ( $10,000 / 1.05^{10}$ ) in 2016. Therefore, long-term investments are unlikely to be profitable while more money is poured into short-term ones.

<sup>2</sup> Source: Demirguc-Kunt and Klapper, 2012

- 3) **Compulsory growth pressures:** As money creation is conditioned with interest repayment, there is always more debt than money supply. Douthwaite (1999) shows three scenarios (deflation, inflation and expansion) and the only desirable one is expansion. Kennedy (1995) compares this growth to that of cancer to highlight its programmed unsustainability, and both the Old Testament (Exodus, 22:25, Leviticus, 25:36, 25: 37 and Deuteronomy, 23:19) and Quran (2:275, 2:276, 2:278, 3:130, 4:161, 30:39) forbid to charge usury / interest (“*riba*” in Arabic).
- 4) **An unrelenting concentration of wealth:** The compound interest is levied almost whenever goods and/or services are purchased, because their producers and/or suppliers need to repay it. Kennedy (1995) calculated that bottom 80% of West-Germans in 1982 lost money while only the top 10% earned it by way of this system. Graphic 2 shows that the pie has been enlarged only for the top 1% since 1970s while even those at top 10% to 1% have lost their share.

*Graphic 2: Top 10-1 % to 1% wealth shares in the US, 1913 - 2012<sup>3</sup>*



- 5) **The devaluation of social capital:** As we have already seen, money supply is by definition scarce, forcing economic players to vie each other for this means of exchange, similar to the musical chairs whereby the lack of chairs in comparison with players forces somebody to be ousted from the game so others can survive. Such a

<sup>3</sup> Source: Saez and Zucman (2014).

picture rather harms than nurtures the social capital, defined as “*connections among individuals - social networks and the norms of reciprocity and trustworthiness that arise from them*” (Putnam: 2000) as competition instead of cooperation is the prevailing force.

An important remark is that 2), 3) and 4) are triggered by the compound interest system: it discounts future assets, making long-term investments less attractive than short-term ones, while forcing the whole economy to grow more and more to pay this exponentially-growing interest. It also redistributes the wealth in favour of the rich at the cost of the majority of the population, increasing the income gap.

These systemic faults undermine different Sustainable Development Goals as follows:

- **1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions:** the current monetary system is designed to increase the income gap, making it harder for this goal to be achieved.
- **2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility:** It is possible that speculations, with funds from commercial banks, undermine the stability of commodity prices.
- **10. 1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average:** Graphic 2 shows a counter-evidence to this goal.

## **2: Social and Solidarity Economy (SSE)’s principles, values and visions**

SSE combines two similar but different concepts: Social economy which includes all forms of non-capitalist economies (co-ops, non-profits, foundations and benefit societies), and solidarity economy which emerged in Latin America as alternative to the neoliberalism which was sweeping over that continent. The second one tends to include different economic practices which surged in the last few decades, such as fair trade, Community-Supported Agriculture (CSA), ethical finance and social and complementary currencies (local currencies), among others, while the first one rather deals with those decades-old experiences.

The Co-operative Principles, to be shown below, are frequently cited as guidelines not only for co-ops but also for SSE players in general:

- 1) Voluntary and Open Membership
- 2) Democratic Member Control
- 3) Member Economic Participation
- 4) Autonomy and Independence
- 5) Education, Training and Information
- 6) Co-operation among Co-operatives
- 7) Concern for Community

RIPeSS (Réseau Intercontinental de Promotion de l'Économie Sociale et Solidaire)<sup>4</sup> is the global network of SSE players which organises the global conference every four years, and its regional (continental) networks realise their own activities. Its current charter<sup>5</sup>, adopted in 2008 in Montevideo (Uruguay), sets the values of “*humanism*”, “*democracy*”, “*solidarity*”, “*inclusiveness*”, “*subsidiarity*”, “*diversity*”, “*creativity*”, “*sustainable development*”, “*equality, equity and justice for all*”, “*respecting the integration of countries and people*” and “*a plural and solidarity-based economy*” and defines its mission as “*producing, exchanging and consuming goods and services that correspond to the economic and social needs of the local and international community, and the establishment of harmonious relations between competitors in economic sphere.*”

Up to today, five countries (Ecuador<sup>6</sup>, France<sup>7</sup>, Mexico<sup>8</sup>, Portugal<sup>9</sup> and Spain<sup>10</sup>, on the alphabetical order) have approved and implemented laws on social (and solidarity) economy. Though each law defines SSE on its own way, similarities are easily found among these five laws, such as supremacy of human being over the capital, voluntary membership, democratic

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<sup>4</sup> <http://www.ripess.org/>

<sup>5</sup> [http://www.ripess.org/wp-content/uploads/2011/07/RIPeSS\\_charter\\_EN.pdf](http://www.ripess.org/wp-content/uploads/2011/07/RIPeSS_charter_EN.pdf) (Last accessed: 08<sup>th</sup> October 2016)

<sup>6</sup> [http://www.desarrollosocial.gob.ec/wp-content/uploads/downloads/2012/07/1\\_ley\\_y\\_reglamento\\_EPS.pdf](http://www.desarrollosocial.gob.ec/wp-content/uploads/downloads/2012/07/1_ley_y_reglamento_EPS.pdf) (in Spanish: last accessed on 08<sup>th</sup> October 2016)

<sup>7</sup>

<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029313296&dateTexte=&categorieLien=id> (in French: Last accessed on 08<sup>th</sup> October 2016)

<sup>8</sup> [http://www.diputados.gob.mx/LeyesBiblio/pdf/LESS\\_301215.pdf](http://www.diputados.gob.mx/LeyesBiblio/pdf/LESS_301215.pdf) (in Spanish: last accessed on 08<sup>th</sup> October 2016)

<sup>9</sup> [http://www.cases.pt/0\\_content/sobre\\_nos/Lei\\_de\\_Bases\\_da\\_Economia\\_Social.pdf](http://www.cases.pt/0_content/sobre_nos/Lei_de_Bases_da_Economia_Social.pdf) (in Portuguese: last accessed on 08<sup>th</sup> October 2016)

<sup>10</sup> <https://www.boe.es/boe/dias/2011/03/30/pdfs/BOE-A-2011-5708.pdf> (in Spanish: last accessed on 08<sup>th</sup> October 2016)

self-management and internal and external solidarity. The Ecuadorean concept of “*buen vivir*” merits further explanation, as this term, translation of “*sumak kawsay*” in Quechua which was incorporated into this Andean country’s current Constitution, is used to represent people’s decent life standard in harmony with the Mother Nature (sometimes referred to in Latin America as Pachamama).

### **3: Financial practices within the domain of SSE**

SSE has developed different financial initiatives all over its own history. In this section we will focus with different experiences to show their relevance.

- **Credit Unions**

The most traditional form of SSE financing are credit unions. Being themselves as co-operatives<sup>11</sup>, they are owned by their own members instead of stockholders in case of other commercial banks, therefore allowing the management to be done in favour for their own members. Smith et al (1980) argue that Credit Union (CU) deal with members both as owners and clients, therefore “*models of a financial firm based on profit maximization cannot be directly translated to a CU environment*” and “*a CU cannot simultaneously maximize its dividend rate for savers and minimize its loan rate for borrowers*”, showing the need to reconcile with its members' contradictory demands (affordable loans for borrowers and more dividend for savers). Melián Navarro et al (2010) demonstrate that most CUs are “*neighbourhood bank*”, with “*an effective knowledge on the environment in which they are operational and on the sector(s) of entrepreneurial activity in which most of their members and clients are concentrated.*” It is important to point out that many ethical banks also take this juridical form because it is the most appropriate one to achieve their own goals.

JAK Bank, operational in Denmark and Sweden, is very remarkable due to its interest-free business model. Depositors to this financial institution do not earn any interest but points to be spent on asking for interest-free loans, which are calculated on the basis of the amount and length of deposit. So, for instance, if somebody deposits 10,000 € for 5 years, (s)he is entitled to borrow 20,000 € for 2.5 years or 5,000 € for 10 years. Anielski (2004) qualifies this experience as “*international benchmark for ‘sustainable banking’*”, showing that it gets 90% of operating costs by “*charging just enough in loan fees and membership fees*”.

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<sup>11</sup> Actually the equivalent term in French and Spanish are “*banque coopérative*” and “*cooperativa de (ahorro y) crédito*”, respectively.

- **Microcredit / Microsaving**

Microcredit is a financial service targeted for the marginalised who only need a small amount of start-up funds to begin their own businesses. The most well-known experience is Grameen Bank in Bangladesh, founded by Muhammad Yunus who, together with his own institution, won the Nobel Peace Prize in 2006. Hashemi et al (1996) prove that this institution *"does empower women"* by increasing their *"mobility, their ability to make purchases and major household decisions, their ownership of productive assets, their legal and political awareness and participation in public campaigns and protests"* while making them less likely to suffer from domestic violence. Karim (2008), however, is critical to microcredit institutions in this South Asian country, creating *"economy of shame"* (*"furtherance of their capitalist goals"*) prevailing over *"local norms of cohesion and community"* based on the *"honor and shame"* culture, the relending practices (a woman who gets microcredit makes money by relending it to somebody else with higher interest rate) and NGOs' *"tremendous control over the lives of the poor"*.

An alternative to microcredit is microsaving. NGOs still assist the poor, but instead of lending, they provide training courses to help such people set up and self-manage their own financial mutual aid groups. Usually a group will consist of between 10 to 30 people and Crespo Ubero (2013) enumerates the advantage of CAF (*Comunidades Autofinanciadas*), a microsaving practiced by immigrant worker groups in Catalonia (Spain), as *"it offers quick and simple access to small credits; it stimulates the saving; it generates profits to be shared among the members; it strengthens the community union; it provides financial education; it enables other services such as insurance, and housing, etc."*

- **Ethical Banks**

The new trend which has appeared in the last few decades are Ethical Banks as alternative banks which only finance money to those socially and/or environmental sound projects, such as organic farming, renewable energy while refusing to finance nuclear energy, weapon factory companies etc. While ordinary credit unions only evaluate projects in terms of profitability, ethical banks examine also their social and/or environmental aspects, thus guaranteeing depositors that their money is invested for such purposes. There is a global

network called INAISE (International Association of Investors in the Social Economy)<sup>12</sup> which holds annual meetings. Table 1 compares some well-known experiences in Europe:

*Table 1: Comparison of different ethical banks in Europe as of 2015<sup>13</sup>*

Name	Country(ies)	Founded in	Members	Deposits (Millions of €)	Loans (Millions of €)
GLS Bank	Germany	1974	41,982	3,618	2,129
Triodos Bank	Netherlands etc <sup>14</sup>	1980	707,057	7,283	5,216
La Nef	France	1978	37,131	125	120
Banca Etica	Italy / Spain	1998	38,910	1,058	865

- **Social and Complementary Currencies / local currencies**

Social and complementary currencies (alias local currencies or community currencies), are means of exchange to be issued and administered by the civil society in parallel with legal tenders. The very expression of “social and complementary currencies” is the combination of two terms, namely: “*social currency*” coined by Primavera (1999) who found out the “*social inclusion effects*” of barter clubs which were at that time a widespread practice in Argentina, and “*complementary currency*” which was first used by Bernard Lietaer who recognised the relevance of such exchange tools’ roles to strengthen cooperative economy, community exchange and social capital (Rizzo: 2003). Lietaer (2001) defines money as “*an agreement within a community to use something as a means of exchange*”, showing the possibility that anything can be regarded as money as far as there is a consensus among community members.

Different sorts of practices exist to satisfy different unmet socioeconomic needs. Some remarkable initiatives are depicted below:

- **Labour Certificate (Austria):** Implemented by City Council of Wörgl, Tyrol between July 1932 and September 1933 when it was forbidden by the National Bank of Austria. The City itself was in financial crisis due to the tax in arrears and it was on

<sup>12</sup> <http://www.inaise.org>

<sup>13</sup> Sources:

GLS: <https://www.gls.de/privatkunden/ueber-die-gls-bank/transparenz/zahlen-und-fakten/>,

Triodos : <https://www.triodos.co.uk/downloads/annual-report-2015.pdf>,

La Nef: [https://www.lanef.com/wp-content/uploads/2016/03/Rapport\\_Annuel\\_2015.pdf](https://www.lanef.com/wp-content/uploads/2016/03/Rapport_Annuel_2015.pdf),

Banca Etica: [http://www.bancaetica.it/sites/bancaetica.it/files/web/la-banca/Chisiamo/Assemblea%20dei%20soci/Assemblea%20dei%20soci%202016/ordine%20del%20giorno/bilancio%20integrato%202015\\_definitivo.pdf](http://www.bancaetica.it/sites/bancaetica.it/files/web/la-banca/Chisiamo/Assemblea%20dei%20soci/Assemblea%20dei%20soci%202016/ordine%20del%20giorno/bilancio%20integrato%202015_definitivo.pdf) (All last accessed: 08<sup>th</sup> October 2016)

<sup>14</sup> It is currently operational in the Netherlands, Belgium, Germany, Spain and the United Kingdom.

the verge of bankrupt, but it issued its own vouchers, backed with Austrian schilling but with the 1% demurrage per month (See Image 1: the spaces in the right are allocated for 12 stamps to be pasted to revalidate this bill). Demurrage is a monetary technique proposed by Gesell (1916) to expire each note periodically to force its bearer to pay a small amount of fee (such as 0.1% per week or 1% per month) and its quick circulation stimulated economic activities in the midst of the Great Depression (Schwarz: 1951).

*Image 1: 10 schilling Labour Certificate<sup>15</sup>*



- **LETS (world):** The most commonplace social and complementary currency model which started in Comox Valley, British Columbia (Canada) in 1982 and later spread into different countries (United Kingdom and Germany in 1986, Australia in 1987, France in 1994, South Korea in 1998 and Japan in 1999). Each member has his/her own account and trades with other members in this account unit which is usually tied with each country's official tender, although it is not convertible. The negative balance in the account is not regarded as debt which grows exponentially with interest rates but the account holder's commitment to provide equivalent goods and/or services, though the maximum negative balance is usually set to prevent free riders who only buy and then leave the system.

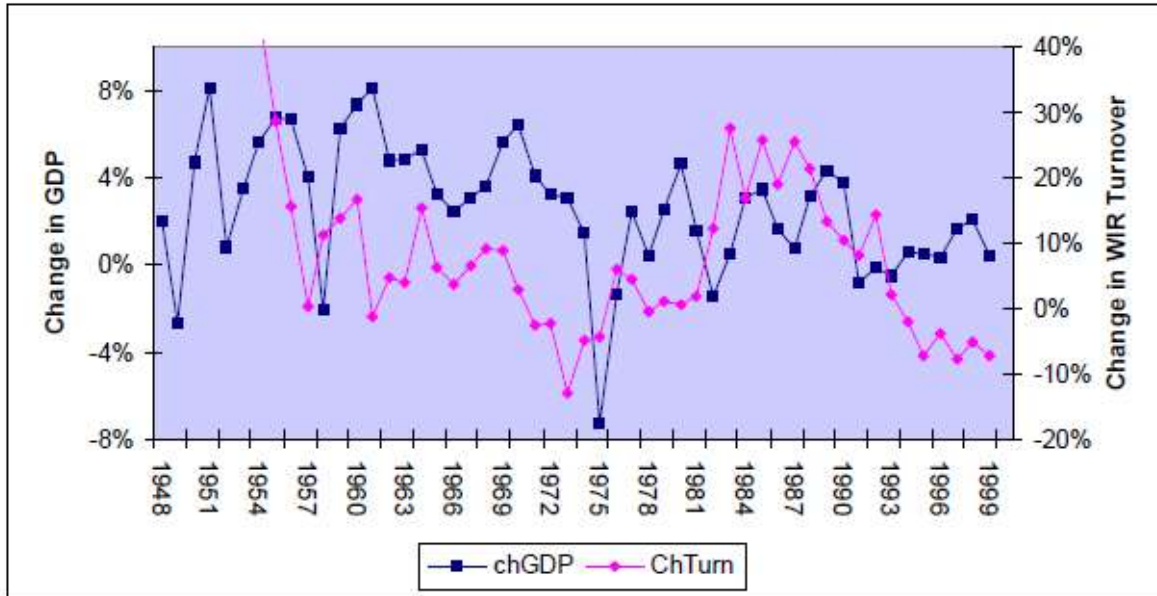
<sup>15</sup> Source: <http://www.complementarycurrency.org/ccGallery/worglfront10.jpg> (Last accessed: 08<sup>th</sup> October 2016)



In South Korea and Hungary the word "*pumasi*" (“*품앗이*”) and "*Kaláka*", both of which means "*mutual help in the farming*", is used as translation for LETS (Hirota: 2012, North: 2004) to remind people of its spirit in a simply language. Williams (1997) and Gran (1998) show that such experiences tend to attract women with higher education with left-wing and ecologist political tendency in Australia and Norway respectively, showing the difficulty for such tools to be shared with people with other profile.

- **Timebank (world):** Started in 1980s in the United States by the lawyer Edgar Cahn as Time Dollar and then spread into other countries, with the “*aim to benefit the socially excluded by involving them in mutual volunteering and community participation*” (Seyfang: 2002). While the system works similarly to LETS, the range of exchanges is limited to services and the exchange unit is time (ex.: 1 hour = 1 point).
- **Chiemgauer (Germany):** Founded in 2003 as an extracurricular project of the Waldorf School in Prien am Chiemsee and later a non-profit and a credit co-op were founded to deal with the money issuance and credit provision, among others. Consumers choose a social project (usually a non-profit) on joining this system and change euro into Chiemgauer. 3% of the euro is donated to the social project while another 2% is levied to cover the running cost for this social currency project. Local businesses which accept Chiemgauer can either redeem euro after losing 5% of commission or spend it to another local business at face value. Chiemgauer adopts 3%/6 months demurrage (2%/3 months up to 2015) to discourage hoarding money but to stimulate its smooth circulation.
- **WIRBank (Switzerland):** A co-operative bank since 1934 to provide loans in WIR, a complementary currency to be spent exclusively within the circuit of this bank’s member businesses. More than 60,000 small and medium-sized enterprises and freelancers are members, therefore a wide range of goods and services are available in this network. It is allowed to use WIR together with Swiss Franc so providers can cover their costs in this official tender. Stodder (2005) proves that WIRBank plays a complementary role in the Swiss economy, increasing its turnover during the recession and restricting it during the boom to balance the economic activities.

**Graphic 3: Change in Swiss GDP (left axis), and Change in Total WIR Turnover (right axis), both in 1990 Swiss Francs, 1948-99<sup>16</sup>**



- **Barter Clubs (Argentina):** This experience, started with some 20 neighbours who exchanged redundant goods and services in the suburbs of Buenos Aires, grew into a huge network of thousands of nodes throughout the country, with millions of people who could end meet with this system in 2001 – 2002 while this South American country was in the midst of the economic crisis. Each node held weekly barter fairs where only the internal currency, called “*crédito*”, was allowed. However, the massive counterfeiting of *créditos*, sale of *créditos* in Argentinean pesos and the same person's participation into different nodes, among others lead to the hyperinflation in this complementary currency and most people left it (Louge: 2005).
- **Banco Palmas (Brazil):** A community bank, defined as “*a financial solidarity-based service, in network, of associative and communitarian nature, targeted for the reorganisation of the local economies, in the perspective of the job and income creation and of the Solidarity Economy*” (Banco Palmas: 2010). It is located at Conjunto Palmeiras, in Fortaleza which was set up in 1998 by neighbours’ association to self-organise microcredits. Since 2002 it issues its own currency Palma, backed with Brazilian Real (R\$), on giving consumer loans to stimulate the trades within the neighbourhood. Nowadays more than 100 similar experiences are found all over Brazil.

<sup>16</sup> Source: Stodder (2005)

Wild (2011) classifies different currencies into 6 categories on the basis of their collateral (Table 2):

*Table 2: Classification of collaterals for currencies<sup>17</sup>*

Type of collateral	Subcategory	Examples
Goods and/or services	Backed with official currency	Chiemgauer, SOL-Violette, Banco Palmas
	Backed with other goods and/or services	Banco de horas comunitario, Terra
	Tax payment	National demurrage currency (Gesell: 1916), “ <i>cuasimoneda</i> ” in Argentina, currency by Money Creation Committee (Jackson and Dyson: 2012)
Transaction (mutual credit)	Mutual trust	LETS, Time Banks
Debt	Issued as bank credit	Euro, WIR, Chiemgauer
None	Fiat	Ithaca Hours, Club de trueque

And below are pros and cons of each category:

- **Backed with official currency:** They are the most stable one and are therefore the most likely to be accepted by local businesses as far as they can redeem, but their complete dependency on legal tender is the most important limiting factor, because communities suffering from the lack of official money cannot issue such currencies.
- **Backed with other goods and/or other services:** Banco de horas comunitario, practiced in Capilla del Monte, Argentina issues its currency when members deposit some goods (food, books, clothes...) and other members can redeem them (Caldano: 2007, Orzi: 2007, 2012) and Terra, still a mere proposal by Lietaer (2004), is designed similarly. The level of such currencies’ acceptance is up to the convenience of such goods and/or services which back the currency.
- **Tax payment:** Any currency issued by the government itself has one of the most important collaterals and is therefore likely to circulate within a national economy: tax payment and other public fees (such as social security fee, university tuition and highway toll). Sbatella (2011) argues that such currencies, issued both by the national

<sup>17</sup> Source: Wild (2011)

and by provincial governments in Argentina during its crisis (2001 – 2002), were effective in complementing the lack of official currency's liquidity, as the currency board system between the Argentine peso and US dollar did not allow the central bank to provide enough amount of money supply. Obviously overissuing such a currency can lead to hyperinflation, so its money supply should be strictly controlled.

- **Mutual trust:** LETS and Time Dollars work under this principle. The collateral for positive balance is other members' commitment to deliver the equivalent value of goods and services, so it is essential to include a wide range of commodities, especially those attractive ones for other members. Also this blur definition of collateral is quite often another limiting factor, as those with positive balance are sometimes not sure which goods and/or services can be redeemed with what they have earned.
- **Bank credit:** WIRBank in the Switzerland is operational under this principle. Actually each credit is provided with other collaterals, for example real estates, but it is safe to say that the reason other member businesses accept WIR is their need to repay debts in this unit. This experience shares the same disadvantage with the current banking system, i.e. no collateral, no loan, although the bank's trust on borrowers can stimulate lending.
- **Fiat:** The word means "let it be" in Latin and such currencies are issued without any collateral. Obviously the biggest advantage is to create money out of nothing, but they are accepted only so far as other people and/or businesses accept them, running the risk of being refused. Ithaca Hours in Tompkins County, New York were stagnated when too much bills were stocked at certain businesses which couldn't spend it (Papavasiliou: 2008) and Barter Clubs in Argentina lost most of its members when the hyperinflation in this currency, triggered by above-mentioned reasons, discouraged people from continuing to join barter fairs (Louge: 2005).

#### **4. Relevance of Islamic Banks (from the anti-usury viewpoint)**

Also, it is worth paying special attention to the Islamic Banks in different countries, from the viewpoint to question the current compound interest system, although they do not necessarily share the same philosophy with SSE. As stated above, Sharia (Islamic Law) forbids the usury (*riba*) while the modern banking system paved the way for the West to drive its industrialisation process, and different practices have emerged to enable financing services within this religious framework (Table 1):

**Table 1: Techniques of the Islamic Banking**

Name	Description (IFSB: 2016)
<i>Bay' al-ʿĪnah</i>	The sale of a commodity for a spot price and its repurchase for a deferred price higher than the spot price.
<i>Muḍārabah</i>	A partnership contract between the capital provider ( <i>Rabb al-Māl</i> ) and an entrepreneur ( <i>Muḍārib</i> ) whereby the capital provider would contribute capital to an enterprise or activity that is to be managed by the entrepreneur. Profits generated by that enterprise or activity are shared in accordance with the percentage specified in the contract, while losses are to be borne solely by the capital provider unless the losses are due to misconduct, negligence or breach of contracted terms.
<i>Murābahah</i>	A sale contract whereby the institution offering Islamic financial services sells to a customer a specified kind of asset that is already in its possession, whereby the selling price is the sum of the original price and an agreed profit margin. The <i>Murābahah</i> contract can be preceded by a promise to purchase from the customer.
<i>Mushārahah</i> ( <i>Sharikat al-ʿAqd</i> )	A partnership contract in which the partners agree to contribute capital to an enterprise, whether existing or new. Profits generated by that enterprise are shared in accordance with the percentage specified in the <i>mushārahah</i> contract, while losses are shared in proportion to each partner's share of capital.

Such financial institutions are on the rise and go on increasing their deposits which amount to 1.88 trillion dollars in the middle of 2015 (IFSB: 2016).

What is inspiring of these practices is that these financial products are regarded as trades. For instance, *Bay' al-ʿĪnah* is quite similar to pawn shops, but the concept of “*riba*” is circumvented by selling and repurchasing the same product. *Muḍārabah* and *Mushārahah* are similar to the relationship between stockholder(s) and the stock-issuing company, although the contract is rather temporary, reminding us of the first stock companies in the world in the 17<sup>th</sup> century. *Murābahah* is quite often used as substitute for housing loans whereby borrowers start living in the house as tenants and only start owing it after paying all the due amount. Such wisdom can be applied for SSE's practices too, especially on the basis to achieve interest-free financing, although some modifications might be necessary to fit better in its own context and philosophy.

Though Islamic banks' vision to enable *riba*-free financial services is innovative, their philosophy differs completely from SSE's one and following differences can be noted:

- Islamic banks do not have to be co-operatives while non-co-operative banks are usually ousted from SSE.

- What matters to Islamic banks are summarised as “*Allah has permitted trade and has forbidden interest*” (Quran: 2:275), therefore there is no limitation to financial gain as far as it is “trade” and therefore investors run the risk of losing it.
- **Examples of projects which are likely to be financed by Islamic Banks but not by SSE:** New oil extraction projects, multinational coffee brands.
- **Examples of projects which are likely to be financed by SSE but not by Islamic banks:** Wineries, ham factories, some gender-related projects (depending on each country’s practice on Sharia), projects which are related to some non-Muslim communities.

These differences do not mean, nevertheless, that Islamic banks are incompatible with SSE. Obviously the Sharia is also ethical guidelines for Muslims, so it is possible to add SSE values into Islamic Banks’ practices. Social and environmental impact studies can be added to put them closer to SSE.

#### **5. SSE in terms of Chicago Plan / Positive Money**

Chicago Plan, not to be confused with Chicago School, is a proposal to end the fractional reserve by obliging commercial banks to have 100% reserve and allowing the State to issue enough money to cancel all the existing debts (ex.: Soddy: 1933, Fisher: 1936). This economic thought has been recently seeing a revival after decades of oblivion, such as Huber and Robertson (2000), Zarlenga (2002), Jackson and Dyson (2012), Benes and Kumhof (2013) and Sigurjonsson (2015). The social movement Positive Money<sup>18</sup> in the United Kingdom evolved into the International Movement for Monetary Reform<sup>19</sup> and the governments of United Kingdom, Iceland, the Netherlands and the Switzerland so far have taken some steps towards this monetary reform. Dyson et al (2014) shows four options for the government to spend the newly-created money:

- 1) To finance additional government spending
- 2) To finance tax cuts (with newly created money substituting for the lost tax revenue)
- 3) To make direct payments to citizens, with each person able to spend the money as they see fit (or to invest or pay down existing debts)
- 4) To pay down the national debt

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<sup>18</sup> <http://positivemoney.org/>

<sup>19</sup> <http://internationalmoneyreform.org/>

Another important standpoint with this reform is that such governments will not be required any more to pay interest on its own debts: Lietaer et al (2012) argue that, had France not approved the Article 25 of the Law on 03<sup>rd</sup> January 1973 which forbade the interest-free direct financing from the Bank of France to the French government, this country's public debt in 2009 would be merely 8.6% of GDP instead of 78%. Ryan-Collins (2015) refers to a similar policy which used to exist in Canada up to 1970s.

We can foresee that, once such a monetary reform is implemented, more funds will be available for the public sector, enabling it to increase budget for those SSE-related projects. On top of the above-mentioned goals, more money could be spent to achieve different goals (end poverty and hunger, improve nutrition, health service, education and gender equality, promote sustainable resource management), which are quite often SSE's goals too. This government-issued currency is backed with the possibility to pay tax, social security and other sorts of public services, so it is expected to be accepted widely within the country, just as *cuasimonedas* in Argentina did in the past.

It is important, however, to have certain processes that the government's new purchasing power should be spent for such purposes which help SSE's growth or, at least, what SSE aims to achieve. It would be necessary to implement some systems to ensure that certain percentage of the funds should be allocated for such fields. Something similar to United Nations' 0.7% ODA/GNI ratio might be required in the global level to make it happen.

## **Conclusion**

Sustainable development is a popular concept which plays an important role on determining the global development plans, and financial inclusion is one of important goals, because even today a significant number of world population, including those who live in Europe, are not entitled to use financial services due to the fact that they have no bank accounts. On top of that, the money system itself has five structural problems, namely "*the pro-cyclical tendency of money creation and flow*", "*short-termism*", "*compulsory growth pressures*", "*an unremitting concentration of wealth*" and "*the devaluation of social capital*", making harder for some Sustainable Development Goals to be achieved. It is worth noting that above these issues, "*short-termism*", "*compulsory growth pressures*" and "*an unremitting concentration of wealth*" are triggered by the compound interest, proving the importance to tackle this issue to achieve the sustainable development.

Social and Solidarity Economy (SSE) has its own values to be declared as the Co-Operative Principles, RIPESS Charter and SSE laws in different countries, such as democratic management, supremacy of people over capital, inclusiveness, equality regardless of gender / ethnicity / sexual orientation etc., co-operation (external solidarity) and commitment for the community can be mentioned.

SSE has its own financial systems, such as credit unions, microcredit / microsaving, ethical banks and social and complementary currencies. Among other credit unions, JAK Bank is remarkable by abolishing the concept of interest, making itself sustainable by charging practically nothing but financial commissions on lending money. Microcredits also play an important role in different countries, but the lack of democracy allows moneylending institutions to control borrowers, and microsaving emerges as an alternative whereby the poor pool their own small saving and lend each other. Ethical banks have emerged as initiatives to ensure that depositors' money is invested exclusively in socially and/or environmental sound projects and different initiatives in Europe have been investing billions of euro to a number of projects. Different sorts of social and complementary currencies, alias local currencies or community currencies, are used as another consensus within a certain group of people and/or businesses in order to strengthen the internal exchanges, and they are classified into different categories (backed with official currency, backed with other goods and/or services, tax payment, mutual trust, issued as bank credit and fiat), with their own pros and cons.

Islamic banks have been growing in the last decades as institutions to provide Sharia-based financial services, such as *Bay' al-ʻInah*, *Muḍārabah*, *Murābahah* and *Mushārahah* (*Sharikat al-ʻAqd*) which proves how interest-free financing can be done. Although important differences are found between their current practices and SSE, it is possible to make them closer by incorporating SSE's values into their ethical guideline.

Chicago plan, a monetary proposal in 1930s to end the fractional reserve by obliging 100% reserve to any commercial bank and to allow the State to restore its power to create money, has been revived in recent years and different governments (namely: United Kingdom, Iceland, the Netherlands and the Switzerland) are studying the possibility to implement it. It will make the public finance healthier, as governments will be set free from the yoke of interest rates to pay on their bonds. It will stand for more funds for the public sector to spend, both to support the SSE sector and to help achieve different Sustainable Development Goals which will nurture favourable conditions for SSE too, although efforts should be made to make sure such policies are implemented, such as creating something similar to 0.7% ODA/GNI target.



## References:

1. Banco Palmas (2010), *Banco Palmas: 100 Perguntas mais frequentes*, <http://es.slideshare.net/bancopalmas/banco-palmas-100-perguntas-mais-frequentes> (Last accessed: 08<sup>th</sup> October 2016)
2. Benes, J. and M. Kumhof (2013), *The Chicago Plan Revisited*, <http://www.lse.ac.uk/economics/newsEventsSeminars/files/MichaelKumhofpaper.pdf> (Last accessed: 08<sup>th</sup> October 2016)
3. Caldano, M. (2007), La experiencia de la Cooperativa Escolar y Banco de Horas Comunitario ‘Olga Cossettini’ in: Plasencia A. and Orzi, R. (ed.), *Moneda social y mercados solidarios – Potencial emancipador y pedagógico de los sistemas monetarios alternativos*, Ciccus, Buenos Aires, pp. 89 – 96.
4. Crespo Ubero, R. (2013), Migraciones y convivencia en tiempos de crisis, apuntes sobre interculturalidad in: *Studia Africana*, vol. 22, pp. 25 – 36.
5. Demirguc-Kunt, A. and Klapper, L. (2012), *Measuring Financial Inclusion: The Global Findex Database*, World Bank, Washington D.C. <https://www.fdic.gov/news/conferences/consumersymposium/2012/Measuring%20Financial%20Inclusion,%20The%20Global%20Findex%20Database2.pdf> (Last accessed: 08<sup>th</sup> October 2016)
6. Douthwaite, R. (1999), *The Ecology of Money*, Greenbooks, Totnes (UK).
7. Dyson, B. et al (2014), *Creating a Sovereign Monetary System*, [http://positivemoney.org/wp-content/uploads/2014/07/Creating\\_a\\_Sovereign\\_Monetary\\_System\\_Web20130615.pdf](http://positivemoney.org/wp-content/uploads/2014/07/Creating_a_Sovereign_Monetary_System_Web20130615.pdf) (Last accessed: 08<sup>th</sup> October 2016)
8. European Commission (2008), *Financial services provision and prevention of financial exclusion*, <http://ec.europa.eu/social/BlobServlet?docId=5092&langId=en> (Last accessed: 08<sup>th</sup> October 2016)
9. Fisher, I. (1936), *100% Money and the Public Debt* in: Economic Forum Spring Number, April-June 1936, pp. 406 – 420.
10. Gesell, S. (1916), *Die natürliche Wirtschaftsordnung durch Freiland und Freigeld*, Les Hauts Geneveys (Switzerland). Nowadays available as *Silvio Gesell Gesammelte Werke Band 11*, Gauke, Kiel (Germany).
11. Greco, T. H., Jr. (1990), *Money and Debt: A Solution to the Global Crisis (second edition)*, Thomas Greco, Tucson (Arizona).
12. Hashemi, S. et al (1996), *Rural Credit Programs and Women's Empowerment in Bangladesh* in: World Development, Vol. 24, No. 4, pp. 635 – 653.
13. Hirota, Y. (2012), *Monedas sociales y complementarias (MSCs): Experiencias, su papel en la economía social, estrategias, marketing y políticas públicas*, <http://www.slideshare.net/mig76/monedas-sociales-y-complementarias-ms-cs-experiencias-su-papel-en-la-economia-social-estrategias-marketing-y-polticas-pblicas> (Last accessed: 08<sup>th</sup> October 2016)
14. Huber, J. and Robertson, J. (2000), *Creating new money – A monetary reform for the information age*, <http://www.jamesrobertson.com/book/creatingnewmoney.pdf> (Last accessed: 08<sup>th</sup> October 2016)

15. IFSB (2016), *Islamic Financial Services Industry Stability Report 2016*, [http://www.ifsb.org/docs/IFSI%20Stability%20Report%202016%20\(final\).pdf](http://www.ifsb.org/docs/IFSI%20Stability%20Report%202016%20(final).pdf) (Last accessed: 08<sup>th</sup> October 2016)
16. Jackson, A. and Dyson, B. (2012), *Modernising money – why our monetary system is broken and how it can be fixed*, Positive Money, London.
17. Karim, L. (2008), *Demystifying Micro-Credit: The Grameen Bank, NGOs, and Neoliberalism in Bangladesh* in: *Cultural Dynamics* March 2008 vol. 20 no. 1, pp. 5 – 29.
18. Kennedy, M. (1995), *Interest and Inflation Free Money*, Seva International, Okemos (Michigan).
19. Kindleberger, C. P. and Aliber, R. Z. (2005), *Manias, Panics and Crashes: A History of Financial Crises, Fifth Edition*, John Wiley & Sons, Hoboken (New Jersey).
20. Lietaer, B. (2001), *The Future of Money*, Century, London.
21. Lietaer, B. (2004), *The Terra TRC White Paper*, <https://es.scribd.com/document/31636027/The-Terra-TRC-White-Paper-2004> (Last accessed: 08<sup>th</sup> October 2016)
22. Lietaer, B. et al (2012), *Money and Sustainability: The Missing Link*, Triarchy Press, Devon (UK).
23. Lietaer, B. and Belgin, S. (2012), *New Money for a New World*, Qiterra Press, Boulder (Colorado).
24. Louge, C. (2005), *Historia del trueque en Latinoamérica y la Argentina* in: Lietaer, B., *El Futuro del Dinero*, Longseller, Buenos Aires.
25. McLeay, M. et al (2014), *Money in the modern economy in: Quarterly Bulletin 2014 Q1* (Bank of England), <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q102.pdf> (Last accessed: 08<sup>th</sup> October 2016)
26. Melián Navarro, A. et al (2010), *El Crédito Cooperativo como instrumento financiero para el fomento del emprendimiento en tiempos de crisis* in: *CIRIEC-Spain*, no. 68, pp. 111 – 139.
27. North, P. (2004), *Kaláka and Kör: Green money and mutual aid in Hungary* in: *International Journal of Community Currency Research*, Vol.8, pp. 24 – 28.
28. Orzi, R. (2007), *Utopía, base material y valores en la construcción de emprendimientos de economía social y solidaria: El caso de la cooperativa escolar y banco de horas comunitario ‘Olga Cossettini’* in: *Plasencia A. y Orzi, R. (comp.), Moneda social y mercados solidarios – Potencial emancipador y pedagógico de los sistemas monetarios alternativos*, Ciccus, Buenos Aires, pp. 119 – 134.
29. Papavasiliou, F. (2008), *The Political Economy of Local Currency: Alternative Money, Alternative Development and Collective Action in the Age of Globalization*, <https://etd.library.emory.edu/view/record/pid/emory:15tdh> (Last accessed: 07<sup>th</sup> October 2016)
30. Primavera, H. (1999), *La moneda social de la Red Global de Trueque en Argentina: ¿Barajar y dar de nuevo en el juego social?*, [http://base.socioeco.org/docs/doc-7262\\_es.pdf](http://base.socioeco.org/docs/doc-7262_es.pdf) (Last accessed: 08<sup>th</sup> October 2016)

31. Putnam, R. D. (2000), *Bowling Alone: The Collapse and Revival of American Community*, Simon & Schuster paperbacks, New York.
32. Rizzo, P. (2003), *L'économie sociale et solidaire face aux expérimentations monétaires – Monnaies sociales et Monnaies multilatérales*, l'Hermattan, Paris.
33. Ryan-Collins, J. (2015), *Is Monetary Financing Inflationary? A Case Study of the Canadian Economy, 1935–75*, [http://www.levyinstitute.org/pubs/wp\\_848.pdf](http://www.levyinstitute.org/pubs/wp_848.pdf) (Last accessed: 08<sup>th</sup> October 2016)
34. Saez, E. and Zucman, G. (2014), *Wealth inequality in the United States since 1913: Evidence from capitalized tax data*, <http://gabriel-zucman.eu/files/SaezZucman2014.pdf>, last accessed: 08<sup>th</sup> October 2016)
35. Sbatella, J. (2011), *El rol de las monedas provinciales y la soberanía monetaria en Argentina*, <http://sdocument.ish-lyon.cnrs.fr/cc-conf/conferences.ish-lyon.cnrs.fr/index.php/cc-conf/2011/paper/viewFile/85/21.pdf> (Last accessed: 08<sup>th</sup> October 2016)
36. Schwarz, F. (1951), *Das Experiment von Wörgl*, Verlagsgenossenschaft Freies Volk, Bern. (nowadays available from Synergia Verlag, Darmstadt (Germany)).
37. Seyfang, G. (2002), Tackling social exclusion with community currencies: learning from LETS to Time Banks in: *International Journal of Community Currency Research*, Volume 6.
38. Sigurjonsson, F. (2015), *Monetary Reform: a better monetary system for Iceland*, <http://www.forsaetisraduneyti.is/media/Skyrslur/monetary-reform.pdf> (Last updated: 08<sup>th</sup> October 2016)
39. Soddy, F. (1933), *Wealth, Virtual Wealth and Debt*. Reprinted in 1961, Omni Publications, London.
40. Soddy, F. (1934), *The Rôle of Money – What it should be, contrasted with what it has become*, George Routledge and Sons, London.
41. Smith, D. J. et al (1980), An Economic Theory of a Credit Union in: *The Journal of Finance*, Vol 36, American Finance Association, No. 2, pp. 519 - 528.
42. Stodder, J. (2005), *Reciprocal Exchange Networks: Implications for Macroeconomic Stability*, [http://www.lietaer.com/images/Stodder\\_Reciprocal\\_Exchange.pdf](http://www.lietaer.com/images/Stodder_Reciprocal_Exchange.pdf) (Last accessed: 08<sup>th</sup> October 2016)
43. United Nations (1987), *Report of the World Commission on Environment and Development: Our Common Future*, <http://www.un-documents.net/our-common-future.pdf> (Last accessed: 08<sup>th</sup> October 2016)
44. Williams, C. C. (1997) Local Exchange And Trading Systems (LETS) In Australia: A New Tool For Community Development? in: *International Journal of Community Currency Research*, Vol 1
45. Wild, L. (2011), *El Dinero o la vida – una guía práctica para la alquimia monetaria*, Mayor Books, Quito
46. Zarlenga, S. (2002), *The lost science of money – the Mythology of Money – They Story of Power*, American Monetary Institute, Valatie (New York).

## **Popular banks in Bulgaria in the Interwar period (1918-1939): leading social institutions for economic development**

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**Abstract:** *Social finance in Bulgaria emerged primarily from the long traditions of mutualism and solidarity among the Bulgarians and from the political and economic conditions in the country. The cooperative credit had a leading role in establishing Bulgaria's financial and economic system in the Interwar period (1918-1939). The popular banks became the most developed cooperative form in Bulgaria at the beginning of the 1930s.*

*The main goal of the paper is to examine the development of popular banks in the Interwar period and their impact on the economy.*

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## **Introduction**

Cooperative banks in Europe have played an important role in the European banking system since the 19th century onwards. Most of them have increased their market share and position in the national financial systems. Bulgaria enjoyed a longstanding tradition in the cooperative movement, and particularly in cooperative banks, after the Liberation in 1878. These institutions had strong contribution to the development of the Bulgarian economy in the Interwar period (1919-1938). During the socialist governance they were controlled and nationalised by the state. For this reason, during the post-socialist transition to market economy, they were not active economic agents.

The Interwar period was characterised by an accelerated development of social finance. The cooperative banks provided the biggest amount of the total credit in the country and became a powerful means of social and economic progress. The popular banks had a leading role in the financial system in that period. This trend reflected the European experience and national economic and social specificity.

The main goal of the paper is to analyse the development of popular banks and their role in setting up a modern financial system and promoting economic growth during the Interwar period.

The first part of the paper focuses on the evolution of cooperative credit institutions in Bulgarian towns in a historical perspective. The second part examines popular banks' impact on economic development. The third section of this paper presents the attempt to make a periodization and theoretical interpretation of their proliferation with regard to the political regimes and the respective regulations imposed on the cooperative movement.

### **1. Birth and evolution of the cooperative credit institutions in the Bulgarian cities**

Providing mutual aid and showing solidarity is a characteristic feature of the Bulgarian psychological makeup. During the Ottoman period, the main forms of collective labour in the towns were bands and guilds (*esnafi*). These guilds emerged in the 16th century in different places across the world (Bucher 1901 [1893]). The guild was a craftsmen association representing specific artisanry during the Ottoman period. It was a social and economic organisation which existed in the 18th and 19th century and it gained official recognition by

virtue of a sultan's firman in 1773. The guilds aimed at abolishing the competition amongst producers from the same craft and protecting their interests. They organised the delivery of raw materials or the resale of goods in order to support the competitiveness of the Bulgarian producers. Unlike the credit cooperatives in the villages, a limited number of people participated in the urban forms of mutual aid and that is why their economic importance was insignificant. The urban mutual credit associations were the predecessor of the cooperative credit in the cities before the Liberation<sup>3</sup>. The first urban mutual credit association was "*Bratsko zaematelno drujestvo*" in Panagyurishte. This association was established in 1871. It attracted savings and the annual interest rate it offered was 6%. It provided loans at 8% annual interest rate. The association functioned until 1876 when the money was given to the rebels in Panagyurishte who took part in fight for the Bulgarian Liberation. Some authors consider that this association represented the first cooperative in Bulgaria (Kanev 1943).

Before the Liberation, the Bulgarian artisans faced significant difficulties in reaching big markets of craft products in the Ottoman Empire. After the Liberation, their production was subject to the strong competition of the imports coming from Europe. The development of transport and communications led to the establishment of new economic areas and changes in the craft centres. Some crafts faded away and new artisans emerged that were rapidly mushrooming in the villages. The first craft cooperative in Bulgaria was established in 1895. It was a producer's cooperative. This was the Progress [*Napredak*] sewing association in Gabrovo. It contributed to raising its members' qualification level and to reducing production costs.

The cooperative credit primarily emerged in the Bulgarian villages in the late 19th century. The first rural credit cooperative was established in 1890 in the village of Mirkovo, Pirdop district. It was also the first cooperative on the Balkan Peninsula created on the principles of saving and credit associations of Raiffeisen. The urban cooperative credit developed after the

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<sup>3</sup> Bulgarian state was established in the seventh century in the heart of the Balkan Peninsula. The Bulgarian territories remained part of the Ottoman Empire from 1396 to 1878, when at the termination of the Russo-Turkish war Bulgaria once more emerged as a national state. In 1885 by means of coup-d'état, Bulgaria effected the fusion between the autonomous principality and Eastern Rumelia, which were separated by the Treaty of Berlin. In 1908 Bulgaria declared herself a fully independent state. During 1885-1912 Bulgaria laid the foundations of a modern state, with parliamentary government, a system of education, a well-organized army, and the basic economic facilities of statehood (Pavolsky 1930, Iaranoff 1919) .

beginning of the 20th century. Before the establishment of the first popular bank in 1903, the craft credit was concentrated at the Bulgarian National Bank (BNB)<sup>4</sup>.

**Table 1. Craft credit provided by the Bulgarian National Bank, m leva.**

Year	Total loans
1890	0.3
1892	0.3
1894	1.6
1896	0.4
1898	0.6
1900	0.2
1902	0.2
1904	0.3
1906	0.4
1908	1.0
1910	1.5
1912	2.2

*Data were obtained by Kurklisiyski (1941).*

The loans provided by the BNB to craftsmen represented a very small amount of the total credit the bank extended (about 1%). The reasons were to be found in artisans' inability of repay their debts, and in the small number of bigger craft enterprises that needed financing in the country. After 1911 the BNB stopped direct financing of craftsmen and that became the purpose of the newly established state-run bank - the Bulgarian Central and Cooperative Bank (BCCB) in 1910. The Bulgarian Central Cooperative Bank was set up in order to promote, develop and control cooperatives, to satisfy their demand for credit, to support craft production and cooperative insurance. The bank was granted the rights of control and supervision over its member cooperatives. It performed all types of bank operations. It assisted collective purchases and sales of its members. The initial capital of the BCCB was 50 m leva, provided by the Bulgarian Agricultural Bank and the BNB as well as by share payments of cooperatives (Central Cooperative Union 1986).

At the beginning, the BCCB did not have sufficient funds in place to meet cooperatives' demands because of Bulgaria's participation in the Balkan wars and in the First World War later on. Thus the bank did not play an important role in the national economy.

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<sup>4</sup> The Bulgarian National bank was established in 1879 as a state credit institution aiming at regulating trade and credit relations in the country. (Nedelchev 1940)

The first popular bank in Bulgaria was the Popular Bank of Sofia created under the guidance and upon the initiative of former BNB Governor Asen Ivanov. In drafting its statute, the bank drew on the popular bank in Milan and that in Menton, France. This comes to show that popular banks in Bulgaria developed on the experience of the credit cooperatives with limited liability in Italy (Palazov 2005 [1947]).

The Bulgarian popular banks appeared much later than those in Western Europe<sup>5</sup> because of the poor development of urban crafts during the Ottoman period. The popular banks were established on the principles of mutual aid of their members, democracy and self-governance. They brought together mainly small artisans and tradesmen. These banks gradually became a powerful tool to combat money-lending and the shortage of capital among artisans who needed cheap and accessible credit. In 1910, the state started conducting an artisan-related policy by the adoption of the Law on organizing and supporting crafts.

Different social groups were represented in the popular banks. In the bigger cities they were dominated by tradesmen, industrial entrepreneurs, officials and, in the smaller cities and villages, by small tradesmen, rural rich men and artisans (Central Cooperative Union 1986). These social credit institutions served the interests and accordingly enjoyed the confidence of all the social strata and economic groups in the Bulgarian society.

**Table 2. Cooperators in the popular banks at the Union of Popular Banks, (%)**

Cooperators	1919	1920	1925	1930	1935	1937	1938
Farmers	10	9	14	24.7	37.7	29	29
Artisans and industrialists	28	28	25	20.4	19.3	19	19
Tradesmen	24	28	21	15.9	11.8	11	11
Liberal profession	....	....	17.7	14.6	3.3	3	3
Officials	14	13	17	17.7	18.5	20	20
Workers	....	....	...	6.1	5	5	5

*Data were obtained by the Central State Archives, file 286K, archive unit 1, N71.*

<sup>5</sup> First credit cooperatives Schulze-Delitsch were established in Germany in 1850.



Just like the credit head offices and unions in Germany and other European countries, the Union of Popular Banks (UPB) was established in Bulgaria (1915). It was the oldest and most developed credit union in the country operating in the Interwar period. Its equity included the membership payments of each popular bank accounting for 10% of its equity capital together with 10% on the increase in the amount of each member's capital at the end of the year. Every popular bank or credit association with limited liability was entitled to membership in the union. Its members were obliged to: deposit their unused funds at the Union; apply for loans provided by other people or institutions only after an official approval by the Union; submit their tariffs and draft budget to the Union for review and opinion before the date of the General assembly. The Union performed the following main operations: provided loans to its members; borrowed money from other credit institutions; accepted savings by its members and third parties; transferred money throughout the country and abroad; audited and made investigations on its members.

**Table 3. Popular banks, members of the Union of Popular Banks, number of cooperators, equity capital and funds, average capital and credit per member**

years	Number of popular banks	Number of cooperators	Capital, thousand leva	Funds <sup>6</sup> , thousand leva	Average amount of capital per member, leva	Average amount of credit per member, leva
1915	14	3 137	2184	396	....	.....
1917	.....	....	.....	....	.....	....
1919	49	21 600	14 549	800	.....	....
1921	61	33 321	38 869	2 816	1185	....
1923	60	31 838	56 410	6 822	1766	....
1925	83	45 704	127 670	20 278	2701	9105
1927	112	67 309	212 187	44 407	3152	.....
1929	150	96 017	328 268	77 042	3429	11 790

<sup>6</sup> Funds consisted of: reserve fund, cultural fund and allowances for depreciation.

1931	162	103 351	352 405	113 437	3411	11 492
1933	172	106 182	317 816	133 323	2994	9 657
1935	184	109 827	315 897	163 477	2888	6 610
1937	205	125 480	326 666	200 526	2620	6 140
1939	207	142 949	345 645	232 434	2424	9 054

*Data were obtained by the Central State Archives, file 286K, archive unit 1, N71.*

The equity of popular banks consisted of their members' payments and its borrowed capital covered savings and different loans provided by credit unions, state credit institutions and private money market. Each member of a popular bank was obliged to deposit a fixed minimum of shares. Each share amounted to 100 leva. A continuous and significant increase in equity capital and funds of popular banks after the WWI was observed. Similarly to the rural credit institutions, the goal of urban cooperative banks was not to gain profit but the provision of cheap and easily accessible credit for their members. The individual member's dividend was legally limited to a maximum of 8% after approval by all the cooperators. Unlike the rural credit cooperatives, the popular banks operated in a wide area.

The rapid development of popular banks began after the WWI when the need for mutual aid and solidarity increased because of the limited funding opportunities of economic agents and exhausted state resources. During that period, the Bulgarian Agricultural Bank (BAB) terminated individual lending to small tradesmen and artisans. This bank was the only state owned institution for financing the agriculture in the country at that time. In such a situation artisans and tradesmen were able to obtain more easily accessible loans directly from the popular banks. In 1918, there were 790 credit cooperatives in the country, 43 of them being popular banks and 738 rural credit cooperatives (CCU, 1986). An upward trend in the number of popular banks in the villages was registered. In many villages the popular banks encountered the competition of rural credit cooperatives.

***Table 4. Number of popular banks in the cities and villages***

	1924.	1925	1926	1927	1928	1929
Cities	84	91	101	106	118	168
Villages	16	22	37	42	46	---

*Data were obtained by Sprostranov (1930).*

After 1923, the BCCB established itself as a credit and supervisory institution only for the urban cooperative associations and the rural credit cooperatives borrowed money again from the BAB.

The number of popular banks was continuously rising after the mid 1920s. In 1925, there were 83 popular banks in the country, while in 1939 their number reached 207. The same trend was registered in the number of cooperators. In 1915, their number was 3,137, while in 1939 it soared to almost 143,000 members who represented about 20% of the whole Bulgarian population at that time.

In the beginning of the third decade of the 20th century the popular banks possessed almost 50% of the equity capital of the Bulgarian cooperatives though they represented about one eighth of all the cooperatives. Similarly to the rural agricultural cooperatives, the popular banks performed not only credit activities but also business operations (supporting the opening of shops and providing collective sales and delivery of products) (Palazov 2005 [1947]).

The popular banks provided financial aid mainly to craft cooperatives. The craft cooperatives were mostly represented in the following economic sectors: carpentry, furniture and shoemaking, smithery, tailoring, furriery, etc. They were divided into: producer cooperatives and cooperatives for collective delivery and sales. Their purpose was to contribute to the price regulation of artisan products and prevent excessive price increase.

In 1934, the BAB and BCCB merged into a new state owned bank (the Bulgarian Agricultural and Cooperative Bank, BACB). It opened branches in almost all the cities and its agencies operated in the bigger villages and smaller cities. The bank was under the control of the Agriculture Ministry and the minister had the right to appoint its governor. The governor and deputy governors were designated by a czar's ordinance and the administrators by the minister of agriculture with the approval of the prime minister. The main task of the BACB was to lend money and offer other measures to promote the development of agriculture, crafts, labour and all other forms of economic activity mainly to small and medium economic entities, mostly cooperatives, as well as to facilitate the exchange of their economic goods. Unlike its predecessor, the new bank was fully governed and controlled by the state. The participation of cooperatives in the bank's capital as well as the involvement of the congress of cooperatives was abolished. The bank's governing council had the right to perform temporary control over the

cooperatives' management and their operations and, if it found it necessary, to suspend it and to appoint a new council (Palazov 2005 [1947]).

The BACB had three lending departments for rural, urban and craft cooperatives. The bank performed also insurance activities: on cattle, against hailstorm and fire. It operated also as a saving institution. It had the right to lend money to municipalities, water syndicates, etc. The BACB was authorised to purchase agricultural tools, machines, seeds, composts, craft and inventory materials on behalf of and the expense of the central government and municipal institutions.

The BACB took the control over the cooperatives as it approved the establishment of new cooperatives before their registration by the local court. The bank became the main auditor of cooperatives and their unions and it had the right to issue a decree for deficiency of officials. It asked the regional court to wind up and to liquidate a cooperative or a union when it found that its interests or these of other creditors were at risk. Furthermore, it was entitled to take such action when the share capital was reduced to such an extent that the cooperative was not able to perform its tasks or when it performed an activity running counter to the mission of the cooperative movement. The bank had the right to wind up a cooperative upon its resolution in the following cases: when the cooperative united people who threatened national security; when it became harmful for the cooperative cause or jeopardized the property rights of its members; it was harmful or unuseful for the economy or the state. The bank appointed its own representatives in the cooperatives. It decided on the area in which a cooperative operated and, if there were more cooperatives in the same region, it had the right to order the merger or liquidation of some of them.

The BACB had the following rights on the financed cooperatives:

- i) They were not allowed to obtain loans from other people or institutions or deposit their surplus anywhere;
- ii) The bank had the right to suspend the loan of an incorrect cooperative at any time on its discretion and after a notice;
- iii) The appointment and dismissal of people who held management or accounting position was decided by the cooperative's governing council upon the bank's preliminary approval;
- iv) The cooperatives' budgets had to be approved by the bank.

In 1935 the law on bank deposits' control was adopted. It obliged the cooperatives to dispose of significant coverage of deposits in cash money that impeded their economic activity and urged them to borrow more from the BACB. The new bank turned into their main creditor. Furthermore, the cooperatives were treated as trade organisations per se, and were forced to become members and pay membership fees to the Trade union.

During 1934-1939, a second credit cooperative union was created as a rival of the Union of Popular Banks. That was the Union of National Cooperative Banks (UNCB). The UNCB governing council comprised representatives of the ruling party whose policy favored the wealthier part of the population. Thus it was not accidental that the biggest and most financially stable popular banks such as that in Sofia, Varna, Pazardjik, Gabrovo, Pleven, and in other towns, were members of the UNCB. The union's capital was much smaller than that of the UCB, though in the period 1933-1939, it saw an almost fourfold increase.

**Table 5. Capital of the Union of Cooperative Banks, the Union of National Cooperative Banks and the General Union of Popular Banks**

year	Union of Cooperative Banks	Union of National Cooperative Banks	General Union of Popular Banks
1919	50 050	....	....
1921	1 438 010	.....	...
1923	3 857 376	.....	.....
1925	8 560 470	.....	.....
1927	21 064 006	.....	.....
1929	34 152 000	.....	.....
1931	36 416 000	.....	.....
1933	33 943 000	2 832 000	39 775 000
1935	34 730 000	4 606 000	36 336 000
1937	36 385 000	6 163 000	42 548 000
1939	38 887 000	8 077 000	46 964 000

*Data were obtained by the Central State Archives, file 286K, archive unit 1, N74.*

The institutional competition between the two credit unions continued until their unification in the General Union of Popular Banks in the mid 1930s. The main goal was to

overcome opposition and to guarantee that accessible loans were extended to all popular banks in Bulgaria.

## 2. Activities of popular banks and economic development during the Interwar period

The period 1920-1938 was characterised by the intensive development of the Bulgarian financial system. The banks played the major role in it. In this regard the national financial system did not differ from those in the other European countries from the second half of the 19th century. The universal banking was a common feature of the financial systems in the Continental Europe in which banks accepted savings and provided short term and long term loans. The banks had a primordial role for the economic development. At the same time, in countries where capital was scarce and diffused, the government should act in order to redirect investments (Gerschenkron 1962). Universal banks were functioning as substitutes for preconditions of economic modernization in less developed countries (Sylla 2005).

Similarly to other European countries, the Bulgarian banking system developed rapidly from the beginning of the 20th century. In the very beginning of the century it was dominated by the three state banks - BNB, BAB and BCCB. Private banks practically were missing. The state cooperative banks (BAB, BCCB) together with the popular banks became the key saving institutions in the country. At the beginning of the second decade of the 20th century they accumulated between 20% and 30% of all deposits reaching up 60%-70% of their total amount in the mid 30s. The rise in the number of the Bulgarian population coincided with the increase in the amount of deposit per person. Furthermore, the savings rose sixfold during the period 1920-1938. The cooperative banks contributed strongly to the upward trend.

**Table 6. Bank deposits, m leva**

Years	BAB	BCCB	Popular banks	Total deposits	Population	Deposit per person, leva
1920	375.4	28.2	55.2	2 155.7	4 825 400	446.7
1922	892.1	21.4	116.8	3 347.1	4 998 000	669.6
1924	1 660.8	69.9	287.0	5 456.3	5 206 300	1 048.0
1926	2157.1	94.9	551.8	7 002.1	4 423 400	1 291.1
1928	3398.6	220.2	1 195.6	11 377.0	5 593 200	2 034.0
1930	4176.8	307.6	1 695.7	12 067.6	5 750 800	2 098.4

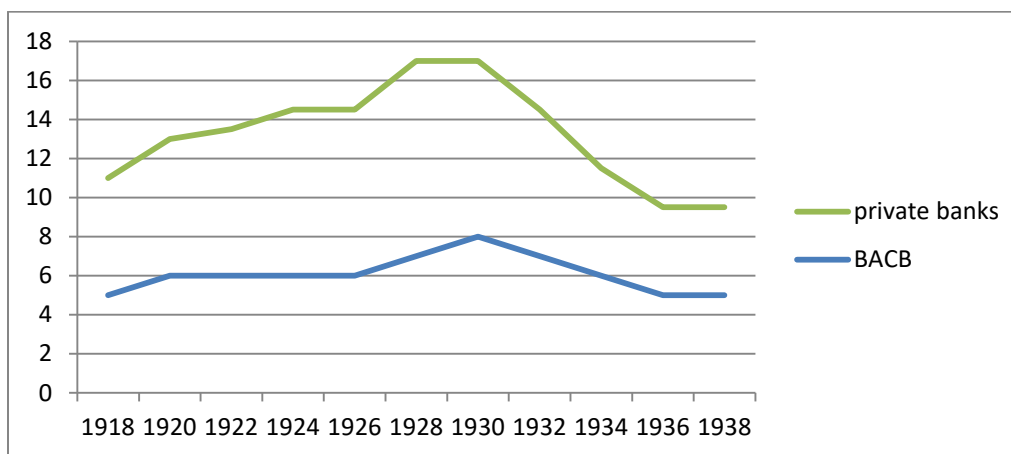
1932	5292.6	391.4	2 075.7	11 756.5	5 911 800	1 988.6
1934	6580.8	905.3	2 156.1	12 920.2	6 038. 800	2 139.5
1936	7382.2	--	2 458.9	13 256.3	6 197.500	2 139.0
1938	8 818	--	3 098	15 754	6 270 000	2 477

*Data were obtained by Palazov (1940).*

Just before the outbreak of the WWII the deposits at the popular banks reached about 20% of the total amount in the country. The main reasons were that popular banks enjoyed trust and prestige among the Bulgarians.

The interest rate policy of the BCCB/BACB had an important role with regard to stimulating savings. The bank sustained relatively high interest rates on the deposits of individual and municipalities (7%), on those of cooperatives (5%), and orphans (7.5%), as well as on savings accounts (8.5%) (Central State Archives, file 289K, a.unit 3). The Bulgarians saved more money than before. The interest rates on deposits at BCCB/BACB were lower than those offered by the private banks in the country. Nevertheless the amount of attracted deposits by the BACB showed a rapid increase during the Interwar period.

**Figure 1 Interest rates on deposits in the banks, %**



*Data were obtained by Chakalov (1962).*

Cooperative banks were the sources of lending to the population. They provided more than 60% of total loans in the country. The amount of bank credit increased by more than 20 times, by far outstripping the increase in savings. The cooperative banks played the major role in the country's credit development. The cooperative credit was accessible to small tradesmen, farmers, artisans in comparison with that offered by the private banks. These social groups became the main debtors of the BACB. The private banks pursued quite different interest rate

policy. What is more, they entered into the national financial system at a later stage (after the WWI) compared to the cooperative banks. The private commercial credit was much more expensive (at an annual interest rate of 20-30%) than the cooperative credit (Sprostranov 1930).

**Table 7. Bank loans, m leva**

Year	BAB	BCCB/BACB	Popular banks	Private banks	Total loans	Population	Loans per person, leva.
1920	390.7	21.13	.....	.....	.....	4 825 400	.....
1922	1069.4	42.54	....	.....	.....	4 998 000	.....
1924	1881.9	126.71	.....	.....	.....	5 206 300	.....
1926	2483.6	156.77	817	.....	.....	4 423 400	.....
1928	3351.4	195.92	1536	.....	.....	5 593 200	.....
1930	4694.1	316.66	1997	5782	12 789.66	5 750 800	2223.97
1932	5314.8	263.38	1487	4046	11 111.18	5 911 800	1879.49
1934	5518.6	318.68	2534	3343	11 714.28	6 038. 800	1939.83
1936	....	5957	2744	3065	11766.0	6 197.500	1898.50
1938	.....	6018.4	2980	3232	12230.4	6 270 000	1960.52

*Data were obtained by Kurklisiiski (1941); Palazov (1940).*

In the period 1920-1934 the BCCB provided almost 100% of the loans to popular banks and craft cooperatives. Significant changes in its lending policy started since 1934. The craft credit passed from state financing to social self-financing.

**Table 8. Loans extended by the BCCB to craft cooperatives and popular banks, m leva.**

Years	Popular banks	Craft cooperatives
1920	19.8	1.3
1922	37.1	5.4
1924	111.7	14.9
1926	115.3	41.5
1928	160.8	35.1
1930	262.9	53.7
1932	197.4	65.9
1934	257.9	60.7
1937	67.2	83.0
1939	55.0	121.9

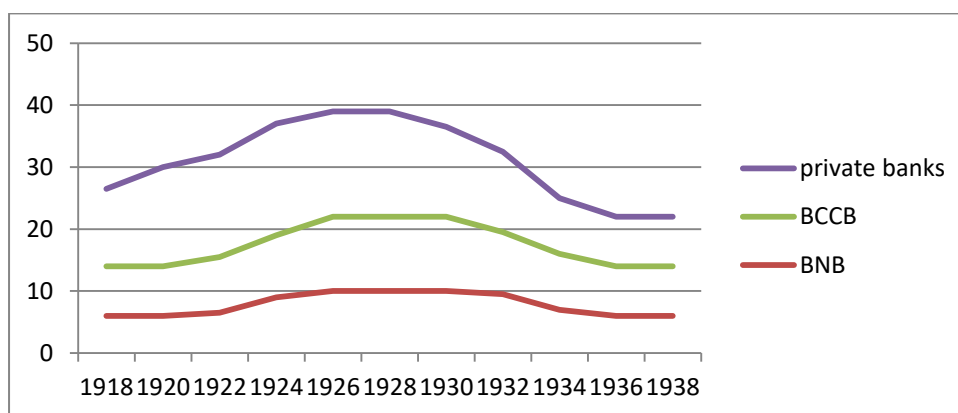
*Data were obtained by Kurklisiiski (1941).*

The popular banks provided between 13% and 25% of total loans in the country in the period 1930-1938, thus encouraging the development of crafts and trade (including foreign trade)



in the cities as well as in the villages. The loans extended by the popular banks bore the lowest interest rate, after that of the state banks. The BNB remained the only state institution that provided loans at the lowest interest rate during the period and it used differentiated rates for the popular and private banks. The interest rates on loans offered by the BCCB during the third decade of the 20th century were within the 7% - 12% range. The popular banks paid to BCCB an interest rate of 10% and obtained from their members an interest rate of 11-12% together with the commission of 2% stipulated by the law. Thus the interest rate reached about 15% on annual basis (BACB, file 289K).

**Figure 2. Interest rates on loans provided by the BNB, BCCB and private banks, %**



*Data were obtained by Chakalov (1962).*

Popular banks' capital showed a trend of continued rise, marking more than a threefold increase. In 1926, 817 m leva were extended as loans, and in 1938 their amount reached 2 980 m leva. The artisans' loans held a share between 14% and 32% of all the loans during the period.

Tradesmen and farmers owned the greatest part of the capital of the popular banks. All the social groups participated in the capital formation. At the beginning of the period, tradesmen owned the biggest part of share capital (35% of the total), while in 1939 the capital of tradesmen and farmers represented about 50% share in it. The artisans' share capital reached 18% before the outbreak of the WWII.

Bank financing played a crucial role in Bulgaria's economic development. This is revealed by the continued upward trend in bank lending, as well as by the growing share of agricultural output, industry and crafts in the gross domestic product (GDP) as well as in the per capita GDP in the Interwar period. Gerschenkron's hypothesis was also applicable to Bulgaria (Sylla and Toniolo 1991). The Bulgarian industry underwent rapid development during the

Interwar period. In the years between 1921 and 1929, the total volume index of the country's industrial production increased more than twofold (1921=100, 1929=209)<sup>7</sup>. This trend was mainly a result of the credit provided by the popular banks. These banks performed all the functions of the private banks in the country. At the start of the third decade of the 20th century, popular banks positioned themselves as the best developed cooperative institutions in Bulgaria. Unlike other countries, they were not only urban but rural institutions for social credit (Totomianz 1935).

**Table 9. GDP and per capita GDP in Bulgaria**

Year	GDP at prices as from 1939, bn leva.	Agriculture, bn leva.	Industry and crafts, bn leva.	Trade, bnleva.	GDP per capita, leva.
1919	28.8	14.7	4.2	0.9	6002.6
1921	32.1	16.7	5.1	1.4	6495.5
1923	36.1	19.0	6.1	1.9	6998.2
1925	38.5	21.3	5.6	2.1	7165.8
1927	38.3	20.5	6.0	2.3	6892.2
1929	39.4	20.6	6.3	2.3	6909.8
1931	44.9	25.6	6.7	2.5	7675.8
1933	43.5	25.0	6.7	2.0	7253.3
1935	44.7	24.8	6.3	2.6	7294.3
1937	52.9	28.1	7.8	4.5	8498.1
1939	59.4	31.0	8.9	6.0	9405.1

*Data were obtained by Ivanov (2012).*

The expansion of the domestic market led to the industrial growth during the period<sup>8</sup>.

<sup>7</sup> The Bulgarian economy was predominantly based on the light industries (food, tobacco and textile industry) (Berov 1989)

<sup>8</sup> The domestic market developed as a result of the increase in rural income and nominal wages. Another factor was the decrease in the import of some industrial goods for mass consumption due to the rise in duties in 1926 as well as the BNB's protectionist policy. After the WWI, Bulgaria entered a stage of monetary and financial stabilisation. From 1918 the BNB restricted the allocation of foreign currency as a result of the introduction of a state monopoly on foreign currency trade (Nenovsky 2006)

The government established an Institute on Foreign Currency Trade that concentrated the inflow of foreign currency and aimed at curbing the volatility of the exchange rate. Nevertheless the Bulgarian lev was unstable and new measures for foreign exchange regulation were adopted. The Foreign Exchange Act was amended in 1923 and this granted the BNB monopolistic powers to trade on the foreign exchange market. An additional measure was introduced in 1929 when the Bulgarian lev was pegged to the dollar (139 leva=1 dollar) and the coverage of the banknote was determined to one third. Import restrictions were often imposed. The government increased the tariffs by 80% in the period 1926-1927 due to administrative interventions in the exchange rate (Nenovsky *et al.* 1997).

The rapid development of the industry and crafts in the Bulgarian towns in the Interwar period resulted in a sustainable increase in the purchasing power of the urban population. Meanwhile the opposite trend was observed in the villages.

**Table 9. Money income and purchasing power of urban and rural population in Bulgaria, bln leva**

Year	Money income of rural population	Money income of urban population.	Purchasing power of rural population	Purchasing power of urban population
1926	12.5	19.8	12.7	20.4
1927	13.6	21.6	14.0	21.0
1928	13.9	22.9	13.5	21.6
1929	13.9	24.0	13.8	22.2
1930	11.5	21.5	12.5	21.7
1931	10.3	20.2	12.9	23.5
1932	7.8	19.3	10.7	24.4
1933	6.9	17.9	9.7	23.2
1934	7.2	17.0	10.4	24.6
1935	8.2	17.0	11.5	26.6

*Data were obtained by the Statistical institute for economic research (1938).*

The popular banks financed many social projects in the field of setting up the electricity grid and the water supply system, the construction of cooperative wineries, among other projects. (Sprostranov 1930).

The data above revealed the efficiency of the popular banks. There was a strong correlation between the activities of these financial institutions and Bulgaria's economic development of in the Interwar period. Through the decrease in information and transaction costs these banks had strong impact on savings, investment decisions and long-term growth. The relation between financial development and economic growth is very strong (Levine 1997).

### **3. Cooperative policy during the Interwar period**

The Interwar period was "the time of the great change and transformations of the institutional forms" in the developed capitalist countries such as the United States, France, other European countries and Japan. It was characterised by the domination of the regime of intensive accumulation of capital without mass consumption (Boyer 2015). In this context, the cooperative movement in Europe enjoyed rapid development and expansion. The proliferation of cooperative societies in different sectors and organisational forms was the natural result of different social groups' reaction (peasants, tradesmen, artisans, other) to the capitalist relations in the context of

an increasing inequality and wealth distribution to a small part of the people. A typical example in this respect was France where the cooperative movement was in upsurge. The banks of the social economy increased their efficiency and their role in the national economy (even though they did not play the leading role in the country's banking sector). This was due to the legal (institutional) changes and the reinforcement of government intervention in the cooperative sector. The state interventions had a positive impact on the popular banks' financial health. Meanwhile these institutions were estranged by their nature - the banking mutual aid (*mutualisme bancaire*). This model of the cooperative banks' development may be referred to as the model of partial banking mutual aid (*semi-mutualiste*), considering that it could not possibly function without the state intervention (Gueslin 2002).

The Interwar period was marked by the accelerated development and establishment of capitalist relations in the Bulgarian economy. The Bulgarian peripheral capitalism had its specific features such as: the accelerated inflow of foreign capital in leading sectors of the economy; the lagging behind of the industrial production in comparison with the developed capitalist countries; the prevalent agrarian nature of the national economy. Unlike the industrially developed capitalist countries, Bulgaria remained a predominantly an agrarian state. More than two thirds of the national income was generated in the agriculture sector, and the people employed in the sector comprised about 80% of the active population. The small ownership and the primitive character of agriculture remained unchanged almost throughout the Interwar period.

The proliferation of the banks of the social economy in Bulgaria in the Interwar period was part of the boom in the cooperative movement in the country. In its role of key actor and regulator of the financial system, the government determined the trends of development in the cooperative banking sector. Government intervention aimed at controlling the savings, which was in turn an integral part of the financial centralisation and concentration was taking place in the country (Reis 2007).

On the basis of the different patterns of economic regulation during the the Interwar period, the following periodization of the cooperative banks' development in Bulgaria was made:

*The first period* covered the regime of the Bulgarian Agrarian National Union (BANU) (1919-1923) during which the power belonged to the peasants<sup>9</sup>. The most serious attempt to

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<sup>9</sup> The leader of the Bulgarian Agrarian National Union, Alexander Stamboliisky argued that the political power should be in peasants' hands because they represented the biggest social group in Bulgaria (Bozhilov *et al.* 1998)

reform agriculture was made by the adoption of the Law on the increase of state lands (1920) and the Law on the functional property (1921). The cornerstone of BANU's agrarian policy was the concept of "property based on personal labour". Property based on personal labour was defined as a property that was directly used by its owners to meet their family's needs. The purpose of the law was to provide land to those who cultivated it, that is, to provide land to the landless people and small farmers (Berov 1989). The agrarian reform restricted the land property of a four-member family to thirty hectares. For bigger families, five hectares were provided to each individual. There was a legal provision whereby farm lands were to be cultivated only by family members. The owners who did not conform to this were entitled to the ownership of between four and ten hectares. The lands that exceeded the legally fixed size were expropriated. The expropriated lands were paid with interest-bearing bonds from the Bulgarian Agricultural Bank based on the average market price in the period 1905-1915. Furthermore a 10-percent discount was imposed on expropriated lands between ten and thirty hectares in size, and a 50-percent discount if the latter exceeded 200 hectares in size. A State Land Fund was established to provide land to the landless people and small farmers.

Similar to other countries, the political powers of peasants and small business was connected with the establishment of non-profit financial institutions such as saving banks and cooperative institutions supported by the state (Sylla 2005). The BANU encouraged the dissemination of consumer, producer and credit cooperatives, which in turn opened up opportunities to the Bulgarian small farmers to take the advantage of the technologies, market knowledge and economies of scale. The government's goal was to unite all Bulgarian farmers in a national cooperative network (Bell 1977). The most important measures taken by the government to develop the cooperative movement in the country were:

- It ordered the three state banks (BNB, BAB and BCCB) to relieve the terms and conditions for extending loans to cooperatives. The BAB granted loans primarily to farmers and rural cooperatives<sup>10</sup>. Thus the bank supported them in the fight against the exploitation of private capital. At the same time, the BCCB provided credit mostly to the urban cooperative communities and popular banks<sup>11</sup>.

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<sup>10</sup> During this period, the BAB increased the number of its operations three times (from 2,5 m to 7,5 m) and their amount rose from 1,8 m leva to 18, 3 m leva.

<sup>11</sup> The number of its operations increased from 1.21 m in 1919 to 124. 13 m in 1924.

- The state established a national cooperative for grain sale - the Consortium for the export of crops. The purchase of crops from the producers became an exclusive right of rural cooperatives. The consortium was established in 1919 as an autonomous state-run enterprise financed by the BNB and BAB. In 1920 the Consortium became a state-run cooperative monopoly. It determined common and higher prices to the cereals. The gained profit was distributed as following: 60% of it among the farmers and 25% for the creation of grain-elevators and hoists.
- The government provided the internal migrants (farmers, mountain inhabitants, small and landless sergeants and soldiers) free timber and gave them free access to the Bulgarian state railways, while legally binding them to create cooperatives (Deyanova 1935).
- A progressive tax system was introduced for families, which in practice freed most farmers from taxation.
- The government stimulated the creation of fishing, forest and other labour cooperatives in the country.

*The second period in the development of the cooperative movement and particularly the cooperative banks in Bulgaria* lasted from the 9th of June 1923 until 1934. The state governance was based on the idea of the administered (controlled) economy in which the economic policy was aimed at stimulating production and arming (Tsankov 1942). The greatest defender of state control (etatism) was professor Alexander Tsankov who believed that the state should act as a director and officer and participate in the establishment and creation of a new social order (Encyclopedia, vol.1 2012). Together with Todor Vladigerov he was among the Bulgarian economists who were the strongest champions of the administered economy. Tsankov revised most of the measures of the agrarian reform of the BANU but strictly adhered to the principle of providing land to those who cultivated it. Alexander Tsankov (1879-1959) was among the most sophisticated leading figures during the 20th century in Bulgaria. He formed the first government after the coup of the 9th of June 1923 when the BANU regime was broken up. (Nedev 2015). Tsankov was chairman of the Union of Popular Banks. He regarded the cooperative as an economic entity that was an integral part of the capitalist order that promoted the social welfare. Both governments of Tsankov and Andrey Liyapchev (1926-1931) focused on the promotion of the domestic industry. Liyapchev initiated the establishment of the BCCB (Vladigerov 1937). He was one of the founders of the Union of rural cooperatives and member of the Governing council

of the General union of rural cooperatives. Liyapchev was also chairman of the Union of popular banks during the period 1923 - 1926. He considered the cooperative as a form of enterprise whose purpose was to bring greater social justice in the capitalist economic system. Liyapchev believed that self-help and mutual aid should be developed only through the cooperative movement.

The main reasons for the rapid development of the cooperative movement until 1930 were: the predominantly small production and small ownership in both agriculture and industry; the encouraging role of the state-owned banks and that of the unions that promoted the cooperative idea throughout the country (Mishaykov 1930).

During the world economic crisis (1929 - 1934) the government constantly intervened in domestic trade through the pricing policy with regard to grains and some basic consumer goods, etc. In domestic trade the state monopoly on the majority of agricultural products was introduced by setting up the Food export (*Hranoiznos*) Directorate. The primary goal of the directorate was to establish subsidised prices for the cereals at a level significantly higher than the average world prices. The main beneficiaries from these prices were the wealthy peasants and tradesmen that bought goods from poor farmers at low prices and then resell them to the directorate at higher prices. The BACB purchased the tobacco harvest, the cotton and the hemp in the country.

The State Budget Acts in 1932 and 1933 stipulated that the first 10 hectares land of each farm were freed from the state land tax. In 1932, the Law for the protection of farmers was adopted which introduced concessions on the debt of the biggest part of the farmers. A Repayment fund was established as a state-owned credit institution to play the role of intermediary between private creditors and debtors. The creditors were mainly rural moneylenders, private banks and other institutions, who were issued against their claims interest-bearing bonds from the Repayment fund. The debtors who wanted concessions were obliged to pay their debt to the fund even though they benefited from installments and lower interest rate.

The different agricultural credit cooperatives and producer cooperatives played a significant role in buying up several agricultural products as they made significant general supplies of industrial and other goods to their members. A major role in this regard had also the urban producer cooperatives and primarily the cooperative "*Napred*" which possessed several

industrial enterprises. The relative weight of cooperatives in the domestic trade gradually reached one tenth of the total amount of the turnover by the end of the crisis.

*The third period in the development of the cooperative movement and cooperative banks* in the country covered the period of the "personal regime" of Tzar Boris III (1934-1941) (Bozhilov *et al.* 1998). The regulation of the economy was practiced in almost all the economic sectors. The cooperative sector was strongly regulated and restricted by the state authorities. In April 1938 the National Assembly adopted the Law on state supervision of companies and associations which limited the autonomy of the cooperatives in the country. The Minister of Interior gained the right to approve the statutory act of each cooperative. He was given the right to remove each person from a cooperative who was an adherent to communist, anarchist and oppressive methods of social and political fight or who was a member of illegal organisations. The minister had the right to ask the local court to break up an association whose members of the governing council belonged to illegal organizations or who were followers of communist, anarchist or oppressive methods for social and political fight.

The big state owned banks started financing private banks, capitalists and companies. The powers of the BACB proved the strong intervention of state authorities in the establishment, management, control and development of cooperative banks in the country. The autonomy and self governance of cooperatives were abolished.

## **Conclusion**



The cooperative credit underwent an accelerated development during the Interwar period in Bulgaria. Our study shows that popular banks played a major role in social credit and they contributed to the economic and financial progress of the country. These social credit and deposit institutions gained confidence and prestige among the Bulgarians. They embodied, to the greatest extent, the principles of mutualism and solidarity among the population, upon which the Bulgarian cooperative movement rested. Popular banks became the major institutions in the Bulgarian cities and in most of the villages. This was their main distinctive feature compared to such banks in the other European countries. They financed all the sectors of the national economy while performing all the functions of private banks.

The state cooperative policy determined the conditions and trends in cooperative credit during the Interwar period. The constant government intervention and restrictions imposed on the social credit institutions failed to bring to a halt the development of credit cooperatives and popular banks in the country. At the same time political management and control over the social credit institutions comprised a powerful instrument to ensure their growing influence in the economy.

## **References:**

1. Bell J., 1977, *Peasants in power : Alexander Stamboliski and the Bulgarian agrarian national union : 1899-1923*, Princeton : N.J. : Princeton university press.
2. Berov L., 1989, *Economy of Bulgaria until the socialist revolution*, Sofia: Nauka i izkustvo.
3. Boyer R., 2015, *Economie politique des capitalismes. Théorie de la régulation et des crises*, Paris: La Découverte.
4. Bozhilov I. et al., 1998, *History of Bulgaria*, Sofia: Abagar.
5. Bucher C., 1901 [1893], *Industrial Revolution*, New York: H. Hold and Company.
6. Central Cooperative Union, 1986, *History of cooperative movement in Bulgaria*, vol. I, Sofia: Otechestven front.
7. Central Cooperative Union, 1986, *History of cooperative movement in Bulgaria*, vol. II, Sofia: Otechestven front.
8. Central State Archives, file 286K, a. unit 1, N71, *Report of the Union of Popular Banks*, 1939, Sofia.
9. Central State Archives, file 286K, a.unit 1, N74, *Report of the General Union of Popular Banks*, 1942, Sofia.
10. Central State Archives, file 289K, a.unit 3, *Interest rate tariff, commissions, fees of the Bulgarian Agricultural and Cooperative Bank on its operations*, 1939, Sofia.
11. Chakalova A., 1962, *Forms, volume and activity of foreign capital in Bulgaria (1878-1944)*, Sofia: BAS.
12. Deyanova M., 1935, *Agrarian problems of the Balkan countries*, *Archive of economic and social policy*, Book 1, Sofia.
13. *Encyclopedia of the cooperative movemant in Bulgaria 1890-1947*, vol. I, 2012, Sofia: Coopmedia.
14. Gerschenkron A., 1962, *Economic backwardness in historical perspective*, Belknap Press.
15. Gueslin A., 2002, "Les banques de l'économie sociale en France : perspectives historiques", *Revue d'économie financière*, n°67. *L'avenir des institutions financières mutualistes*. pp. 21-43.
16. Iaranoff A., 1919, *La Bulgarie économique*, Lausanne: Petter, Giesser & Held
17. Ivanov M., 2012, *Gross domestic product in Bulgaria 1870-1945*, Sofia: Ciela.

18. Kanev N., 1943, Cooperative work, Sofia.
19. Kurkliiski N., 1941, Findings on lending activities of banking institutions considering their impact on important sectors of the Bulgarian national economy, Varna: Bulgarian Agricultural and Cooperative Bank.
20. Levine R., 1997, Financial development and economic growth: views and agenda
21. Mishaykov D., 1930, The Bulgarian cooperative and the Bulgarian Central and Cooperative Bank.
22. Nedelchev K., 1940, Money in Bulgaria 1879-1940, Sofia.
23. Nedev N., 2015, Alexander Tsankov, Sofia: Hermes.
24. Nenovsky N., 2006, Exchange rates and inflation: France and Bulgaria in the Interwar Period and the contribution of Albert Aftalion (1874-1856), Bulgarian National bank.
25. Nenovsky N., Dimitrova K., Pavanelli G., "Exchange Rate Control in Italy and Bulgaria in the Interwar Period. History and Perspectives", The Experience of Exchange Rate Regimes in South-Eastern Europe in a historical and comparative perspective, Oesterreichische Nationalbank, 2007. pp. 80-117.
26. Palazov I., 2005 [1947], Theory and practice of the cooperative, Filvest Publisher.
27. Palazov I., 1940, Savings and cooperatives, Union of Popular Banks.
28. Pasvolsky L., 1930, Bulgarian Economic Position (with Special Reference to the Reparation Problem and the Work of the Leagues of Nations), Washington: The Brookings Institution.
29. Reis J., 2007, Bank structures, Gerschenkron and Portugal (pre-1914), European University Institute.
30. Sprostranov N., 1930, Popular banks in Bulgaria, Sofia.
31. Sylla R., Toniolo G., 1991, Patterns of European industrialization. The nineteenth century, Routledge.
32. Sylla R., 2005, The origins of national financial systems: Alexander Gerschenkron reconsidered., EH.Net Economic History Services.
33. Totomianz V., "L'organisation coopérative en Bulgarie", Revue des études coopératives, N:56, 1935, pp.341-351.

34. Tsankov A., 1942, The three economic systems: capitalism, communism and national socialism, Sofia: National outlook.
35. Vladigerov T., 1937, The administered economy, Sofia.
36. Workings of the Statistical Institute for Economic Research, vol. I, 1938.

# The Road to Eurozone. Comparative Analysis of the Maastricht Criteria Fulfillment by the CEE Countries

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**Abstract:** *As some of the CEE countries are not yet participating as full members of the Economic and Monetary Union they are still obliged to enter the Euro area at some time in the future. Issue with raising importance tends to be the fulfillment of the convergence criteria and the problems relating to it in the context of the global financial crisis. This paper is focusing on the comparative analysis of the Maastricht criteria fulfillment by some of the CEE countries and the related criticism regarding their proper settlement.*

**Key words:** *CEE countries, Maastricht criteria, Eurozone, critique.*

**JEL codes:** *F02*

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## 1. Introduction:

The road to Eurozone goes through obligation to fulfill some criteria for nominal convergence, namely the Maastricht criteria for inflation, long-term interest rates, debt, deficit and exchange rate. In a pure economic and monetary union it is important for the countries to success such level of integration which makes it possible for them to realize low trade cost and similar business cycles for maintaining sustainable growth and economic stability.

*This paper investigates comparatively the fulfillment of the convergence criteria by some CEE countries and the problems relating to it in the context of the global financial crisis. Special attention is paid to the criticism regarding their proper settlement.*

Next sections are organized as follows: Chapter 2 presents the methodological explanation of the abovementioned analysis. Chapter 3 comprises of the comparative analysis itself. Chapter 4 represents the guidelines for further analysis and literature review regarding the critics to the Maastricht criteria is presented in Chapter 5. The last Chapter 6 is the conclusion.

## 2. Methodology:

For the purpose of our analysis the *comparative analysis method* is used.

The examined countries are presented in three groups:

- *the Baltic countries: Lithuania, Latvia and Estonia;*<sup>1</sup>
- *the New member states: Bulgaria and Romania;*<sup>2</sup>
- *Central European member states: Czech Republic, Hungary, Poland, Slovak Republic and Slovenia.*<sup>3</sup>

All of them are small and open economies, which have a large share of their foreign trade within the EU. Some of the countries are already euro zone members but the focus of the investigation is on their way to euro zone as regards of their monetary and fiscal policies.

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<sup>1</sup> Members of EU since 2004. Estonia has entered the Euro zone in 2011, Latvia – in 2014, and Lithuania – in 2015.

<sup>2</sup> Members of EU since 2007. Still not members of the Euro zone.

<sup>3</sup> Members of the EU since 2004. Slovenia is euro zone member since 2007, the Slovak Republic – since 2009. The Czech Republic, Poland and Hungary aren't still members of the Eurozone.

The investigation period is the time frame between the entering in the EU until the present, i.e. 2004 – 2016, though the new member states are EU members since 2007.

Because of the different timing of the available data it is presented in two time frames, namely:

- GDP growth, debt and deficit levels – annual data;
- Inflation and long-term interest rates – monthly data.

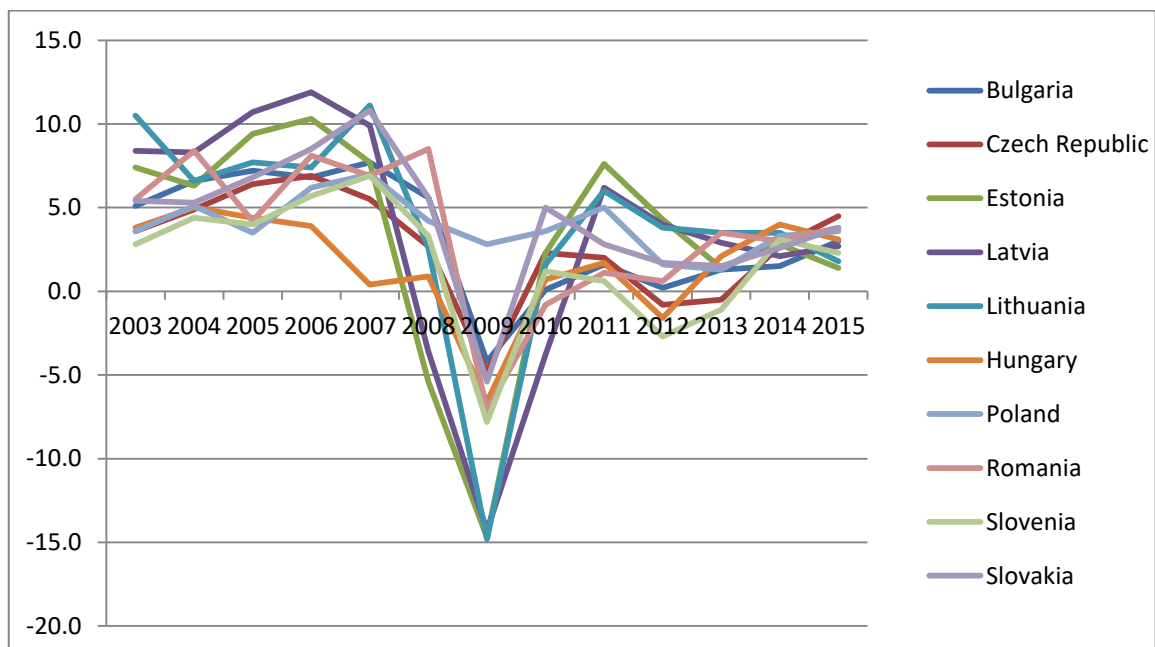
All abovementioned data is extracted from Eurostat.

### 3. Comparative analysis

#### ➤ GDP Growth

In regard to the Maastricht Criteria fulfillment, it is not presented in detail, but rather in a comparative view and particularly attention is brought to the countries with the most deviating parameters. These criteria are very well known, but first the *GDP growth* of each country is addressed. The data is annual, presented as chain linked volumes, percentage change over previous period, the period – between 2003 and 2015.

*Graph. 1 GDP growth. Annual data 2003 – 2015*



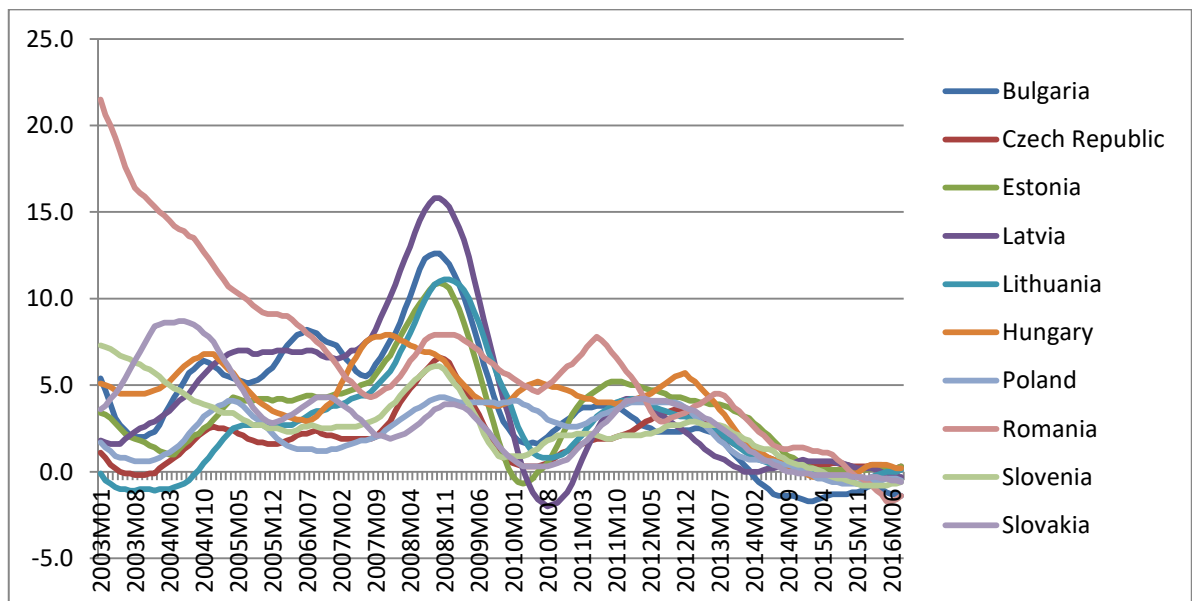
Source: Eurostat

At a first sight there is a large downturn in the period of the world economic and financial crisis between 2008 and 2010. These three countries are the Baltics. At the same time there is also very high growth before the crisis and again these are the Baltics. If we think about this large difference we can consider the book of Mr. Chobanov (2012) where he explains this with the huge imbalances, accumulated before the crisis, which allowed the very high GDP growth and then this growth turned into a severe recession. As regards the new member states Bulgaria and Romania, there is very similar dynamics as in the Baltic countries but not in the same large extent.

➤ **Inflation**

To proceed to the price developments, represented as the Harmonized Index of Consumer Prices dynamics, we use monthly data, presented as moving 12-months average rate of change, the period – between 2003M1 and 2016M8.

*Graph. 2 HICP. Monthly data 2003M1 – 2016M8*



*Source: Eurostat*

Here the contrast is made by more countries. Romania has very high values of inflation in the beginning of the period but later this problem is already solved. The so called BELL countries<sup>4</sup> had also problems with the inflation.

<sup>4</sup> Bulgaria, Lithuania, Latvia and Estonia.



All of the three Baltic countries have seriously high inflation levels, which are observed also in the period of the global financial and economic crisis. Actually the inflation is following the strong internal demand combined with the very high level of GDP growth, which shows the economy overheating. In the meantime these economies are narrowly catching up with the prices in the euro area. Also the international prices of oil and food have significant impact.

In the case of the New Member states a dynamic activity is observed. The two countries are under the influence of the global prices of oil and food and the increasing of the internal administrative prices related to it.

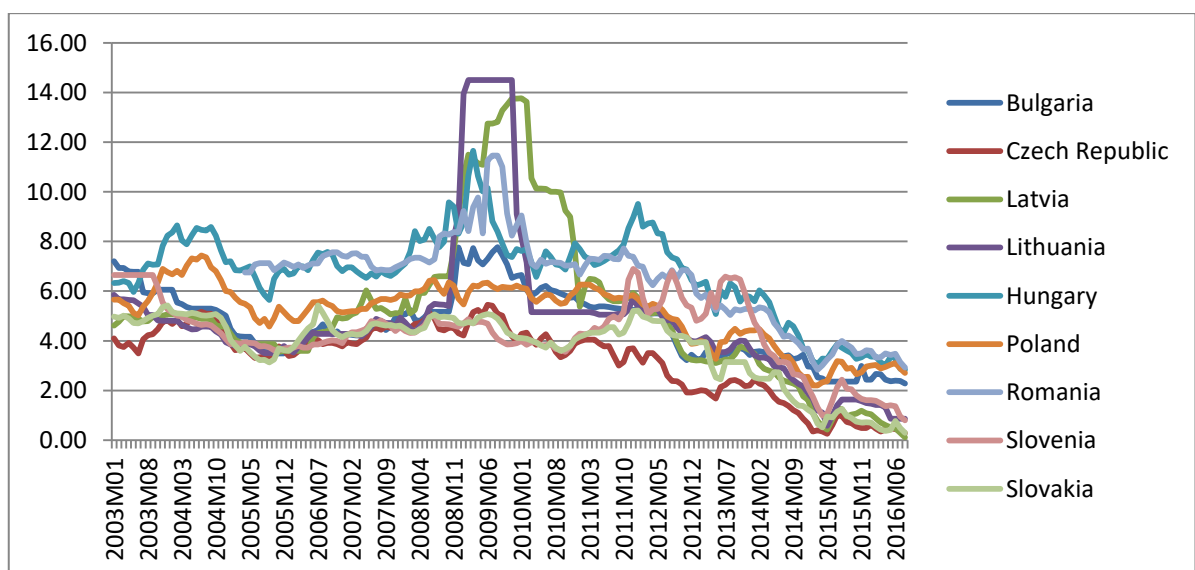
Romania has problems with the inflationary expectations but after the financial aid from international financial institutions the confidence is again regained and the inflation went down to normal values.

A big part of the inflationary pressures in Bulgaria, particularly in the period of the global crisis, could be explained with the fact that the food has a large share in the consumer expenses and the economy uses a lot of energy in the production processes. So when the international prices of food and oil rise, it immediately influences the Bulgarian inflation.

➤ **Long-term interest rates**

The long-term interest rates' data is again monthly, representing the period between 2003M1 and 2016M8.

*Graph. 3 Long-term Interest Rates. Monthly data 2003M1 – 2016M8*



Source: Eurostat

Here the exceptionally high values are again in the Baltics. May be it is interesting to be noted that Estonia is not in this graph. The reason is that this country has not got benchmark for the long-term interest rates due to the fact that the bond market in the country is not developed and the government has not issued government securities with long maturities. Instead for the purposes of the convergence assessment a broad analysis of the financial sector is used and it should be concluded that the country has no problems with the fulfillment of this requirement.

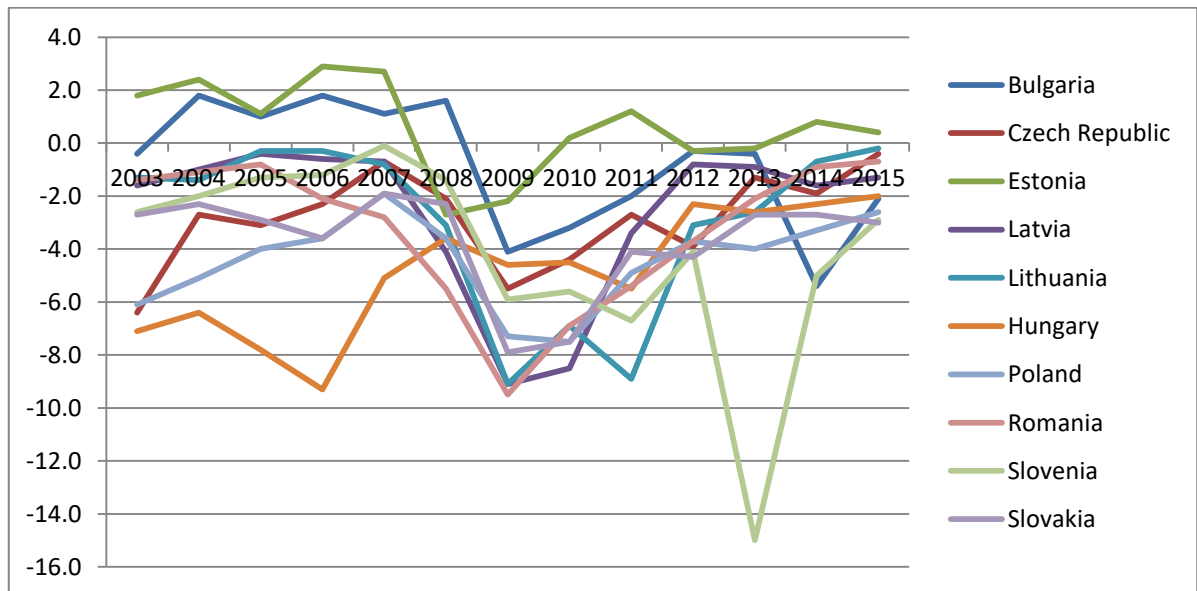
The other two Baltic countries have some problems in the period of the global crises but then the long-term interest rates are on historically low levels.

Romania has also very high values of the long-term interest rates, which could be explained with the severe global recession, the very limited opportunity for financing from the international capital markets and the high instability also in the country.

➤ **Budget balance**

The budget balance is the criteria with the most problematic fulfillment. It is represented as a percentage of the gross domestic product at the end of every year for the period between 2003 and 2015.

*Graph. 4 Budget balance. Annual data 2003 – 2015*



*Source: Eurostat*

Almost all of the countries have been subject of the excessive deficit procedure. The only exception is Estonia. The country has also very good performance as compared to the other two Baltics. Latvia even had a need for financial assistance,

which was provided by a team of international financial institutions and neighbor countries.

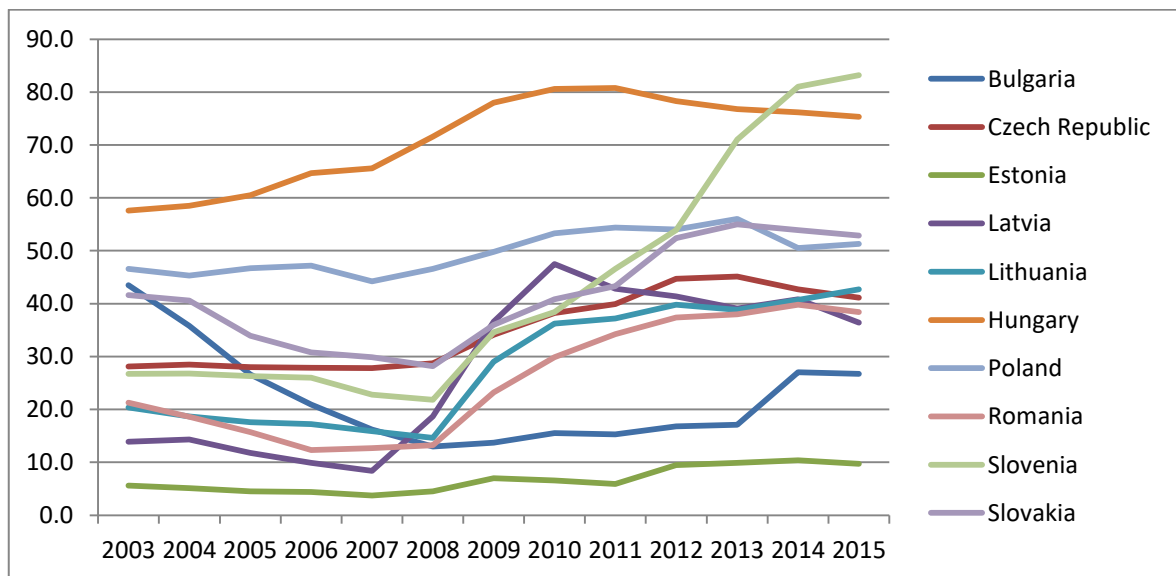
The most severe downturn and really high deficit has Slovenia and it should be mentioned that this happened not in the period of the Great recession but after it, when the debt crisis is already in action. This has rational explanation. In the year 2012 the government has implemented bank recapitalization, which raised the deficit with almost 10% of GDP.

In regard of the New Member states it is obviously that Bulgaria has better performance than Romania and is subject of the excessive deficit procedure for a very short period. Actually Bulgaria has deficit level above the reference value for a second time after the global crisis in 2014. The European Commission has agreed that this is caused by exceptional economic conditions in the face of the local banking crisis due to the bankruptcy of the local bank CCB<sup>5</sup> and the need for financing the National Deposit Guarantee Fund.

➤ **Debt**

The debt dynamics, similarly to the budget balance, is represented as a percentage of the GDP. The data is annual for the period between 2003 and 2015.

*Graph. 5 Debt Dynamics, Annual data 2003 – 2015*



Source: Eurostat

<sup>5</sup> Corporate Commercial Bank.

Almost all of the countries have debt levels which are well below the reference value of 60% of GDP. Hungary comes under notice because in the whole period the debt levels of the country are well above the reference value. This situation is determined by the low GDP growth, the very high yield of the government securities due to the European debt crisis from 2012 and the high budget deficits. Even the financial and technical assistance of the international financial institutions is not of great help.

In contrary, Estonia could be named “the best performer” among all countries. Bulgaria also is much disciplined.

The situation of the debt dynamics in the Baltics is the same as it is with the budget deficit. Although not subject of the corrective arm of the Stability and Growth Pact, Latvia and Lithuania has a large increase in their general government debt levels. In contrast, in Estonia only slight increase is observed.

The New Member States have no significant problems with the share of the government debt in the GDP. Even though the debt levels in Romania have been on a historically high path, they are well below the reference value.

In contrast, Bulgaria has very high debt levels in the beginning of the period in consideration and even at the time of the global crisis and after it the debt dynamics is far below the values before the crisis.

As a whole it is obvious that the debt levels are well increasing right after the outbreak of the global financial and economic crisis.

#### 4. Guidelines for further analysis

For the narrower analysis possible classification of these 10 countries could be regarding their monetary policy and also their exchange rate. This is illustrated in the table below where the countries are allocated considering the two factors mentioned.

Monetary Regime / Exchange Rate	Pegged Exchange Rate	Floating Exchange Rate
Currency Board	Bulgaria	
	Estonia	
	Lithuania	
Inflation Targeting	Hungary	Romania
		Slovak Republic
		Poland
		Czech Republic
Active Monetary Policy	Latvia	Slovenia

The countries in italic and grey color are already members of the euro zone but before entering the euro area these were their characteristics. It is useful to follow up their way of entering the Eurozone and draw some conclusions of good practices and well managed policies.

## **5. Critique of the Maastricht criteria. Literature Review:**

Since the appearance of the European Union the issues regarding the European integration are broadly concerned and discussed. In recent times, although very criticized each and together, the convergence criteria of Maastricht are in the field of view of economists, politicians and researchers.

Malović, Đukić and Redžepagić (2011) even stated that these criteria are settled without fundamental base and most of the countries didn't fulfill them or did this for a very small time period. Baldwin and Wyplosz (2009) actually noticed that the fiscal criteria of Maastricht are chosen in regard of the German economy circumstances and could not be applied to all European countries.

Claessens, Mody and Vallée (2012) expressed the fear that this is the cause of the instability in the newly established monetary union and that is why there are so many mechanisms and funds created to address the lack of common fiscal buffer in the eurozone in times of economic crisis and other negative external shocks.

As was mentioned above, the criteria in the fiscal area are the most problematic. Questions arose even at the far beginning of their settlement, the most fundamental of them: Why are there actually fiscal requirements for entering the Eurozone?<sup>6</sup> The Eurozone is a monetary union and all countries conduct common monetary policies, but in the fiscal area they implement particularly individual policy measures. In fact it is really difficult for the countries to fulfill this requirement in the context of different budget needs and economic conditions.

Moreover in a monetary union the fiscal policy tends to be the resource for addressing the external and internal shocks for the normal functioning of the economy, so these Maastricht requirements are restricting the power of the parliaments to be flexible and sustained to the world and regional crisis.

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<sup>6</sup> Frankel (1992)

Most recent investigations actually reveals again the Keynes' idea, named “the new view of fiscal policy”<sup>7</sup> that the government expenses are a big power for the growth of the economy and that they are not the cause for the crowding-out effect of the private investments, but could also help to boost their activity. Here is also obvious the limiting effect of the Maastricht fiscal criteria.

This critique is only the base for further analysis of the need and if there is a need, of the optimal and sustainable value of the fiscal requirements in a monetary union with different level of economic development countries in the CEE region.

## **6. Conclusion**

The review of the Maastricht criteria fulfilment by the CEE countries is a good opportunity to realize a situation where there is some kind of inconsistency and internal conflict between monetary and fiscal indicators. One could inevitably ask the question why are these criteria designed like that. There are a lot of possible explanations but the most important issue appears to be whether it is necessary and as it looks like in a monetary union it should exist fiscal coherence to some extent, which are then the optimal requirements as regards to countries under different local economic circumstances.

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<sup>7</sup> Furman (2016)

## References:

1. Чобанов, П., Неравновесията, рисковете и глобалната криза, изд. „Пропелер“, София, 2012.
2. Claessens, S., Mody, A., Vallée, S., Paths to Eurobonds, IMF Working Paper, July 2012.
3. Frankel, J., Excessive Deficits: Sense and Nonsense in the Treaty of Maastricht, Comments on Buitert, Corsetti and Roubini, Presented at panel meeting, Economic Policy, Centre for Economic Policy Research, London, United Kingdom, October 15-16, 1992, Revised March 1993.
4. Furman, J., The New View of Fiscal Policy and Its Application, CEPR Policy Portal, November 2016.  
<http://voxeu.org/article/new-view-fiscal-policy-and-its-application>
5. Malović, M., Đukić, M., Redžepagić, S., Maastricht Criteria at the Age of 18: Are They Even Converging, Which Party and to What End?, in: Serbia and the European Union: economic lessons from the new member states, Faculdade de economia Universidade de Coimbra, Coimbra, pp. 11-26, 2011.

## The loss of interest for the euro in Romania

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**Abstract:** *We generalize a money demand micro-founded model to explain Romanians' recent loss of interest for the euro. We show that the reason behind this loss of interest is a severe decline in the relative degree of the euro liquidity against that of the Romanian leu.*

**Key words:** *Money demand, Open economy model, Currency substitution, Romania*

**JEL codes:** *E41, E52, F41*

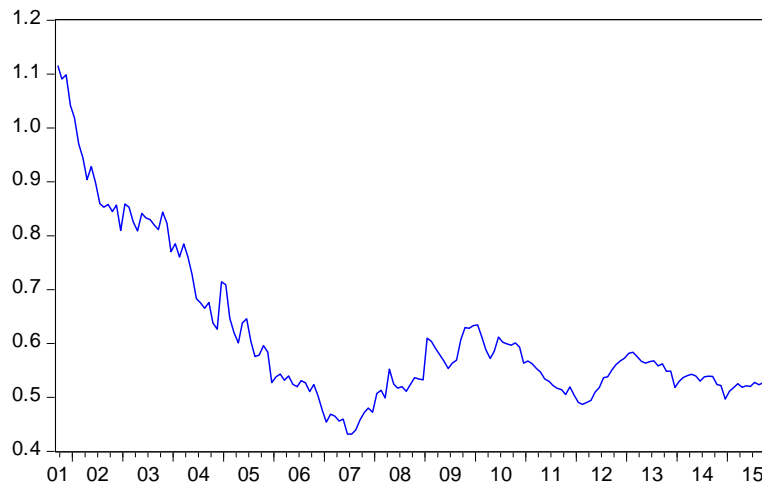


## 1. Introduction

Romania joined the European Union (EU) in 2007 being now one of the Euro area candidate countries. Long before Romania's entrance to the EU, the leu and the euro went hand in hand as the main transactions and savings currencies. However, since September 2001, the euro holding has considerably diminished as compared to that of the domestic currency.

Let  $M_t$  denote the Romanian domestic money holding, while  $M_t^*$  is the euro holding. Assuming that  $S_t$  is the exchange rate, then  $S_t M_t^*$  represents the euro holding denominated in lei. Figure 1 shows the drop of the  $S_t M_t^* / M_t$  ratio over the period 2001:M9-2015:M11.

**Figure 1. Romanians' euro holding to domestic money holding ratio**



Source: Own computations based on monthly bulletins of the National Bank of Romania

The literature on money demand provides no explanation for such a trend. The money demand in the CEE countries is empirically investigated by Van Aarle and Budina (1996), Mulligan and Nijssse (2001), Dreger et al. (2007), Fidrmuc (2009), or Dritsaki and Dritsaki (2012). Single-country analyses of money demand are conducted *inter-alia* by Komárek and Melecký (2004) for the Czech Republic, by Siliverstovs (2008) for Latvia, or by Hsieh and Hsing (2009) for Hungary. The money demand in Romania was investigated by Andronescu et al. (2004) and Ruxanda and Muraru (2011). None of these papers provides a micro-founded theoretical model to justify the specification of their empirical money demand functions. Albulescu and Pépin (2016) represent an exception.

Our contribution to the existing literature is twofold. First, we generalize the micro-founded model of Albulescu and Pépin (2016) by assuming that the relative liquidity degree

of the euro against that of the leu is changing. Second, we apply the new model on the Romanian case and explain the loss of interest for the euro during the last period.

## 2. A money demand model in an open economy

Generalizing Albulescu and Pépin (2016), we suppose that the lifetime utility function of the domestic agent is:

$$V_t = E_t \left[ \sum_{i=0}^{\infty} \beta^i U \left( \frac{X_{t+i}}{P_{t+i}}, \frac{M_{t+i}}{P_{t+i}}, \frac{S_{t+i} M_{t+i}^*}{P_{t+i}}; \varepsilon_{t+i}, t+i \right) \right], \quad (1)$$

where  $X_t$  is the monetary consumption spending denominated in lei,  $P_t$  is the price index,  $\varepsilon_t$  is a stationary stochastic process and  $t$  is a deterministic trend.  $E_t[\cdot]$  is the expectation conditional upon the information available at time  $t$  and the presence of  $\varepsilon_t$  and of trend  $t$  in the utility function indicates that its properties are subject to changes. This utility specification is based on the assumption that the representative agent holds foreign and domestic money in relation with his total consumption, with no distinction between his consumption of foreign and domestic goods.

Now suppose that the utility function takes the form:

$$U \left( \frac{X_t}{P_t}, \frac{M_t}{P_t}, \frac{S_t M_t^*}{P_t}; t, \varepsilon_t \right) = \left( \frac{X_t}{P_t} \right)^{1-\theta} \left\{ \delta(t, \varepsilon_t) \left( \frac{M_t}{P_t} \right)^\gamma + (1-\delta(t, \varepsilon_t)) \left( \frac{S_t M_t^*}{P_t} \right)^\gamma \right\}^{\frac{\theta}{\gamma}}, \quad \gamma = \frac{\sigma-1}{\sigma}, \quad (2)$$

where  $\sigma = 1/(1-\gamma)$  is the elasticity of substitution between the leu and the euro and  $\delta(t, \varepsilon_t)$  is a function of  $t$  and  $\varepsilon_t$  (the share parameter).

If the elasticity  $\sigma$  is high, it is easier to replace one currency by another, which represents a proof of monetary integration (Fidrmuc, 2009). Therefore, if  $\sigma > 1$  we have substitutability between currencies, while a value  $\sigma < 1$  indicates their complementarity. In their simplified model, where  $\delta(t, \varepsilon_t) = \delta \forall t$ , Albulescu and Pépin (2016) find that the elasticity of substitution between the leu and the euro is weak, ranging between 0.3 and 0.5 under different estimations, and reject thus the hypothesis of monetary integration with the Euro area.

The expression  $\left\{ \delta(t, \varepsilon_t) \left( \frac{M_t}{P_t} \right)^\gamma + (1-\delta(t, \varepsilon_t)) \left( \frac{S_t M_t^*}{P_t} \right)^\gamma \right\}^{\frac{1}{\gamma}}$  is the liquidity production

function and the term  $(1-\delta(t, \varepsilon_t))/\delta(t, \varepsilon_t)$  measures the liquidity degree of the euro against the leu in the eyes of the Romanian representative agent. It indicates the amount of euros needed to produce the same liquidity service as one leu. The liquidity service provided by a currency

is likely to be influenced by any institutional change, by financial innovations or technological developments in payment systems, or, in this particular case, by blockages in the real estate market, hence the hypothesis of a changing degree of liquidity.

The real consumption and the CES liquidity production function are next combined according to a Cobb-Douglas utility function with a consumption elasticity of  $1-\theta$  and a liquidity elasticity of  $\theta$ , while the parameters are restricted so that  $0 < \theta < 1$ ,  $0 < \delta(t, \varepsilon_t) < 1$  and  $0 \leq \sigma < +\infty$ .

The representative agent faces the budget constraint:

$$M_{t-1}(1-\phi) + S_t M_{t-1}^*(1-\phi) + B_{t-1}(1+i_t) + S_t B_{t-1}^*(1+i_t^*) + Z_t = X_t + M_t + S_t M_t^* + B_t + S_t B_t^*, \quad (3)$$

where  $B_t$  is the value (in lei) of domestic bond holding,  $B_t^*$  is the value (in euro) of foreign bond holding,  $Z_t$  are the non-financial incomes and monetary transfers from the government, and  $i_{t+1}$  and  $i_{t+1}^*$  are the nominal domestic and foreign interest rates. Because bonds are nominally risk-free,  $i_{t+1}$  and  $i_{t+1}^*$  are known at time  $t$ .

The parameter  $\phi$  represents the proportional cost the agent faces for holding money (for simplification this cost is considered the same for cash and deposits and is fixed as in Lucas and Nicolini (2015) at 1% per year, that is 0.082953% on a monthly basis). It stands for the charges related to the use of money (cost of a bank card, cash theft or loss...).

Consider now the optimization problem of the representative agent who maximizes (1) with respect to  $\frac{M_t}{P_t}$ ,  $\frac{S_t M_t^*}{P_t}$ ,  $\frac{B_t}{P_t}$  and  $\frac{S_t B_t^*}{P_t}$ , under (2) and (3). If we consider that  $\delta(t, \varepsilon_t)$  is perfectly observable at date  $t$ , the first-order conditions  $E_t[\partial V_t / \partial (M_t/P_t)] = 0$  and  $E_t[\partial V_t / \partial (B_t/P_t)] = 0$  from Albuлесcu and Pépin (2016) lead to:

$$\frac{\theta}{1-\theta} \left( \delta(t, \varepsilon_t) \left( \frac{M_t}{P_t} \right)^\gamma + (1-\delta(t, \varepsilon_t)) \left( \frac{S_t M_t^*}{P_t} \right)^\gamma \right)^{-1} \left( \frac{X_t}{P_t} \right) = \frac{oc_{t+1}}{\delta(t, \varepsilon_t)} \left( \frac{M_t}{P_t} \right)^{1-\gamma}, \quad (4)$$

where  $oc_{t+1} = \frac{i_{t+1} + \phi}{1 + i_{t+1}}$  is the opportunity cost of domestic money holding, while the remaining two first-order conditions,  $E_t[\partial V_t / \partial (S_t M_t^*/P_t)] = 0$  and  $E_t[\partial V_t / \partial (S_t B_t^*/P_t)] = 0$  allow to obtain:

$$\frac{\theta}{1-\theta} \left( \delta(t, \varepsilon_t) \left( \frac{M_t}{P_t} \right)^\gamma + (1-\delta(t, \varepsilon_t)) \left( \frac{S_t M_t^*}{P_t} \right)^\gamma \right)^{-1} \left( \frac{X_t}{P_t} \right) = \frac{oc_{t+1}^*}{1-\delta(t, \varepsilon_t)} \left( \frac{S_t M_t^*}{P_t} \right)^{1-\gamma}, \quad (5)$$

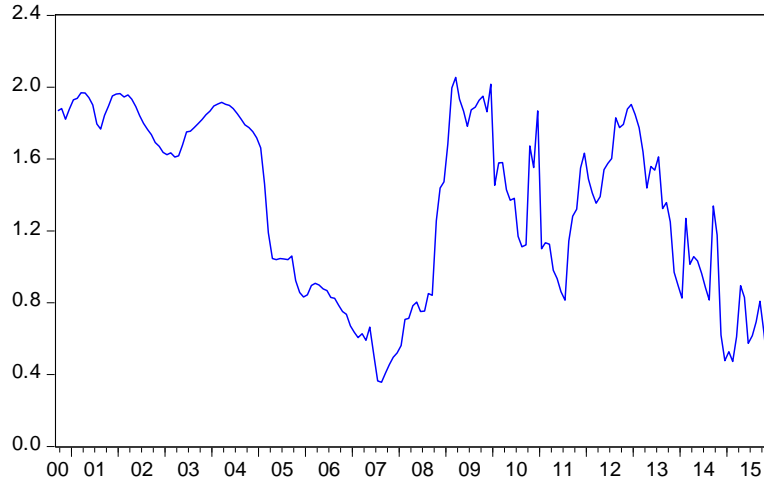
where  $oc_{t+1}^* = \frac{i_{t+1}^* + \phi}{1+i_{t+1}^*}$  is the opportunity cost of euro holding.

As the left-hand terms of equations (4) and (5) are the same, it comes:

$$\ln \left( \frac{S_t M_t^*}{M_t} \right) = \sigma \ln \left( \frac{1-\delta(t, \varepsilon_t)}{\delta(t, \varepsilon_t)} \right) + \sigma (\ln oc_{t+1} - \ln oc_{t+1}^*). \quad (6)$$

Equation (6) describes the euro holding relative to the leu holding. If the opportunity cost of holding euros increases more than the opportunity cost of holding lei, the Romanians abandon the euro in favor of the leu, and this is what really happened. This substitution effect is even stronger if the elasticity of substitution between currencies is high. Figure 2 shows that the opportunity cost spread  $\ln oc_{t+1} - \ln oc_{t+1}^*$  decreases since 2001, even if in an irregular way, given the impact of the 2008 financial crisis on the interest rate spread.

**Figure 2. The opportunity cost spread of holding domestic money against euro**



Source: Own computations based on Albuлесcu and P epin (2016)

Over the timespan 2001:M9 to 2015:M9, the linear correlation coefficient between  $\ln(S_t M_t^*/M_t)$  and  $\ln oc_{t+1} - \ln oc_{t+1}^*$  is 0.341. The coefficient's positive value shows that part of the euro holding decline undoubtedly relates to the downfall of the Romanian short interest rate, as compared to the Euro area interest rate. In the long-run,  $\ln(S_t M_t^*/M_t)$  should be perfectly explained by  $\ln oc_{t+1} - \ln oc_{t+1}^*$  if  $\delta(t, \varepsilon_t) = \delta \forall t$ . However, this is not the case because the correlation coefficient is considerably smaller than 1. Consequently, other factors

might explain this strong loss of interest for the euro, like a changing liquidity degree of the euro.

Indeed, equation (6) also shows that the euro demand depends on  $(1 - \delta(t, \varepsilon_t)) / \delta(t, \varepsilon_t)$  ratio. A decrease in this ratio is associated with a decrease in the liquidity service provided by the euro and thus a reduction in the demand for euro. It remains to assess the relevance of this explanation by estimating the function  $\delta(t, \varepsilon_t)$ .

If  $\ln(M_t / S_t M_t^*)$  and  $(\ln oc_{t+1} - \ln oc_{t+1}^*)$  are I(1), a simple way for  $\delta(t, \varepsilon_t)$  parametrization is to suppose the existence of three  $v_0, v_1$  and  $v_2$  parameters such as:

$$\sigma \ln \left( \frac{1 - \delta(t, \varepsilon_t)}{\delta(t, \varepsilon_t)} \right) = v_0 + v_1 t + v_2 t^2 + \varepsilon_t. \quad (7)$$

Inserting (7) in (6), we obtain the cointegration equation which allows the estimation of the elasticity of substitution  $\sigma$  and the ratio  $(1 - \delta(t, \varepsilon_t)) / \delta(t, \varepsilon_t)$ :

$$\ln \left( \frac{S_t M_t^*}{M_t} \right) = v_0 + v_1 t + v_2 t^2 + \sigma (\ln oc_{t+1} - \ln oc_{t+1}^*) + \varepsilon_t. \quad (8)$$

### 3. Empirical evidence

We use monthly statistics from 2001M9 to 2015M11 to estimate equation (8). The money market rate is used to compute the discounted interest rate (data come from IMF International Financial Statistics). The structure of bank deposits is used as a proxy of the money demand structure (data are extracted from the National Bank of Romania monthly bulletins). We apply the Hansen's (1992) test to check the existence of a long-run relationship and we estimate the cointegration equation (8) by the Fully-Method Ordinary Least Squares (FMOLS) method.

Before estimating equation (8), we verify if our series are I(1). The application of the ADF and PP unit root tests prove the existence of a unit root for both processes (Table 1).

**Table 1. Unit root tests**

Variables	Test ADF (with intercept)	Test ADF (with trend and intercept)	Test PP (with intercept)	Test PP (with trend and intercept)
$\ln(S_t M_t^* / M_t)$	-2.89*	-2.26***	-3.01*	-2.22***
$\ln oc_{t+1} - \ln oc_{t+1}^*$	-1.74***	-2.00***	-1.74***	-1.99***

Notes: (i) the null hypothesis is the presence of unit root; (ii) \*, \*\*, \*\*\* means a p-value for the t-statistic >1%, >5% and >10% respectively. Otherwise said, \*\* implies that null hypothesis of unit root cannot be rejected at 5% significance level.

The results of the FMOLS estimation for equation (8) are highlighted in Table 2. The Hansen’s test accepts the existence of a cointegrating relationship at 10%, result that validates the theoretical specification of our model.

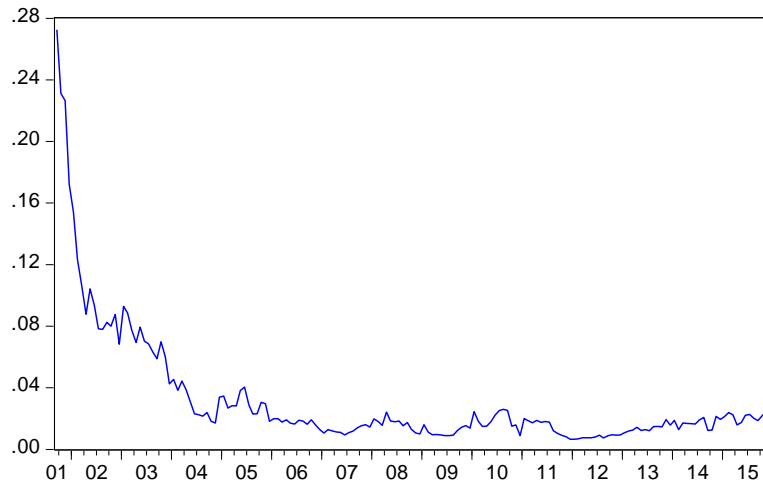
**Table 2. FMOLS estimation**

Parameter	$\upsilon_0$	$\upsilon_1$	$\upsilon_2$	$\sigma$
Estimated value	-0.037619	-0.012215***	0.000042***	0.201694***
t-statistic	-0.49	-10.59	8.97	8.88
Probability	0.6221	0.0000	0.0000	0.0000
$R^2 = 0.91$	Lc statistic = 0.561928		Probability Lc test = 0.1358	

Notes: (i) \*\*\*, \*\*, \* means significance at 1%, 5% et 10% significance level; (ii) Probability means p-value of the test of nullity ; (iii) Lc statistic is the statistic of the Hansen’s cointegration test (Hansen, 1992) and Probability Lc test is the p-value of test (the null hypothesis is cointegration).

All the parameters are significant and the  $\sigma$  elasticity of substitution is positive, as expected. However, similar to Albuлесcu and Pépin (2016), we report a low value for  $\sigma$  (0.20), which shows that the leu and the euro are rather complements than substitutes. The parameters  $\hat{\upsilon}_1$  and  $\hat{\upsilon}_2$  are significant, underlining that the euro liquidity service compared to that of the leu  $(1 - \delta(t, \epsilon_t)) / \delta(t, \epsilon_t)$  considerably diminished. Equation (7) allows to derive an estimate of this ratio date after date (Figure 3).

**Figure 3. Estimation of the  $(1 - \delta(t, \epsilon_t)) / \delta(t, \epsilon_t)$  ratio**



A simple examination of this figure highlights Romanians’ loss of interest for the euro. If at the end of 2001 the degree of liquidity of the euro was about 0.25 (indicating that four euros produce the same liquidity service as one leu), it has continuously declined until 2004, with a stabilization around a level of about 0.02. The complementary role of the euro became marginal nowadays.

## **Conclusions**

We build a generalized money demand micro-founded model which allows a change in the relative liquidity degree of the euro against the Romanian leu. The long-run money demand is influenced by the interest rate spread, a drop in this spread generating the loss of interest for the euro.

## **Acknowledgements**

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## References:

1. Albulescu, C.T., Pépin, D. 2016. The money demand in an open economy model with microeconomic foundations: An application to the CEE countries. hal-01348842 working paper. Available at: <https://hal.archives-ouvertes.fr/hal-01348842>.
2. Andronescu, A., Mohammadi, H., Payne, J.E. 2004. Long-run estimates of money demand in Romania. *Applied Economics Letters*, 11, 861–864.
3. Dreger C., Reimers, H-E., Roffia, B. 2007. Long-run money demand in the new EU member states with exchange rate effects. *Eastern European Economics*, 45, 75–94.
4. Dritsaki, M., Dritsaki, C. 2012. A panel data approach to the demand for money in Bulgaria and Romania. *Applied Economics Letters*, 19, 705–710.
5. Fidrmuc, J. 2009. Money demand and disinflation in selected CEECs during the accession to the EU. *Applied Economics*, 41, 1259–1267.
6. Hansen, B.E. 1992. Tests for Parameter Instability in Regressions with I(1) Processes. *Journal of Business and Economic Statistics*, 10, 321–335.
7. Hsieh, W-J., Hsing, Y. 2009. Tests of currency substitution, capital mobility and nonlinearity of Hungary's money demand function. *Applied Economics Letters*, 16, 959–964.
8. Komárek, L., Melecký, M. 2004. Money Demand in an Open Transition Economy: The Czech Republic, 1993-2001. *Eastern European Economics*, 42, 73–94.
9. Lucas R.E. Jr., Nicolini, J.P. 2015. On the stability of money demand. *Journal of Monetary Economics*, 73, 48–65.
10. Mulligan, R.F., Nijse, E. 2001. Shortage and currency substitution in transition economies: Bulgaria, Hungary, Poland, and Romania. *International Advances in Economic Research*, 7, 275–295.
11. Ruxanda, G., Muraru, A. 2011. Household money demand in Romania. Evidence from cointegrated VAR. *Technological and Economic Development of Economy*, 17, 382–396.
12. Siliverstovs, B. 2008. Dynamic Modelling of the Demand for Money in Latvia. *Baltic Journal of Economics*, 8, 53–74.
13. Van Aarle, B., Budina, N. 1996. Currency substitution and seignorage in Eastern Europe. *The Journal of Policy Reform*, 1, 279–298.



# **Monetary policy and monetary regimes in the Central and Eastern Europe**

**(in Bulgarian)**

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**Abstract:** *The choice of monetary regime is important in order to determine the monetary policy of a central bank and the implementation of instruments of this policy. Monetary policy is part of economic policy of the countries and the right choice of a monetary regime is important for the realisation of the ultimate goals of the monetary policy. The study aims to analyse the monetary regimes, applied in the countries in the Central and Eastern Europe in the period 2000-2015. The study confirmed that the countries in Central and Eastern Europe have chosen the appropriate monetary regimes such as currency boards and inflation targeting, which are stable and sustainable over time. The selected monetary regimes of the countries in Central and Eastern Europe allowing them to recover from the global financial crisis and to overcome the negative consequences from the crisis.*

**Key words:** *monetary regimes, monetary policy, exchange rate regimes, Central and Eastern Europe*

**JEL codes:** *E52, E58, F31*

## Паричната политика в страните от Централна и Източна Европа

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**Резюме:** *Изборът на паричен режим е важен с оглед на определянето на паричната политика на една централна банка и прилагането на инструментите на тази политика. Паричната политика е част от икономическата политика на страните и правилния избор на паричен режим е важен за реализирането на крайните цели на паричната политика. В настоящото изследване се цели да се анализират прилаганите парични режими в страните от Централна и Източна Европа в периода 2000-2015 г. В изследването се доказва, че страните в Централна и Източна Европа са избрали подходящи парични режими като парични съвети и инфлационно таргетиране, които са стабилни и устойчиви във времето. Избраните парични режими от страните в Централна и Източна Европа им позволяват да възстановят след глобалната финансова криза и да преодолеят негативните последици от нея.*

**Ключови думи:** *парични режими, парична политика, валутно-курсен режим, Централна и Източна Европа*

**JEL:** *E52, E58, F31*

## 1. Увод

Паричната политика на страните от Централна и Източна Европа се определя от паричните режими и валутно-курсните режими, действащи в тези страни. В исторически план съществуват различни парични режими, които се характеризират със своите предимства и недостатъци. Но, в икономическата литература все още няма обособено единно мнение, кой е най-подходящият паричен и валутно-курсен режим за конкретната страна. Така се обособява виждането, че нито един паричен и валутно-курсен режим е подходящ за всички страни по едно и също време<sup>1</sup>. Кой режим е подходящ за конкретната страна се определя от специфичните особености на страната, конкретното време, за което се определя този паричен и валутно-курсен режим и нивото на икономическото развитие<sup>2</sup>.

Страните се характеризират освен с различно ниво на икономическо развитие и с различно ниво на културни и социално-демографски характеристики. Поради това с оглед на извършване на анализ за резултатите от действието на конкретен паричен режим е необходимо да се изберат страни със сходно икономическо и социално развитие. Страните от Централна и Източна Европа (Чехия, Унгария, Полша, Естония, Литва, Латвия, Словакия, Словения, България и Румъния) са избрани за предмет на изследване в настоящата разработка. Тези страни си приличат по това, че те преминават през съществени трансформации на икономическите си системи от началото на 90-те години на миналия век. Това са страни, които избират в бъдеще да се присъединят към Европейския съюз и в последствие към Еврозоната и до този момент те имат правото да избират съответния валутно-курсен и паричен режим с оглед на постигането на целите на макроикономическата си политика<sup>3</sup>. Тези страни избират различни стратегии по отношение на прилаганата икономическа политика при техните усилия за постигането на изискванията за членство в Европейския съюз, а в последствие към еврозоната като в началото на прехода те прилагат различни парични режими и валутно-курсни режими. Една част от страните се ориентират към фиксиране на валутния си курс в началото на прехода и в последствие преминават към режим на плаващ курс (Чехия, Унгария, Полша,

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<sup>1</sup> За подробности виж. Frankel (1999), БНБ (2008).

<sup>2</sup> Според Мишкин (2014) таргетирането на валутния курс като алтернативна стратегия на парична политика не е най-добрата стратегия за парична политика да индустриалните страни, докато за нововъзникващите пазари, където паричните и политическите институции не функционират добре този режим е единствения начин за ограничаване на инфлационните очаквания (Мишкин (2014), с. 492).

<sup>3</sup> Някои страни вече са част от Еврозоната, а именно Словения (2007), Словакия (2009), Естония (2011), Латвия (2014), Литва (2015).

Словакия) или запазват фиксирания валутен курс за целия период на прехода (Естония, Литва, Латвия)<sup>4</sup>, а други страни започват първо с плаващи валутни курсове, а в последствие преминават към фиксиране на валутните си курсове (България) или запазват плаващия валутен курс за целия период (Румъния)<sup>5</sup>. Следва да се има предвид, че страните от Централна и Източна Европа, по пътя си към еврозоната се сблъскват и с редица предизвикателства и са изправени и пред негативните последици от проявлението на глобалната финансова криза. Глобалната финансова криза се отразява негативно на страните като една част от тях отчитат по-съществен спад на БВП, отколкото други страни от Централна и Източна Европа. Дали обаче, прилаганите парични и валутно-курсони режими влияят върху възстановяването на страните в Централна и Източна Европа?

В настоящото изследване се цели да се анализират прилаганите парични режими в страните от Централна и Източна Европа в периода 2000-2015 година. Този период е избран с оглед на това, че след 2000 година страните вече са приложили съответния предпочитан от тях паричен и валутно-курсони режим и са направили основните икономически и структурни реформи в прехода си от планова към пазарна икономика. Всички страни са преминали кризисните си периоди, свързани с прехода през 90-те години и са успели да стабилизируют икономиките си с оглед бъдещото членство в ЕС и еврозоната.

Тезата, която се защитава е, че страните от Централна и Източна Европа са избрали парични режими, които са стабилни във времето и им позволяват да се възстановят сравнително плавно след глобалната финансова криза и при двата основни парични режима на паричен съвет и на инфлационно таргетиране.

Настоящото изследване е структурирано по следния начин. Във втората част се разглежда същността на различните парични режими, техните недостатъци и предимства. В следващата част са представени паричните и валутно-курсони режими в страните от Централна и Източна Европа. Последната част представя основните заключения от анализа в хода на изложението.

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<sup>4</sup> Неновски (2009) ги нарича страни с тип „фиксиран старт“.

<sup>5</sup> Неновски (2009) ги нарича страни с тип „плаващ старт“.

## 2. Видове парични режими

Паричният режим може да се дефинира като съвкупност от формални правила, които определят динамиката на паричното предлагане. Bordo, Schwartz (1997) определят паричния режим като съставен от „ограничения, наложени от традициите, институциите и природата върху възможността на паричните власти да влияят на динамиката на макроикономическите величини“<sup>6</sup>. Авторите наблягат на важността на очакванията, които се отнасят до тези на публиката по отношение на действията на провеждащите паричната политика и тези на провеждащите паричната политика по отношение на реакцията на публиката, свързана с техните действия. Неновски, Христов, Петров (2001)<sup>7</sup> определят паричният режим като правила, които определят динамиката на паричното предлагане и механизмите, чрез които се контролират наложените правила. Неновски (2009)<sup>8</sup> подчертава, че паричният режим има две измерения, а именно вътрешно, което включва механизма на паричното предлагане, и външно, което включва режима на валутен курс. Именно поради тази причина са възможни различни комбинации на паричен режим и валутно-курсен режим, които ще бъдат проследени в следващата част и които са от значение по отношение на дефинирането на стратегията на паричната политика на една страна.

Съществуват различни видове парични режими в световен мащаб, което се наблюдава и на практика при отделните страни. Мишкин (1999)<sup>9</sup> предлага една от най-широко-известните класификации на паричните режими, която определя четири вида парични режими: таргетиране на валутния курс, таргетиране на паричен агрегат, таргетиране на инфлацията и парична политика с имплицитна, а не експлицитно зададена номинална котва. Всички те се основават на определяне на „номинална котва“, която се счита като основна предпоставка за успешен паричен режим поради възможността от ограничаване на инфлационните очаквания и постигането на основната цел на паричната

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<sup>6</sup> Bordo M., Anna Schwartz, (1997) Monetary Policy Regimes and Economic Performance: The Historical Records, NBER Working Papers Series, Working Paper 6201, стр. 4.

<sup>7</sup> Неновски, Н., К. Христов, Б. Петров (2001) От лев към евро: кой е най-добрият път?, издателство „Сиела“, София, стр. 13.

<sup>8</sup> Неновски, Н.(2009), Паричните режими в посткомунистическите страни. Дългосрочни перспективи, Агенция за икономически анализи и прогнози, Икономически изследвания, №2, стр. 4.

<sup>9</sup> Mishkin, F. International Experiences with Different Monetary Policy Regimes. NBER Working papers, No 7704, 1999.

политика – ценова стабилност и поради избягването на проблема с времевото несъответствие<sup>10</sup>.

При таргетирането на валутния курс стойността на националната парична единица се фиксира към стойността на стоки, чужда валута или кошница от валути. Този режим е привлекателен за малки отворени икономики, при които производството и потреблението са зависими от търгуеми стоки, имащи голям дял в икономиката и колебанията на валутния курс оказват значително влияние върху ценовото равнище. Най-твърдият ангажимент за спазване на фиксирания курс към чуждестранната валута или кошницата от валути има при паричен съвет, който се прилага сравнително в голяма степен в Централна и Източна Европа и до голяма степен се счита за успешна стратегия за влизане в еврозоната. Този режим, обаче, се свързва с няколко недостатъка най-вече загубата на независима парична политика<sup>11</sup> и отвореност към спекулативни атаки срещу валутата на страната.

При таргетирането на паричните агрегати се задава определена цел за паричния агрегат като нарастване с конкретен темп на прираст или увеличаване в определени граници, за да се постигне крайната цел на паричната политика – ценовата стабилност. Но, успешността на този режим зависи от това дали съществува ясно изразена връзка между таргетирувания паричен агрегат и инфлацията. Централната банка е изправена и пред избора на конкретен паричен агрегат с оглед на това, че тя може по-лесно да таргетира тесните парични агрегати, но те съответно имат по-слаба връзка с инфлацията и с основните макроикономически величини, които са и основни цели на паричната и икономическата политика като цяло. Като предимство на този режим се счита, че е лесно-разбираем за публиката, поради ясното дефиниране на целта, за която излизат статистически данни с много голяма честота. Това осигурява доверие в режима, особено при стриктното спазване на зададената цел.

Инфлационното таргетиране е паричен режим, при който централната банка публично обявява средносрочните цели за инфлацията като се ангажира да постигне

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<sup>10</sup> Този проблем възниква, когато паричните власти са притискани от правителството да провежда експанзионистична парична политика, която в краткосрочен план води до стимулиране на производството и заетостта, но в дългосрочен план води до по-висока инфлация.

<sup>11</sup> Някои автори, например Мишкин (2014), дори изтъкват, че за страните в преход, това не е толкова голям недостатък с оглед на това, че паричните власти на тези страни все още нямат достатъчно опит да провеждат парична политика и по-добре да се откажат от провеждането на такава.

ценова стабилност като основна дългосрочна цел на паричната политика. Този режим осигурява голяма прозрачност по отношение на прилаганата парична политика. Предимствата на инфлационното таргетиране са свързани с голямата отчетност на централната банка, която поема ангажимента постоянно да комуникира с публиката резултатите от провежданата парична политика, с недопускането на провеждане на експанзионистична парична политика, водеща до увеличаване на производството и заетостта в краткосрочен план, но водеща до инфлация в дългосрочен период, с разбираемостта си, осигурена по отношение на публиката. Недостатъци на инфлационното таргетиране са липса на гъвкавост поради трудности за реакция при непредвидени обстоятелства, разкриване на резултатите от паричната политика със закъснение, нисък ръст на икономиката и нарастващи колебания в производството.

При паричната политика с имплицитна, а не с експлицитна номинална котва, не се представят никакви експлицитни правила, но се следва стратегия за управление на паричната политика, която цели да постигне дългосрочната цел - ценовата стабилност.

### 3. Паричните режими в Централна и Източна Европа

През анализирания период 2000-2015 г. в страните от Централна и Източна Европа се прилагат два основни парични режима на инфлационно таргетиране и на таргетиране на валутните курсове с твърд ангажимент за поддържане на фиксирания валутен курс при условията, правилата и механизмите на паричен съвет (Таблица 1).

*Таблица 1. Парични и валутно-курсони режими в Централна и Източна Европа*

	Валутно-курсони режим	Паричен режим	Членство в Еврозоната
<b>България</b>	Фиксиран валутен курс	Паричен съвет	
<b>Естония</b>	Фиксиран валутен курс	Паричен съвет	От 2011 година и прилагане на парична политика без външно зададена котва
<b>Латвия</b>	Фиксиран валутен курс	Спазване на покритие на паричната база с валутни резерви	От 2014 година и прилагане на парична политика без външно зададена котва
<b>Литва</b>	Фиксиран валутен курс	Паричен съвет	От 2015 година и прилагане на парична политика без външно зададена котва
<b>Чехия</b>	Свободно плаване, а от 2014 г. управлявано плаване	Инфлационно таргетиране	
<b>Унгария</b>	Плаващ валутен курс	Инфлационно таргетиране	

<b>Полша</b>	Свободно плаващ курс	Инфлационно таргетиране	
<b>Румъния</b>	Плаващ валутен курс	Инфлационно таргетиране	
<b>Словения</b>	Управлявано плаване и фиксиран курс с отклонение +/-15 от юни 2004 г.	Инфлационно таргетиране	От 2007 година и прилагане на парична политика без външно зададена котва
<b>Словакия</b>	Управлявано плаване и фиксиран курс с отклонение +/-15 от ноември 2005 г.	Инфлационно таргетиране преди влизането в еврозоната	От 2009 година и прилагане на парична политика без външно зададена котва

Източник: МВФ

За целия анализиран период в *България* се прилага паричен съвет, който е въведен през юли 1997 г. след период на значителна инфлация (през 1996 г. инфлацията, измерена чрез индекса на потребителските цени възлиза на 311.6%). Преди това в страната се прилага паричен режим на таргетиране на паричните агрегати<sup>12</sup>, който се оказва твърде неуспешен.

В Естония се въвежда паричен съвет още през август 1992 г., поради инфлационния натиск вследствие на либерализацията на цените при прехода към пазарна икономика, разрешаването на проблемите с хроничния недостиг на пари в брой и възстановяване на равновесието на търсенето и предлагането<sup>13</sup>. Страната запазва паричния съвет до влизането ѝ в еврозоната благодарение на това, че този паричен режим е подкрепен и със съответната политика, насочена към полагане на максимални усилия за постигане на балансиран бюджет, затварянето на банки в несъстоятелност и ангажимента за поддържането на паричния съвет, въпреки Руската криза през 1998 г. и глобалната финансова криза през 2008-2009 г.

В Литва също се прилага паричен съвет от април 1994 година. В периода от въвеждането на паричния съвет до 1 февруари 2002 година литът е фиксиран към американския долар, а от 2 февруари 2002 година литът е фиксиран към еврото при курс

<sup>12</sup> През 1996 г. след подписването на четвъртото стендбай споразумение с МВФ се определят конкретни индикативни цели за резервните пари като оперативна цел и за широкия паричен агрегат М3 като междинна цел, но те са трудно постижими в условията на банкова криза и теглене на депозити. Програмата на МВФ е ориентирана към паричното предлагане, но провеждането на парична политика чрез таргетиране на паричните агрегати в период на криза на доверието може да бъде трудно изпълнима поради това, че търсенето на пари е нестабилно и се нарушава връзката между оперативните, междинните и крайните цели (Roussanova (2002)).

<sup>13</sup> Fabris, N., Rodic, G. The efficiency of the currency board arrangement, *Journal of Central Banking Theory and Practice*, Vol 1, pp 157-176, 2013.



3,45280 лита за 1 евро. От юни 2004 г. Литва влиза в Европейския валутен механизъм II при същия валутен курс с граници на колебание +/- 15% около централния паритет.

Латвия прилага фиксиран курс от февруари 1994 година до края на 2004 година като латът е фиксиран към специалните права на тираж. От началото на 2005 г. латът е фиксиран към еврото при валутен курс 0,702804 лата за 1 евро с допустими граници на отклонение +/- 1% около централния паритет. Следва да се има предвид, че Латвия въпреки, че не въвежда паричен съвет спазва правилата на този режим за покритие на паричната база с валутни резерви.

Чехия въвежда инфлационното таргетиране от началото на 1998 г. като не променя своята основна цел за постигане на ценова стабилност, но променя начина, по-който ще реализира тези цели. Още в началото на въвеждането на инфлационното таргетиране в Чехия централната банка обявява целта си за постигане на средносрочна „нетна“ инфлация до края на 2000г. в границите на 3,5%-5,5%. За да ограничи инфлационните очаквания централната банка задава и граници, в които следва да бъде инфлацията в края на 1998 г., а именно – 5,5%-6,5%. През 2001 г. централната банка на Чехия взема решение да таргетира инфлацията, измерена чрез индекса на потребителските цени, и дефинира съответните граници на колебание около съответния таргет. От началото на 2006 г. се определя инфлационна цел от 3% с отклонение +/-1 процентни пункта, а през март 2007 г. е променена целта на 2%, която да влезе в сила от 2010 г. с отклонение +/-1 процентни пункта и да остане такава до влизането на страната в еврозоната. В първите години на прехода Чехия прилага таргетиране на валутния курс. През 1997 г. Чехия взема решение да прилага режим на управлявано плаване с инфлационно таргетиране като през 2001 г. страната започва да прилага свободно плаване<sup>14</sup>. През 2014 г. Чешката централна банка в условията на паричен режим на инфлационно таргетиране решава да повлияе експанзионистично на икономиката, стимулирайки вътрешното търсене чрез активна намеса на валутния пазар при осъществявяните на валутни интервенции и ясно дефинирана цел на достигане на определена стойност на валутния курс на кроната към еврото. Централната банка се стреми да поддържа валутен курс 27 крони за едно евро до края на 2016 г. като се очаква тази политика да продължи и през 2017 г. Така централната

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<sup>14</sup> Bubula, A. and Otker-Robe, I. (2002). The evaluation of exchange rate regimes since 1990: Evidence form de facto policies, IMF working paper series, No 155.

банка през 2014 г. преминава при валутно-курс режим на управлявано плаване поради невъзможността да прилага традиционните инструменти на парична политика за стимулиране на икономиката в условията на близки до нулата лихвени проценти.

Унгария също въвежда инфлационно таргетиране през 2001 г. като нейната основна цел е постигане на ценова стабилност. Централната банка трябва да следва определените инфлационни цели като определя още при въвеждането на паричния режим през юни 2001 г. постигането на инфлационна цел от 7% в края на 2001 г. и 4,5% в края на 2002 г. До 2006 г. инфлационната цел се определя за всяка година отделно. През август 2005 г. централната банка определя за цел инфлация, измерена чрез индекса на потребителските цени, от 3% за средносрочен период, която цел да започне да бъде изпълнявана през 2007 г. с ангажимент за преразглеждане на целта през 3-5 години. През март 2015 г. централната банка въвежда възможност за отклонение +/-1% около определената цел от 3%. По отношение на валутния курс страна прави чести промени на прилагания валутно-курс режим през 90-те години. Тя започва прехода към пазарна икономика с фиксиран курс<sup>15</sup>, след което през 1995 г. страната преминава към плъзящ валутен курс с определен коридор на обезценка. През 2001 г. Унгария отново преминава към фиксиран валутен курс с допустими граници на отклонение от +/-15%. През 2008 г. страната преминава към свободно плаващ валутен курс<sup>16</sup>.

Полша прилага режим на свободно плаващ валутен курс от 2000 г. насам. Паричният режим в страната е инфлационно таргетиране, което е въведено от 1998 г. От 2004 г. централната банка на Полша прилага инфлационна цел 2,5% при граници на отклонение +/-1 процентни пункта.

Румъния прилага режим на таргетиране на валутния курс през периода 2000-2004 г., а от 2005 г. въвежда инфлационно таргетиране с управлявано плаване на валутния курс<sup>17</sup> с оглед на осигуряване на гъвкава политика при необходимост и неочакван негативен шок, който би повлиял на икономиката.

Словакия и Словения са страните от Централна и Източна Европа, които най-бързо влизат в еврозоната и започват да прилагат общата парична политика, дефинирана от ЕЦБ.

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<sup>15</sup> Неновски, Н.(2009), Паричните режими в посткомунистическите страни. Дългосрочни перспективи, Агенция за икономически анализи и прогнози, Икономически изследвания, №2, стр. 7.

<sup>16</sup> От 2010 г. МВФ определя режима на валутен курс в Унгария като плаващ (виж МВФ, 2010).

<sup>17</sup> IMF. (2005) De Facto Classification of Exchange Rate Regimes and Monetary Policy Framework.

Словакия прилага паричен режим, характеризиращ се с липсата на определена външно зададена номинална котва преди 2004 г., докато след това въвежда инфлационното таргетиране до влизането си в еврозоната през 2009 г. Тя става част от ЕВМ II през ноември 2005 г. при централен паритет от 38.4550 словашки крони за едно евро и възможно отклонение +/-15%. След като ревалоризира валутата си два пъти през май 2007 и май 2008 г. влиза в еврозоната. Преди влизането си в ЕВМ II прилага управлявано плаване. Словения прилага управлявано плаване на валутния си курс като през юни 2004г. влиза в ЕВМ II при централен паритет и възможно отклонение от +/-15%. Следва да се има предвид, че Словакия и Словения влизат по-бързо от останалите страни в Централна и Източна Европа в еврозоната и прилагат през по-голяма част от анализирания период общата парична политика на еврозоната, поради което дефакто условно се съпоставят с останалите страни от Централна и Източна Европа.

#### **4. Заключение**

В изследването бяха изследвани паричните режими в Централна и Източна Европа и резултатите от прилаганите парични режими. В Централна и Източна Европа се прилагат два основни парични режима на парични съвети или фиксирани валутни курсове и на инфлационно таргетиране с плаващи валутни курсове. В изследването бе обхванат периода 2000-2015 г. с оглед на относителното стабилизиране на икономиките след първите десет години на прехода им от планова към пазарна икономика. При анализа на прилаганите парични режими се установява, че тези страни запазват прилаганите си парични режими дори и в условията на криза. Глобалната финансова криза не се оказва причина за промяна на паричните им режими, което доказва относителната стабилност на тези два вида парични режими, прилагани за малки отворени икономики. Някои от страните – Естония, Словения, Словакия, Литва и Латвия променят паричния си режим и паричната си политика в този период, но поради влизането им в еврозоната и прилагането на общата парична политика.

## **Библиография:**

1. Международните валутни режими. БНБ. (2008).
2. Международни валутни резерви. С.: БНБ, 2008, 242 с.
3. Bubula, A. and Otker-Robe, I. (2002). The evaluation of exchange rate regimes since 1990: Evidence form de facto policies, IMF working paper series, No 155
4. IMF (2010). Appendix II Financial operations and transactions.
5. Неновски, Н.(2009), Паричните режими в посткомунистическите страни. Дългосрочни перспективи, Агенция за икономически анализи и прогнози, Икономически изследвания
6. IMF. (2005) De Facto Classification of Exchange Rate Regimes and Monetary Policy Framework

# **Financial sustainability of financial safety net and particularly of the deposit insurance systems and investors compensation funds**

**(in Bulgarian)**

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**Abstract:** *The financial safety net is one of the state's tools to limit some of the undesired outcomes of financial markets turmoil regarding failure of investment institutions which sometimes leads to loss of clients' assets and nevertheless to loss of confidence. We can differentiate the financial safety net in three main segments of the financial sector - banking, capital and social insurance market. From the point of providing stability in the financial sector it could be better to use the term "financial system security".*

*The purpose of the financial safety net is generally to lower the risk of losses not only for the financial institutions but also for their clients. Most often the term "Financial safety net" is associated with the banking sector including three components: 1) regulation and supervision of the banking system; 2) the central bank as a lender of last resort and 3) deposit insurance. The other two markets have no lender of last resort, but first two components are at place – the legal framework requirements and the investor protection institutions, where the latter guarantee investor claims in a case of financial intermediary default. On the capital market such institutions are investor compensation schemes, which protect investors in financial instruments.*

*The paper observes and investigates the factors that impact the financial sustainability of the financial safety net participants as it is considered to be a key element for financial sustainability of countries.*

**Key words:** *deposit insurance, investor compensation, sustainability, regulation.*

**JEL codes:** *G18, G21, G28.*

## **Финансова устойчивост на мрежата за финансова сигурност и в частност на фондовете за гарантиране на влоговете в банките и на фондовете за компенсиране на инвеститорите**

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**Резюме:** *Мрежата за финансова сигурност е един от инструментите, чрез които държавата е намерила начин да се ограничат нежеланите ефекти от сътресенията на финансовите пазари, изразяващи се във фалити, загуба на активи и не на последно място загуба на доверие. Може да разграничим мрежата за финансова сигурност в трите главни сегмента на финансовия сектор - банковия, капиталовия и застрахователния пазар. От гледна точка осигуряване стабилността на финансовия сектор може да се използва изразът „система за финансова сигурност“.*

*Предназначението на мрежата за финансова сигурност е да се намалят рисковете от загуби, както за самите институции, така и за техните клиенти. Най-често понятието „мрежа за финансова сигурност“ се асоциира с банковия сектор, като то включва три компонента: 1) регулирането и надзора на банковата система; 2) централната банка като кредитор от последна инстанция и 3) защитата на депозитите. На останалите пазари отсъства кредитор от последна инстанция, но присъстват другите два компонента - разпоредбите на нормативната рамка и институциите за защита на клиентите, които гарантират техните вземания, в случай на несъстоятелност на финансовия посредник. На капиталовия пазар към защитните институции се отнасят схемите за компенсиране на инвеститорите.*

*Настоящият доклад разглежда и изследва факторите, които влияят върху финансовата устойчивост на мрежата за финансова сигурност, тъй като се приема че тя има ключова роля за финансовата устойчивост на страните като цяло.*

**Ключови думи:** *защита на депозитите, защита на инвеститорите, устойчивост, регулации.*

**JEL код:** *G18, G21, G28.*

## **Въведение**

Мрежата за финансова сигурност е един от инструментите, чрез които държавата е намерила начин да се ограничат нежеланите ефекти от сътресенията на финансовите пазари, изразяващи се във фалити, загуба на активи и не на последно място загуба на доверие. Понятието „мрежа за финансова сигурност“ се употребява понякога с различно съдържание. Поради широкото му приложение в трите главни сегмента на финансовия сектор (банковия, капиталовия и застрахователния пазар), може би е по-точно да се говори за мрежи за финансова сигурност в тези области. От гледна точка осигуряване стабилността на финансовия сектор може да се използва изразът „система за финансова сигурност“.

Предназначението на мрежата за финансова сигурност е да се намалят рисковете от загуби, както за самите институции, така и за техните клиенти. Най-често понятието „мрежа за финансова сигурност“ се асоциира с банковия сектор, като то включва три компонента: 1) регулирането и надзора на банковата система; 2) централната банка като кредитор от последна инстанция и 3) защитата на депозитите. На останалите пазари отсъства кредитор от последна инстанция, но присъстват другите два компонента - разпоредбите на нормативната рамка и институциите за защита на клиентите, които гарантират техните вземания, в случай на несъстоятелност на финансовия посредник. На капиталовия пазар към защитните институции се отнасят схемите за компенсиране на инвеститорите. В застрахователния сектор такива схеми за защита има, но те са по-малко на брой и все още не са задължителни в ЕС - в България такава схема е обезпечителният фонд, който се администрира от гаранционния фонд „Гражданска отговорност“ и който гарантира вземанията на потребители на застрахователни услуги при несъстоятелност на застраховател. В някои страни членки на ЕС са създадени защитни схеми в областта на пенсионното осигуряване, но те са насочени към гарантиране получаването на определена доходност от инвестициите на пенсионните дружества.

Съществуването на посочените по-горе схеми се оспорва от някои икономисти, защитаващи тезата за ненамеса на държавата в пазарните отношения. Противопоставянето се аргументира с разходите, които тези схеми налагат, от една страна, и от друга, с моралния риск, който се създава и който отслабва или премахва пазарния натиск и пазарната дисциплина.

В областта на капиталовия пазар, през 1970 г. в САЩ е основана Корпорацията за защита на инвеститорите в ценни книжа (Securities Investor Protection Corporation). От тогава досега значителен брой държави последваха примера на САЩ и също създадоха схеми за компенсиране на инвеститорите във финансови инструменти като особено активно тези процеси се развиват през първото десетилетие на 21 век. Все още има много държави обаче, в които не са изградени такива структури. От друга страна, съществуващите схеми се различават значително по обхват, лимит на компенсация и структура. С развитието на финансовите пазари се променят пазарните условия, нормативната уредба и движението на инвестициите. Глобализацията също повлиява значително финансовата среда и финансовата инфраструктура в национален и световен мащаб. Същевременно неизбежна е еволюцията и развитието на системата за финансова сигурност, като особено предизвикателство се оказват схемите за защита на депозитите и схемите за защита на инвеститорите във финансови инструменти. В последните 2 години се наблюдава развитие на тези системи в насока увеличаване на отговорностите и правомощията им при реструктуриране и възстановяване на кредитни институции и инвестиционни фирми. В тази нова функция на системите се въвежда нов тип защита, целяща да предотврати евентуално затваряне на дадена финансова институция, като по този начин самата институция се спаси, но също и да се похарчат по-малко ресурси, отколкото при алтернативата да се изплащат компенсации при фалит.

В редица научни изследвания, занимаващи се с ролята на гарантирането на депозитите, се доказва, че при липса на добра институционална среда, която не само да налага регулации, но и да следи за тяхното спазване, наличието на защитни схеми, особено в банковия сектор, увеличава моралния риск и може да има силно негативен ефект върху банковата стабилност, водещ дори до банкови и финансови кризи. Открива се обаче и обратната зависимост, а именно, че защитата на инвеститорите и особено на вложителите в банките е необходима и има положително влияние върху стабилността на сектора в държави, където действа ефективен финансов надзор. Проблем остава моралният риск при защитата на депозитите и съответните ефекти от него.

### **Финансова устойчивост**

Като основен проблем, засягащ функционирането и стабилността на мрежата за финансова сигурност, разглеждайки нейните компоненти за защита на вложителите и



защита на инвеститорите във финансови инструменти, може да се посочи устойчивостта на тези системи по отношение на финансирането им.

Този проблем е последователно обвързан с размера на осигуряваната защита от съответните схеми (лимита на компенсация), дялът на защитените инвеститори, с начина на определянето на вноските, които да се набират от участниците в тях и не на последно място нивото от необходими ресурси за изплащане на компенсации. Тези четири елемента са представени на Фигура 1.

*Фиг. 1*

*Елементи на финансовата устойчивост в мрежата за финансова сигурност*



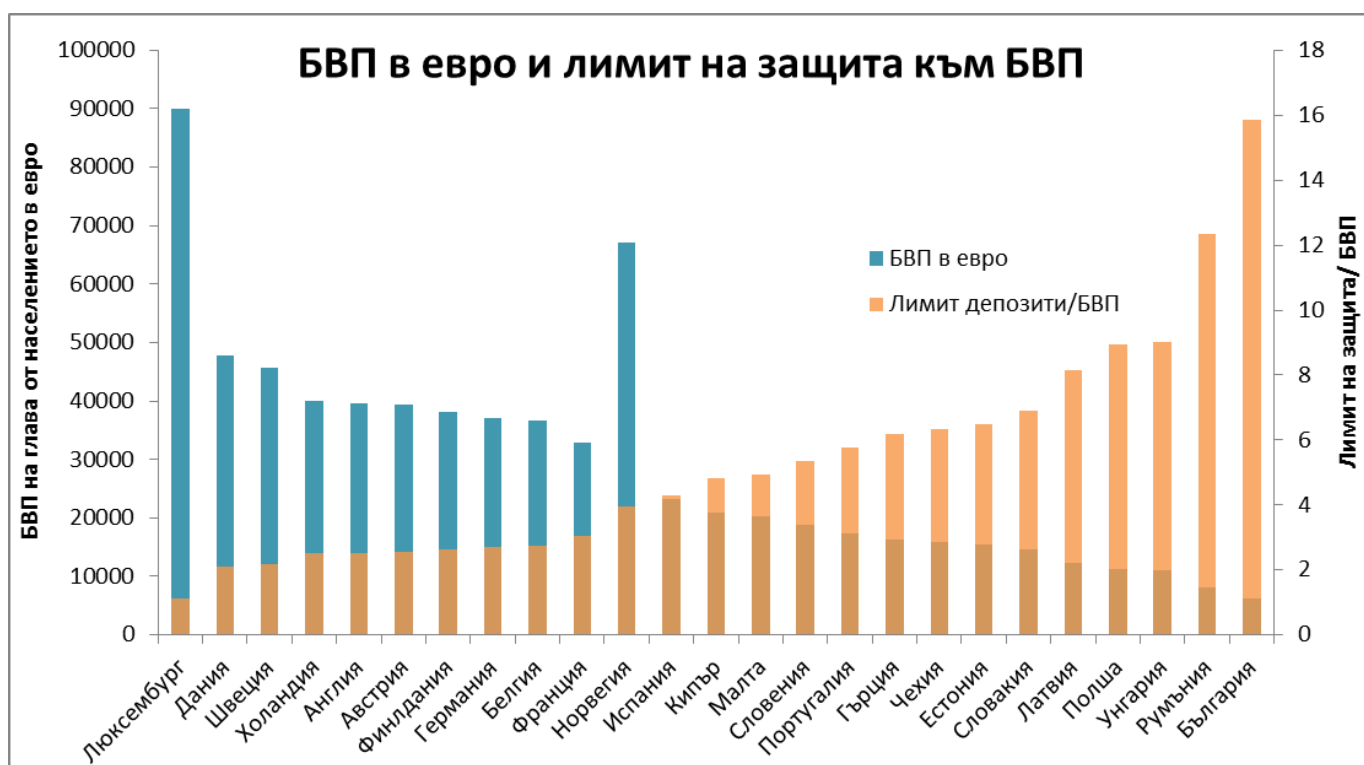
Посочените четири проблема са обвързани по следния начин:

- **Лимитът на защита** определя от една страна процентът на защитените инвеститори, а от друга размера на плащанията за компенсации. Т.е. той е много важен за устойчивостта на мрежата, защото ако е твърде висок би довел до големи компенсации, които да застрашат финансовата стабилност на схемите, а от друга страна, ако е твърде нисък може да предизвика по-малко доверие и нестабилност при финансови кризи. Има и трети фактор, който обикновено не се взема предвид – по принцип създаването на схемите за защита на инвеститорите е с цел да се противопостави на масовото изтегляне на средства от финансовите

институции. В тази връзка лимитът на компенсация следва да бъде този праг, над който, ако средствата бъдат изтеглени, стабилността на финансовата институция не би била засегната, т.е. ако инвеститори с активи на сума над лимита на защита ги изтеглят от затруднената институция, то това да не повлияе на нейната стабилност. Тук обаче значение има не само броят на не напълно защитените инвеститор, но и обема на техните средства. Този въпрос ще бъде засегнат по-подробно по-нататък.

- Един от индикаторите за оценка на лимита на компенсация е БВП и по точно, чрез съотношението: сума на лимита към БВП на глава от населението. По препоръки на МВФ това съотношение трябва да бъде между 1 и 2. Според икономистите държавите, в които сумата на покритие е четири или повече пъти по-голяма от БВП на глава от населението, са 5 пъти по-предразположени към банкови кризи, отколкото държави, в които това отношение е под единица. На Фигура 2 е представен БВП на глава от населението и отношението на лимита на защита на влоговете към БВП за 2015 г.

Фиг. 2



Източник: по данни от Евростат и схемите за защита на влоговете в ЕС.

В Приложение 1 е представена и информацията в табличен вид.

Единствено Люксембург е с индикатор под 2, доближаващ се до 1. България е с най-голям стойност на индикатора – над 15. Единадесет страни са с индикатор над 5.

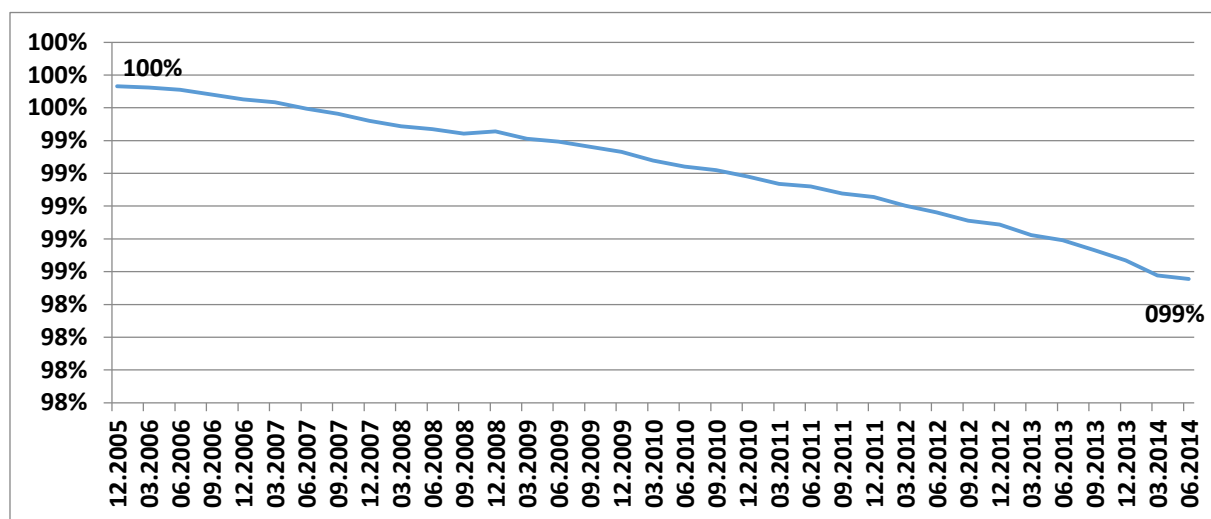
### За България

Личи си по този индикатор, че лимитът е твърде завишен. Този факт ще коментираме по-нататък при модела за устойчиво финансиране на схемите. Хипотезата е, че ако не бе толкова висок, плащанията по компенсациите за клиентите на КТБ щяха да са на значително по-ниска сума, което щеше да е по-благоприятно за схемата в по-дългосрочен план от гледна точка на нейното финансиране. Сам по себе си този индикатор не е достатъчен, за да се направят изводи и заключения. Нека погледнем, как стоят нещата в България.

Проблемът за лимита на компенсация е подробно разгледан в предишни изследвания, като се доказва, че в рамките на България поставеното ниво от 100000 евро е много високо, повече отколкото е необходимо за целите на мрежата за финансова сигурност.<sup>1</sup> На Фигура 3 е представен дялът на депозитите на домакинствата в размер до 20 000 евро, колкото бе и лимитът преди 2010 г.

Фиг. 3

Обем на депозитите на домакинствата до 20 000 евро.



Източник: информация от сайта на БНБ.

<sup>1</sup> Виж Митева, Д. THE CONTEMPORARY DEPOSIT INSURANCE THROUGH THE PERSPECTIVE OF BANK RESOLUTION AND MORAL HAZARD, Economic Alternatives Journal, Issue 1, 2015.

Вижда се, че едва 1,5% са депозитите на домакинствата на обща сума над 20 000 евро.

### Анализ на депозитите в България

На следващите две таблици е дадена информация за депозитите по групи и по размер към септември 2016 г.

Интересно е да се види, че в обхвата на защита до 100 хил. евро попадат 98% от депозитите на нефинансовите предприятия и 99,9% от депозитите на домакинствата или почти 100 % от депозитите. Разбира се, тук следва да се изключат тези, които не подлежат на защита, съгласно законодателството, т.е. евентуално горните проценти биха могли да нараснат. Вижда се, че един лимит от 50 хил. лв. би покрил 93% от депозитите на нефинансовите предприятия и почти 99% от депозитите на домакинствата, което е значително покритие. Тези данни недвусмислено показват, че лимитът от 100 хил. евро за България е твърде висок.

*Таблица 1. Депозити на нефинансови предприятия към 9.2016 г. в България*

Нефинансови предприятия					
	Депозити хил. лв.	Дял	Среден размер на депозита в групата (деп./брой)	Брой депозити	Дял
до 40000 лв.	1,526,659	8%	2840	537,594	92%
от 40 хил. до 50 хил.	272,196	1%	44828	6,072	1%
от 50 хил. до 100 хил.	1,082,432	6%	70882	15,271	3%
от 100 хил. до 200 хил.	1,652,477	9%	144954	11,400	2%
над 200 хил.	14,051,840	76%	1077182	13,045	2%
<b>Общо</b>	<b>18,585,604</b>	<b>1</b>		<b>583,382</b>	<b>100%</b>

*Източник: по данни от БНБ към 09.2016 г.*

*Таблица 2. Депозити на домакинства към 9.2016 г. в България*

Домакинства					
	Депозити хил. лв.	Дял	Среден размер на депозита в групата (деп./брой)	Брой депозити	Дял
до 40000 лв.	24,532,441	56%	2411	10,174,771	98%
от 40 хил. до 50 хил.	2,367,111	5%	44480	53,218	1%
от 50 хил. до 100 хил.	6,810,600	16%	68534	99,376	1%
от 100 хил. до 200 хил.	5,725,488	13%	140506	40,749	0,4%
над 200 хил.	4,397,000	10%	512471	8,580	0,1%
<b>Общо</b>	<b>43,832,640</b>	<b>1</b>		<b>10,376,694</b>	<b>100,0%</b>

*Източник: по данни от БНБ към 09.2016 г.*

Интересна е и друга информация, а именно средната сума на депозитите по групи, като за домакинствата до 40 хил. лв. спестявания, средно е 2411 лв., а за предприятията е 2840 лв. Доста ниски суми в сравнение с лимита. Т.е. лимитът от 100 000 евро е 81 пъти по-висок от средната сума на спестявания на 98% от домакинствата.

Ясно е, че този лимит е много висок, въпросът е какъв да бъде, така че от една страна да са доволни спестителите, а от друга да се запази стабилността и доверието в банковата система. Ако се спази схващането, че над 5 съотношение лимит/БВП на гл. н. е показател за кризи, то може да се приложи то да е около 5 или около 30000 евро лимит на защита е съвсем удачен за България, покриващ над 99% от вложителите (домакинства).

Този въпрос ще бъде последователно разглеждан по-нататък.

### **Устойчиво финансиране на схемите**

Има различни подходи за оценка на потенциалните плащания по компенсации. Тук ще бъде използван част от подхода, разработен в дисертационен труд на тема „*Развитие на схемите за защита на инвеститорите във финансови инструменти и граници на защитата*“, защитен през 2013 г.<sup>2</sup> По-същество примерните данни от модела са за схемите за защита на инвеститорите във финансови инструменти, но самият модел е напълно приложим и за схемите за защита на депозитите. Единствената разлика би била в начина по определяне на потенциалните компенсации. Докато при схемите за защита на инвеститорите във финансови инструмент по-рядко се събира информация за клиентските активи, поради което се налага формирането на приближения за изчисления на потенциалните плащания по компенсации, при банковите институции данните са регулярни и с точност се знае величината на потенциалните плащания, което отхвърля нуждата от допълнително сметки.

В краткосрочен период до една година би могло да се прогнозира сумата на потенциалните компенсации, както и размерът на вноските на участниците в една схема. Обикновено честота на фалитите е малка, с изключение на някои схеми като английската, където има по-няколко десетки фалита на година. Не малко схеми все още не са изпитали нито един случай на компенсации, а други са били задействани, но рядко. Това ни дава основание, да смятаме, че в краткосрочен период стабилно състояние на една схема би било това ниво на финансиране, което може да гарантира изплащане на компенсации на клиентите на средно голям участник (т.е. без най-

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<sup>2</sup> Митева Д., РАЗВИТИЕ НА СХЕМИТЕ ЗА ЗАЩИТА НА ИНВЕСТИТОРИТЕ ВЪВ ФИНАНСОВИ ИНСТРУМЕНТИ И ГРАНИЦИ НА ЗАЩИТАТА, Дисертационен труд, 2013 г., УНСС. С. 129-158.

големите случаи, т.н. твърде големи). Ако дълго време не е имало случаи за изплащане на компенсации, могат да се съберат средства, които да бъдат достатъчни дори и за покриване на някои от най-големите случаи, което зависи много от разпределението на клиентите и техните активи. По принцип е трудно да се поддържат средства, които да бъдат достатъчно за покриване на плащания по най-големите фалити, какъвто бе случаят и с КТБ в България. Не само, че е трудно, но не е и препоръчително, толкова голяма сума да бъде задържана, вместо да циркулира в икономиката и да носи добавена стойност. Тук опираме отново до същността и първоначалната идея за създаване на схемите за защита- да имат психологически ефект върху инвеститорите, като ги възпират от масово теглене на вложения в във финансови активи при нестабилност на финансовите пазари.

Трябва да се отбележи, че е възможно експозицията на една схема към участника, имащ най-голям пазарен дял, да не е най-голямата, защото тази експозиция зависи от частта на защитените клиентски активи към общата сума на управляваните от него активи, а също и от броя на клиентите, имащи активи в размери над лимита на предоставяната компенсация. Т.е. потенциалните компенсации не зависят единствено от общата сума на държаните клиентски активи, но също и от размера на активите на отделните клиенти, които подлежат на компенсация. Така може да се случи експозицията към най-големия участник на пазара да не е най-голяма, а дори да попада в обхвата на възможностите на схемата да покрие евентуалните задължения.

Установяването на минимално ниво на разполагаемите ресурси е много важен момент, защото от него зависи краткосрочната стабилност на схемата и способността ѝ бързо да изплати дължимите суми. Поради това е добре да се търси величина, която е максимално близка до вероятността за изплащане на компенсации.

Колкото по-голяма е вероятността да се посрещне случай на изплащане на компенсации, толкова по-стабилна ще бъде една схема. За добро финансово обезпечение е добре да имаме поне 95% вероятност. В повечето случаи в останалите 5% се крие рискът да фалира някоя от най-големите компании, което е по-малко възможно, тъй като по-големите компании се предполага, че се управляват по-добре, имат по-големи буфери (капиталови резерви) и са по-малко зависими от отделните клиенти, а също би трябвало да подлежат и на по-строг контрол, макар че по-сложните

компания са по-трудни за надзор и понякога по-лесно биха прикрили нередности в сравнение с по-малките инвестиционни фирми.

**Обобщение:** Може да обобщим, че от нивото на стабилност, което си поставя за цел управлението на една схема, може да се установи минимално ниво на разполагаемите ресурси, под което средствата на схемата не трябва да падат. Също така, може да се изчисли и процентът на покритие на наличните ресурси спрямо потенциалните плащания за компенсация. В случай, че нивото на сигурност ниско, то може да се таргетира минимален фонд, който да се достигне в определен период от време. Обикновено минималното целево ниво на средствата трябва да се достига бързо и да не се позволява спадане на ресурсите под него.

Това ниво гарантира, че в краткосрочен период (до 1 година) при нормална обстановка схемата ще може да покрие почти всеки фалит (без особено големите) или няколко по-малки фалита. Тази сума може да се разглежда като минималния фонд средства, с който всяка схема в нормална обстановка (не кризисна) трябва да разполага, но в същото време крайно нежелателно е падането на средствата под този минимум, тъй като това би означавало нарастване на вероятността при случай на изплащане на компенсации събраните от схемата средства да се окажат недостатъчни.

В някои схеми има подобни разпоредби, които не позволяват ресурсите им да спадат под определено ниво. Недостатък на съществуващите разпоредби е липсата на конкретни изчисления. Лимитите обикновено се установяват наслуки, например 7 млн. евро при италианската схема, която се финансира ex-post, но поддържа този минимум постоянно, независимо, че стойността на клиентските активи постоянно се променя.

Важно е изчислението и на средната стойност на очакваните загуби. Изчислението на тази сума би спомогнало да се определи с колко средно биха недостигнали средствата на една схема, като това ще помогне планирането на ресурсите ѝ, както и осигуряване на начини за допълнително привличане на средства. Когато е известна приблизителната сума, която може да се наложи да се плаща, по-лесно може да се предвиди откъде да се търси в случай на необходимост.

### Устойчив целеви фонд (дългосрочен период)

Минималният размер на целевия фонд не е достатъчен за устойчивата стабилност на една схема, тъй като може да се наложи почти цялостно разходване на средства в случай на задействане на схемата, което, разбира се, зависи също от честотата на случаите за компенсация, както и от мащаба им. В краткосрочен период този фонд би гарантирал стабилност на една схема, но тя следва да се стреми към увеличаването му, защото в дългосрочен период (над 1 година), стабилността на схемата може да бъде под въпрос.

Ако се вземе примерът с КТБ АД(н), експертите по-скоро биха казали, че няма как ФГВБ да беше събрал сума, достатъчно за изплатените близо 3,7 млрд. лв. Погледнато от тази страна в абсолютна сума, може би е вярно като твърдение, но ако се приеме фактът, че лимитът от 100 хил. евро е много над необходимия в България, то при определяне на устойчив лимит, най-вероятно сумата щеше да е значително по-малко и „по силите“ на Фонда.

За да се гарантира нормална защита във всеки един момент, схемата трябва да може да покрие плащания за един средно голям участник  $C_{ave}$  или  $FS_{min}$ . Т.е. това следва да е сумата, под която средствата на схемата не следва да падат. Не може да се твърди, че е достатъчно да се поддържа само  $C_{ave}$ , тъй като в много случаи, тя се набавя в продължение на няколко години, т.е. ако бъде изразходена за един случай, то за схемата ще последва един неустойчив период, в който тя да набави отново необходимия ресурс, за да се върне в относително стабилно положение, какъвто може да се каже е примерът с България. И ако в този период отново се наложи да изплаща компенсации, лесно може да изпадне в неплатежоспособност и да се постави под въпрос стабилността и най-вече доверието в системата. Затова схемите трябва да разполагат с по-висока сума на средствата в дългосрочен период.

Нивото на защита (лимитът на компенсация) зависи от една страна процентът на защитени инвеститори, но от друга и размерът на общите суми, които схемите следва да плащат. Ако този размер е твърде голям, това ще наруши устойчивостта на схемите и те може да изпаднат в невъзможност да функционират. От друга страна, големият размер компенсации би довел до значителни вноски от страна на участниците в



защитните схеми, което от своя страна може да повлияе на тяхната финансова стабилност.

Съществува и третата опасност, схемите да не се финансират по начин, който да гарантира тяхната устойчивост, а именно че ще разполагат с достатъчно средства в средносрочен план за изплащане на компенсации. За да се гарантира такова ниво на средствата, следва да се прогнозираят евентуалните плащания, които могат да възникнат, както бе направено по-горе.

Основна теза на изследването е, че при формиране на модел за устойчивостта на тези системи, следва да се вземат предвид трите направления, описани по-горе, като се определи такова ниво на защита, което да гарантира стабилността на финансовия пазар, покривайки масата от инвеститорите, но същевременно да не претоварва системите с непосилни разходи, и да позволява адекватното им финансиране.

## **Заклучение**

Направеният анализ сочи, че са налице редица елементи, които влияят на финансовата устойчивост на системата за защита на инвеститорите. Също така, предвид ключовата роля на институциите, част от тази система, следва финансовата устойчивост да не се пренебрегва, тъй като тя може да има заразен ефект към други структури на финансовия и икономическия сектор на една страна, в случай на нейна нестабилност. Основните моменти, на които следва регулаторите да обърнат внимание, са по отношение на навременното и адекватно ниво на финансиране, както и по отношение на избора на целесъобразен и по-скоро устойчив лимит на защита.

Обект на бъдещи изследвания за оценка на финансовата устойчивост на мрежата за финансова сигурност, би бил модел на индикатор.

Изграждането на такъв индикатор би имал за цел да даде информация доколко системата е устойчива. Добре би било този индикатор да се изчислява за отделните схеми за защита, като след това може да се изчисли общо за дадена страна.

**Библиография:**

1. Митева Д., РАЗВИТИЕ НА СХЕМИТЕ ЗА ЗАЩИТА НА ИНВЕСТИТОРИТЕ ВЪВ ФИНАНСОВИ ИНСТРУМЕНТИ И ГРАНИЦИ НА ЗАЩИТАТА, Дисертационен труд, 2013 г., УНСС. С. 129-158.
2. Митева, Д. THE CONTEMPORARY DEPOSIT INSURANCE THROUGH THE PERSPECTIVE OF BANK RESOLUTION AND MORAL HAZARD, Economic Alternatives Journal, Issue 1, 2015.
3. Статистическа информация от : [www.bnb.bg](http://www.bnb.bg)
4. Статистическа информация от : <http://ec.europa.eu/eurostat>

№	Държава	Защитата на влоговете (евро)	БВП в евро	Лимит депозити/ БВП	Устойчиво ниво до 2 от БВП	При 20 000 евро	При 30 000 евро	При 35000 евро
1	Люксембург	100000	89900	1,11	179800	0,22	0,33	0,39
2	Дания	100000	47800	2,09	95600	0,42	0,63	0,73
3	Швеция	100000	45600	2,19	91200	0,44	0,66	0,77
4	Холандия	100000	40000	2,50	80000	0,50	0,75	0,88
5	Англия	100000	39600	2,53	79200	0,51	0,76	0,88
6	Австрия	100000	39400	2,54	78800	0,51	0,76	0,89
7	Финландия	100000	38200	2,62	76400	0,52	0,79	0,92
8	Германия	100000	37100	2,70	74200	0,54	0,81	0,94
9	Белгия	100000	36600	2,73	73200	0,55	0,82	0,96
10	Франция	100000	32800	3,05	65600	0,61	0,91	1,07
11	Норвегия	265000	67100	3,95	134200	0,30	0,45	0,52
12	Испания	100000	23200	4,31	46400	0,86	1,29	1,51
13	Кипър	100000	20800	4,81	41600	0,96	1,44	1,68
14	Малта	100000	20300	4,93	40600	0,99	1,48	1,72
15	Словения	100000	18700	5,35	37400	1,07	1,60	1,87
16	Португалия	100000	17300	5,78	34600	1,16	1,73	2,02
17	Гърция	100000	16200	6,17	32400	1,23	1,85	2,16
18	Чехия	100000	15800	6,33	31600	1,27	1,90	2,22
19	Естония	100000	15400	6,49	30800	1,30	1,95	2,27
20	Словакия	100000	14500	6,90	29000	1,38	2,07	2,41
21	Латвия	100000	12300	8,13	24600	1,63	2,44	2,85
22	Полша	100000	11200	8,93	22400	1,79	2,68	3,13
23	Унгария	100000	11100	9,01	22200	1,80	2,70	3,15
24	Румъния	100000	8100	12,35	16200	2,47	3,70	4,32
25	България	100000	6300	15,87	12600	3,17	4,76	5,56

**Economic convergence indicators of Bulgaria  
(2007-2016)  
(in Bulgarian)**

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***Abstract:*** *The Euro continues to be a key theme in Bulgaria and has been discussed by a lot of specialists over the past 10 years, highlighting the advantages and disadvantages of this act. The topic of European integration in the various dimensions - political, social, economic and monetary - is widely discussed. This report examines the state of economic convergence indicators of Bulgaria, comments and analyzes are made regarding their implementation and their adherence to borders.*

**Keywords:** *convergence, Euro, Eurozone, Exchange Rate Mechanism II*

**JEL codes:** *G28*

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## Състояние на икономическите показатели за конвергенция на България (2007-2016)

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**Резюме:** Темата за еврото продължава да бъде ключова в България и се дискутира от редица специалисти през последните 10 години, които изтъкват предимствата и недостатъците на този акт. Темата за европейската интеграция в различните ѝ измерения – политически, социални, икономически и парични е широко дискутирана. В настоящия доклад се разглежда състоянието на икономическите показатели за конвергенция на България, правят се коментари и анализи по отношение на тяхното изпълнение и придържането им в граници.

**Ключови думи:** конвергенция, евро, еврозона, Валутно-курс механизъм II

**JEL codes:** G28

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## Въведение:

Икономическият паричен съюз се създава през 1992 г. и се характеризира с обща валута и парична политика за членовете. Целта е да се повиши икономическата ефективност и стандартът на живот чрез въвеждането на единна валута, което би улеснило обмена на стоки, услуги, пари и др. От 1 януари 1999 г. досега еврото бе въведено в 19 държави членки на ЕС. Две от деветте държави, които не са приели еврото – Дания и Обединеното кралство, са изпратили нотификация, че няма да участват в третия етап на Икономическия и паричен съюз (ИПС). По силата на Договора за функционирането на Европейския съюз всички седем държави (България, Чехия, Хърватия, Унгария, Полша, Румъния и Швеция) са поели ангажимент да приемат еврото, което означава, че те трябва да се стремят да покрият всички критерии за конвергенция.

Раждането на еврото води до фиксиран валутен курс между всички държави членки на ИПС. Според П. Кругман, М. Обстфелд и М. Мелиц<sup>2</sup> с решението си да създадат валутен съюз страните от ИПС жертват в още по-голяма степен суверенитета си по отношение на монетарната политика, отколкото един режим на фиксиран валутен режим изисква. Според авторите по този начин държавите се отказват от националните си валути и монетарни политика и еврото се явява крайно решение на трилемата: абсолютна стабилност, абсолютна отвореност на финансовата търговия и без каквато и да е монетарна автономност. Според мен въпросът е дискуссионен и централните банки на държавите членки на еврозоната все пак имат възможност за осъществяване на парична политика по отношение на използването на различни инструменти за влияние върху инфлацията и лихвените проценти. Друг е въпросът дали ги използват, а и доколко трябва да се съобразяват с ЕЦБ във връзка с подобни политики.

Опитът и ефектите от присъединяването към споразумение за фиксиране на валутните курсове са сложни и зависят от редица микро- и макроикономически фактори. Проведените структурни реформи в годините след въвеждането на паричния съвет практически дадоха възможност да се адаптира икономиката на страната към условията на паричен съюз. Присъединяване на България към ИПС би следвало да не доведе до съществени промени в механизма на действие на икономиката, тъй като процесът е подобен.

Критериите за членство в еврозоната са ясни и широкообсъждани, а при евентуално членство във ERM II, България следва да продължи да ги изпълнява. Процедура за

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<sup>2</sup> Кругман, П., Обстфелд, М., Мелиц, М., „Международен Икономикс. Теория и политика“, УНСС, София, 2013 г., стр. 658

стартирането на подобни преговори има вероятност да се случи по време на председателството на България през 2018 г.

*Табл. 1 Маастрихтски критерии, данни България<sup>3</sup> (2007-2016г.)*

	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016	
	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст	БГ	Реф. ст-ст
<b>Темп на инфлация в %</b>	7,6	2,8	12	4,1	2,5	0,6	3	1,5	3,4	1,5	2,4	3,1	-0,8	1,7	-1,6	1,7	-1,1	??	-1,0	0,7
<b>Бюджетен дефицит/излишък към БВП в %</b>	0,1	-3	1,8	-3	-3,9	-3	-3,1	-3	-2,1	-3	-1,9	-3	-1,5	3	-5,4	-3	-2,1	-3	-2	-3
<b>Държавен дълг към БВП в %</b>	19,8	60	14,1	60	14,8	60	16,3	60	16,3	60	18,4	60	18,9	60	27	60	26,7	60	28,1	60
<b>Дългосрочен лихвен процент (месечна средна величина)</b>	4,5	6,3	5,4	6,2	7,2	6,1	6	5,8	5,4	5,8	3,5	5,8	3,5	6,2	3,3	6,2	3,3	??	2,5	4

В Таблица 1 са посочени данни за България от ЕЦБ, БНБ и Евростат относно състоянието на критериите по Маастрихт в България и референтните стойности (реф. ст-ст) за 10 години. Последният референтен период, в който ЕЦБ разглежда критериите за конвергенция<sup>4</sup> на България, е юни 2016 г. През 2016 г. 12-месечният среден темп на инфлация в България, измерен с хармонизирания индекс на потребителските цени (ХИПЦ), е -1%, т.е. доста под референтната стойност от 0,7% по критерия за ценова стабилност.

Ако се разглежда по-дълъг период назад, през последните десет години инфлацията в България, измерена чрез потребителските цени, е колеблива и на годишна база се движи в диапазона от 0,4% до 12,0%. Повишаването на инфлацията в периода 2007–2008 г. отразява корекции в административно определяните цени, хармонизирането на акцизите с равнищата им в ЕС, поредица от шокове от страна на предлагането и нарастващ натиск от страна на търсенето. Резкият спад на инфлацията през 2009 г. отчасти се дължи на по-ниските цени на основните суровини и на свиващата се икономическа активност. През 2010 г. и 2011 г. инфлацията постепенно отново се повишава съответно до 3,0% и 3,4%, отразявайки най-вече

<sup>3</sup>БНБ ([www.bnb.bg](http://www.bnb.bg)), ЕЦБ (<https://www.ecb.europa.eu/stats/html/index.en.html>), ЕВРОСТАТ (<http://ec.europa.eu/eurostat/data/database>)

<sup>4</sup> Доклад за конвергенция на ЕЦБ, юни 2016 г., <https://www.ecb.europa.eu/pub/convergence/html/index.en.html>

поскъпването на основните суровини и повишения на акциза върху тютюневите изделия. Впоследствие облекчаването на натиска от страна на цените на основните суровини, съчетано с по-слабото вътрешно и външно търсене, води до постепенно понижаване на инфлацията. Освен ниското равнище на базисната инфлация значителни намаления на административно определяните цени допълнително способстват за ниските равнища на инфлация, достигнати през 2013 г.

Годишният темп на инфлацията, следва низходящ тренд, понижавайки се от 1,0% през май 2013 г. до най-ниската стойност от -2,1% през февруари 2014 г., след което се възстановява, за да се установи на -1,3% през април 2014 г. и достига -1 % през 2016 г. Тази динамика се обуславя отчасти от низходящия тренд на международните цени на храните и енергията и в по-малка степен от покачването на ефективния валутен курс. Освен това извънредни вътрешни фактори оказват значителен натиск за понижаване на инфлацията. Тези фактори включват намаляване на контролираните цени на електроенергията за домакинства, както и намаления на други административно определяни цени, понижаване цените на транспорта и на здравните услуги, а добрата селскостопанска реколта допринася за поевтиняване на храните.

Според последните налични прогнози<sup>5</sup> на ЕЦБ и Евростат се предвижда инфлацията през 2016-2017 г. да нараства постепенно от текущите отрицателни нива до стойности в диапазона от 1,5 до 2% през 2017 г. Инфлацията в еврозоната нараства отскоро, защото спадналите неотдавна цени на енергията започват отново да нарастват. След като инфлацията бе много ниска през последните две години, през тази и следващата година се очаква тя да достигне по-високи равнища, макар и все още под целта от „под, но близо до 2% в средносрочен план“, която се определя като ценова стабилност. Същинската инфлация, от която се изключват нестабилните цени на енергията и храните, се очаква да нараства постепенно. Като цяло инфлацията в еврозоната се очаква да се повиши от 0,2% през 2016 г. до 1,7% през 2017 г. и 1,4% през 2018 г. Според прогнозите за ЕС инфлацията ще нарасне от 0,3% през 2016 г. до 1,8% през 2017 г. и 1,7% през 2018 г. Икономическата активност и вътрешното търсене се очаква постепенно да се възстановяват, тъй като не се предвиждат допълнителни намаления на административно определяните цени, а международните цени на основните суровини може да се стабилизират. Въпреки това инфлационният натиск в България е възможно да бъде смекчен от слабо вътрешно търсене, висока безработица и нестабилна международна среда. Рисковете относно прогнозата за инфлацията изглеждат

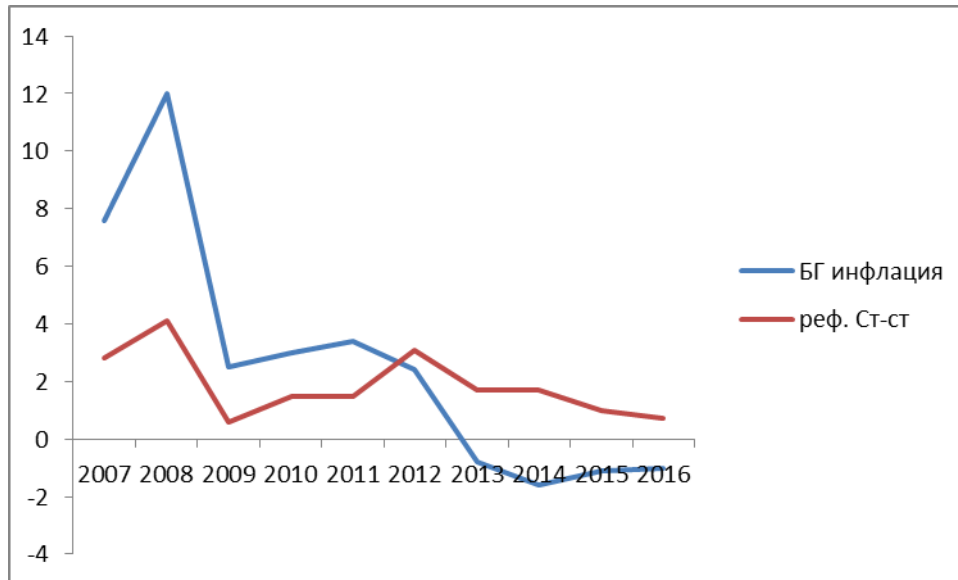
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<sup>5</sup> [https://ec.europa.eu/bulgaria/zimna-ikonomicheska-prognoza-2017\\_bg](https://ec.europa.eu/bulgaria/zimna-ikonomicheska-prognoza-2017_bg)



като цяло балансиран в кратко- и средносрочен хоризонт. Съществуват рискове от надценяване в резултат от по-слабото от очакваното вътрешно търсене. Международните цени на основните суровини, както и прекратяване или обрат в неотдашните понижения на административните цени може обаче да породят риск от подценяването ѝ.

*Графика 1. Динамика на темпа на инфлация (ХИПЦ, %) в България за периода 2007-2014 г.<sup>6</sup>*



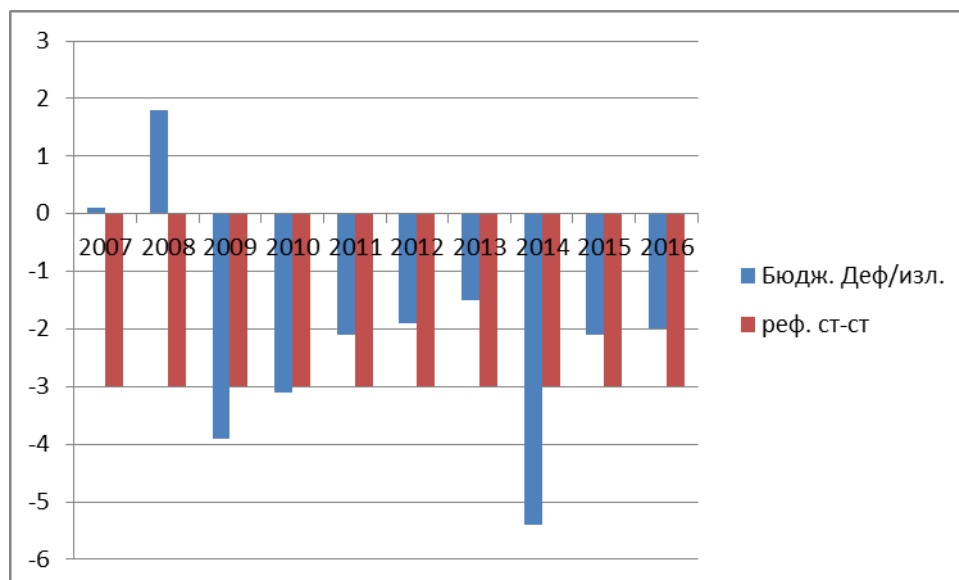
В по-далечна перспектива поддържането на устойчиво ниски темпове на инфлация в България може да се окаже трудно в средносрочен план предвид ограничените възможности за активна парична политика при съществуващия режим на паричен съвет. Процесът на догонване вероятно ще даде отражение върху инфлацията в средносрочен хоризонт, тъй като БВП на човек от населението и равнището на цените в България са значително по-ниски от тези в еврозоната. Все пак е трудно да се оцени точният размер на ефекта върху инфлацията, дължащ се на този процес на догонване. Когато икономиката се възстанови и бъде постигнат напредък в конвергенцията на доходите, конвергенцията на ценовите равнища вероятно ще продължи. Тя на свой ред ще намери проявление под формата на по-висока вътрешна инфлация предвид фиксирания номинален валутен курс. При процеса на икономическа конвергенция не може изцяло да се изключи възобновяването на значителен натиск от страна на търсенето, макар извършващият се понастоящем процес на съкращаване на коефициентите на ливъридж да ограничава в близко бъдеще този риск. Предвид режима на паричен съвет и ограниченото въздействие на алтернативни инструменти за провеждане на антициклична политика може да се окаже трудно да се предотврати ново натрупване на

<sup>6</sup>БНБ ([www.bnb.bg](http://www.bnb.bg)), ЕЦБ (<https://www.ecb.europa.eu/stats/html/index.en.html>), ЕВРОСТАТ (<http://ec.europa.eu/eurostat/data/database>)

макроикономически дисбаланси, включително високи темпове на инфлация. В обобщение, въпреки че понастоящем 12-месечният среден темп на инфлация в България, измерен с ХИПЦ, е значително под референтната стойност, съществуват опасения относно устойчивостта на конвергенцията по отношение на инфлацията.

Следващият критерий за номинална конвергенция, който се разглежда, е критерият за бюджетен дефицит. Понастоящем България не подлежи на решение на Съвета на ЕС за наличие на прекомерен бюджетен дефицит. През последния разглеждан референтен период до юли 2016 г. бюджетното салдо на сектор „държавно управление“ отчете дефицит в размер на 2% от БВП, т.е. значително под референтната стойност от 3% (Графика 2).

**Графика 2. Равнище на бюджетния дефицит/излишък (дял от БВП в %) в България за периода 2007-2016 г.<sup>7</sup>**



Съотношението „брутен държавен дълг/БВП“ е 18,9%, т.е. много под референтната стойност от 60%. От 2007 г. до 2008 г. се наблюдава бюджетен излишък, а през 2009 г. е регистриран бюджетен дефицит от 3,9% от БВП. В периода от 2010 до 2012 г. съотношението на дефицита към БВП значително е намаляло. Тъй като през 2009 г. съотношението на дефицита спрямо БВП се повиши над референтната стойност от 3% от БВП, на 13 юли 2010 г. ЕКОФИН реши, че в България е налице прекомерен дефицит, и определи 2011 г. като краен срок за коригирането му. През юни 2012 г. решението бе отменено, след като България успешно намали бюджетния си дефицит.

<sup>7</sup> БНБ ([www.bnb.bg](http://www.bnb.bg)), ЕЦБ (<https://www.ecb.europa.eu/stats/html/index.en.html>), ЕВРОСТАТ (<http://ec.europa.eu/eurostat/data/database>)

Според оценките на Европейската комисия, както подробно е показано на графика 2, като цяло цикличните фактори са оказали известно благоприятно въздействие върху изменението на бюджетното салдо, след което са допринесли за неговото силно влошаване през 2009 г. От 2010 г. цикличните фактори съвкупно оказват неутрално въздействие върху изменението на бюджетното салдо. Нецикличните фактори оказват разнопосочно влияние върху изменението на бюджетното салдо преди 2008 г. и допринасят за силното му влошаване през 2009 г., достигайки стойности от -3,9 %. Това се дължи главно на увеличението на разходите, включително на повишението на пенсиите и на други дължими текущи трансфери. През втората половина на 2009 г. правителството приложи мащабни мерки за консолидация, които преустановиха влошаването на бюджетното салдо за съответната година и спомогнаха за намаляване на бюджетния дефицит през следващите три години. Тези мерки бяха насочени към съкращаване по-специално на текущите разходи и повишаване събираемостта на данъчните приходи чрез по-доброто спазване на разпоредбите за ДДС и данъка върху корпоративните доходи, за да се противодейства на спада на данъчните приходи. Нецикличните фактори отново оказват негативно влияние за влошаването през 2013 г. на бюджетното салдо, главно в резултат от увеличение на компенсациите на наетите лица, публичните инвестиции и пенсиите. Основните промени в бюджетния дефицит през 2007–2013 г., изглежда, отразяват структурно влошаване на фискалната позиция на България в периода до 2009 г., подобряването ѝ от 2010 г. до 2012 г. и отново влошаване през 2013 г.

В стратегията на средносрочната фискална политика на България, представена в осъвременената Конвергентна програма за 2014–2017 г.<sup>8</sup>, е посочено, че бюджетният дефицит слабо ще нарасне до 1,8% от БВП до края на 2014 г. и постепенно ще се понижи до 0,9% от БВП до 2017 г. Съгласно осъвременената Конвергентна програма за 2014–2017 г. структурният дефицит ще достигне средносрочната цел в размер на 1,0% от БВП (определена в съответствие с Пакта за стабилност и растеж) през 2016 г. Според икономическите прогнози на Европейската комисия структурният дефицит ще остане над средносрочната цел от 1,0% от БВП през целия прогнозен период. Реално числата са други, дефицит за 2014 г. – 5,4%, за 2015 г. – 2,1%, за 2016 г. – 2%.

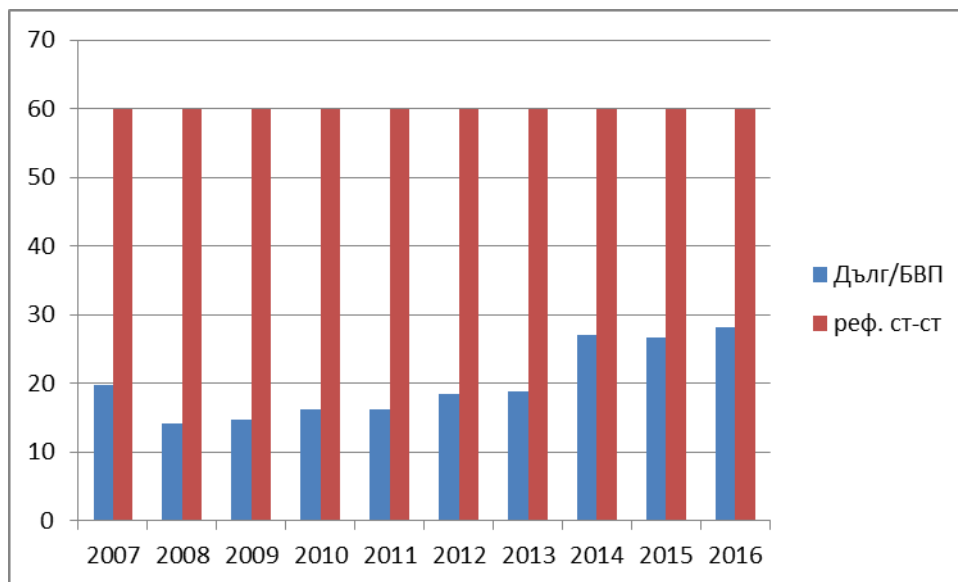
Ако се анализират тенденциите при брутния дълг на сектор „държавно управление, съотношението „дълг/БВП“ остава най-ниското сред държавите – членки на ЕС извън еврозоната. Първичният излишък и положителният диференциал между растежа и лихвения

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<sup>8</sup> Конвергентна програма за 2014–2017 г.,  
<https://www.ecb.europa.eu/pub/pdf/conrep/cr201606.en.pdf?a91977931874a7c6c63d80305b651394>

процент благоприятстват това развитие до 2008 г., както е посочено на графика 3. Първичният дефицит допринася за увеличение на дълга след 2009 г., при влошаващи се макроикономически и финансови условия, докато корекциите на бюджетния дефицит и държавния дълг ограничават нарастването на съотношението на дълга, тъй като правителството намали размера на своите финансови активи.

**Графика 3. Равнище на държавния дълг (дял от БВП в %) в България за периода 2007-2014 г.<sup>9</sup>**



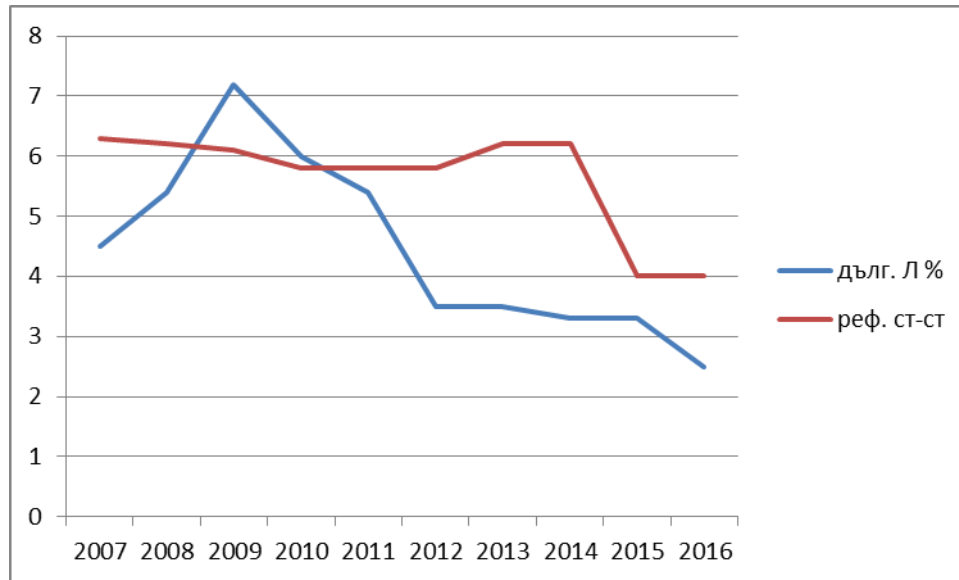
Как стои въпросът с дългосрочните лихвени проценти? През последния разглеждан период до юли 2016 г. дългосрочният лихвен процент е средно 2,5%, т.е. много под референтната стойност от 4% според критерия за конвергенция на дългосрочните лихвени проценти. През по-голямата част от 2008 г. дългосрочният лихвен процент в България се стабилизира около 5%, но през декември същата година рязко се покачи и достига 7,8% поради световната финансова криза, което доведе до понижаване на кредитния рейтинг на България. Както е показано на Графика 4, от края на 2009 г. дългосрочният лихвен процент започна устойчиво да се понижава в резултат от протичащия процес на коригиране на значителните преди кризата дисбаланси и от забавянето на инфлацията. Дългосрочният лихвен процент в България има постепенен, но постъпателен низходящ тренд до 2013 г., когато започна да се стабилизира.

Дългосрочният лихвен процент в България се стабилизира през последните години. Диференциалът му спрямо този на еврозоната се сви значително до около нула към края на 2012 г., след което леко се разшири. В края на разглеждания период диференциалът спрямо

<sup>9</sup> БНБ ([www.bnb.bg](http://www.bnb.bg)), ЕЦБ (<https://www.ecb.europa.eu/stats/html/index.en.html>), ЕВРОСТАТ (<http://ec.europa.eu/eurostat/data/database>)

средния за еврозоната лихвен процент е едва 1,0 процентен пункт (и 1,7 процентни пункта спрямо доходността по облигациите на еврозоната с рейтинг AAA).

**Графика 4. Динамика на дългосрочния лихвен процент (месечна средна величина, %) в България за периода 2007-2014 г.<sup>10</sup>**



Формирането на среда, благоприятстваща устойчивата конвергенция на България, изисква наред с другите предпоставки, насочени към осигуряването на обща макроикономическа стабилност, включително устойчива стабилност на цените. Що се отнася до макроикономическите дисбаланси, Европейската комисия избира България за задълбочен преглед в своя „Доклад по механизма за предупреждение, 2014 г.“ и заключението е, че „България продължава да е засегната от макроикономически дисбаланси, които изискват наблюдение и политически действия“<sup>11</sup>. В същото време предвид ограничените възможности на паричната политика за маневриране в условията на паричен съвет е наложително другите сфери на икономическата политика да осигурят на стопанството необходимия ресурс за справяне със специфичните за страната шокове с цел избягване на ново натрупване на макроикономически дисбаланси. По-конкретно, България следва да се справи с широк кръг предизвикателства пред икономическата си политика.

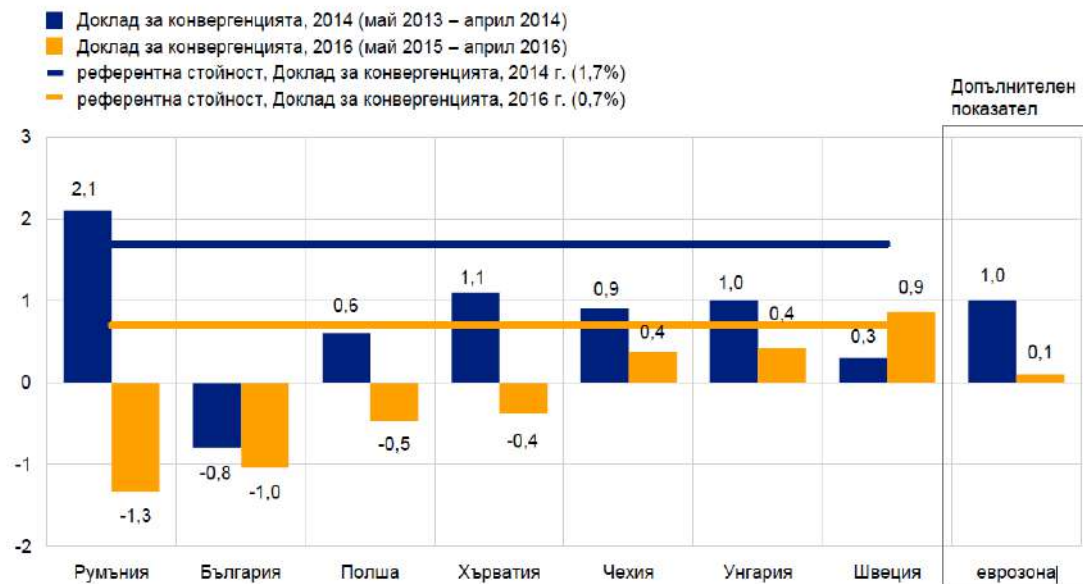
<sup>10</sup> БНБ ([www.bnb.bg](http://www.bnb.bg)), ЕЦБ (<https://www.ecb.europa.eu/stats/html/index.en.html>), ЕВРОСТАТ (<http://ec.europa.eu/eurostat/data/database>)

<sup>11</sup> Доклад за механизма за предупреждение на ЕК за 2015 г. до европейския парламент, съвета, европейската централна банка и европейския икономически и социален комитет, 28.11.2014 г., стр .16

Според изследване на А. Минеа и К. Раут<sup>12</sup>, „България е сравнително по-добре интегрирана с ИПС в сравнение с други страни от Централна и Източна Европа, които имат парична автономност“. Къде стои страната ни в сравнение с останалите членки с дерогация?

## Инфлация по ХИПЦ

(средногодишно процентно изменение)



Източник: Евростат.

Както се вижда на графиката при шест от седемте разглеждани в доклада държави 12-месечният среден темп на инфлация е под, а в няколко случая и много под референтната стойност от 0,7%. България, Хърватия, Полша и Румъния отчитат отрицателен темп на инфлация. В Швеция инфлацията е малко над референтната стойност.

По отношение на критерия за държавната бюджетна позиция, към юни 2016 г. от разглежданите държави членки само Хърватия подлежи на решение на Съвета на ЕС за наличие на прекомерен дефицит (следната графика)<sup>13</sup>.

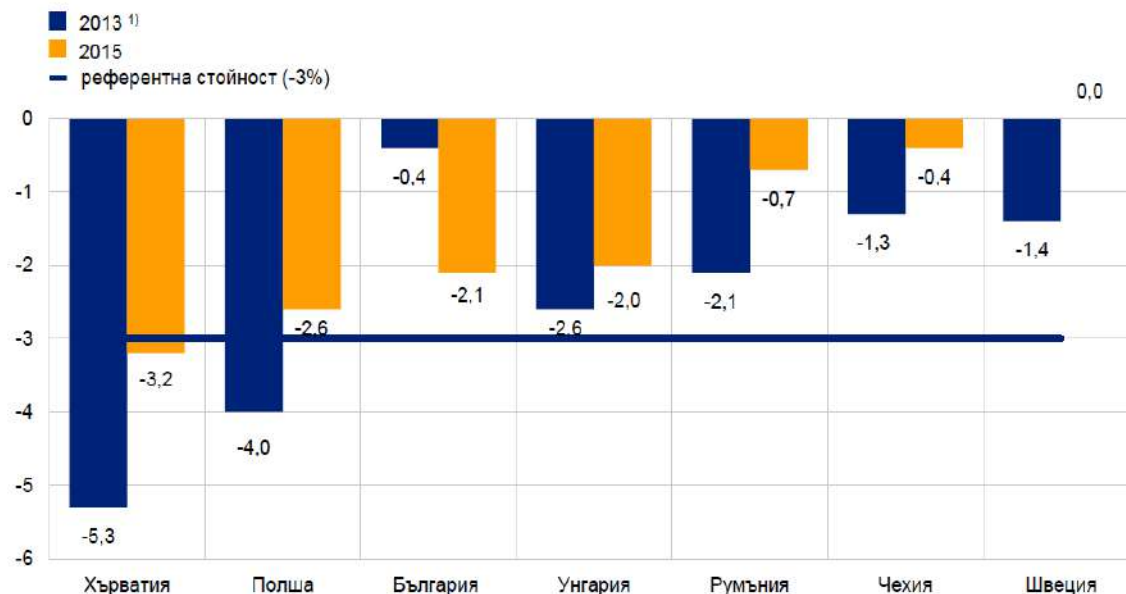
<sup>12</sup> цит. Minea, A., Rault, Ch., External monetary Shocks and monetary Integration: Evidence from the Bulgarian Currency Board”, Elsevier journal, www.elsevier.com/locate/ecmod, 2011

<sup>13</sup> Доклад за конвергенцията, 2016

<https://www.ecb.europa.eu/pub/pdf/conrep/cr201606.en.pdf?a91977931874a7c6c63d80305b651394>

## Излишък (+)/дефицит (-) на сектор „държавно управление“

(дял от БВП, %)

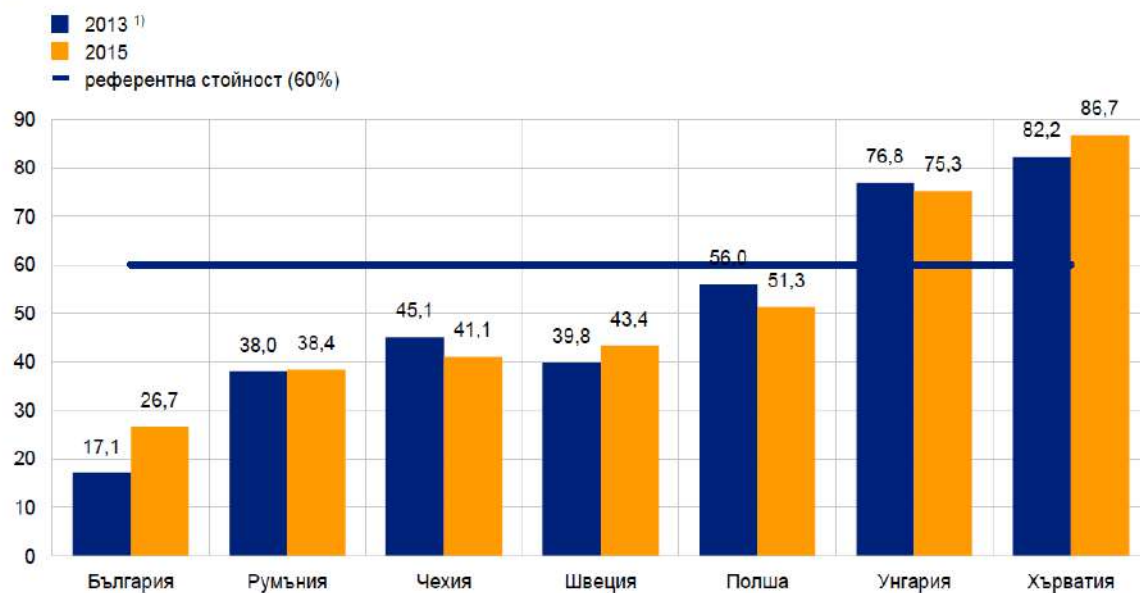


Източник: Евростат.

През 2015 г. общото бюджетно салдо във всички държави освен Хърватия е на равнището на или под референтната стойност за дефицита от 3% от БВП, докато в доклада от 2014 г. бе отбелязано, че в Хърватия и Полша съотношението „бюджетен дефицит/БВП“ за 2013 г. е над референтната стойност от 3%. България има най-добри показатели и за периода 2014 - 2016 г. и по индикатора за дълг към БВП, като графично данните са изобразени на следната фигура.

## Брутен дълг на сектор „държавно управление“

(дял от БВП, %)



Източник: Евростат.

Както и в Доклада за конвергенцията<sup>14</sup> от 2014 г., съотношението на дълга на сектор „държавно управление“ към БВП за 2015 г. е над референтната стойност от 60% само в Хърватия и в Унгария. В Хърватия съотношението на дълга бе значително по-високо в сравнение с данните за 2013 г., а в Унгария – малко по-ниско. През 2015 г. съотношението „дълг/БВП“ в Полша е над 50%. В Чехия и Швеция то е под 50%, в Румъния – под 40%, а в България – под 30%.

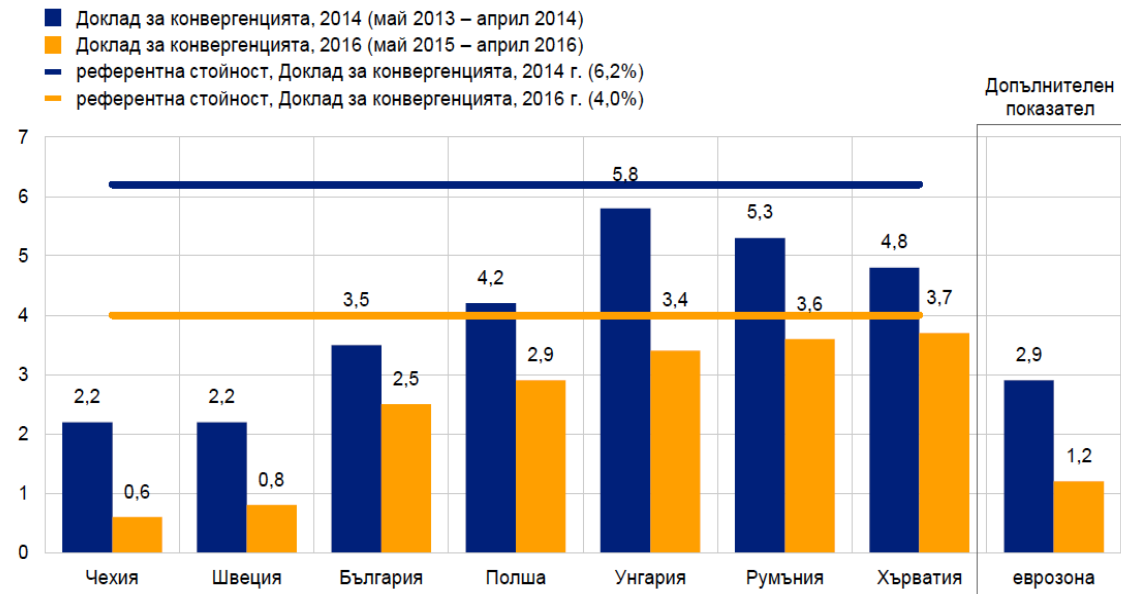
По отношение на дългосрочните лихвени проценти всички седем държави са под референтната стойност от 4%, като при България те спадат от 3,5 % при референтна стойност 6,2 % през 2013-2014 до 2,5% при референтна стойност 4% през 2015- 2016 г.

<sup>14</sup> Доклад за конвергенцията 2014  
<https://www.ecb.europa.eu/pub/pdf/conrep/cr201406en.pdf?c759d9b132af38d2cde1900f23c35ce9>



## Дългосрочни лихвени проценти

(процент, средногодишно)



Източници: Евростат и ЕЦБ.

Оказва се, че България спазва стриктно изискванията за конвергенция и дори по повечето показатели се намира на първо място. Конвергенцията трябва да бъде постигната трайно, а не краткосрочно, а България показва такъв опит през последните години. Процесът на конвергенция следва да бъде устойчив, а страната ни е готова да изпълнява постоянните ангажименти, свързани с приемането на еврото. Този момент приближава и властите следва да бъдат още по-настойтелни в исканията си за влизане в чакалнята, а какъв по-подходящ момент от председателството на България на Съвета на ЕС през 2018 г.

## Библиография:

1. Доклад за конвергенцията, 2016  
<https://www.ecb.europa.eu/pub/pdf/conrep/cr201606.en.pdf?a91977931874a7c6c63d80305b651394>
2. Доклад за конвергенцията 2014  
<https://www.ecb.europa.eu/pub/pdf/conrep/cr201406en.pdf?c759d9b132af38d2cde1900f23c35ce9>
3. Доклад за механизма за предупреждение на ЕК за 2015 г. до европейския парламент, съвета, европейската централна банка и европейския икономически и социален комитет, 28.11.2014 г., стр .16
4. Конвергентна програма за 2014–2017 г.,  
<https://www.ecb.europa.eu/pub/pdf/conrep/cr201606.en.pdf?a91977931874a7c6c63d80305b651394>
5. Кругман, П., Обстфелд, М., Мелиц, М., „Международен Икономикс. Теория и политика“, УНСС, София, 2013 г., стр. 658
6. Minea, A., Rault, Ch., External monetary Shocks and monetary Integration: Evidence from the Bulgarian Currency Board”, Elsevier journal, [www.elsevier.com/locate/ecmod](http://www.elsevier.com/locate/ecmod), 2011
7. Христозов, Я., "Пътят на България към еврозоната. С или без валутен борд?", сп. Бизнес посоки, БСУ, 2015 г., брой 1, стр. 22 – 32

## Cash flows and national accounts (Need new satellite account)

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### INTRODUCTION

The questions related to cash flows deserve greater attention than the one devoted on this subject nowadays. The reasons for such a conclusion are at least two circumstances. On the one hand this is their complexity, but on the other - the fact that they are an integral part of any micro- and macroeconomic activity. Studies show that these questions have long engaged for both theoreticians and practitioners. Today they are again relevant. The need for their resolution is even higher in today's turbulent economic development. For this purpose, however, it is necessary to find a reliable tool for the presentation of cash flows. Expectations that this is possible by the information contained in more widely used national accounts (Generalised System of National Accounts - SNA 2008 and the European System of National Accounts - ESA 2010) found no practical application. This is due to the fact that there is not reliable definition nor reliable coverage of cash flows. It is obvious that in this situation there is a need to create another satellite account to the national accounts to cover this gap. This is the main objective of the proposed material. In its **first part** issues about the definition and presentation of cash flows in the national accounts are discussed. The **second part** is dedicated to the opportunities to establish new satellite account to the national accounts for cash flows. The content of the **third part** is about ideas how to use the new satellite account.

**Part One**  
**DEFINITION AND PRESENTATION OF CASH FLOWS**  
**NATIONAL ACCOUNTS**

**The Generalised System of National Accounts (SNA 2008)** argues that "the majority of flows represent operations." (3.50) and "monetary operation - it's such an operation in which one institutional unit makes payment (received payment) or accept obligations (receives an asset), expressed in monetary units. "(3.55) and that " ... all money transactions are bilateral. "(3.56)

The **European System of National Accounts (ESA 2010)** confirms the view that "operations are cash when the units involved make or receive payments, or accrue liabilities or receive assets which are expressed in monetary units." (1.70)

Based on all this and the overall content of the systems of national accounts we can make the following important conclusions: *f i r s t*, cash flows are associated not only with the movement of money in the form of currency and deposits between perceived aggregate economic subjects but also with all other changes in financial assets and liabilities; *s e c o n d*, it is neglected the fact that each cash flow is the movement of the known in theory and practice monetary aggregates M1 (narrow money), M2 and M3 (broad money); *t h i r d*, it is underestimated the fact that individual cash flows are part of domestic money turnover for a period of time and *f o u r t h*, for the national accounts cash flows do not represent a priority item.

In the **Generalised System of National Accounts (SNA 2008)** financial assets and liabilities are presented by **financial account** (Table 11.1), which account for currency and deposits (F.2) is as follows:

*Table 1 \**

OPERATIONS	S.11	S.12	S.13	S.14	S.2	TOTAL
1. Net acquisition of currency and deposits (F2)	39	10	- 26	66	11	100
2. Net provision currency and deposits (F2)	0	65	37	0	- 2	100
3. Balance: net accumulation of assets (+) or liabilities (-)	39	- 55	- 63	66	13	0

\* *S.11 Non-financial business corporations, S.12 Financial Institutions, S.13 Government, S.14 Households and S.2 External subjects*

The presentation of currency and deposits (F2) in **the European System of Accounts (ESA 2010)** is also done through **financial account** (Annex A - Table 24.2). In parallel, however, in this system is shown also a **model of financial account "from whom to whom"** (Table 5.1), which for currency and deposits (F.2) might look like this:

*Table 2*

Sectors debtors Sectors creditors		Net acquisition of currency and deposits (F2) from:					
		S.11	S.12	S.13	S.14	S.2	TOTAL
Net provision currency and deposits (F2) to:	S.11	0	2	10	8	-20	0
	S.12	25	0	15	20	5	65
	S.13	9	8	0	22	-2	37
	S.14	0	0	-28	0	28	0
	S.2	5	0	-23	16	0	-2
	TOTAL	39	10	-26	66	11	100

Based on all this, for the presentation of cash flows in the national accounts can be made the following major conclusions: *f i r s t*, the national accounts used at present do not pay enough attention to presentation of cash flows between economic subjects; *s e c o n d*, the attention in these accounts is focused on establishing the changes that occur in financial assets and liabilities within which are also treated the currency and deposits (F.2); *t h i r d*, even the orientation of the use of financial account "from whom to whom" is related only to the net presentation of the movement of money between economic subjects; *f o u r t h*, there is not even an attempt to connect the cash flows in a particular period of time with the movement of money in previous and subsequent periods and *f i f t h*, it is not provided a relevant connection with general money supply that serves the economic subjects, measured in monetary aggregates M1, M2 and M3.

Taking in mind the significant not only macroeconomic but microeconomic importance of cash flows that penetrate all activities related to the economy, the **general conclusion** is that it is necessary to develop and introduce another satellite account to the national accounts item, i.e. **satellite account for the movement of money between economic subjects**. This account will supplement the now adopted satellite accounts to SNA 2008 and ESA 2010 for tourism, ecology, health, cottage industries, agriculture and so on.

## Part Two

### NEW SATELLITE ACCOUNT OF CASH FLOWS TO THE NATIONAL ACCOUNTS

For the construction of the new satellite account to the national accounts various **models** could be used. When choosing a model, however, we must take into account the needs for information related to cash flow, as well as the opportunities for its provision. For this purpose the following must be taken into account: *f i r s t*, the content of the cash flows, i.e. that they present a set of moving cash (coins and notes) and deposits with banking institutions; *s e c o n d*, the subjects among which is preformed this movement of money, i.e. for aggregate economic subjects that are used in national accounts; *t h i r d*, the relationship of cash flow over a period of time with the movement of those funds in previous and subsequent periods and *f o u r t h*, the relationship of cash flows with the money supply, which serves economic subjects, i.e. monetary aggregates M1, M2 and M3. These requirements can be met if the composition of the new satellite account of cash flows to the national accounts is done through the following **exemplary model**:

*Table 3*

Cash outflows (i) →		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.1314	S.125	S.123 + S.124	S.121 + S.122	S.2	SUMS
Cash inflows (j) of ↓		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	20	150	14	24	20	8	2	5	10	15	248
Non-profit organizations (R.15)	2	5	10	1	5	2	1	1	0	2	0	22
Households (R.14)	3	20	25	1	1	5	1	3	0	2	2	40
Government (S.1311 + S.1313)	4	5	20	2	5	1	1	2	1	1	1	34
Social security funds (S.1314)	5	3	7	1	1	1	0	1	1	1	2	15
Insurance companies and pension funds (S.125)	6	2	5	2	1	3	1	0	0	0	0	12
Other financial institutions (S.123 + S.124)	7	1	5	1	0	1	0	0	0	0	1	8
Banking Institutions (S.121 + S.122)	8	0	8	1	3	0	1	0	0	2	10	25

External subjects (S.2)	9	0	5	0	1	3	1	1	1	2	0	14
SUMS	10	56	235	23	41	36	14	10	8	20	31	418
	11	SE (Z)	33	4	19	3	4	4	1	+ 5	- 17	68 + 12

The following main conclusions could be made on the basis of the above model: *f i r s t*, it shows that at the beginning of the selected time period the total value of cash, representing a major component of the monetary aggregates, located outside banking institutions and foreign entities is 56 units, *s e c o n d*, the sum of all cash flows during the selected time period is 418 units, and between the amount of outflows and the amount of cash inflows there is equality; *t h i r d*, by taking into account the funds in each of the aggregate subjects without banking institutions and foreign entities and totals of their incoming and outgoing cash flows the remains of cash at the end of the selected time period is found, the total amount is 68 units; *f o u r t h*, when comparing balances of cash at the end and beginning of the selected time period we find that money supply that serves the aggregate economic subjects increased by 12 units and *f i f t h*, the increase in money supply is the result of an increase in cash in the banking institutions with 5 units and additional inflow of money from foreign entities amounted to 17 units.

There is no need for specific evidence to connect the reliability of the proposed model here with opportunities for its **information provision**. Studies show that for this purpose can be used the reporting form which represents an annex to the **accounting standard 7** i.e. to the statement of cash flows. For the needs of this model, the application can have the form shown in the following table:

**Statement of cash flows  
the "x" in s.11 of 20 ...year**

*Table 4*

№	Cash outflows (i) → INDICATORS ↓	S.11	S.15	S.14	S.1311 + S.1313	S.1314	S.125	S.123 + S.124	S.121 + S.122	S.2	SUMS
0	01	1	2	3	4	5	6	7	8	9	10
1	Stock at the beginning of the "X"	x	x	x	x	x	x	x	x	x	...
2	Cash inflows (j) the "X"	...	...	...	...	...	...	...	...	...	...

3	Outflows (i) - a total of "X"	...	x	x	x	x	x	x	x	x	x
4	Cash inflows (j) of S.2	...	x	x	x	x	x	x	x	x	x

The orientation of individual economic subjects to cash inflows has as its basis the greater attention which is being paid to them in the current practice and the fact that each inflow corresponds outgoing cash flow. The inclusion in this report form information and total cash outflows of the economic subject having the need to make verification of data about them that will be incurred by the relevant accounts of other economic subjects. There is an obvious need for inclusion in this form of information on inflows of foreign entities because the data for them can not be collected from these subjects and hope that they are available within the balance of payments is negligible. It is necessary to underline that the extraction of information for this report form from the accounts of individual economic subjects should use a specially developed for this purpose **software products**. The opportunities in this field are limitless.

Based on the information received from the proposed here annex to Accounting Standard 7, again by a suitable software product, must be made summary of cash flows in a way that is shown in the following table:

**Summary statement of cash flows  
s.11 for over 20 ... year  
(example)**

*Table 5*

№	Cash outflows (i) → INDICATORS ↓	S.11	S.15	S.14	S.1311 + S.1313	S.1314	S.125	S.123 + S.124	S.121 + S.122	S.2	SUMS
0	01	1	2	3	4	5	6	7	8	9	10
1	Stock at the beginning of S.11	x	x	x	x	x	x	x	x	x	20
2	Cash inflows (j) the "S.11"	150	14	24	20	8	2	5	10	15	248
3	Cash outflows (i) - a total of S.11	235	x	x	x	x	x	x	x	x	x
4	Cash inflows (j) of S.2	5	x	x	x	x	x	x	x	x	x



The information provision of the new satellite account of cash flows of the national accounts can be ensured by appropriate **expertise evaluations** for the availability of cash at the beginning and end of the selected period of time and for the outgoing and incoming cash flows of every aggregate economic subject. When choosing such an approach it the opportunities of subjective methods should be used, to which methods it could be counted the "DELPHI" and the "BRAIN ATTACK" ones. The success of this approach will depend primarily on the quality of the experts and the availability of sufficient and reliable for their work existing cash flow information. Unfortunately the second condition is still missing. This is the reason not to pay more attention in this paper to the expert approach to information assurance model treated here.

### **Part Three**

## **SCOPE FOR NEW SATELLITE ACCOUNT CASH FLOWS**

### **3.1 The new satellite account as an instrument for structural analysis of money**

It is known that in the analysis of all economic subjects, which represent aggregates, the structural analysis has primarily importance. This is because it gives an indication of the weight of each one of the elements of the aggregate. From this point of view for the cash money and cash flows also there are necessary prerequisites for their treatment as aggregates. This applies both to the common values of cash money at the beginning and end of the selected period of time and to the amounts of outgoing and incoming cash flows, giving an idea of the domestic money turnover. The structural analysis of cash money gives opportunity for the establishment of their distribution between the aggregate economic subjects, while for the cash flows – it displays the beneficiaries of outflows and the origin of the cash inflows.

In this situation there are sufficient grounds to assert that the new satellite account cash flow creates a lot of great opportunities to perform both vertical and horizontal structural analysis. By **vertical structural analysis** it is possible to ascertain first how the money supply is distributed outside the banking institutions and foreign entities among other economic entities at the beginning of the selected period of time. In parallel with this analysis it can be established for each individual aggregate economic subject how the total amount of his cash outflows is distributed, i.e. how much of it is provided to the other entities included in the model.

Similarly, through the new satellite account of cash flows to the national accounts it

can be made and **horizontal structural analysis**. In this direction firstly it comes to its ability to show where the cash inflows come from for each of the selected aggregate economic subject. Then with the help of this analysis the structure of the cash money at the end of the chosen period of time can be established, i.e. to determine what changes have occurred in them after this period of time has elapsed. In this case, again it comes to the structure of of cash outside the banking institutions and foreign entities. Some idea of the treated here vertical and horizontal structural analysis can be obtained from the content of the following table:

**Table 6**

Cash outflows (i) →		SB	S.11	S.15	S.14	S.1311	S.125	S.1314	S.123	S.121	S.2	SUMS
Cash inflows (j) of		(Y)				+ S.1313			+ S.124	+ S.122		
↓												
		0	1	2	3	4	5	6	7	8	9	10
<b>Non-financial business corporations (S.11)</b>	<b>1</b>	35,7 -	63,8 60,5	60,9 5,6	58,5 9,7	55,6 8,1	57,1 3,2	20,0 0,8	62,5 2,0	50,0 4,0	48,4 6,0	59,3 100,0
<b>Non-profit organizations (R.15)</b>	<b>2</b>	8,9 -	4,3 45,5	4,3 4,5	12,2 22,7	5,6 9,1	7,1 4,5	10,0 4,5	0,0 0,0	10,0 9,1	0,0 0,0	5,3 100,0
<b>Households (R.14)</b>	<b>3</b>	35,7 -	10,6 62,5	4,3 2,5	2,4 2,5	13,9 12,5	7,1 2,5	30,0 7,5	0,0 0,0	10,0 5,0	6,5 5,0	9,6 100,0
<b>Government (S.1311 + S.1313)</b>	<b>4</b>	8,9 -	8,5 58,8	8,7 5,9	12,2 14,7	2,8 2,9	7,1 2,9	20,0 5,9	12,5 2,9	5,0 2,9	3,2 2,9	8,1 100,0
<b>Social security funds (S.1314)</b>	<b>5</b>	5,4 -	3,0 46,7	4,3 6,7	2,4 6,7	2,8 6,7	0,0 0,0	10,0 6,7	12,5 6,7	5,0 6,7	6,5 13,3	3,6 100,0
<b>Insurance companies and pension funds (S.125)</b>	<b>6</b>	3,6 -	2,1 41,7	8,7 16,7	2,4 8,3	8,3 25,0	7,1 8,3	0,0 0,0	0,0 0,0	0,0 0,0	0,0 0,0	2,9 100,0
<b>Other financial institutions (S.123 + S.124)</b>	<b>7</b>	1,8 -	2,1 62,5	4,3 12,5	0,0 0,0	2,8 12,5	0,0 0,0	0,0 0,0	0,0 0,0	0,0 0,0	3,2 12,5	1,9 100,0
<b>Banking Institutions (S.121 + S.122)</b>	<b>8</b>	0,0 -	3,4 32,0	4,3 4,0	7,3 12,0	0,0 0,0	7,1 4,0	0,0 0,0	0,0 0,0	10,0 8,0	32,3 40,0	6,0 100,0
<b>External subjects (S.2)</b>	<b>9</b>	0,0 -	2,1 35,7	0,0 0,0	2,4 7,1	8,3 21,4	7,1 7,1	10,0 7,1	12,5 7,1	10,0 14,3	0,0 0,0	3,3 100,0
<b>SUMS</b>	<b>10</b>	100,0 -	100,0 56,2	100,0 5,5	100,0 9,8	100,0 8,6	100,0 3,3	100,0 2,4	100,0 1,9	100,0 4,8	100,0 7,4	100,0 100,0
	<b>11</b>	SE (Z)	- 48,5	- 5,9	- 27,9	- 4,4	- 5,9	- 5,9	- 1,5	- -	- -	- 100,0

### 3.2 Satellite account and chain dependencies on cash flows

Chain dependencies of cash flows are associated with changes in their aggregate after the emergence of changes in a particular cash flow. This is a result of changes in existing regulations (laws, decrees, ordinances, regulations, etc.). Studies show that both in domestic and in the world practice there is not yet a reliable tool for their tracing. The reason for this should be sought in the lack of tools for reliable representation of cash flows. On this basis, it can be concluded that through the proposed new satellite account to the national accounts such possibilities will be

created. This account will provide prerequisites for a more limited but also for a more advanced traceability of the chain dependencies. The limited tracking can establish only changes in the initially affected aggregate economic subject. On the other hand the advanced tracking can monitor changes within the totality of cash flows. It is necessary to recognize, however, that the more extended targets for tracking chain dependencies are, the less reliable are the results. This is because in the above extension there will have to be used less accurate approaches, such as the case with the probability calculations.

On the other hand the whole range of chain dependencies could be divided into two main groups: *f i r s t*, dependencies which do not affect the money supply that serves economic subjects and *s e c o n d*, dependencies that cause such change. The first group includes all chain dependencies caused by changes in cash flows which do not affect the banking institutions and external entities, and the second group - chain dependencies that affect these two aggregated subjects. Following these conditions the case where there is an increase of payment of tax on profits of non-financial business corporations (S.11) with 10 units could be classified in the first group, for example, while in the second group - the case in which households (S.14) receive less interest on their deposits in banking institutions by 1 unit. Some ideas of the limited form of these two chain dependencies can be acquired from the content of Table 7.

It is obvious the fact that if the obligation of non-financial business corporations (S.11) is increased by 10 units as **corporate tax** this will cause an increase with the same units of the total amount of their cash outflows and the total amount of domestic money turnover, as well as a decrease with the same units of their cash at the end of the chosen period of time. In parallel, the total amount of the incoming cash flows and the cash money for the Government (S.1311) will increase with the same units at the end of the chosen period of time. If there is **decrease in interest on deposits** for Households (S.14) with 1 unit this will cause a reduction for them with the same amount of the total value of their incoming cash flows and cash money at the end of the chosen period of time, accompanied by a corresponding reduction in the total value of domestic money turnover. This change for the Banking institutions (S.122) will cause a corresponding reduction in their cash outflows and an increase in their cash money at the end of the chosen period of time. That change, however, will be accompanied also by a decrease of 1 unit of the money supply which is serving the economic subjects without Banking Institutions (S.121 + S.122) and external entities (S.2).

*Table 7*

Cash outflows (i) → Cash inflows (j) of ↓		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.125	S.1314	S.123 + S.124	S.121 + S.122	S.2	SUMS
		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	20	150	14	24	20	8	2	5	10	15	248
Non-profit organizations (R.15)	2	5	10	1	5	2	1	1	0	2	0	22
Households (R.14)	3	20	25	1	1	5	1	3	0	2 <i>1</i>	2	40 <i>39</i>
Government (S.1311 + S.1313)	4	5	20 30	2	5	1	1	2	1	1	1	34 44
Social security funds (S.1314)	5	3	7	1	1	1	0	1	1	1	2	15
Insurance companies and pension funds (S.125)	6	2	5	2	1	3	1	0	0	0	0	12
Other financial institutions (S.123 + S.124)	7	1	5	1	0	1	0	0	0	0	1	8
Banking Institutions (S.121 + S.122)	8	0	8	1	3	0	1	0	0	2	10	25
External subjects (S.2)	9	0	5	0	1	3	1	1	1	2	0	14
SUMS	10	56	235 245	23	41	36	14	10	8	20 19	31	418-428 418-417
	11	SE (Z)	33 23	4	19 18	3 13	4	4	1	+5 +6	-17	68 67

### 3.3 Satellite account as a tool for forecasting cash flows

The need for forecasting cash flows is undisputable. It is imperative to develop multiple options for their future condition and then to choose the right one. The information that will be contained in the new satellite account for cash flows creates the prerequisites for achieving this goal. This is because on the basis of the outgoing and incoming cash flows, which are contained in it, first, it is possible to build the **matrix of coefficients**. For this purpose each cash flow should be divided on the total amount of the cash flows. Some ideas for the matrix of coefficients can be obtained from the data which is placed on the next table:

Table 8

Cash outflows (i) → Cash inflows (j) of ↓		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.125	S.1314	S.123 + S.124	S.121 + S.122	S.2	SUMS
		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	20	0,357	0,033	0,057	0,048	0,020	0,005	0,012	0,024	0,036	0,592
Non-profit organizations (R.15)	2	5	0,024	0,002	0,013	0,005	0,002	0,002	0,000	0,005	0,000	0,053
Households (R.14)	3	3	0,020	0,002	0,002	0,002	0,000	0,002	0,002	0,002	0,005	0,037
Government (S.1311 + S.1313)	4	2	0,013	0,005	0,002	0,007	0,002	0,000	0,000	0,000	0,000	0,029
Social security funds (S.1314)	5	1	0,013	0,002	0,000	0,002	0,000	0,000	0,000	0,000	0,002	0,019
Insurance companies and pension funds (S.125)	6	0	0,020	0,002	0,007	0,000	0,002	0,000	0,000	0,005	0,024	0,060
Other financial institutions (S.123 + S.124)	7	0	0,013	0,000	0,002	0,007	0,002	0,002	0,002	0,005	0,000	0,033
Banking Institutions (S.121 + S.122)	8	56	0,569	0,053	0,098	0,085	0,032	0,023	0,018	0,048	0,074	1,000
External subjects (S.2)	9	0	0,013	0,000	0,002	0,007	0,002	0,002	0,002	0,005	0,000	0,033
SUMS	10	56	0,569	0,053	0,098	0,085	0,032	0,023	0,018	0,048	0,074	1,000
	11	SE (Z)	33	4	19	3	4	4	1	+ 5	- 17	68

In the presence of such a matrix it must be done a **prediction about the total value of the future cash turnover**, i.e. for the future set of cash flows. This can be accomplished by the use of subjective (expert) methods, methods of extrapolation, causal (causal effect) methods and extremal methods. The variety of such methods is very large. They are well known, so it is not necessary to give more information about them here. It is necessary to be emphasized that for greater certainty it should be used not just one but a set of those methods. The final stage within this procedure is the **establishment of future cash flows between economic subjects**. For this purpose, the estimated total value of the future set of cash flows must be multiplied by each element of the matrix of coefficients.

If it is assumed that the projected future value of the set of cash flows will be not 418 units but 500 units and if the coefficients of the matrix remain the same, the future status of cash flows in this case can be seen from the data on next table:

*Table 9*

Cash outflows (i) →		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.1314	S.125	S.123 + S.124	S.121 + S.122	S.2	SUMS
Cash inflows (j) of ↓		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	33,0	178,5	16,5	28,5	24,0	10,0	2,5	6,0	12,0	18,0	296,0
Non-profit organizations (R.15)	2	4,0	12,0	1,0	6,5	2,5	1,0	1,0	0,0	2,5	0,0	26,5
Households (R.14)	3	19,0	30,5	1,0	1,0	6,0	1,0	3,5	0,0	2,5	2,5	48,0
Government (S.1311 + S.1313)	4	3,0	24,0	2,5	6,5	1,0	1,0	2,5	1,0	1,0	1,0	40,5
Social security funds (S.1314)	5	4,0	10,0	1,0	1,0	1,0	0,0	1,0	1,0	1,0	2,5	18,5
Insurance companies and pension funds (S.125)	6	4,0	6,5	2,5	1,0	3,5	1,0	0,0	0,0	0,0	0,0	14,5
Other financial institutions (S.123 + S.124)	7	1,0	6,5	1,0	0,0	1,0	0,0	0,0	0,0	0,0	1,0	9,5
Banking Institutions (S.121 + S.122)	8	0,0	10,0	1,0	3,5	0,0	1,0	0,0	0,0	2,5	12,0	30,0
External subjects (S.2)	9	0,0	6,5	0,0	1,0	3,5	1,0	1,0	1,0	2,5	0,0	16,5
SUMS	10	68,0	284,5	26,5	49,0	42,5	16,0	11,5	9,0	24,0	37,0	500,0
X. <i>ij</i> = ΣDMT1* K. <i>ij</i>	11	SE (Z)	44,5	4,0	9,0	10,0	6,5	7,0	1,5	+ 6,0	- 20,5	82,5 + 14,5

### 3.4 The satellite account and the velocity of money

The questions that are related to the velocity of money should not be underestimated, since *ceteris paribus* it determines the amount of money that serves economic subjects. This means that the acceleration of the velocity of money leads to a reduction of that amount, but its delay - to increase it. In the foreground within these issues stands the choice of indicators of measurement of the velocity of money and how to calculate them. It is accepted for this purpose to use the **number of turnovers of money (NTM) and the duration of a turnover, measured in days (D)**. Not only in theory but also in practice it is suggested that the first indicator is

calculated by dividing the gross domestic product (GDP) with money supply which is serving the economic subjects. On the other hand the second indicator is calculated by dividing the number of days for the selected period with already calculated number of turnovers.

However, this approach can hardly be considered as fully successful, because the use of GDP gives no idea about the actual value of set of cash flows, which corresponds to the velocity of money. It does not include all outgoing and incoming cash flows because it represents the cash value of manufactured, distributed or consumed new goods and services during the period. This money equivalent besides the fact that it is a consequence of numerous objectively existing cash flows between economic subjects, it is connected with the function of money as a measure of value, not with functions where there is movement of money and which stand in the core of cash flows. For example, GDP does not include the cash flows related to buying and selling of goods and services, cash flows related to lending, etc. This gives sufficient grounds to assert that in the calculations related with the velocity of money **GDP should not be used, but domestic money turnover (DMT)**, which represents a set of all cash flows during the selected period of time. It is obvious that for this purpose we can use the information contained in the proposed new satellite account to the national accounts.

Some ideas of the ability to use new satellite account to establish the **number of turnovers of money (NTM)** and the **duration of a turnover, measured in days (D)** can be obtained from the information contained in the following table:

*Table 10*

Cash outflows (i) → Cash inflows (j) of ↓		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.125	S.1314	S.123 + S.124	S.121 + S.122	S.2	SUMS
		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	20	150	14	24	20	8	2	5	10	15	248
Non-profit organizations (R.15)	2	5	10	1	5	2	1	1	0	2	0	22
Households (R.14)	3	20	25	1	1	5	1	3	0	2	2	40
Government (S.1311 + S.1313)	4	5	20	2	5	1	1	2	1	1	1	34
Social security funds (S.1314)	5	3	7	1	1	1	0	1	1	1	2	15
Insurance companies and pension funds (S.125)	6	2	5	2	1	3	1	0	0	0	0	12
Other financial institutions (S.123 + S.124)	7	1	5	1	0	1	0	0	0	0	1	8
Banking Institutions (S.121 + S.122)	8	0	8	1	3	0	1	0	0	2	10	25
External subjects (S.2)	9	0	5	0	1	3	1	1	1	2	0	14
SUMS	10	56	235	23	41	36	14	10	8	20	31	418
418 NTM = ----- = 6,7 (56 + 68) : 2 360 D = ----- = 54 6,7	11	SE (Z)	33	4	19	3	4	4	1	+5	-17	68

### 3.5 Satellite account and monetary policy

It is known that the monetary policy has central role within the economic policy of a country or a community of states. This policy covers two main segments - **policy related to the demand of money and policy related to the supply of money**. There is an objective need for synchronization of these two segments of monetary policy which must have as its main objective compliance of the money supply with demand for money. The successful implementation of this synchronization, however, largely depends on the ability to obtain quantitative information primarily to the demand for money, since the information for the money supply exists. The



allegation about money supply is fully confirmed by the observations that are made by the monetary statistics of central banks. It is primarily about the observations related to the well known monetary aggregates M1 (narrow money), M2 and M3 (broad money). The new proposed satellite account for cash flows to national accounts also creates conditions for the establishment of the status of money supply both at the beginning and at the end of the selected period of time. This can be seen from the content of the following table:

*Table 11*

Cash outflows (i) →		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.125	S.1314	S.123 + S.124	S.121 + S.122	S.2	SUMS
Cash inflows (j) of ↓		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	20	150	14	24	20	8	2	5	10	15	248
Non-profit organizations (R.15)	2	5	10	1	5	2	1	1	0	2	0	22
Households (R.14)	3	20	25	1	1	5	1	3	0	2	2	40
Government (S.1311 + S.1313)	4	5	20	2	5	1	1	2	1	1	1	34
Social security funds (S.1314)	5	3	7	1	1	1	0	1	1	1	2	15
Insurance companies and pension funds (S.125)	6	2	5	2	1	3	1	0	0	0	0	12
Other financial institutions (S.123 + S.124)	7	1	5	1	0	1	0	0	0	0	1	8
Banking Institutions (S.121 + S.122)	8	0	8	1	3	0	1	0	0	2	10	25
External subjects (S.2)	9	0	5	0	1	3	1	1	1	2	0	14
SUMS	10	56	235	23	41	36	14	10	8	20	31	418
	11	SE (Z)	33	4	19	3	4	4	1	+ 5	- 17	68 + 12

There are enough reasons that it could be claimed that until now not only in theory but also in practice, an adequate solution to the problem of establishing of the amount of the money demand has not been found. The practical value of the ideas in this connection is small i.e. for the

amount of money demand by Karl Marx, for the equation of exchange by Irving Fisher, for the equation of preferences for liquidity by John Maynard Keynes and the equation of demand for assets of Milton Friedman. It is also accepted that it is possible to conduct a successful monetary policy related to the supply of money without knowing what is the demand of money. This approach, however, creates prerequisites for an oversupply of money or insufficient money supply. All this is due to the insufficient information for the cash flows that are very heavily dependent on the behavior of the economic subjects within a given period of time, behavior which is associated with the demand for money. This is because neither one separately taken economic subject nor single aggregated economic subjects are able to make cash outflow without being subject of the demand of money.

On this basis it can be assumed that over a period of time the amount of the demand of money is in close connection with the total amount of all cash outflows of the economic subjects. This total amount can be considered as a minimum quantity for money demand. It is obvious, however, that its maximum level is significantly greater than the total amount of cash outflows in a given period of time. This means that the total amount of the cash outflows can serve only as a guide in the conduction of monetary policy which is related to the money supply.

The information that will be included in the proposed new satellite account for cash flows to national accounts creates the necessary preconditions for the establishment of an indicative amount of money demand. This is because it represents the cash outflows of aggregate economic subjects during the selected time period. For the achievement of this goal, however, we have to take into account the velocity of money, calculated not by the **gross domestic product (GDP)** but by using **domestic money turnover (DMT)**. On this basis, the **quantity of demanded money (QDM)** will be equal to the total amount of cash outflows divided by the number of turnovers of money.

All of this can be traced from the data contained in the following table:

*Table 12*

Cash outflows (i) → Cash inflows (j) of ↓		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.125	S.1314	S.123 + S.124	S.121 + S.122	S.2	SUMS
		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	20	150	14	24	20	8	2	5	10	15	248
Non-profit organizations (R.15)	2	5	10	1	5	2	1	1	0	2	0	22
Households (R.14)	3	20	25	1	1	5	1	3	0	2	2	40
Government (S.1311 + S.1313)	4	5	20	2	5	1	1	2	1	1	1	34
Social security funds (S.1314)	5	3	7	1	1	1	0	1	1	1	2	15
Insurance companies and pension funds (S.125)	6	2	5	2	1	3	1	0	0	0	0	12
Other financial institutions (S.123 + S.124)	7	1	5	1	0	1	0	0	0	0	1	8
Banking Institutions (S.121 + S.122)	8	0	8	1	3	0	1	0	0	2	10	25
External subjects (S.2)	9	0	5	0	1	3	1	1	1	2	0	14
SUMS	10	56	235	23	41	36	14	10	8	20	31	418
418 QDM = ----- = 62,4 6,7	11	SE (Z)	33	4	19	3	4	4	1	+ 5	- 17	68

### 3.6 Satellite account and public sector economy

The estimates for the state owned sector in market conditions are still subject of lively discussions. Within all discussions there is unanimous opinion that in any economy there must be both private and public sector. Problems in this area are related to the search for the best distribution between these two sectors. Liberal economists and specialists advocate for a greater share of the private sector while the rest - to maintain a significant share of the public sector. The solution of this problem is very difficult. This verbal presentation, however, is hardly to be satisfactory. On this basis the need for finding the most appropriate way to quantify the two components of this ratio arises. For this purpose different variants can be used. They include the present calculations for the participation of these two sectors in the creation of GDP, for the

separation of the property between the two sectors and so on. Their importance should not be underestimated. In parallel, however, there could be found and other approaches to measure the ratio treated here. For this purpose it could successfully be used the information for money supply, serving subjects and the aggregate of all cash flows, also known as turnover, contained in the proposed new satellite account of cash flows to the national accounts.

For example, based on this information, the respective rates may be calculated which gives an idea about the volume of money owned by the state economic subjects outside the banking institutions and also the external entities at the beginning and the end of the selected period of time. In this connection we should not underestimate the public opinion that "who owns the money he manages the economy." On this basis we can support the opinion that the more money has the state the greater share it has in the economy and vice versa. This is because depending on how much money has the state it may be more active or more passive in solving emerging economic problems.

From the information that will be contained in the proposed new satellite account of cash flows to the national accounts it will be possible to establish and the corresponding percentages for the participation of the state in both the outgoing and the incoming cash flows. On the other hand based on the percentages of cash outflows it will be able to make the relevant conclusions about its activity in relation to the financing of the other aggregate economic subjects, and based on percentages of cash inflows - conclusions about the concentration of funds in the state.

The practice shows that in both areas there is not sufficient and detailed information at present for objective judgments. They can not be made neither by the statistics of the National Statistical Institute nor by the data of the specialized institutions such as the Bulgarian National Bank and Ministry of Finance. For this purpose it is not possible to use existing national accounts.

Some ideas of the possibilities to make assessments of the public sector based on the information that will be contained in the proposed new satellite account of cash flows to the national accounts can be obtained from the content of next table:

*Table 13*

Cash outflows (i) → Cash inflows (j) of ↓		SB (Y)	S.11	S.15	S.14	S.1311 + S.1313	S.125	S.1314	S.123 + S.124	S.121 + S.122	S.2	SUMS
		0	1	2	3	4	5	6	7	8	9	10
Non-financial business corporations (S.11)	1	20	150	14	24	20	8	2	5	10	15	248
Non-profit organizations (R.15)	2	5	10	1	5	2	1	1	0	2	0	22
Households (R.14)	3	20	25	1	1	5	1	3	0	2	2	40
Government (S.1311 + S.1313)	4	5 8,9%	20	2	5	1	1	2	1	1	1	34 8,1%
Social security funds (S.1314)	5	3 5,4%	7	1	1	1	0	1	1	1	2	15 3,6%
Insurance companies and pension funds (S.125)	6	2	5	2	1	3	1	0	0	0	0	12
Other financial institutions (S.123 + S.124)	7	1	5	1	0	1	0	0	0	0	1	8
Banking Institutions (S.121 + S.122)	8	0	8	1	3	0	1	0	0	2	10	25
External subjects (S.2)	9	0	5	0	1	3	1	1	1	2	0	14
SUMS	10	56	235	23	41	36 8,6%	14 3,3%	10	8	20	31	418
	11	SE (Z)	33	4	19	3 4,4%	4 5,9%	4	1	+ 5	- 17	68

### 3.7 Satellite account and misuse of money

In Bulgaria and globally misuse of money has become a dangerous phenomenon for the society. This is due to many reasons, but the most important are two of them. First is the fact that in modern conditions it has become possible to acquire everything with money. In the core of this reason stands not only the ability of money to be a universal equivalent, but also the fact that there are no reliable public protection systems and sanctions. Parallel to this, the abuse of money is due to the inherent greed for more and more money of some individual persons and entities. In the core of this reason stands not only the first reason, but also the insufficient moral of the persons concerned.

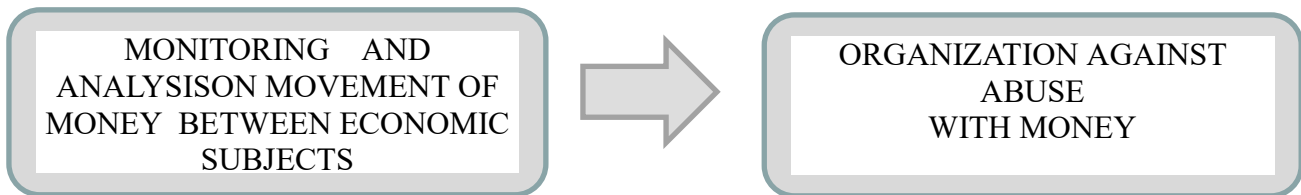
On the other hand the possibilities for abuse of money are unlimited and they find

different forms of expression - money laundering, terrorism, drug traffic, human traffic and other similar phenomena.

The opportunities to use the new satellite account cash flow to national accounts in this area can be divided into two main groups. In the **first group** are included the opportunities to analyze the information contained in that satellite account in order to identify unusual cash flows, i.e. those cash flows that show deviations from their normal appearance. This analysis must take into account the fact that the cash flows between economic subjects which are included in each aggregated economic entities stand in the basis of aggregated cash flows. The **second group** includes the possibilities of taking various measures to penalize those persons and entities that misuse money. On this basis it can be built the corresponding set of measures to prevent similar abuses.

A schematic picture of the opportunities from the information contained in the proposed satellite account against the abuse of money can be acquired by the following scheme:

**Scheme 1**



**CONCLUSION**



## References:

1. The System of National Accounts (SNA 2008)
2. European System of National Accounts (ESA 2010)
3. Hristov, M., Възможности за съставяне и използване на баланс на паричния оборот (Opportunities for compiling and using the balance of money turnover, Sofia, Bulgarian National Bank, DP / 45/2005 и Opportunities of Making and Using the Money Circulation Balance. Available at SSRN:  
<http://ssrn.com/abstract=2438449> or <http://dx.doi.org/10.2139/ssrn.2438449>)
4. Hristov, M. and Hristov St., Книга за парите (Book money), Велико Търново, 2002
5. Mishkin, Frederic., Теория на парите, банковото дело и финансовите пазари (The Economics of Money, Banking and Financial Markets), София, 2014

## Socialist industrialization and Infant industry argument

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**Abstract:** *Insofar as the issue of reindustrialization, or “reshoring”, becomes more and more relevant for advanced economies, Bulgaria is not only unable to devise a serious long-term national economic model, but it also appears unable to find domestic consensus even on its evaluation of certain questions relating to its own recent economic history. However, time is running out, and the country needs to prepare itself for this possible next phase in its development and its reindustrialization alongside other European countries.*

*First, however, it might be better to start from national economic interests i.e. from the reconciliation of issues, such as those of the Socialist industrialization, and from the subsequent transition to a market economy, with a special focus on how this transition has taken place in pure economic terms. Indeed, one might ask if it would have been better to “consult” an economist such as Friedrich List, rather than leave everything to the “mercy” of democratic euphoria, the “invisible hands” and political divisions. Perhaps, a golden opportunity to deploy the different assets of the country’s actual industrial sector has been lost.*

*That being said, this paper does not aim to enter into issues of evaluation or defense, nor even less to evoke nostalgia for the Communist regime. Forcing a connection between Socialist industrialization and the “infant industry argument” would be stretching things theoretically, and perhaps even “politically incorrect”, too. That being said, maybe such an economic doctrine could have been at least “been asked for” when engaging the “heavy” industrial legacy of the Communist regime in Bulgaria.*

**Key words:** *Friedrich List, Socialist Industrialization, Infant industry argument, Reindustrialization, Reshoring, Bulgarian Transition, Economic Nationalism*

**JEL codes:** *A14, B15, B31, F52, L52, N13, N14, O25, P11, P21, P31*



## Premise

### **It was a neutral ground, but...**

Under the Communist regime, Bulgaria transformed from being a predominately post-World War II agricultural country into an industrialized one, though given its economic similarity to the USSR of the twenties and thirties, it was better positioned to exploit the Stalinist model than the other countries of Central and Eastern Europe, despite the obvious inherent flaws in the model itself.<sup>1</sup>

In April 2013, a meeting was held at the Department of Political Science of “Roma Tre” University in Italy on the occasion of Armando Pitassio’s latest publication *The History of Contemporary Bulgaria*. I couldn’t help but notice that there were only three Bulgarians present, one of whom was a professor from the same university and acting moderator on that day. Furthermore, the total absence of any formal or institutional presence on behalf of Bulgaria may also have raised an eye-brow or two. In any case, at a certain point in the proceedings, an Italian scholar in the history of Central and Eastern Europe, put forward his firm conviction that the industrialization carried out under Communism had been the worst thing that had ever happened to the Bulgarian people. The Bulgarian professor (and moderator) replied that had most certainly “not been the case” and admonished quite openly on the fact that the history, as is recounted in books, may have very little to do with how people actually lived that history “on their own shoulders”. Such strikingly polarized and subjective viewpoints were, for me, a rather unexpected occurrence in an otherwise “neutral” and academic setting that is “Roma Tre” University in Italy.

### **From a centrally planned economy to the free market: It’s hard to be positive!**

Today Bulgaria is a democratic state, inserted into the logic of the market economy, and an EC and NATO member. However, despite all this, after more than a quarter of a century, the wounds of the Bulgarian soul have not only not healed, but at times, they seem to have become more profound. Questions regarding its industrialization under Socialism are being evaluated in an ever more negative and radicalized fashion. In a nutshell, there is deep disagreement and two mutually incompatible beliefs. The only possible neutral position, so as not to be targeted by one or other of the two hostile camps, is that of apathy. And it is precisely this stance that may be the most problematic, as it presupposes the adoption of a position of passive indifference where one may lose even basic orientation of what has been,

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<sup>1</sup> Guida F., Biagini A., *Mezzo secolo di socialismo reale*, G. Giappichelli Editore, Torino, 2 ed., 1997, p. 68, (author’s translation).

or what will be, or where one was, and where one may yet go. Indeed, going from the disinterested to the defeatist is just one short step away and renouncing objective evaluation of the past also precludes a proactive attitude towards the present, and towards the future, too, neither of which may be in the best interests of generations to come.

An even bigger problem, however, is that these same issues could, and should, have been tackled more forcibly in the advent of the country's democratization more than 25 years ago. Indeed, in that important historical moment, Bulgaria, despite the great efforts towards integration with the civil-democratic world it had already made, had not been lucky enough to find the leadership capable of laying the foundations for serious post-traumatic growth. Furthermore, still from a psycho-sociological point of view, it is difficult to ascertain how exactly Bulgaria affronted this changeover, or to define its approach as being primarily *functional* or *dysfunctional* and, of course, to evaluate the ensuing stress that *coping* with this may have brought. In addition, the question of Socialist industrialization in Bulgaria is not only complex but it is also quite controversial, in part because some of the processes are still under way, and in part, because some of the main protagonists are still alive.

Of course, while creating an objective historical framework requires a certain temporal distancing from events, objectivity also needs to be created and fostered through the ideological and experiential neutrality of who is recounting and evaluating the events. In my own case, research figures would seem to confirm that my personal experience may afford me such a neutrality, as I was not directly involved in the “building of Communism” (for obvious age reasons), though I did witness it second hand and the euphoria surrounding its downfall, too. Furthermore, while I have also earnestly followed the ensuing difficulties “building Democracy” has brought to Bulgarian society, I have done so from a certain distance, as I have been permanently living in Italy. In short, not having lived these experiences completely first hand may confer on me a certain objectivity and just neutrality, because being completely neutral, without having a piece of history “lived on the own shoulders”, would perhaps not have been very useful.

### **Why Socialist industrialization and Infant industry argument?**

Perhaps it is time to objectively evaluate the whole question of the period of industrialization under Socialism. This is not only important from the point of view of history itself but also in the light of current debate among the developed economies on shifting towards a more production based economy i.e. re-industrialization. My basic hypothesis is that the industrialization of the Socialist period could have been seen in the general light of an infant industry argument, in order to approach the market paradigm in a more purposeful and

economic way. That being said, I would like to stress at this point that the purpose of this paper is not to get into issues of generalised evaluation, defense, and even still less to evoke nostalgia for the Communist regime. Rather, it aims at researching an approach centered on a purely objective evaluation of the economic legacy of that regime, namely that of Socialist industrialization. Hence my thesis proposes that if there was something positive about the Socialist industrialization, it would not be economic to deny this, in the technical sense of the word, nor to leave it to the “mercy” of mere political euphoria and its implications and evaluations.

In the first chapter, the main aspects of the doctrine of Friedrich List – the father of infant industry argument – will be presented, where I will attempt to clarify some misunderstandings that surround it. The approach taken is hermeneutically descriptive, while empirical support is mainly taken from List’s volume *The National System of Political Economy* and other related secondary sources. In the second chapter, some of the features of the Bulgarian Socialist industrial model will be highlighted, which will include some statistical data, too. In the Conclusions, some possible connections between List’s doctrine and Bulgarian industrial history will be explored, using the aforementioned neutral position (where possible) of the researcher as a basic guideline.

Therefore, as the objective of this paper is the theory of Friedrich List in relation to the Bulgarian industrialization under Socialism, the paper itself thus becomes an exploration of the History of Economic Thought and Economic History, with a special focus on List’s volume *The National System of Political Economy*<sup>1</sup>, where the goal will be to demonstrate how List’s ideas would have been more than pertinent at the beginning of the transition from centrally planned economy to market economy in Bulgaria and that a golden opportunity to exploit the different assets of the country’s industrial sector were lost as a result

## **1. List’s Infant Industry Argument**

### **1.1. Preliminary Considerations**

The infant industry argument rational has been proposed as a kind of twofold response to both the theory of international trade as exchange values (Adam Smith), and the theory of comparative advantage (David Ricardo). For the supporters of infant industry argument, the first one was too optimistically universalist, while the second – although it did not exclude a certain dynamism – was tendentially rather conservative on questions regarding long-term development. It is very interesting that infant industry argument was first codified in the

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<sup>1</sup> List F., *National System of Political Economy* (1841), translated by Matile G. A., Philadelphia, J.B. Lippincott and Co., 1856.

United States and its “natural fathers” were economists like Alexander Hamilton, Henry Carey, Henry Clay and Daniel Raymond. “The modern protectionist school of thought was actually born in the United States”, and “it was also the mother country and the bastion of modern protectionism”<sup>1</sup>. Thanks to the time lived in the United States (1825-1830) and aforementioned influence of the American economists, List transformed his beliefs about protection from “retaliatory” towards infant industry protection<sup>2</sup>. His elaboration of the infant industry argument is best articulated in the volume *The National System of Political Economy*, where he “offered his readers much more than a repetition of the familiar argument put forward by [other] writers”<sup>3</sup>.

### **1.2. How would industrialization elevate civilization?**

According to List, economic progress is closely related to the progress in civilization. However, for List, it was industrial production rather than foreign trade which was to have the foremost civilizing effect and this went contrary to what was proposed by the mainstream economists. Indeed, if one were to replace the term “industrial production” with “real economy”, as in the previous sentence, one realizes just how contemporary the scholar’s thoughts actually are, even at a distance of more than a century and a half. “The popular school has attributed this civilising power to foreign trade, but in that it has confounded the mere exchanger with the originator.”<sup>4</sup>

For List, countries pass through five stages of consecutive development: the savage; the pastoral; the agricultural; the agricultural and manufacturing; and finally, the agricultural, manufacturing and commercial stage. In order to develop economically, countries must industrialize, surpassing the purely agricultural stage, though this does not happen naturally or automatically through some “invisible hand”. The only way to develop economically, would be to activate the infant industry protection, because otherwise the developing domestic industries would be crushed by foreign ones before they ever get off the ground. “They may be compared to a youth, struggling with a full-grown man – aggression is impossible, and resistance hopeless. The manufactures of the chief industrial and commercial power possess a thousand advantages over those of other nations just coming into existence or not arrived at full growth.”<sup>5</sup> However, the adoption of such a commercial protection

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<sup>1</sup> Bairoch P., *Economic and World History*, Brighton, Wheatsheaf, 1993, p. 23-30.

<sup>2</sup> See Henderson W., *Friedrich List*, London, Frank Cass., 1983, p. 144-145.

<sup>3</sup> *Ibid.*, p. 158.

<sup>4</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 115.

<sup>5</sup> List F., *National System of Political Economy, Introduction*, (1841), translated by Matile G. A., Philadelphia, J.B. Lippincott and Co., 1856, p. 378.

policy, need also be consider in the light of both the particular situation of the country-nation in question, and the current international situation, too. Protection should be limited to selected manufacturing industries while taking into account the inconvenience caused by duties on the importation of raw materials or intermediate goods, in addition to excluding the idea of “mere” agriculture, which instead should be “raised to a skilled industry, an art, a science”<sup>1</sup>. Protection should be temporary, operating only until the industry in question matures. Eventually, the protection should also be weighted so as not to completely remove the possibility of domestic industries competing with foreign ones. “Duties upon imports so high as to absolutely exclude foreign competition are prejudicial to the country which adopts them; for they suppress all rivalry between domestic and foreign manufacturers, and encourage indolence among the former.”<sup>2</sup> The gradual removal of protection would also be a decisively important issue. According to List, as an intermediate measure, domestic competition could also be introduced, with the implicit hints of the economies of scale: “new manufactures suitably protected, however imperfect and costly their products in the beginning, may, by the aid of experience and the stimulus of domestic competition, rival in all respects the products of older factories in foreign countries”<sup>3</sup>. In this sense, List’s regulatory system was fairly sophisticated, and by no means *naïve*. He was fully aware of the possible distortions and inefficiencies that the creation of a monopoly through protectionism could cause and for this reason, he proposed, at the same time, a selective protection outside, and a liberalization inside countries. “The competition at home, and protection against overwhelming competition from abroad, have worked wonders, of which the School [Classical economists] is ignorant. It is not true then, as has been pretended by the School, that protection enhances the price of domestic products by the amount of the protective duty. Duties may cause a temporary increase of price, but in any country prepared for manufacturing, home competition soon reduces the prices below the rates at which they would have remained under the operation of free trade.”<sup>4</sup> List, however, also warned of the danger of another kind of monopoly – the “monopoly” of the more powerful nation – as a result of an abrupt and premature shift towards deregulation and free trade by the less developed country.

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<sup>1</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 162.

<sup>2</sup> *Ibid.*, p. 79.

<sup>3</sup> *Ibid.*, p. 113.

<sup>4</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 160.

If one were to set out a compact list of List's factors-instruments for the development of the "productive power", one would undoubtedly mention: political and religious freedom through the promotion of general and individual freedom of thought and action; security, stability and morality as pillars of society; legal regulations towards social progress; promotion of investment and the development of education, science, research oriented towards the technological progress; stimulation and improvement of communications and transports infrastructures; efficient and impartial administrations; promotion of the entrepreneurial and innovative spirit; and a solid agricultural sector as a premise of industrialization.

While for Smith and his disciples, the universal interests would be the sum of individual interests, because each individual, in pursuing their own interests, pursues the interests of the whole society; for List, the nations would be more interested in increasing their economic well-being, and in the expansion of their productive forces, rather than in the prosperity of all humanity. "I would indicate, as the distinguishing characteristic of my system, *nationality*. On the nature of *nationality*, as the intermediate interest between those of *individualism* and of *entire humanity*, my whole structure is based."<sup>1</sup> In this sense, the central place in the scholar beliefs occupies the "theory of productive power" (in place of the "theory of exchange values"), where economic development is tied to the destiny of the Nation state in an implicit dirigist spanner. "Individuals would be in vain laborious, economical, ingenious, enterprising, intelligent, and moral, without a national unity; without a division of labor and a co-operation of productive power. A nation cannot otherwise attain to a high degree of prosperity and power, nor maintain itself in the permanent possession of its intellectual, social, and material riches."<sup>2</sup>

Therefore, the main economic entity would be the Nation state defined as "productive power". Central to the "productive power" theory is the conception of "immaterial economic capital"<sup>3</sup> (well rooted in the German Historical tradition of economics<sup>4</sup>) tightly oriented to social progress. List often declares the importance of: experience, practice, adaptation, industrial training-education and productive synergy between economic sectors or the

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<sup>1</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, Author's Preface to the First edition, p. xliii.

<sup>2</sup> List F., *National System of Political Economy, Introduction*, (1841), translated by Matile G. A., Philadelphia, J.B. Lippincott and Co., 1856, p. 74.

<sup>3</sup> See List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 113.

<sup>4</sup> It refers to both individual, social and collective capacities, as well as both actual and historically accumulated immaterial capital, *Wikipedia*, (URL= [https://en.wikipedia.org/wiki/Mental\\_capital](https://en.wikipedia.org/wiki/Mental_capital)).

industry's branches; alluding to current economic notions such as: human capital, scale economies and even externalities caused by industrialization-protection. "Manufacturing industry is concerned with so many branches of science and art, it implies so much experience, practice, and, adaptation, that the industrial training and education of a country can only proceed but slowly. All excessive or premature protection is expiated by a diminution of national prosperity."<sup>1</sup> According to the level of "productive power", the Nations should adopt different strategies on the international economic scene. "A country like England which is far in advance of all its competitors cannot better maintain and extend its manufacturing and commercial industry than by a trade as free as possible from all restrictions. For such a country, the cosmopolitan and the national principle are one and the same thing."<sup>2</sup> The least developed countries instead, should not adopt the logic of free trade before the industrialization and should strengthen their "productive power" through the protection of their infant industries. In List's State-centric view, free trade would be appropriate and beneficial only for those countries at the same level of industrialization and economic development.

The notion of freedom guaranteed by legal order deserves special attention, as the strong role played by the Nation-state, as invoked by List, is often associated with political and social restrictions. According to the scholar, religious and political freedom and industrialization were intertwined. "It has been the experience of all ages and of all countries that freedom and industrial progress are like Siamese twins [...] The spirit of enterprise, economic progress, technical knowledge, and artistic skill develops only in countries enriched by political and religious freedom."<sup>3</sup> Furthermore, List emphasized the two way nature of the relationship, pointing out that industrialization (and urbanization) was a means for the individual's social and spiritual development. Therefore, the State was strong and based on stability, security and protection, but at the same time it was conceived as profoundly democratic, liberal and as a defender of civil rights. The State was the guarantor of the universality of law, and the freedom of expression; the coordinator between the bureaucratic and industrial sectors in rendering their functioning efficient and harmonious, as well as the promoter of the entrepreneurial spirit and communication-innovation.

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<sup>1</sup> List F., *National System of Political Economy, Introduction*, (1841), translated by Matile G. A., Philadelphia, J.B. Lippincott and Co., 1856, p. 78.

<sup>2</sup> *Ibid.*, p. 79.

<sup>3</sup> List F., *The Natural System of Political Economy*, (1837), ed. W. H. Henderson, reprinted, Totowa, NJ, Frank, Cass. 1983, p. 153, 164.

Crucial to the productivity of labor, according to List, was the integration-combination of division of labor and the union or confederation or co-operation of labor. That was a vital prerequisite for the organic and harmonious functioning of the national economic system. “The whole social state of a nation will be chiefly *determined by the principle of the variety and division of occupations and the cooperation of its productive powers.* [...] the whole nation depend on the exertions of all individuals standing in proper relation to one another. We call this relation the *balance* or the *harmony of the productive powers.*”<sup>1</sup>

Current and relevant to the argument of this paper would be List’s criticism addressing short-sightedness in economic affairs. He identifies examples in history where some states – England, Holland, US – acted against their own long-term interests, and that could have been avoided by means of appropriate regulatory policies and information-education activities.

### **1.3. Main criticisms and misinterpretations about List**

Some of the biggest misunderstandings of List’s convictions can be found in questions regarding free trade. To begin with, he was not a fierce opponent of free trade, as has often been accused nor, in my opinion, was he “a greater free trader than his main adversary Adam Smith”<sup>2</sup>, as some of his contemporaries supporters might claim. After all, for List, both free trade and protection were simply a means to an end, namely the development of “productive power”.

Another criticism levied at the infant industry argument in its reduction to protectionism is understood solely in terms of duties and subsidies. In reality, however List’s theory appears much more detailed, complex and extended, even to the point of wondering why the scholar is almost always associated with protectionism and infant industry argument, when the focal point of his doctrine is about the “productive power of nations”, structured as a real theory of economic development. The scholar states that: “The productive power of nations is not solely dependent on the labor, the saving, the morality, and the intelligence of individuals, or on the possession of natural advantage and material capital; it is dependent also upon institutions and laws, social, political, and civil, but, above all, on the securities of their duration, their independence, and their power as nations.”<sup>3</sup>

The criticism that the infant industry argument does not appear to work well for small countries is quite meaningful, enough to have been perceived by the same List. He indicates

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<sup>1</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 129-130.

<sup>2</sup> See Daastøl A. M., *Friedrich List the ultimate globalist*, essay-collection on Free Trade and the Nation State, edited by Jürgen G. Backhaus, as an outcome of The 1997 Heilbronn conferences on the German tradition in economics.

<sup>3</sup> *Ibid.*, p. 74.



some remedies to widen the market of small nations, among which is the promotion of regional associations of countries. In my opinion, the size of the countries and relativity of their markets, do not in any case compromise List's theory, because efficient industries do not have to be large. In addition, there are also industry sectors, such as the consumer goods industries, that may be in position to exploit a fairly extensive domestic demand.

#### **1.4. Some points for contemporary reflection**

I would like to propose an extract of some of List's thoughts that, besides being pertinent to today's economic debate, might also help to explain the "why" of the adversity and the "snobbery" towards his ideas by so-called mainstream economists.

...commerce must be regulated according to the interests and wants of agriculture and manufactures, not vice versa. [...] 'Laissez faire, laissez passer,' an expression which sounds no less agreeably to robbers, cheats, and thieves than to the merchant, and is on that account rather doubtful as a maxim. This perversity of surrendering the interests of manufactures and agriculture to the demands of commerce, without reservation, is a natural consequence of that theory which everywhere merely takes into consideration present values, but nowhere the powers that produce them, and regards the whole world as but one indivisible republic of merchants. The school does not discern that the merchant may be accomplishing his purpose (viz. gain of values by exchange) at the expense of the agriculturists and manufacturers, at the expense of the nation's productive powers, and indeed of its independence. [...] It is therefore evident that the interest of individual merchants and the interest of the commerce of a whole nation are radically different things...<sup>1</sup>

In any case, this does not mean that List was contrary to the category of merchants: "It is the nature of things that he [the merchant] must buy in the cheapest markets and sell in the dearest."<sup>2</sup> This does not even mean, an aversion to the market or some preference for economic autarky: "International trade by rousing activity and energy, by the new wants it creates, by the propagation among nations of new ideas and discoveries, and by the diffusion of power, is one of the mightiest instruments of civilization, and one of the most powerful

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<sup>1</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 208-209.

<sup>2</sup> List F., *The Natural System of Political Economy*, (1837), ed. W. H. Henderson, reprinted, Totowa, NJ, Frank, Cass. 1983, p. 99.

agencies in promoting national prosperity.”<sup>1</sup> For the scholar, the role of the State is especially important in the promotion of an efficient national economy and as a defender-regulator of collective interests.

In this order of thought the next quote would be equally interesting. “The establishment of a universal republic will be much more likely if all the civilized countries in the world - followed in due course by countries which are at present relatively backward - were making uniform economic progress. This would be much better than a situation in which one country dominated all others in industrial and commercial power, because in that case a world trading monopoly and a universal despotism would have been established.”<sup>2</sup> Still in 1841, List warned of the risks involved in opening up to international financial markets and to deregulated free trade, especially for small and underdeveloped countries: “...as long as separate national interests exist, a wise State policy will advise every great nation to guard itself by its commercial system against extraordinary monetary fluctuations and revolutions in prices which overturn its whole internal economy...”<sup>3</sup>.

Another interesting point of List’s doctrine, which merits further consideration is the statement of having extrapolated his theory from events in the history (not by case, List begins his book with the story of the main trade policy of some countries), while the Classical school (according to him) relies for its convictions on a theory that stems from mere conjectural interest. “It [Classical school] avails itself of the advantages of internal free trade, to prove that nations can attain the highest state of prosperity and power only by absolute freedom of international trade, whilst history proves positively the contrary.”<sup>4</sup>

Again from a historical viewpoint, the infant industry argument is very often associated with the failure of the recent strategy – *import substitution industrialization* – adopted by Latin American countries. To even things up, List’s supporters responded with another recent example of the successful industrial policies of so-called “Asian Tigers”, pointing out that the industrial policy of the Latin American countries had not been born from a serious economic project, but rather from a balance of payment’s problems. In my view, apart from not being “magic”, List’s formula is simply too elastic and sophisticated to be applied in a purely

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<sup>1</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 70-71.

<sup>2</sup> List F. *The Natural System of Political Economy*, (1837), ed. W. H. Henderson, reprinted, Totowa, NJ, Frank, Cass. 1983, p. 188.

<sup>3</sup> List F., *The National System of Political Economy*, (1841), translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909, p. 227.

<sup>4</sup> List F., *National System of Political Economy*, (1841), translated by Matile G. A., Philadelphia, J.B. Lippincott and Co., 1856, p. 394.

mechanical fashion. He states that one must start from the particular conditions of the country in question, then orientate in the context of an international economic situation but most especially one must lay the foundations of the infant industry argument on an non-material (“immaterial”) assets such as human capital, strong institutional structure and social cohesion. “Every nation must follow its own course in developing its productive powers; or, in other words, every nation has its particular Political Economy.”<sup>1</sup>

Finally, List’s affirmation, which goes against the common speculation that investors avoid countries with protectionist policies, is indeed very interesting. The scholar believes that it is quite the contrary and perhaps the examples of long-term industrial development like those of Korea, Taiwan and China would might him prove him right. “People are attracted to a country [England] which safeguards its industries by the policy of protection because they wish to share in the advantages provided by tariffs.”<sup>2</sup>

## **2. Bulgarian Socialist industrialization**

### **2.1. Is it the issue of industrialization still relevant today?**

At the time of writing (September 2016), speaking of industrialization is not as anachronistic as it might appear at first sight. Currently, the voices returning to the so-called “real economy” are becoming increasingly insistent. The reason for the crisis of recent years (in the advanced countries) is often detected in the implemented deindustrialization of the past twenty years. “In recent years we have seen progressive offshoring of manufacturing from Europe to third countries and progressive deindustrialization leading to a decline in its share of European GDP, which has fallen from 20 % to 15 % in just a few short years. In the EU 3,5 million jobs have been lost in the manufacturing industry since 2008.”<sup>3</sup> The free movement of goods and capital and the relocation of production to low-labor cost countries, explained by the theory of a natural progression of the advanced capitalist economy towards a tertiary structure, is being increasingly challenged.

For some years now the United States is actively engaged in the reindustrialisation, or for the return of some its manufacturing base from Asian countries to the national territory (“re-shoring” in place of “off-shoring”). “Reshoring is a factor in all manufacturing companies’ decisions. As companies start to carry out more comprehensive total cost analysis, they are discovering that the rise in the cost of labour along with the hidden costs of

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<sup>1</sup> List F., *Outlines of American Political Economy*, Printed by Samuel Parker, Philadelphia, 1827, p. 24.

<sup>2</sup> List F. *The Natural System of Political Economy*, (1837), ed. W. H. Henderson, reprinted, Totowa, NJ, Frank, Cass. 1983, p. 79.

<sup>3</sup> Official Journal of the European Union, *Opinion of the European Economic and Social Committee on the “Reshoring of EU industries in the framework of reindustrialisation”*, (2014/C 311/03), 12.9.2014, p. 19.

offshoring have often outweighed the competitive advantage. There is a movement involving the United States government and various associations in creating the new *Made in America, Again* label, aiming to persuade customers to buy American products and equipment. *Reshore now* is another initiative at national level aimed at reshoring companies to US soil.”<sup>1</sup> In Europe, such a debate is already carried out even in official programmatic documents as those of the European Economic and Social Committee on the *Reshoring of EU industries in the framework of reindustrialisation* where the key word is *reshoring*. “The EESC is convinced that in order to halt the EU’s economic decline, new impetus must be given to industry, and manufacturing in particular, one of the strong points of the production system. [...] The Committee supports the plan [...] to develop a reindustrialisation policy for the EU, bringing industry’s share of EU GDP back up to at least 20 % from the current 15,1 % [...] The manufacturing industry is still the main driver for economic growth: in regions where manufacturing has increased its relative share, GDP has risen more. This is explained by the fact that product and process innovation in the manufacturing sector generates increased productivity in other sectors too [...]”<sup>2</sup> Therefore, the question of industrialization would seem to be anything but anachronistic, exhausted or absent in today’s economic and political landscape.

## **2.2. Some aspects of Bulgarian “industrial” transition**

After more than 25 years since the beginning of the profound reforms in the Bulgarian society, related to the transition from Socialist central planning to market economy, it could be safely said that this transformation has been very difficult and has had high social costs. The main problem is the impossibility of reaching a consensus both on the Socialist economic legacy and on the future planning of a national long-term economic development strategy. Today’s economic debate is focused mainly on budgetary matters and on immediate conjuncture issues, while the national economy rotates around “known stratagems” such as direct and foreign portfolio investment, European aids, financing loans for consumption etc.

A large part of the foreign investment is concentrated in speculative, bubble-risk sectors, such as the real estate. In addition about, two very worrying general trends for Bulgaria should also be noted. The first is the return of some productions to national soil (“reshoring”), evidenced in the previous paragraph. The second is the shift of industries that are currently located in post-communist countries, where labor costs continue to rise, towards countries where labor cost are continually diminishing – a kind of “race to the

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<sup>1</sup> *Ibid.*, p.22.

<sup>2</sup> *Ibid.*, p. 1, 15, 20.

bottom”, as it were. Moreover, financial institutions tend to accumulate capital without investing it back into the real or manufacturing economy.

Today, in Bulgaria, industry is principally focused on labor-intensive products. High-tech products account for only 3% of exports. More than 70% of industrial employees perform low technology content activities, principally related to the processing of raw materials. The current Bulgarian industry is characterized by a low added value and does not possess known productions for international markets.<sup>1</sup> The political and economic course after the crisis of 1996-1997, and the subsequent introduction of the Currency board, has led to a certain stability from a macroeconomic and financial point of view, as well as to a discrete acceleration in economic growth. However, this level of economic growth has not allowed Bulgaria to bridge the gap between its average and the general average of the Member States as a whole. Indeed, Bulgaria remains the second least developed country in Europe. This is particularly worrying in that Bulgaria is behind even those countries who has recently acceded to the EU. In 2016, Bulgaria occupies the 50<sup>th</sup> place in the ranking of countries according to the economic competitiveness, behind countries such as Romania, Kazakhstan and Chile<sup>2</sup>; and staunchly keeps its 59<sup>th</sup> place in the ranking list of the Human Development Index according to the Reports of the United Nations Development Programme, coming after countries such as Barbados, Belarus, Russian Federation and others<sup>3</sup>. Particularly striking also is the Bulgarian attitude to the transition in the first place. In fact, after more than 25 years since the start of democratic reform, statistical sociological research data on this gave back a general negative rating, a rating that appeared very similar to one found in the 10<sup>th</sup> year since the reforms had started.<sup>4</sup>

The Socialist revolution [...] tried to develop a kind of middle class as well as universally accessible social services (education, health care, employment). In fact, as oppressive as it was, the Socialist regime was widely perceived by the general public as a version of the western welfare state, particularly after the fall of the regime. The post-Socialist transformation initiated a decline of state provided social services, and

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<sup>1</sup> See Financebg.com, *White Paper on a new high-tech industrialization 2015-2020*, in Bulgarian, Atlas Finans AD, March 2014, p. 4, 19.

<sup>2</sup> See, *IMD World Competitiveness Yearbook 2016 Results*, (URL=<http://www.imd.org/uupload/imd.website/wcc/scoreboard.pdf>)

<sup>3</sup> See Table 2: *Trends in the Human Development Index*, (URL=<http://hdr.undp.org/en/composite/trends>)

<sup>4</sup> See also EUREQUAL, Project ID:28920, Funded under:FP6-CITIZENS, *Social Inequality and Why It Matters for the Economic and Democratic Development of Europe and Its Citizens. Post-Communist Central and Eastern Europe in Comparative Perspective*, Deliverable 2 Desk Research Bulgaria, Scientific consultant: Todor Hristov, CORDIS, Managed by the EU Publications Office, (URL=<http://eurequal.politics.ox.ac.uk/papers/eurequal%20desk%20research%20bulgaria.pdf>)

particularly in its earlier phase, before 1997, led the country into deep economic crises with soaring rates of unemployment and inflation. After 1997 the economy has stabilized and to an extent prospered, yet the period witnessed further increase of income and wealth inequality, pauperization of the Socialist middle class, emergence of another tightly intertwined economic and political elite, as well as social groups of transformation losers (pensioners, unemployed, families with children, ethnic minorities).<sup>1</sup>

Ultimately, the Bulgarian transition was characterized by a period of massive de-industrialization of the national economy, with the consequent change in the territorial and demographic structure and in the social development of the country with the appearance and aggravation of phenomena such as unemployment, depopulation (especially in medium and small sized industrial areas), immigration, impoverishment and so on.

### **2.3. Some aspects of Bulgarian Socialist industry**

As has already been mentioned several times, there is no conformity in how the Socialist industrialization in Bulgaria is to be evaluated. Opinions are extremely radicalized and even involve divergent statistical evidence. The present paper does not intend to avail of the opinions proposed by any of the “armies” in this field, but rather it searches for a hypothetical reasonableness in its evaluation of the industrial inheritance handed down by the regime; and it especially examines what might have been a more purposeful attitude to adopt at the beginning of the transformation in Bulgaria and during its subsequent transition to a market economy?

The most problematic aspect of this work is to find the evidence that in the Socialist industry not everything was to be “thrown out”, as it is often claimed by some of the radicalized exponents of the liberalization which occurred in Bulgaria, but, in the perspective of the next economic and political openness, certain valid elements could nevertheless have been found. The biggest problem, however, is that researching something potentially purposeful in the Socialist industry is often mistakenly seen as taking a stand in that field, next to the “comrades with the left fist raised”. By the way, to calm everyone down, it would be very interesting to provide some data, directly from the document *The Bulgarian Economic and Transition Project*, as it is so hated by the supporters of the “myth” of the Socialist industry and considered it as the main guideline of the neo-liberal policy in Bulgaria. Indeed, the extrapolated data concerns one of the industrial sectors with a very high

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<sup>1</sup> *Ibid.*, p. 48.

technological content. These sectors are generally related to innovation, which are extremely underrepresented in Bulgarian industry at present, yet they can boast of the extremely dynamic development in recent decades, as demonstrated by the data on economic competitiveness. It is precisely this type of innovation which was defined as a primary goal during a recent European Union address (the *Strategy Europe 2020*). Therefore according to the already cited document, *The Bulgarian Economic and Transition Project*, since the early 70's, Bulgaria has made “substantial capital investments” (both in national and in convertible currency) in the electronics industry, “that has led to the establishment of impressive production facilities and research-development units”; electronics and telecommunications represented more than 20% of the Bulgarian national industrial production; in that industry approximately 130 thousand people were employed, about 8 thousand of which were highly qualified engineers; since the early 60's there has been a specialization in the projection and manufacturing of hardware for computers; a “diversified and stable” electronic and computer industry has also been developed and over the last twenty years “ample opportunity for research, development and production” has been implemented in microelectronics, in big-size computer systems, in parallel architectures with outstanding performance for scientific purposes, in minicomputer systems, in microprocessors, in peripheral systems with disk and tape, in displays, in optoelectronics etc. The electronics industry had the technological capability to project and produce 80-85% of the components and assemblies necessary for the manufacturing of finished products. “Our estimate is that between 70% and 80% of the main structure is modern, with regard to the technology.” According to the official statistics for the year 1989, all entities within the electronics industry were profitable.<sup>1</sup>

Therefore, with the help of the data extrapolated from a clearly inspired neo-liberal document, it could be said that Bulgarian Socialist industry not only existed, but in some cases it could even pass as being modern and advanced. In any case, it will be impossible to examine all the assets of the Socialist industrial production in one paper and even less to pass judgment on which of these were virtuous or not. We can only add that a considerable investment in many industrial sectors was made, with the purchasing of licenses, authorizations and machinery from the world's leading Western companies, and as a consequence the domestic products were considered as relatively advanced.<sup>2</sup> Definitively, in 1989 there were 2593 industrial enterprises, where 1.58 million people were employed, the

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<sup>1</sup> See Rahn R. W., Utt R. D., *The Bulgarian Economic and Transition Project*, Graves A. G. and Seybold C. G., Chapter Electronics in Bulgarian language, 1990, p. 388-90, (author's translation in the quotation marks).

<sup>2</sup> See Financebg.com, *White Paper on a new high-tech industrialization 2015-2020*, in Bulgarian, Atlas Finans AD, March 2014, p. 29.

volume of exports amounted to 16.2 billion US dollars and more than 50% of exports consisted of engineering and electronics products.<sup>1</sup>

Among the biggest problems for the transition from Socialist industry to free market economy, was the pre-eminence of the large production heavy industry facilities and as a consequence their difficult in restructuring. Although this seems a widely accepted and indisputable assertion, there is no shortage of influential voices contrary to the fact “it should have been easier to proceed with restructuring for countries like China, Vietnam, Mongolia, Cuba, Hungary, Bulgaria, Poland, some former Yugoslav republics, where enterprises with less than 500 employees accounted for 25% or more of total industrial employment”<sup>2</sup>. Bulgarian industrial assets were also inserted in a complex division of labor system both inside the country and according to the logic of COMECON’s Socialist integration. This logic, conditioned the Bulgarian industry on guidelines, volumes, investment and above all, it guaranteed a market for this production. As a general consequence, the safe and guaranteed market didn’t favored product quality. In addition, the structural industry base was often not modernized. Generally, the low competitiveness of Bulgarian production and the disintegration of the COMECON are defined as some of the main causes for the loss of markets during the transition and the subsequent de-industrialization of the country.

### **Conclusions: List’s argument and Bulgarian Socialist industrialization**

It is quite obvious that issues on the infant industry argument and the Socialist industrialization are too complex to be addressed in one paper. For this reason, narrowing the field of investigation is more than necessary. Therefore, the main focus has been put on general trends and tendencies instead of entering into an excessive elaboration of arguments, statistical data or historical facts.

#### **A real guide for Bulgarian transition**

This is the approach that has been adopted right from the beginning of this paper, with a special focus on the legacy of Friedrich List – the founder of a school of thought – who still continues to generate very valid disciples. In this sense, it would have been even more challenging to take a contemporary scholar like Ha-Joon Chang<sup>3</sup> as a reference for the present

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<sup>1</sup> *Ibid.*, p. 27.

<sup>2</sup> Popov V., *Shock Therapy Versus Gradualism: The End of The Debate (explaining the magnitude of transformational recession)*, Comparative Economic Studies, 2000, vol. 42, issue 1, p. 18.

<sup>3</sup> Ha-Joon Chang (Hangul: born 7 October 1963) is a South Korean institutional economist specialising in development economics. Currently a reader in the Political Economy of Development at the University of Cambridge, Chang is the author of several widely discussed policy books, most notably *Kicking Away the Ladder: Development Strategy in Historical Perspective* (2002). In 2013 *Prospect* magazine ranked Chang as one of the top 20 World Thinkers, *Wikipedia*, (URL= [https://en.wikipedia.org/wiki/Ha-Joon\\_Chang](https://en.wikipedia.org/wiki/Ha-Joon_Chang)).



work, but this has not been done for reasons of excessive complexity and because it is not yet a mature choice. Instead, List – apart from being “a founder” of a school – is an evergreen and still relevant author; he worked before the events of Socialist industrialization and the following transition from a planned to market economy in Bulgaria. In addition, it would have been more than appropriate to consult (at least) the main figures in the history of economic thought, when Bulgaria was heading towards free trade, deregulation and universalist economy. In my view, the doctrine of List had all the qualities to be the cornerstone of departure and to be a kind of guide for those processes. Moreover, it seems that the current debate on the direction of the Bulgarian economy is far from exhausted. It presents itself as extremely radicalized on several issues, both historical and long-term development. For this reason, a return to authors such as List and Smith means going back somehow to the base, to look for a more neutral ground in order to make evaluations and reasonable choices of the past and the future.

After a critical review of List’s main ideas in this paper, it can be said that his theory is quite different from what certain critics might lead us to believe. List particularly emphasizes the role of industry as a vehicle of progress and oddly, 175 years later, this appears very timely. Recently in the advanced countries, there is not only a discussion on this, but also the current elaboration of plans to return some industries to the national soil (“reshoring”). The question of industrialization was very important for Bulgaria at the beginning of its path towards the market economy and it is equally important today after a transition characterized by the de-industrialization of the country.

### **The “national productive power”**

List’s approach to economic affairs was from a political and perhaps even a geopolitical point of view. He placed emphasis on the national interest and therefore on the development of the “national productive power”. Indeed, List elaborated a true doctrine for economic development and his most famous concepts (protective and nationalist economic policy, railroad construction) were only a sort of corollary.

According to the scholar, if the international world is composed of countries which are in different stages of economic development, in order to progress, nations should activate the infant industry protection, otherwise the nascent domestic industries will be crushed by foreign ones. Here, as in the first chapter of this paper, it must be clearly stressed that List was not a fierce opponent of free trade as it is often held up by his critics, but he fully understood the positive elements of a hypothetical globalized world. For List, both free trade and protection were simply a means to the attainment of a goal, i.e. the development of

“productive power”. The least developed countries should not adopt the logic of free trade before industrializing and strengthening their own industries. According to the State-centric perspective of List, the free trade would be appropriate and beneficial only for countries which are at the same level of industrialization and economic development. List did not provide dogmatic formulations, but general and flexible guidelines, because the implementation of the protection (or trade policy) was supposed to be dependent on the particular situation of the nation-country in question, and the international situation need to be considered, too. The protection had to be: limited to selected industries only; temporary, i.e. maintained until the mature growth of the industry in question; moderate, so as not to completely remove the possibility for domestic industries to compete with foreign ones; and then gradually it would be removed. Concerning the last condition, List firmly advised against a sudden and premature shift towards deregulation and free trade. List’s limited protection may be seen even as contributing more to efficiency and competition than to the immediate introduction free trade; it may be seen as a “remedy to correct market imperfections where some actors have the upper hand”<sup>1</sup>. Ignoring the political aspects, because Communist Bulgaria was far from List’s conception of State, also the same Socialist industrialization could be seen, by means of a certain academic-instrumental stretch, as a kind of infant industry argument, and this was mainly due to the opening and development towards industrialization precisely in that period. A more interesting question is, however, another. As far back as 1841, Friedrich List had already provided the solution for the Bulgarian industrial situation of 1989: first of all by focusing on national interests; then selecting the priority industries for protection and development; followed by a directing of their growth according to the criterion of competitiveness and finally to open them gradually to the international market. Bulgaria has done the exact opposite, and the results are obvious: a “miraculous” adaptation was expected, through an “invisible hand”, to the harsh introduction of market’s logic following the liberalization of economic activities and the retreat of the State from economy. Besides the fact that such an adjustment does not yet seem to have been fully implemented, the country was thrown into a terrible recession with absurd social repercussions. The central planning institutions were dismantled before having built and consolidated the market institutions, causing a general state of “disorganization”<sup>2</sup>. By the

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<sup>1</sup> See Daastøl A. M., *Friedrich List the ultimate globalist*, essay-collection on Free Trade and the Nation State, edited by Jürgen G. Backhaus, as an outcome of The 1997 Heilbronn conferences on the German tradition in economics.

<sup>2</sup> See Blanchard O., *The Economics of Post-Communist Transition*, Clarendon Press, Oxford, 1997, and Blanchard O., Kremer M., *Disorganization*, Quarterly Journal of Economics 112(4): 1091-1126, 1997.

way, even one of the supporters of “rapid transition to “normal” capitalism”<sup>1</sup> Jeffrey Sachs writes, “While the dismantling of central planning can be done literally in days or months, the building up of new institutions requires years”<sup>2</sup>. In addition, there are also the not so isolated voices that say “today a bitter worldwide reconsideration of the hyper-liberal doctrine is ongoing”<sup>3</sup> and that “if the transition had taken place twenty years later, the post-Socialism would definitely have arrived at a very different model from the hyper-orthodox liberalism.”<sup>4</sup>

### **The Nation State**

As has already been said, List’s vision on the State is very often misunderstood. The State for him was strong, founded on stability, security and protection but at the same time it was conceived as profoundly democratic, and liberal. The State was the Guarantor for universality of law and freedom of expression, the Coordinator between the bureaucratic and industrial sectors on their efficient and harmonious functioning, as well as the Promoter of entrepreneurship and communication-innovation. The integration-combination of division of labour and union-confederation or co-operation of labour was of fundamental importance for productivity. That State, intended as “harmony of the productive powers”, was a vital precondition for the organic and harmonious functioning of the national economic system. Therefore, it also seems that List’s vision on the State could be seen as a good guide at the beginning of the reforms in Bulgaria in 1989, although the size of the country and consequently the size of its market could have been quite problematic for the implementation of the infant industry argument. According to List, the promotion of regional unions of countries could have been a valid remedy for enlargement of small national markets. Indeed, after the disintegration of the COMECON, the obstacles to establish new commercial relations with other countries were further decreased, and other countries such as those belonging to the Visegrad Group, immediately went in that direction. Thus Bulgaria, as well as its industries losing markets, has not been a “constructive player” either. In addition, during the privatization of hundreds of Bulgarian factories, it seems that even the leading international companies, on which Bulgarian production licenses depended, and in which

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<sup>1</sup> Wikipedia, (URL= [https://en.wikipedia.org/wiki/Jeffrey\\_Sachs](https://en.wikipedia.org/wiki/Jeffrey_Sachs)).

<sup>2</sup> Sachs J., *Shock Therapy in Poland: Perspectives of Five Years*, The Tanner Lectures on Human Values, Delivered at University of Utah, April 6 and 7, 1994.

<sup>3</sup> Nuti D. M., *Venti anni dopo: ragioni, processi, risultati della transizione post-socialista*, Saggio preparato per la AISSEC XVIIth Scientific Conference “Growth and Development Patterns: The Role of Institutions in a Comparative Perspective”, Università di Perugia, 25-27 giugno 2009, p. 14, (author’s translation in the quotation marks).

<sup>4</sup> *Ivi*.

supply systems participated, were not called upon, contrary to what had been done by countries in the Visegrad Group.

In addition, List's idea for a strong State, seems far from being absent to contemporary scholars: "there is enough evidence that differing performance during transition, after factoring in initial conditions and external environment, depends mostly on the strength of institutions and not so much on the progress in liberalization *per se*"<sup>1</sup>. "To put it differently, Gorbachev reforms of 1985-91 failed not because they were gradual, but due to the weakening of the state's institutional capacity, which lead to the inability of the government to control the flow of events."<sup>2</sup>

### **"Immaterial economic capital", historical approach and short-sightedness in economic affairs**

Therefore, the main economic subject for List would be the Nation state defined as "productive power". A central place in the theory of "productive power" is occupied by the conception of "immaterial economic capital" – human capital, innovation, entrepreneurial spirit – amalgamated into a solid socially cohesive institutional structure. Another important fact is that List's conjectures were not purely theoretical and hypothetical, but rather based on empirical methodology and data. Elaborating his doctrine on historical examples, he provided a concrete historical evidence on short-sightedness in economic affairs. The ideas about "immaterial capital" and short-sightedness are equally relevant for the Bulgarian industrial history. In the light of the second chapter of this paper, where even with the help of an example from the clearly inspired by neo-liberal doctrine, as well the most hated document by Bulgarian left wing<sup>3</sup> (*The Bulgarian Economic and Transition Project*), has proved that productive assets of highly technological and innovative content could be found in the Bulgarian Socialist industry. Then some questions come spontaneously: What happened to those industries after more than 25 years?; Although they were the legacy of a evil and hated regime, were they treated with appropriate economic criterion?; Is this perhaps one of the cases of shortsightedness in economic affairs, neglecting the long-term national interest, with which to integrate the examples given by List almost two centuries ago?

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<sup>1</sup> Popov V., *Shock Therapy Versus Gradualism: The End of The Debate (explaining the magnitude of transformational recession)*, Comparative Economic Studies, 2000, vol. 42, issue 1, p. 33.

<sup>2</sup> *Ivi.*

<sup>3</sup> "The plan Ran-Utt in essence aimed at turning Bulgaria into a neocolony." (*Social Economic and Political Development of Bulgaria From 1944 to Our Days*, Bulgarian Left Youth Group, "23rd of September", Sofia/April 2006, p. 2).

### **Foreign investors**

List believed that foreign investors do not avoid countries with protectionist policies (as claimed by the Classical School), but they are even willing to invest in those countries, because their investments would be even more secure. In this sense, one of the reasons to completely open up Bulgaria to free trade had been explained with the intention of attracting foreign investment. Here too, one must wonder who was right, List or the “gurus” of free trade. In Bulgaria after 25 years since it opened to free trade, a good part of the foreign investments, in addition to the “moody” financial sector, is still mainly concentrated in areas inclined to speculative bubbles (such as real estate) and in industrial activities involving the generation of a low added value. In addition, two worrying and current trends are noticed: the returning of some production to the domestic soil (“reshoring”) and the shifting to countries with even lower labor costs, i.e. the strategy “race to the bottom”. Therefore, there is a serious risk that tomorrow, even those few foreign investors will leave Bulgaria for one or another reason.

### **Concluding remarks**

This paper has tried to bring the radicalized debate about the recent Bulgarian economic history on a more neutral ground. Friedrich List’s economic doctrine does not provide concrete recipes and could not be applied automatically. It offered an alternative paradigm to embrace the “heavy” (both literally and metaphorically) industrial legacy of the Socialist period and it still offers a way to look at the future of the ancient Bulgarian nation. List himself states, that there is a need to start from the particular conditions of the country in question, to understand the international situation and above all: “Every nation must follow its own course in developing its productive powers; or, in other words, every nation has its particular Political Economy.”<sup>1</sup> Consequently in order to build-direct its own economic development, the Bulgarian economic model should have been, and should be conceived, on the historical experience of the country, taking into account the natural resources, the other available “immaterial” existing resources and the international political-economic situation. Finally, in perfect accordance with our age of the “simple and instant message”, I would conclude this paper with one of the most famous quotes of the scholar Friedrich List: “Industry entirely left to itself, would soon fall to ruin, and a nation letting everything alone would commit suicide.”<sup>2</sup>

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<sup>1</sup> List F., *Outlines of American Political Economy*, Printed by Samuel Parker, Philadelphia, 1827, p. 24.

<sup>2</sup> List F., *Outlines of American Political Economy*, 1827 a, Letter 6, p.87, Cf. 1841, pp.166.

## References:

1. Alpha Research, *La Transizione: Miti e Memoria, 25 anni dopo*, Sondaggio rappresentativo nazionale, parte dell'iniziativa "25 anni di Liberta Bulgara", ottobre 2014
2. Bairoch P., *Economic and World History*, Brighton, Wheatsheaf, 1993
3. Blanchard O., *The Economics of Post-Communist Transition*, Clarendon Press, Oxford, 1997, and Blanchard O., Kremer M., *Disorganization*, *Quarterly Journal of Economics* 112(4): 1091-1126, 1997
4. Chang Ha-Joon, *Kicking Away the Ladder: The "Real" History of Free Trade, Foreign Policy In Focus*, Silver City, NM: Interhemispheric Resource Center, December 2003
5. Daastøl A. M., *Friedrich List the ultimate globalist*, essay-collection on Free Trade and the Nation State, edited by Jürgen G. Backhaus, as an outcome of The 1997 Heilbronn conferences on the German tradition in economics
6. EUREQUAL, Project ID:28920, Funded under:FP6-CITIZENS, *Social Inequality and Why It Matters for the Economic and Democratic Development of Europe and Its Citizens. Post-Communist Central and Eastern Europe in Comparative Perspective*, Deliverable 2 Desk Research Bulgaria, Scientific consultant: Todor Hristov, CORDIS, Managed by the EU Publications Office
7. Henderson W., *Friedrich List*, London, Frank Cass., 1983
8. Financebg.com, *White Paper on a new high-tech industrialization 2015-2020*, in Bulgarian, Atlas Finans AD, March 2014
9. Guida F., Biagini A., *Mezzo secolo di socialismo reale*, G. Giappichelli Editore, Torino, 2 ed., 1997
10. List F., *National System of Political Economy (1841)*, translated by Matile G. A., Philadelphia, J.B. Lippincott and Co., 1856
11. List F., *The National System of Political Economy, (1841)*, translated by Sampson S. Lloyd, Longmans, Green, and Co., London, New York, Bombay, and Calcutta, 1909
12. List F., *The Natural System of Political Economy, (1837)*, ed. W. H. Henderson, reprinted, Totowa, NJ, Frank, Cass. 1983
13. List F., *Outlines of American Political Economy*, Printed by Samuel Parker, Philadelphia, 1827
14. Nuti D. M., *Venti anni dopo: ragioni, processi, risultati della transizione post-Socialista*, Saggio preparato per la AISSEC XVIIth Scientific Conference "Growth

and Development Patterns: The Role of Institutions in a Comparative Perspective”,  
Università di Perugia, 25-27 giugno 2009

15. Official Journal of the European Union, Opinion of the European Economic and Social Committee on the “Reshoring of EU industries in the framework of reindustrialisation”, (2014/C 311/03), 12.9.2014
16. Popov V., Shock Therapy Versus Gradualism: The End of The Debate (explaining the magnitude of transformational recession), Comparative Economic Studies, 2000, vol. 42, issue 1
17. Rahn R. W., Utt R. D., The Bulgarian Economic and Transition Project, Graves A. G. and Seybold C. G., Chapter Electronics in Bulgarian language, 1990
18. Sachs J., Shock Therapy in Poland: Perspectives of Five Years, The Tanner Lectures on Human Values, Delivered at University of Utah, April 6 and 7, 1994

## Estimation of the term structure of interest rates for Moroccan financial market using Vasicek model

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**Abstract:** *The term structure of interest rates measures the relationship among the yields on default-free securities that differ only in their term to maturity. This paper is an attempt to estimate the term structure of interest rates using the Vasicek model as a one-factor model which considered the short interest rate as a risk. Our data is a weighted average rate from the Moroccan money market considered as a short rate. The choice of the short interest rate is owned from the choice of the one-factor model of interest rates. To model the term structure of interest rates we use the ordinary least square (OLS) and then we estimate the Vasicek model's parameters. Finally, we construct the yield curve of Moroccan financial market.*

**Key words:** *term structure of interest rates, Vasicek model, one-factor model.*

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## **Introduction:**

The term structure of interest rates measures the relationship among the yields on default-free securities that differ only in their term to maturity. The determinants of this relationship have long been a topic of concern of economists and practitioners. The term structure embodies the market's anticipations of future events.

Modeling the term structure of interest rate represents one of the most important topics on financial research. Since the introduction of interest rate dependent assets, an attention has been given to the development of models to price and hedge interest rate dependent assets or to manage the risk of interest rates contingent portfolios.

There are many models, which have been used to model the term structure of interest rates. In this paper, one model is considered: the Vasicek model. All those models are based on the previous theory of term structure. However, in a certain context, equilibrium forward rates must coincide with future spot rates, but when uncertainty about future rates is introduced the analysis become much more complex, theories of the term structure have taken the certainty model as their starting point and have proceeded by examining stochastic generalizations of the certainty equilibrium relationship. Merton (1973), Brennan and Schwartz (1977), and Vasicek (1977) have all assumed that the instantaneous spot rate of interest rate follows a gauss-wiener process. Those models are called single-factor models, which incorporate one state variable. A review of literature of some of those models is shown. A partial listing of these interest rate models includes those by Merton (1973), Brennan and Schwartz (1977, 1979, 1980), Vasicek (1977), Dothan (1978), Cox, Ingersoll and Ross (1980,1985), Longstaff (1989), Hull and White (1990), Black and Karshinski (1991), and Longstaff and Schwartz (1992).

The main question in this paper is “ does the Vasicek model of term structure of interest rates fit very well the yield curve of Moroccan financial market?”.

An econometric analysis of the term structure interest rates is shown using data from Moroccan money market in order to model the Vasicek model for this market. Ordinary least square method is used in this paper to estimate the Vasicek model parameters.

The plan of this paper is as follows. Section 1 presents a review of literature of the major one- factor models of the term structure of interest rates. In Section2, we summarize the Vasicek model. Section 3, the parameters of the assumed stochastic process for interest rates are estimated using data on Moroccan interest rates.. Section 4, a comparison between empirical and real observed yield curve . section 5: we conclude.

## Section 1: review of literature of one-factor models of term structure of interest rates:

Several models of the term structure have been proposed in the academic literature. Examples are Brennan and Schwartz (1979, 1982), Courtadon (1982), Cox, Ingersoll, and Ross (1985b), Dothan (1978), Langetieg (1980), Longstaff (1989), Richard (1979), and Vasicek (1977). All these models have the advantage that they can be used to value all interest-rate-contingent claims in a consistent way. Their major disadvantages are that they involve several unobservable parameters and do not provide a perfect fit to the initial term structure of interest rates.

According to the one-factor models, all the information about the term structure at any point in time can be summarized by one factor. The short term interest rate could be chosen for this single factor models. In consequence, only the short term interest rate and the time to maturity will affect the price of any interest rate contingent claim.

All models of one-factor start by specifying the stochastic differential equation. This equation can be written:

$$dr(t) = f(r, t)dt + \rho(r, t)dW(t)$$

where  $W(t)$  is a Wiener process, and  $f$  represents the drift coefficient, while  $\rho$  is the diffusion term. By specifying those functions, many researchers have proposed their own term structure interest rates. The purpose of this section is to propose a very well-known one-factor model that has been used to model the yield curve. Merton, Vasicek, CIR... are researchers who model the yield curve taking a one variable of risk which is the interest rate and especially the short rate. The criteria classification proposed is to mention those models not by consistent but citing them by a chronological order.

### 1-1- Merton, 1973:

One of the more important developments in modern capital market theory is the Sharpe-Lintner-Mossin mean-variance equilibrium model of exchange, called the capital asset pricing model. It is still subject to theoretical and empirical criticism. Because the model assumes that investors choose their portfolios according to the Markovitz mean-variance criterion.

Merton develops an equilibrium model of the capital market which, (i) has the simplicity and empirical tractability of the capital asset pricing model, (ii) is consistent with expected utility maximization and the limited liability of assets, and (iii) provides a specification of the relationship among yields that is more consistent with empirical evidence.

### 1-2- Vasicek,1977:

Vasicek gives an explicit characterization of the term structure of interest rates in an efficient market. The model is widely used for pricing the bonds. Additionally, it uses the Ornstein-Uhlenbeck process to compute the spot interest rate. This model is a one-factor model which means that rates depend on the spot interest rate. Thus, the spot rate defines the whole term structure. For more development, see the next section.

### 1-3- Cox, Ingersoll and Ross,1985:

Cox, Ingersoll and Ross use an intertemporal general equilibrium asset pricing model to study the term structure of interest rates. In their model, anticipations, risk aversion, investment alternative and preferences about the timing of consumption all play a role in determining bond prices.

The researchers propose a description of the term structure interest rates as a stochastic differential equation described as follows:  $dr = k(\theta - r)dt + \sigma\sqrt{r}dz$  for  $k, \theta > 0$ , this corresponds to a continuous time first-order autoregressive process where the randomly moving interest rate is elastically pulled toward a central location or long term value,  $\theta$ . The parameter  $k$  determines the speed of adjustment. The interest rate behavior implied by this structure thus has the following empirically properties: (i) Negative interest rate are precluded. (ii) if the interest rate reaches zero, it can subsequently become positive. (iii) the absolute variance of the interest rate increases when the the interest rate itself increases. (iv) There is a steady state distribution for the interest rate.

### 1-4- Ho, Lee, 1986:

Ho et. al. proposes an alternative approach to pricing models. The approach is taking the term structure as given, and deriving the feasible subsequent term structure movements. These movements must satisfy certain constraints to ensure that they are consistent with an equilibrium framework. Specifically, the movements cannot permit arbitrage profit opportunities. They called these interest rate movements arbitrage-free rate movements (AR). When the AR movements are determined, the interest rate contingent claims are then priced by the arbitrage methodology, which is used in CIR. Therefore, their model is a relative pricing model in the sense that they price the contingent claims relative to the observed term structure; however, they do not endogenize the term structure as the CIR model do. Thus, Ho and Lee pioneered a new approach by showing how an interest rate model can be designed so that it is automatically consistent with any specified initial term structure.

**1-5- Hull, White, 1990:**

Hull and White show that the one-state-variable interest rate models of Vasicek (1977) and Cox, Ingersoll, and Ross (1985) can be extended so that they are consistent with both the current term structure of interest rates and either the current volatilities of all spot interest rates or the current volatilities of all forward interest rates. The extended Vasicek model is shown to be very tractable analytically. They compare option prices obtained using the extended Vasicek model with those obtained using a number of other models.

**Section 2: the Vasicek model:**

The yield to maturity  $R(t, T)$  is the internal rate of return at time  $t$  on a bond with maturity date  $t, T=S$ .

$$P(t, T)e^{(T-t)R(t, T)} = 1$$

This relation can be written:

$$R(t, T) = -\frac{\text{Ln}P(t, T)}{T - t}$$

The rates  $R(t, T)$  considered as a function of  $T$  will be referred to as the term structure at time  $t$ .

The spot rate as the instantaneous borrowing and lending rate:

$$r(t) = R(t, 0) = \lim_{T \rightarrow 0} R(t, T)$$

At any time the current value  $r(t)$  of the spot rate is the instantaneous rate of increase of the loan value.

It is assumed the  $r(t)$  is a stochastic process, subject to two requirements: first,  $r(t)$  is a continuous function of time. Second,  $r(t)$  follows a Markov process.

Process that are Markov and continuous are called diffusion process.

All in all, they can be described by an Ito stochastic differential equation of the form:

$$dr(t) = f(r, t)dt + \rho(r, t)dz$$

Where  $z(t)$  is a wiener process with incremental variance  $dt$ . The functions  $f(r, t)dt$ ,  $\rho^2(r, t)$  are the instantaneous drift and variance, respectively, of the process  $(t)$ .

Most of the diffusion models for interest rates are based on the no-arbitrage principle and they are characterized by similar assumptions on the bond market:

(A.1): the single variable that determines the state of economy at time  $t$  is the spot rate  $r(t)$ ;

(A.2): the spot rate follows a diffusion process;

(A.3): the market is efficient: there are no transactions costs, information is available to all investors and every investor acts rationally.

Vasicek illustrates the general model by assuming that:

The market price of risk  $q(t, r) = q$  is a constant, independent of the calendar time and the level of the spot rate. In addition, the spot rate  $r(t)$  follows the Ornstein-uhlenbeck process:

$$dr(t) = \alpha(\gamma - r(t))dt + \sigma dz$$

The Ornstein-uhlenbeck process with  $\alpha > 0$  is sometimes called the elastic random walk. It is a Markov process with normally distributed increments. The instantaneous drift  $\alpha(\gamma - r(t))$  represents a force that keep pulling the process towards it's long term mean  $\gamma$  with magnitude proportional to the deviation of the process from the mean. The stochastic element, which has a constant instantaneous variance  $\sigma^2$ , causes the process to fluctuate around the level  $\gamma$  in an erratic, but continuous, fashion.

According to given assumptions in this model, the value for the value  $P$  of the zero-coupon bond at time  $t$  with maturity at time  $T$  could be expressed as follows:

$$P(t, T, r(t)) = \exp \left[ \frac{1}{\alpha} (1 - e^{-\alpha(T-t)}) (R_\infty - r(t)) - (T-t)R_\infty - \frac{\sigma^2}{4\alpha^3} (1 - e^{-\alpha(T-t)})^2 \right]$$

Where:  $R_\infty = \gamma + \frac{\sigma q}{\alpha} - \frac{1}{2} \frac{\sigma^2}{\alpha^2}$

And the term structure of interest rates takes the form:

$$R(t, T) = R_\infty + (r(t) - R_\infty) \frac{1}{\alpha T} (1 - e^{-\alpha T}) + \frac{\sigma^2}{4\alpha^3 T} (1 - e^{-\alpha T})^2$$

Since  $r(t)$  is normally distributed by virtue of the properties of the Ornstein-uhlenbeck process, and  $R(t, T)$  is a linear function of  $r(t)$ , it follows that  $R(t, T)$  is also normally distributed.

It will only be noted that the differential equation imply that the discrete rate series, follows a first order linear normal autoregressive process of the form:

$$r_t = c + a(r_{t-1} - c) + \varepsilon_t$$

With independent residuals  $\varepsilon_t$ . The process is the discrete elastic random walk, fluctuation around its mean  $c$ . The parameters  $c, a$  and  $s^2 = E(\varepsilon_t^2)$  could be expressed in terms of  $\gamma, \alpha, \sigma, q$ . The constant  $a$ , which characterizes the degree to which the next term in the series  $[R_t]$  is tied to the current value, is given by  $a = e^{-\alpha T}$ .

### Section 3: Vasicek model’s parameters estimation:

#### 3-1- Data:

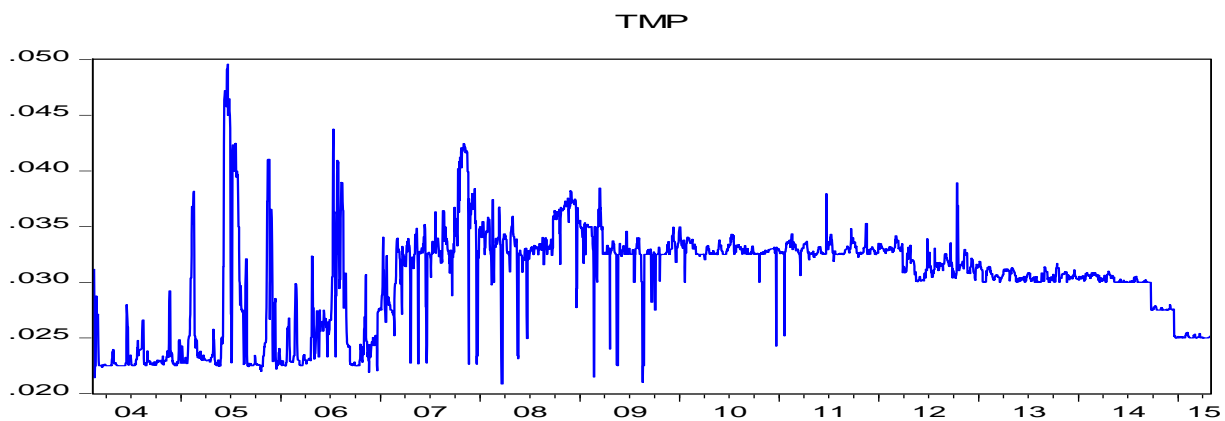
To generate the Moroccan yield curve, the data of short interest rates from money market and the data of prices of coupon-zero bond are used. Using linear least square method in order to estimate parameters of the Vasicek model from 2004 to 2015 and inserting them into the term structure formula. It is collected from Bank-al-Maghreb (Moroccan central bank) that has been used as a typical short-term interest rate.

Basic statistics of daily weighted average rates from 2004 through 2015 are summarize below:

N	Mean	Std.dev	Minimum	Maximum	Skewness	Kurtosis
4095	0.030266	0.004559	0.02087	0.04959	-0.07621	3.265581

*Source: Eviews*

*Figure: daily evolution of interbank of Moroccan money market since 2004 to 2015*



The correlogram of data of interest rates shown that we could presume that the data follow a first-order linear autoregressive process. The statistic of Jarque-Bera (15.99) confirm that the process follows a Gaussian process. This result confirms the assumption of Vasicek model (1977). We conclude that our data follows a first-order linear autoregressive process.

#### 3-2- Unit root test (Dickey-Fuller):

The augmented Dickey-Fuller (ADF) test applied to the sample of data reject the null hypothesis of a unit root at the 5% risk level. The result of this test is summarized below.

Result of unit root test:

Model	ADF test statistic	Test critical value (5%)	Decision
With trend and intercept	-9,398229	-3,410903	Stationary
With intercept	-9,044416	-2,862050	Stationary
None	-1,393970	-1,940901	Non stationary

Source: Eviews

### 3-3- Parameters estimation:

In this sub-section, we have to estimate the parameters of the Vasicek model using the ordinary least square (OLS). Longstaff and al (1992) estimated a variety of continuous-time models of the short-term riskless rate using the Generalized Method of Moments (GMM). In a paper published in 2013, Fatma Chakron and Fathi Abid, The researchers develop a methodology to estimate the interest rates yield curve and its dynamics in the Tunisian bond market using OLS and Maximum likelihood estimation.

We estimate the parameters of the continuous-time model using a discrete-time econometric specification, according to Brennan-schwartz (1982), dietrich-campbell and others did.

The exact discrete model corresponding to the stochastic differential equation is a first-order autoregressive AR (1) model:

$$r_t - r_{t-1} = c + dr_{t-1} + \varepsilon_t$$

$$E(\varepsilon_t) = 0 \quad ; \quad E(\varepsilon_t^2) = \sigma^2 r_t^{2\gamma}$$

This discrete-time model has the advantage of allowing the variance of interest rate changes to depend directly on the level of the interest rate in a way consistent with the continuous-time model. It's important to acknowledge that the discretized process above is only an approximation of the continuous-time specification.

Where:

$$\alpha = -\log \hat{d}$$

$$\gamma = \frac{\hat{c}}{1 - e^{-a\Delta t}} = \frac{\hat{c}}{1 - \hat{d}}$$

$$\sigma^2 = \frac{s^2 * 2a^3 * \theta^2}{(1 - e^{-aT})^2 (1 - \hat{d}^2)} = s^2 \sqrt{\frac{-\log \hat{d}}{1 - \hat{d}^2}}$$

The estimation result:

Rate	$\hat{c}$	Stat t	$\hat{d}$	Stat t	$\alpha$	$\gamma$	$\sigma^2$
<b>TMPjj</b>	-0.001073	-8,5195	0.035390	8.604079	3.34	-0.001	0.0107
	(0.000126)		(0.004113)				

Source: Eviews

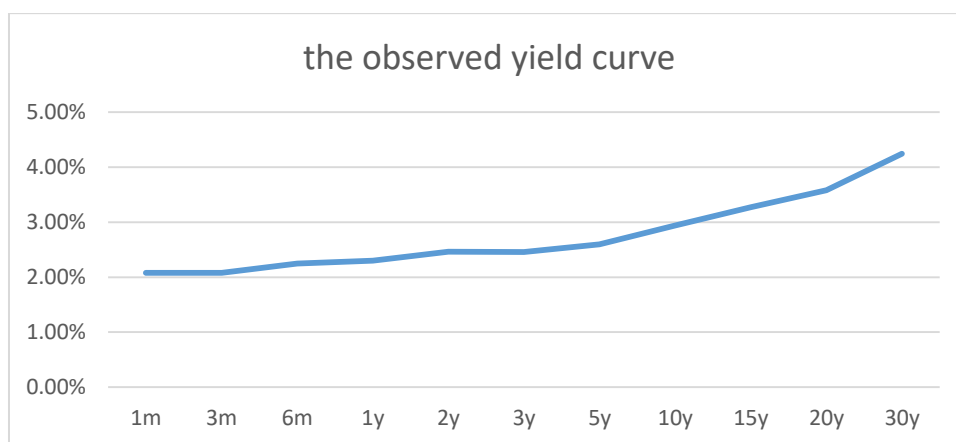
The standard errors of the estimated coefficient are in parentheses.

All parameters of the model are significant at the 5% risk level. We observe that the conditional volatility of the process is very weak which is mean that is not highly sensitive to the level of the short-term yield. In fact, the most relevant problem in the present context is the estimation bias in the practical use of econometric estimators for the continuous-time discretized models. In general, discretization introduces an estimation bias since the internal dynamics between the sampling points are ignored.

#### 4- Vasicek model of the term structure of interest rates:

##### 4-1- The observed yield curve:

We take as reference the yield curve published by the Moroccan central bank in 28/07/2016. The shape of the term structure of the interest rates is an upward sloping yield curve because short-term interest rates are below long term interest rates. In other words, longer-term interest rates are usually higher than shorter term interest rates that why we are saying normal yield curve. Th graph below summarize the shape of the term structure of interest rates for treasury bills in 28/07/2016.



##### 4-2- Vasicek yield curve:

By choosing 28/07/2016 as a reference where the short-term of interest rate is 2.263%, we construct the Vasicek yield curve using:

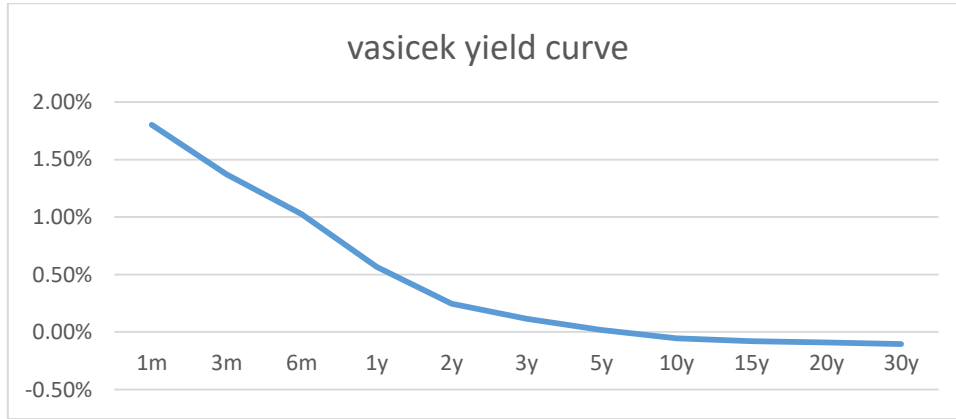


$$R(t, T) = R_{\infty} + (r(t) - R_{\infty}) \frac{1}{\alpha T} (1 - e^{-\alpha T}) + \frac{\sigma^2}{4\alpha^3 T} (1 - e^{-\alpha T})^2$$

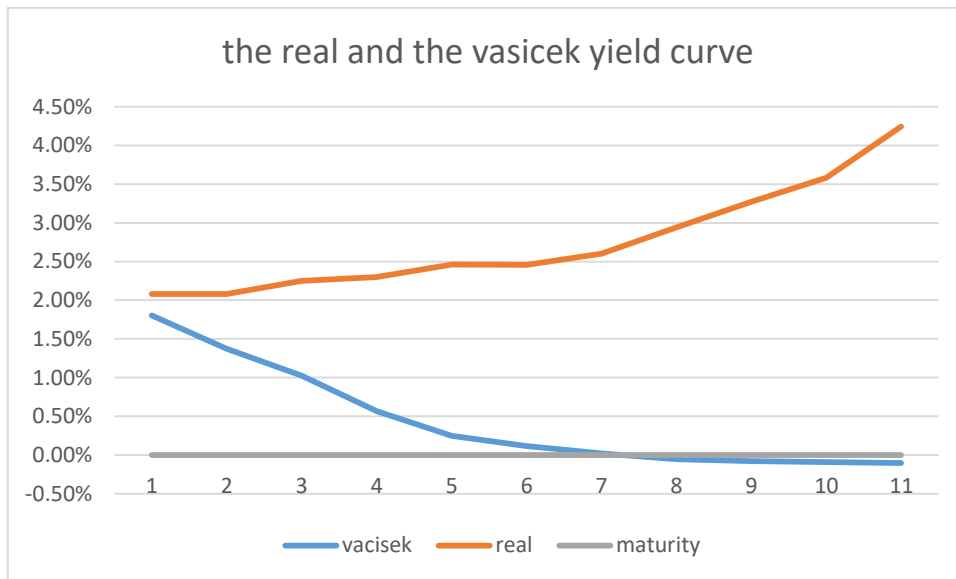
where :

$$R_{\infty} = \gamma + \frac{\sigma q}{\alpha} - \frac{1}{2} \frac{\sigma^2}{\alpha^2}$$

In a neutral-risk we assume that:  $q=0$ , well,  $R_{\infty} = \gamma - \frac{1}{2} \frac{\sigma^2}{\alpha^2}$



The shape of the term of structure of interest rates using Vasicek model is a downward sloping yield curve as shown in the graph above, which is not connected with the real yield curve.



The shape of Vasicek model and the shape of the yield curve of Moroccan market are not similar. Many reasons could explain that difference. Firstly, our work does not take in consideration the market risk, because we are working in a neutral risk space. And also it is hard to observe it. Secondly, the bias estimation as a result to the passage from a continuous-time to a discretized-time.

## **5- Conclusion:**

This paper is an attempt to model the term structure of interest rates, which measures the relationship among the yields on default-free securities that differ only in their term to maturity. The determinants of this relationship have long been a topic of concern of economists and practitioners. We opt for the Vasicek model, which is a single-factor model of the term structure of interest rates in a continuous-time. To estimate the model's parameters, we use data from the Moroccan central bank and the ordinary least square that is an econometric technique is used. The choice of this technique is due to discretization of the diffusion model, which is a linear, and a first-order autoregressive model. Then we infer the result to estimate the model's parameters. After that, we construct the Vasicek model and compare it with the real yield curve extracted from the Moroccan central bank. The result shows that Vasicek model does not fit the actual yield curve.

This result may let us think about an alternative for using another model like CIR models or other models cited above in second section. And also maybe if we use a jackknife estimation to include the bias estimation.

## References:

1. Abid, Fatma Chakroun and Fathi. "A methodology to estimate the interest rates yield curve in Illiquid Market: the Tunisian case." *The Macrotheme Review*, 2013: 18-37.
2. C.Merton, Robert. "an intertemporal capital asset pricing model." *econometrica*, Vol 41, No.5, 1973: 867-887.
3. Cox, John C, Jonathan E. Ingersoll, Stephen A. Ross. "a theory of the term structure of interest rates." *econometrica*, 1985: 385-408.
4. F.-É. Racicot et R. Théoret. *finance computationnelle et gestion des risques*. québec: presses de l'université de quebec, 2006.
5. Francis A. Longstaff, Eduardo S. Schwartz. "interest rate volatility and the term structure: a two Factor general equilibrium model ." *the journal of finance*, 1992: 1259-1282.
6. Hassan, Peter Aling and Shakill. "No-Arbitrage One-Factor Models of the South African Term-." *South African Reserve Bank Working Paper*, 2012: 1-27.
7. Heath, D, Jarrow, R, Morton, A. "bond pricing and the term structure of interest rates: a new methodology for contingent claims valuation." *econometrica*, 1992: 77-105.
8. Irturk, Ali Umut. "term structure of interest rates." *the economics department of the university of californie, santa barbara*, 2006: 1-48.
9. Irturk, Ali Umut. "Term Structure of Interest Rates." *economics*, 2006: 1-48.
10. John Hull, Alan White. "pricing interest rate derivatives securities." *The review of financial studies*, 1990: 573-592.
11. K.C Chan, G. Andrew Karolyi, Francis A. Longstaff, Anthony B. Sanders. "An Empirical Comparaison of Alternative Models of the short-term interest rate." *the journal of finance*, 1992: 1209-1227.
12. S. Schwartz, Michael J. Brennan and Eduardo. "a continuous time approach to the pricing of bonds." *journal of banking and finance* 3, 1979: 133-155.
13. Vasicek, o. "an equilibrium characterization of the term structure." *journal of financial economics*, 1977: 177-188.
14. Zdravka Aljinović, Branka Marasović, and Blanka Škrabić. "Comparative Analysis of the Stochastic and Parsimonious interest rate models on croatian government market." *world academy for science, engineering and technology* 25, 2009: 568-572.

# Financial factors for fiscal stability of Municipalities in Bulgaria (in Bulgarian)

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**Abstract:** *Fiscal performance of municipalities represents a significant problem in public finances in Bulgaria. Data reveals that most Bulgarian municipalities generate major debt, arrears and respectively - a negative budget balance. This paper explores the options for defining factor dependencies between fiscal stability criteria, as set in the Public Finance Act, and additional financial indicators relating to the finances of municipalities. Two types of analyses are used to examine relevant dependencies – a correlation analysis to identify the similarity in the dynamics of the studied parameters and a regression analysis to derive statistically significant correlations.*

**Key words:** *fiscal stability, financial stability, finances of municipalities*

**JEL codes:** *H76, H83*

## Финансови фактори за фискална стабилност на общините в България

**д-р Стефан ПЕТРОВ**  
УНСС

**Резюме:** *Фискалното представяне на общините се формира като съществен проблем в публичните финанси в България. Данните показват, че повечето български общини формират сериозни дългове, просрочени задължения и съответно отрицателно бюджетно салдо. В статията се изследват възможностите за определяне на факторни зависимости между критерии за фискална стабилност определени в Закона за публичните финанси и допълнително финансови показатели, свързани с финансите на общините. За изследване на зависимостите е използван корелационен анализ за идентификация на сходство в динамиката на изследваните показатели и регресионен анализ за извеждане на статистически значими зависимости.*

**Ключови думи:** *финансова стабилност, фискална устойчивост, общински финанси*

**JEL код:** *H76, H83*

## **Въведение**

Фискалната дисциплина в областта на публичните финанси обикновено се свързва със способността на публични институции да ограничават разходите свързани с изпълнение на възложените им функции, в рамките на разполагаемия бюджет. Наборът от административни, стопански и инвестиционни функции възложени по нормативен път на органите на местната власт е изключително широк, което се отразява както върху процеса на бюджетиране, така и при изпълнението на бюджетите на общините. Собствените приходи в тези бюджети съставляват относително малка част от необходимия финансов ресурс, в резултат на което общините се „дофинансират“ от централния бюджет. В този смисъл, фискалната стабилност на общините е пряко свързано с фискалните показатели на страната, тъй като липсата на дисциплина при разходването на общински средства, респективно води до необходимост от разходване на публични средства от държавата, за покриване на непланирани дефицити.

Удачно е да се направи уточнението за това, че реализирането на каквито и да е анализи на резултатите за финансовото представяне на общините, базирани на данни да общинските бюджети, попадат в обхвата на някои ограничения. Така например, бюджетите не са представителни за цялостната финансова дейност на общините. Почти цялата инвестиционна дейност на местната власт се реализира и отразява в извънбюджетни сметки, свързани с отпуснато целево финансиране или получено по донорски програми (например от ЕС). Това ограничение трябва да се има предвид, особено в контекста на начините, по които функционира механизмът за финансово управление и контрол в общините при разходване на средства на проектен принцип. В допълнение към това, въпреки, че донорското финансиране не се отразява в общинския бюджет, получени финансови корекции от изпълнението на проекти с такова финансиране попада именно в бюджета. В повечето подобни случаи не е ясно дали тази корекция реално представлява фискален проблем със самия бюджетен процес и изпълнението на бюджета или е специфика на проекта.

## **Общо състояние на общинските финанси**

Влезният в сила през 2014 година Закон за публичните финанси (ЗПФ) създава определена рамка от показатели, чрез които да бъде наблюдавано финансовото и фискално представяне на определен кръг бюджетни организации, в т.ч. и на общините. Публично представените данни за величината на тези критерии за 2015 година са

свидетелство за това, че проблеми с фискалната дисциплина определено има. Дори и самият факт, че 58,43% от общините приключват финансовата година с отрицателно бюджетно салдо или 156 общини, е свидетелство за това<sup>1</sup>.

Логично, възниква въпросът за това, по какъв начин следва да бъде организиран контролът по изпълнение на общинските финанси, за да се подобри фискалната дисциплина. Един базов подход, използван и в настоящото изследване, е да бъдат идентифицирани статистически значими взаимовръзки между отделните фактори и показателите за фискална дисциплина, което да даде възможност да се изследва наличието на факторна обусловеност. За основа на изследването са избрани показатели, за които е налична достоверна информация за всички общини в страната, като същевременно е на лице и възможна логическа взаимовръзка между тези показатели и фискалното представяне по общини.

### **Показатели за оценка на финансовото състояние и фискалната стабилност**

Основната част от избраните показатели са представените и дефинирани в Закона за публичните финанси (в сила от 01.01.2014 г.), критерии за финансова устойчивост (чл.130а, ал.1. от Закона за публичните финанси). Тези критерии са формирани, като относителни тегла на показатели и стойности от общинските бюджети и/или натурални показатели за постигнат резултат. За някои от тях е преценено, че е по-удачно да бъдат преобразувани в относителна величина спрямо населението в общината, за която се отнасят, доколкото показателя за население в общините се отличава драстично и прилагането на абсолютни стойности при емпиричния анализ би могло да доведе до съществени изкривявания на резултатите. По същата причина към набора от показатели са включени населението в отделните общини и дялът на населението живеещо в градовете.

Като показатели за оценка на фискалната дисциплина са използвани фискалните правила определени в ЗПФ (чл. 32, ал.1 и ал.2 от Закона за публичните финанси). Общият набор от показатели се отнася за всички общини в България и е представен както следва:

- **Население** в общината и **Дял на населението в градовете** спрямо общото население в общината (%). Предвид факта, че основна част от задълженията и отговорностите на общините са свързани с предоставяне на административни

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<sup>1</sup> Министерство на финансите, Финансови данни за общини по чл.130 г, ал.2 от ЗПФ-2015-Q12016, 2016г.

услуги и обслужване на населението, естествено възниква въпроса за това, дали броя на населението оказва влияние върху фискалните показатели. Същевременно се търси потвърждение и на хипотезата, че между общините с преобладаващо население в градски райони и останалите са на лице съществени различия, поне що се отнася до фискалните показатели. Данните използвани за целите на анализа, по тези показатели са за 2015 година от НСИ.

- **Дял на приходите от общите постъпления (%), Покритие на разходите за местни дейности с приходи (%) и Бюджетно салдо спрямо общите постъпления (%).** Тези показатели спадат към набора показатели за финансова устойчивост наблюдавани от Министерство на финансите (МФ), съгласно чл.130а, ал.1<sup>2</sup>. от ЗПФ. Данните използвани за целите на анализа, по тези показатели са за 2015 година от МФ.
- **Дълг към планирани приходи и изравнителна субсидия (%) и Просрочени задължения към планирани приходи и изравнителна субсидия (%).** Двата показателя дават възможност да се прецени, доколко фискалното представяне е свързано с процеса на планиране на общинските бюджети, както и в каква степен наличието на фискални проблеми се обуславя от процеса на механичното им „пренасяне“ в следващата бюджетна година. Второто, би било по-удачно да се изследва чрез анализ на данни от няколко последователни години, но публичното оповестяване на данни за финансите на общините е факт едва от датата на влизане в сила на ЗПФ, т.е. липсват достатъчно данни за предходни периоди. Данните използвани за целите на анализа, по тези показатели са за 2015 година от МФ.
- **Население на един общински служител и Дял на разходите за заплати и осигуровки в общите разходи (%).** Двата показателя за използвани в ЗПФ (чл.130а, ал.1. от Закона за публичните финанси), като показатели за ефективност на общинските финанси. Независимо от възможните уговорки относно коректността на броя общински служители<sup>3</sup> използван в методиката на МФ за изчисляване на тези показатели, между тях и фискалната дисциплина

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<sup>2</sup> Критерии за финансова устойчивост (чл.130а, ал.1. от Закона за публичните финанси). Формират се като относителни тегла на показатели и стойности от общинските бюджети и/или натурални показатели за постигнат резултат.

<sup>3</sup> Броя общински служители не включва например привлечени експерти, които се разглеждат като доставчици на външни услуги.



биха могли да бъдат търсени зависимости. Данните използвани за целите на анализа, по тези показатели са за 2015 година от МФ.

- **Размер на разходите за заплати и осигуровки на един жител (лв.).** Показателят е базиран на информация и данни на МФ за 2015 година, като данните за разходите за заплати и осигуровки от бюджета на общините са преобразувани спрямо данните за населението<sup>4</sup>.
- **Дял на капиталовите разходи в общите разходи.** Показателят е считан за основен измерител на инвестиционната активност на общината, но не включва реализирани инвестиции с извънбюджетни средства и по различни донорски инициативи и програми. Предвид факта, че за получените извън бюджета инвестиционни субсидии МФ не публикува данни, а основната част от реализираните инвестиции в техническа инфраструктура или други обекти от общините се използват именно такива средства, е спорно до колко показателят може да отговори на амбициозното си наименование. Независимо от това, той е включен в изследваната група данни, за да се провери дали има връзка с фискалните критерии. Данните използвани за целите на анализа, по този показател са за 2015 година от МФ.
- **Общински приходи на глава от населението (лв.) и Общински разходи на глава от населението (лв.)<sup>5</sup>.** И двата показателя за преобразувани в относителна величина спрямо броя население, доколкото се търси потвърждение за наличие на зависимост между броя население и абсолютната величина на приходите и разходите в общинските бюджети. Съвсем отделно е очакването за това, тези стойности да са свързани с фискалната дисциплина в общините. Данните за приходите и разходите в общинските бюджети използвани за целите на анализа са за 2015 година от МФ, а данните за населението за същата година са от НСИ.
- **Осреднена събираемост на местните данъци (%).** Данните за изпълнение на общинските бюджети за 2015 година показват средна събираемост на данъците върху недвижимите имоти и данъците върху превозните средства съответно 68,31% и 63,39%<sup>6</sup>. Ниската **събираемост** неминуемо се отразява като намаление на планираните приходи и би могла да бъде фактор влияещ върху фискалната

<sup>4</sup> Конкретните стойности на показателя за изследваните общини са изчислени от автора.

<sup>5</sup> За целите на анализа „Общински приходи“ са дефинирани съгласно чл. 45, ал. 1, т. 1 от ЗПФ (без §46, §47 и §48), а „Общински разходи“ - съгласно чл. 45, ал. 1, т. 2 от ЗПФ (без §19).

<sup>6</sup> Министерство на финансите, Финансови данни за общини по чл.130 г, ал.2 от ЗПФ-2015-Q12016, 2016г.

стабилност. Данните използвани за целите на анализа по този показател са за 2015 година от МФ.

- **Размер на плащанията по дълга към средно-годишния размер на разходите на общината (%), Задължения за разходи към средно-годишния размер на разходите (%), Поети ангажименти за разходи към средно-годишния размер на разходите (%) и Просрочени задължения към отчетените за последната год. разходи (%)<sup>7</sup>**, са показатели свързани с фискалната дисциплина<sup>8</sup> на общините, които са посочени в ЗПФ. Данните използвани за целите на анализа, по тези показатели са за 2015 година от МФ.

Методологията на анализ е последователно реализиране на:

- ❖ *Корелационен анализ* на всяка двойка показатели, с цел идентифициране на статистически значима взаимовръзка. В резултат от анализа се идентифицират показатели, които имат динамика сходна с тази на критериите за фискална дисциплина, за всеки един от тези критерии по отделно (корелационен коефициент над .25)<sup>9</sup>.
- ❖ *Множествена линейна регресия* на всеки един показател за фискална дисциплина (разглеждани като резултативен признак) и показателите, за които е

<sup>7</sup> Понятията за ангажимент за разход и задължение за разход са дефинирани в преходните и заключителни разпоредби на закона за публичните финанси: "Поети ангажименти за разходи" са клаузи на договори, разпоредби на нормативни и административни актове, които обвързват общината с бъдещи задължения за разходи с определима стойност, (не вкл. разходите за персонал, пенсии и приравнени на тях плащания, лихви по дълга, както и разходите за данъци и други публични държавни и общински вземания, и "Задължения за разходи" (не вкл. задълженията за разходи за персонал, пенсии и приравнени на тях плащания, лихви по дълга, за данъци и други публични държавни и общински вземания, провизиите за задължения съгласно счетоводното законодателство, приложимо за бюджетните организации, задълженията, които представляват дълг, както и поетите ангажименти за разходи).

<sup>8</sup> Критериите за фискална дисциплина са обособени и разглеждани самостоятелно, като тяхната дефиниция е направена в съответствие със законовата формулировка: Чл. 32 (1) от ЗПФ: Годишният размер на плащанията по общинския дълг за всяка община във всяка отделна година не може да надвишава 15 на сто от средногодишния размер на собствените приходи и общата изравнителна субсидия за последните три години, изчислен на базата на данни от годишните отчети за изпълнението на бюджета на общината. И Чл. 32 (2) от ЗПФ: (2) Номиналът на издадените през текущата бюджетна година общински гаранции не може да надвишава 5 на сто от общата сума на приходите и общата изравнителна субсидия по последния годишен отчет за изпълнението на бюджета на общината.

<sup>9</sup> R корелационен коефициент, който представя линейната зависимост между случайните величини X и Y, изчислена като нормална ковариация на две величини:

$$R = \frac{Cov(x, y)}{\sqrt{Var(x).Var(y)}}$$

Като случайни величини в случая са използвани данните за всяка двойка изследвани показатели, за всяка отделна община в страната към 2015 година.

идентифицирана значима сходна динамика от корелационния анализ (разглеждани като фактор-признаците в регресионното уравнение)<sup>10</sup>.

### Резултати от корелационен анализ

Резултатите от направения корелационен анализ са представени в Приложение, Таблица 1. Корелационни коефициенти за показателите за финансово представяне и фискална дисциплина на общините в България през 2015 година. За удобство на работа случаите, в които корелационния коефициент е над границата от .25, съответната клетка е маркирана в по-тъмен цвят. От получените стойности могат да бъдат направени следните изводи:

- Фискалният критерий **Размер на плащанията по дълга към средногодишния размер на разходите на общината (%)** показва сходна динамика с показателите Дял на приходите от общите постъпления (%) и Дълг към планирани приходи и изравнителна субсидия (%).
- Фискалният критерий **Задължения за разходи към средногодишния размер на разходите (%)** показва сходна динамика с показателите Просрочени задължения към планирани приходи и изравнителна субсидия (%), Поети ангажименти за разходи към средногод. размер на разходите (%) и Просрочени задължения към отчетените за последната год. разходи (%).
- Фискалният критерий **Поети ангажименти за разходи към средногодишния размер на разходите (%)** показва сходна динамика с показателите Население на един общински служител и Задължения за разходи към средногодишен размер на разходите (%).
- Фискалният критерий **Просрочени задължения към отчетените за последната година разходи (%)** показва сходна динамика с показателите Просрочени задължения към планирани приходи и изравнителна субсидия (%) и Задължения за разходи към средногодишен размер на разходите (%).

В допълнение към получените резултати могат да бъдат отбелязани и някои наблюдения свързани с първоначалните очаквания при избора на показатели за анализ. Така например, не е на лице наличие на сходна динамика между броя на населението в

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<sup>10</sup>  $Y_i = a_0 + a_1 X_{1i} + a_2 X_{2i} + \dots + a_n X_{ni}$ , където: Y резултативния признак в регресията (съответния показател за фискална дисциплина); X представляват фактор-признаците в регресионното уравнение представени от показателите със сходна динамика от корелационния анализ;  $a_1$ - $a_n$  са коефициентите в регресионното уравнение; i – 265 общини, включени в извадката.

общините и показателите за фискална дисциплина. Очакването за това, че в „малките“ общини или в тези с преобладаващо „селско“ население спазването на фискалната дисциплина е затруднено не се потвърждава. Независимо от това, че съществува интуитивно очакване за формирането на дефицит предимно в общините с негативни фискални показатели, показателя за наличие на отрицателно бюджетно салдо не показва сходна динамика с нито един от разгледаните показатели, в т.ч. и фискални.

### Резултати от регресионен анализ

За всеки един от фискалните критерии е реализирана множествена линейна регресия, като за фактор-признаци в регресионното уравнение са използвани показателите със сходна динамика от корелационния анализ. Резултатите от регресионния анализ са представени в Приложение<sup>11</sup>. Тъй като при анализа на получените резултати от четирите регресии могат да бъдат формулирани сходни наблюдения и изводи, удачно е изводите да бъдат представени общо, а не по отделни регресии.

- ❖ На първо място, и при четирите регресионни уравнения статистическата им достоверност се потвърждава, като показателите за Significance F са близки до 0 (виж. Таблица 2-5). И в четирите модела, вероятностният коефициент P-value е под стойността от ,05, което е свидетелство за статистически значима регресионна зависимост спрямо съответния резултативен признак за фискална дисциплина. Изключение представлява единствено връзката на показателя за просрочени задължения към планирани приходи и изравнителна субсидия спрямо задължения за разходи към средногодишния размер на разходите (виж Таблица 4).
- ❖ Прави впечатление, че показателите за фискална дисциплина са зависими от показателите Дълг към планирани приходи и изравнителна субсидия (виж Таблица 2) и Просрочени задължения към планирани приходи и изравнителна

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<sup>11</sup> Съответно в Таблица 2. Зависимост между размера на плащанията по дълга към средногодишния размер на разходите на общината (%) и показателите Дял на приходите от общите постъпления (%) и Дълг към планирани приходи и изравнителна субсидия (%); Таблица 3. Зависимост между задълженията за разходи към средногодишния размер на разходите (%) и показателите Просрочени задължения към планирани приходи и изравнителна субсидия (%), Поети ангажименти за разходи към средногод. размер на разходите (%) и Просрочени задължения към отчетените за последната год. разходи (%); Таблица 4. Зависимост между поетите ангажименти за разходи към средногодишния размер на разходите (%) и показателите Население на един общински служител и Задължения за разходи към средногод. размер на разходите (%); и Таблица 5. Зависимост между просрочени задължения към отчетените за последната година разходи (%) и показателите Просрочени задължения към планирани приходи и изравнителна субсидия (%) и Задължения за разходи към средногод. размер на разходите (%).

субсидия (виж Таблица 3 и 5). Фактически това означава, че в определена степен потенциалните проблеми със стойностите на фискалните показатели се предопределят още при изготвянето на бюджетите за следващата финансова година. Тъй като величината на приходите и субсидия обикновено се планират на основата на предходните бюджети и рядко са обект на съществени изменения, то на практика основен фактор, от който зависи фискалната стабилност на общината се явяват плащанията по дълга и просрочените задължения. От една страна това означава, че общинските бюджети са силно зависими от натрупването на дългове, т.е. наличие на плащания по стари дългове са рискова характеристика за изпълнението на бюджета през годината. От друга, формирането на просрочени задължения, по същество има ролята на дълг, който се пренася от годината на възникване в следващата и води до нарастване на плащанията по дълга, като цяло. И ако за плащанията по дълга могат да се въведат определени лимити (каквито в ЗПФ на практика има) и могат да бъдат адекватно планирани в бюджета, то за просрочените задължения това не е така. Общият извод, който може да се направи е, че фискалната стабилност може да бъде подобрена при подобряване процеса на планиране на дълговите плащания, и то още в периода на изготвяне на общинските бюджети.

- ❖ На лице е регресионна зависимост между фискалната стабилност и показателите за ефективност, представени от показателя население на един общински служител (виж Таблица 4). Общият извод, който може да се направи е, че фискалната стабилност на общините е не толкова свързана с броя на населението (като се има предвид резултата от направения корелационен анализ), колкото с броя на общинските служители. От една страна, сериозна част от разходите на общината за местни дейности е свързана именно с разходи за заплати и осигуровки на служители. По този начин „разширено“ щатно разписание може да се яви и като фактор на увеличени разходи, като цяло. От друга, относителния брой на населението обслужвано от един служител се определя и от спецификата на функциите, които общините следва да изпълняват по закон. Тези функции обаче, са еднакви за всички общини, което води до логичния извод, че е добре да се направят допълнителни анализи за факторна обусловеност и взаимовръзка между населението на общините, основните им изпълнявани функции, предоставяни административни услуги и брой на служителите. Въпросът за това каква е логическата, статистическата, а от там и

финансовата връзка между тези показатели биха могли да обяснят по-ясно формирането на показателите за фискална стабилност, а оттам и да подпомогнат оптимизирането на управленските процеси в посока на подобряване на фискалното представяне на общините.

- ❖ Интересна е връзката на показателя за дял на приходите от общите постъпления (виж Таблица 2) с фискалните критерии. Очевидно и статистически достоверно е това, че изпълнението на приходната част от бюджета на общината създава предпоставки за безпроблемното реализиране на заложените разходи. Тоест, при неизпълнение на приходите и предварително оптимизиране на разходите в бюджетите е нормално да възникнат дефицити (над 58% от общините за 2015 година<sup>12</sup>), независимо дали те се проявят под формата на дълг, просрочени задължения или друго. На този фон, ниската събираемост на собствените данъчни приходи (средно 65,86% за 2015 година<sup>13</sup>) свидетелства за това, че определено не се полагат достатъчно усилия за постигане на стабилна фискална среда при управление на общинските финанси. При това, масовата практика е недоборите от предходни години да не се включват като очаквани приходи през следващата, което фактически води до натрупването им от година за година. Реално, финансовият прочит на тази зависимост може да се интерпретира и в положителна посока, тъй като по този начин се формират значителни взимания на общината, от предходни години, събирането на които би могло да осигури финансов буфер при евентуална фискална нестабилност в държавата и периоди от време, в които субсидията от централния бюджет може да бъде намалена или забавена. Фискалната интерпретация, обаче е силно негативна, тъй като това означава, че общините като цяло не са особено стриктни към събирането на собствените си приходи, което е нормално да доведе до проблеми с фискалните критерии.
- ❖ Не на последно място, съществува сериозна зависимост между отделните фискални критерии, включени в аналитичната и регулативна рамка на ЗПФ. На лице са сериозни факторни зависимости между показателите Задължения за разходи към средногодишен размер на разходите, Поети ангажименти за разходи към средногодишен размер на разходите и Просрочени задължения към отчетените за последната год. разходи (виж Таблица 3-5). Показателите създават

<sup>12</sup> Министерство на финансите, Финансови данни за общини по чл.130 г, ал.2 от ЗПФ-2015-Q12016, 2016г.

<sup>13</sup> Министерство на финансите, Финансови данни за общини по чл.130 г, ал.2 от ЗПФ-2015-Q12016, 2016г.

набор от взаимосвързани критерии за фискална стабилност на общината, като за всеки един от тях е определена референтна критична стойност<sup>14</sup>. Интересно би било задълбочаването на анализа в посока проверка за оптималност на поставените критични стойности. Така например, при използване на регресионното уравнение за изчисляване величината на показателя Просрочени задължения към отчетените за последната година разходи<sup>15</sup>, се получава стойност от .075134897, което е над величината на допустимата стойност на критерия от .05 съгласно ЗПФ. От една страна нарушаването на един фискален критерий не представлява сериозен проблем (съгласно изискванията на ЗПФ), но от друга, силната обвързаност между критериите би могла да бъде сериозен сигнал за задълбочаване на фискалните затруднения през следващия бюджетен период.

Както се вижда от направените изводи, изпълнението на изискванията за фискална дисциплина може да се възприема като функционално свързано с финансовото представяне на общините и бюджетното им изпълнение. Това означава, че наборът от инструменти на финансовото управление с помощта на които могат да бъдат подобрени фискалните показатели на общините е достатъчно широк. Същественният въпрос, обаче е свързан по-скоро с това, дали е необходимо изменение в привила за оперативен и мониторингов контрол върху общинските финанси или проблемите са свързани с липсата на реални последици от тяхното неспазване. Влошените финансови и фискални показатели на общините не са изключение, а нормално състояние на системата. В този смисъл, ако нарушаването на възприетите правила за финансово управление и контрол не води до достатъчно сериозни последици, би било спорно дали определянето на по-различни целеви величини на тези показатели ще има каквото и да е значение.

## **Изводи и препоръки**

Направените изводи могат да послужат за формиране на насоки за бъдещи изследвания, както и за реализиране на фактическа политика по отношение подобряване фискалното представяне на общините. В същото време на лице са зависимости, които не могат да бъдат пренебрегнати и които повдигат сериозни въпроси за ефективността на управление на общинските финанси като цяло. Вероятно е

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<sup>14</sup> Виж Чл. 32 (1) от ЗПФ.

<sup>15</sup> В регресионното уравнение на отделните фактори ( $X_1$  и  $X_2$ ) се присвоят техните максимални прагове, а коефициентите ( $a_0$ ,  $a_1$  и  $a_2$ ) величините получени стойности на Coefficients от Таблица 5.

подходящо към настоящата проблематика да бъде съсредоточено по-сериозно внимание както от страна на научните среди, така и от страна на политическите оператори, като един от основните фактори за това, наличие на официална и публична информация за финансовите и фискални показатели на общините, вече е на лице. В този смисъл публичното оповестяване дори и на по-широк спектър от финансовите резултати от работата на общините в България, би могъл да допринесе не само за подобряване общественя контрол, но и за реално подобряване на тяхното финансово и фискално представяне.

### **Библиография:**

1. Стоилова, Десислава Георгиева, Общински финанси, Благоевград, 2013
2. Страхилова, К., Възможности за моделиране на общинския бюджет чрез прилагане на обектно ориентирания подход, Икономически алтернативи, бр.1, 2011
3. Министерство на финансите, Финансови данни за общини по чл. 130 г, ал. 2 от ЗПФ - 2015-Q1 2016, София, 2016
4. Министерство на финансите, Критерии по чл. 130а, ал.1, София, 2016
5. Министерство на финансите, Методически указания по прилагането на чл. 130а, ал.1 от ЗПФ, София, 2016
6. Закон за публичните финанси, Обн., ДВ, бр. 15 от 15.02.2013 г., в сила от 1.01.2014 г.



<i>Таблица 1. Корелационни коефициенти за показателите за финансово представяне и фискална дисциплина на общините в България през 2015 година.</i>	Население	Дял на населението в градовете (%)	Дял на приходите от общите постъпления (%)	Покритие на разходите за местни дейности с приходи (%)	Бюджетно салдо спрямо общите постъпления (%)	Дълг към планирани приходи и изравнителна субсидия (%)	Просрочени задължения към планирани приходи и изравнителна субсидия (%)	Население на един общински служител	Дял на разходите за заплати и осигуровки в общите разходи (%)
Население	1,000000								
Дял на населението в градовете (%)	0,248301	1,000000							
Дял на приходите от общите постъпления (%)	0,191504	0,259925	1,000000						
Покритие на разходите за местни дейности с приходи (%)	0,196816	0,301742	0,763635	1,000000					
Бюджетно салдо спрямо общите постъпления (%)	-0,021892	-0,024150	-0,111735	0,075300	1,000000				
Дълг към планирани приходи и изравнителна субсидия (%)	0,139876	0,198501	0,139861	0,120220	-0,008186	1,000000			
Просрочени задължения към планирани приходи и изравнителна субсидия (%)	-0,036717	0,032371	-0,142420	-0,146059	-0,017892	0,105937	1,000000		
Население на един общински служител	0,407502	0,438416	0,294675	0,409359	-0,076328	0,209183	-0,023996	1,000000	
Дял на разходите за заплати и осигуровки в общите разходи (%)	-0,115178	0,009201	-0,457830	-0,017125	0,189915	0,060964	0,014378	0,053706	1,000000
Размер на разходите за заплати и осигуровки на един жител (лв.)	-0,039946	0,077750	0,123154	0,092421	-0,018117	-0,020412	-0,042095	0,166981	-0,049589
Дял на капиталовите разходи в общите разходи	-0,058376	-0,232267	0,080248	-0,327909	-0,211122	-0,158401	-0,067187	-0,263630	-0,738405
Общински приходи на глава от населението (лв.)	-0,018436	0,089502	0,260265	0,183765	-0,021226	-0,013712	-0,053909	0,172656	-0,149038
Общински разходи на глава от населението (лв.)	-0,035807	0,075124	0,164499	0,101358	-0,030752	-0,022420	-0,045442	0,159156	-0,116931
Осреднена събираемост на местните данъци (%)	0,058913	0,229303	0,312934	0,257031	-0,063794	0,161266	-0,071111	0,219492	-0,143203
Размер на плащанията по дълга към средногод. Размер на разходите на общината (%)	0,176799	0,239179	0,271096	0,225412	-0,041714	0,936531	0,100900	0,241936	0,009867
Задължения за разходи към средногод. размер на разходите (%)	0,016686	0,027949	-0,026536	-0,064152	-0,011342	0,112464	0,800353	0,040458	-0,075836
Поети ангажименти за разходи към средногод. размер на разходите (%)	0,064025	0,187074	0,151308	0,120367	-0,053052	0,075149	0,178435	0,333566	-0,189680
Просрочени задължения към отчетените за последната год. разходи (%)	-0,032054	0,056282	-0,031499	-0,027153	-0,007904	0,130074	0,915105	0,023426	-0,000398

<b>Таблица 1. Корелационни коефициенти за показателите за финансово представяне и фискална дисциплина на общините в България през 2015 година (продължение).</b>	Размер на разходите за заплати и осигуровки на един жител (лв.)	Дял на капиталовите разходи в общите разходи	Общински приходи на глава от населението (лв.)	Общински разходи на глава от населението (лв.)	Осреднена събираемост на местните данъци (%)	Размер на плащанията по дълга към средногод. Размер на разходите на общината (%)	Задължения за разходи към средногод. размер на разходите (%)	Поети ангажименти за разходи към средногод. размер на разходите (%)	Просрочени задължения към отчетените за последната год. разходи (%)
Население									
Дял на населението в градовете (%)									
Дял на приходите от общите постъпления (%)									
Покритие на разходите за местни дейности с приходи (%)									
Бюджетно салдо спрямо общите постъпления (%)									
Дълг към планирани приходи и изравнителна субсидия (%)									
Просрочени задължения към планирани приходи и изравнителна субсидия (%)									
Население на един общински служител									
Дял на разходите за заплати и осигуровки в общите разходи (%)									
Размер на разходите за заплати и осигуровки на един жител (лв.)	1,000000								
Дял на капиталовите разходи в общите разходи	0,038426	1,000000							
Общински приходи на глава от населението (лв.)	0,977507	0,098371	1,000000						
Общински разходи на глава от населението (лв.)	0,995034	0,094947	0,987690	1,000000					
Осреднена събираемост на местните данъци (%)	0,043452	0,037317	0,077226	0,054915	1,000000				
Размер на плащанията по дълга към средногод. Размер на разходите на общината (%)	-0,014474	-0,171915	0,006632	-0,012851	0,189681	1,000000			
Задължения за разходи към средногод. размер на разходите (%)	-0,038962	0,010090	-0,039605	-0,037812	0,011122	0,150728	1,000000		
Поети ангажименти за разходи към средногод. размер на разходите (%)	0,043555	0,052011	0,056569	0,057753	0,058554	0,128395	0,250531	1,000000	
Просрочени задължения към отчетените за последната год. разходи (%)	-0,040902	-0,091659	-0,043180	-0,043284	-0,024915	0,193320	0,845585	0,233012	1,000000

**Таблица 2. Зависимост между размера на плащанията по дълга към средногодишния размер на разходите на общината (%) и показателите Дял на приходите от общите постъпления (%) и Дълг към планирани приходи и изравнителна субсидия (%)**

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,947160312
R Square	0,897112657
Adjusted R Square	0,896327257
Standard Error	0,071951635
Observations	265

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	11,82681101	5,913405506	1142,237268	4,1631E-130
Residual	262	1,356383901	0,005177038		
Total	264	13,18319491			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	-0,069362047	0,011027495	-6,289918977	1,32452E-09	-0,091075843	-0,047648252	-0,091075843	-0,047648252
Дял на приходите от общите постъпления (%)	0,243803559	0,034143455	7,140564978	9,15649E-12	0,176573057	0,31103406	0,176573057	0,31103406
Дълг към планирани приходи и изравнителна субсидия (%)	0,448696599	0,0097976	45,79658071	4,7858E-127	0,429404539	0,467988659	0,429404539	0,467988659

**Таблица 3. Зависимост между задълженията за разходи към средногодишния размер на разходите (%) и показателите Просрочени задължения към планирани приходи и изравнителна субсидия (%), Поети ангажименти за разходи към средногод. размер на разходите (%) и Просрочени задължения към отчетените за последната год. разходи (%)**

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,850343713
R Square	0,723084431
Adjusted R Square	0,719901493
Standard Error	0,073522888
Observations	265

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	3,684064804	1,228021601	227,1751844	1,8538E-72
Residual	261	1,410865534	0,005405615		
Total	264	5,094930338			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	0,020883049	0,006221453	3,356619452	0,000906485	0,008632419	0,033133678	0,008632419	0,033133678
Просрочени задължения към планирани приходи и изравнителна субсидия (%)	0,103040813	0,04726038	2,180278988	0,030130281	0,009980649	0,196100977	0,009980649	0,196100977
Поети ангажименти за разходи към средногод. размер на разходите (%)	0,028201575	0,015034637	1,875773554	0,061802552	-0,00140305	0,057806199	-0,00140305	0,057806199
Просрочени задължения към отчетените за последната год. разходи (%)	0,906682022	0,111201175	8,153529167	1,4899E-14	0,687716375	1,125647668	0,687716375	1,125647668

**Таблица 4. Зависимост между поетите ангажименти за разходи към средногодишния размер на разходите (%) и показателите Население на един общински служител и Задължения за разходи към средногод. размер на разходите (%)**

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,409322255
R Square	0,167544709
Adjusted R Square	0,161190088
Standard Error	0,284575914
Observations	265

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	4,270388321	2,13519416	26,36580857	3,69216E-11
Residual	262	21,2176641	0,080983451		
Total	264	25,48805242			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	0,085747915	0,032012943	2,678538964	0,007862055	0,022712519	0,148783311	0,022712519	0,148783311
Население на един общински служител	0,000680553	0,00011851	5,742574595	2,57714E-08	0,000447199	0,000913906	0,000447199	0,000913906
Задължения за разходи към средногод. размер на разходите (%)	0,531037219	0,126178322	4,208624839	3,53322E-05	0,282584569	0,779489869	0,282584569	0,779489869

**Таблица 5. Зависимост между просрочени задължения към отчетените за последната година разходи (%) и показателите Просрочени задължения към планирани приходи и изравнителна субсидия (%) и Задължения за разходи към средногод. размер на разходите (%)**

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0,845585234
R Square	0,715014388
Adjusted R Square	0,713930793
Standard Error	0,054830433
Observations	265

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1,983768312	1,983768312	659,8536083	1,18292E-73
Residual	263	0,790676992	0,003006376		
Total	264	2,774445303			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	-0,003336554	0,003969193	-0,840612656	0,401328546	-0,011151994	0,004478886	-0,011151994	0,004478886
Задължения за разходи към средногод. размер на разходите (%)	0,62398816	0,0242914	25,68761586	1,18292E-73	0,576157786	0,671818534	0,576157786	0,671818534

## Is the contagion effect present on the CEE capital markets ?

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**Abstract:** *Starting 2007, the world capital markets experienced periods of persistent turbulences, that emphasized the presence of common effects on the markets' stability, due to the contagion phenomenon.*

*In this article, we considered the market returns of 11 capital markets - developed, emergent and frontier markets (mainly from the Central and Eastern Europe) - between January 1st, 2007-15th September, 2016. The data was used to assess the impact on the Romanian capital market implied by the turbulences that were present in the other 10 markets. In order to estimate the impact the turbulences present in the developed capital markets have on less developed capital markets, we followed a methodology proposed by Diebold and Yilmaz (2008) in order to calculate volatility indexes for daily data.*

*The obtained results show the influence that the developed capital markets have on the volatility of the daily returns of the Romanian capital market, as well as the insignificant effects induced by the Romanian capital market on the other analyzed markets. We found that the daily volatility of the other 10 countries have an impact of more than 34% on the daily volatility of the Romanian capital market's return (with the largest impact derived from the US market).*

**Key words:** *capital market, contagion risk, volatility*

**JEL Codes:** *C13, C22, C58, D53, G01, G15*

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## 1. Introduction

The globalization lead to a greater exposure of the less developed capital markets to turbulences that are present on more developed capital markets. This fact was seen in the aftermath of the global financial crisis that started in US in 2007, that impacted almost every stock market in the world. As medium term effects generated by the global financial crisis, we face a continuous process of reshaping the financial systems, the regulatory framework and the economic theories in the financial field.

Due to globalization, the primary effect of shocks in the developed stock markets seen in the less developed markets is the generalized increased volatility of prices of listed companies, mainly due to massive inflows (*that lead to soaring prices*) and outflows (*that lead to plunging prices*). In this regard, the analysis of the economic variables during the crisis help us finding the relevant causes of the turbulences, whose study is important for a large spectrum of users (*stakeholders, investors, regulatory bodies etc.*). Starting with economic variables' study, we shall consider the difference between the interdependence (*that occurs when the markets' comovement does not increase significantly after a shock, despite the high level of correlation between the markets*) and the contagion phenomenon (*that occurs when the markets' comovement is increasing when a shock is present on the financial markets*).

We should note that the impact generated by the turbulences from the developed markets depends also on the characteristics of the local economy, such as the openness degree toward the global financial system, the active institutional investors' structure and the independence of the monetary and financial authorities. As a result, it is necessary for the financial and monetary authorities from each country (*as it is the case of member states of the European Union*) to develop and implement adequate and targeted measures, with the aim of controlling the causes and effects of the turbulences that are present on financial markets and, ultimately, to improve the citizens' trust in the stability and resilience of the global financial system. This goal is also pursued by the European Commission in the process of reshaping the capital markets' legal framework, with the aim of facilitating the economic growth. As a consequence, the Capital Markets Union project, intended to be done starting 2019, aims to consolidate the financing channels for European companies and, therefore, create new jobs and foster the economic growth.

In this article, using the methodology proposed by Diebold and Yilmaz (2008) to outline the contagion effect, we define a static spillover index, whose evolution shows the impact the turbulences from the developed and emerging markets have on selected and analyzed capital markets, including the Bucharest Stock Exchange. We use the daily returns of the main indices



from the 11 selected markets, in order to emphasize the impact the developed markets' volatility of returns has on the less developed markets.

## **2. The theoretical basis of contagion on the financial markets**

In order to assess the presence and the effects of contagion, it is important to distinguish it to the one of interdependence between markets. Forbes and Rigobon (2002) state that the interdependence is present when the occurrence of a shock in one market does not lead to statistically significant increase of the comovement of the analyzed markets (even though the existence of a close connection between these financial markets). On the other hand, the contagion is present when the comovement of different markets is statistically significant, as a result of a turbulence occurred in one market.

Reinhart and Rogoff (2009) define contagion as the phenomenon of occurrence of immediate effects in a number of countries following an event, considering two forms of contagion, namely the „slow-burn” spillover and the „fast and furious” phenomenon, depending on the speed and intensity of this process.

Helleiner (2011) emphasized the connection between the degree of financial contagion and the overall stance of an economy: its presence is felt especially in countries whose financial systems where vulnerable to shocks (like real estate bubbles, financial excess and so on).

Diebold and Yilmaz (2008) proposed a method for studying the contagion phenomenon, based on the autoregressive vector concept (VAR), defined by Sims (1980). With the VAR model he proposed, Sims actually eliminated one of the main problems arising from the data series analysis, namely the selection of endogenous and exogenous variables (as in a VAR model, all variables are considered as endogenous variables). So, the main advantage of VAR models is that it solved the difficult problem arising from a large data set, such as the selection of the dependent and independent variables. The autoregressive vectors developed by Sims follow an asymptotic distribution and, for the largest part of the tested hypothesis, the number of degrees of freedom associated with this Chi-square distribution is not largely different from the number of degrees of freedom of the calibrated distribution.

In a VAR model, the variables' past values are considered, in order to find the possible relations between the current and past values (evaluating the impact the past values have on the current value of the studied variables). Sims and Watson (2001) show that, for a univariate autoregressive vector, the model consists in a single linear equation, where the current values of a variable are explained by its past values. Generalizing this approach and considering that the model is linear, for an autoregressive vector with  $n$  components, the model is a linear relation of the past values of the variable and the past and current values of the other  $(n-1)$  variables.

Pfaff (2008) defines the general form of a VAR (p) process as being given by:

$$y_t = A_1 y_{t-1} + A_2 y_{t-2} + \dots + A_p y_{t-p} + u_t,$$

where we denote  $y_t = (y_{1t}, y_{2t}, \dots, y_{nt})$ ,  $A_i$  are  $(n \times n)$  matrices, with  $i = 1, \dots, p$ , and  $u_t$  is a  $n$ -dimensional process with null estimated mean (or  $E(u_t) = 0$ ), and the covariance matrix  $E(u_t u_t^T) = \Sigma_u$

$$= \begin{bmatrix} \sigma_{u1}^2 & 0 & \dots & 0 & 0 \\ 0 & \sigma_{u2}^2 & & 0 & 0 \\ \vdots & & \ddots & \vdots & \\ 0 & 0 & \dots & 0 & \sigma_{un}^2 \end{bmatrix}, \text{ being constant and positive defined.}$$

In order to use this model, it is necessary to the stationary condition being fulfilled, or  $\det(I_n - A_1 z - \dots - A_p z^p)$  is not null for  $|z| \leq 1$ .

When the VAR(p) model is stationary, the stationary time series that are generated have constant means, variances and covariances. When a solution is equal to one, then at least one of the considered variables in the VAR(p) is integrated of level 1, or between the analyzed variables exists cointegrated relations.

The general VAR(p) can be rewrite as an VAR(1) process, given by the equation:

$$\xi_t = A \xi_{t-1} + v_t, \text{ where } \xi_t = \begin{bmatrix} y_t \\ \vdots \\ y_{t-p+1} \end{bmatrix}, A = \begin{bmatrix} A_1 & A_2 & \dots & A_{p-1} & A_p \\ I & 0 & & 0 & 0 \\ \vdots & & \ddots & \vdots & \\ 0 & 0 & \dots & I & 0 \end{bmatrix}, v_t = \begin{bmatrix} u_t \\ 0 \\ \vdots \\ 0 \end{bmatrix}, \text{ and the first}$$

and the third are  $(np \times 1)$  vectors, and the matrix  $A$  is of  $(np \times np)$  type.

Using similar reasoning a for the VAR(p), the previous model is stable if the absolute values of the matrix  $A$ 's eigenvalues are less than one.

Stock and Watson (2001) define 3 forms of the VAR model: the reduced form VAR, the recursive VAR and the structural VAR. In the reduced VAR model, each variable is given by a linear relation of the variable' s past values and the past values of the other variables and an error term that is uncorrelated with them. In the recursive VAR model, each equation's error terms are uncorrelated with other equation's error terms (*this can be done by including in the model of some current variables as endogenous variables*). It is important to stress that the results are dependent on the order we choose to insert the variables in the VAR model. In the structural VAR model, the economic theory is used in order to find the order to select the variables, considering the causality relations between the variables (*such that the number of structural VAR models depends on the goals followed by the researcher*).

These theoretical concepts are also used to test the Granger causality relations between the studied variables (*that show the usefulness of the past values of a variable to predict the values of a different variable*), to construct Impulse-Response Analysis (*that assess the impact generated on the current and future values of each variable by the increase of the current error of the VAR model*

with one unit) and to make the variance decomposition of the forecasted errors (*that shows the percentage from the forecasted error's variance that is given by the occurrence of a shock within a time interval*).

The variance decomposition will be used in order to construct a static spillover index, following the methodology proposed by Diebold and Yilmaz (2008). Considering the structural VAR model  $G(L)z_t = u_t$ , where  $G(L)$  is a polynomial function obtained by using the structural VAR model, then the representation of the vectorial moving average is  $z_t = \Gamma_0 u_t + \Gamma_1 u_{t-1} + \Gamma_2 u_{t-2} + \dots$ . Therefore, for the time interval  $s$ , the estimation error for  $z_t$  is given by the relation  $z_{t+s} - E_t z_{t+s} = \Gamma_0 u_{t+s} + \Gamma_1 u_{t+s-1} + \Gamma_2 u_{t+s-2} + \dots + \Gamma_{s-1} u_{t+1}$ , whose variance is given by the formula:

$$\text{Var}(z_{t+s} - E_t z_{t+s}) = \Gamma_0 \Sigma_u \Gamma_0' + \Gamma_1 \Sigma_u \Gamma_1' + \Gamma_2 \Sigma_u \Gamma_2' + \dots + \Gamma_{s-1} \Sigma_u \Gamma_{s-1}'.$$

Using this formula, we can estimate the percentage from the total variance of estimated error that is given by the variance of each analyzed structural shock.

In order to study the economic phenomena, the VAR model is widely used to find the relations between various variables that can explain the respective phenomena. Armeanu, Pascal and Cioacă (2014) used these concepts for analyzing the contagion effects considering a number of 6 European countries. Using the daily returns of the main indices of the Istanbul Stock Exchange and Bucharest Stock Exchange, for the October 1<sup>st</sup>, 2011- October 1<sup>st</sup>, 2012, Armeanu et al. (2012) found a relation of cointegration, as well as a positive relationship between the returns (*1% growth on Istanbul Stock Exchange determines 0.25% growth on the Bucharest Stock Exchange*). In Armeanu et al.(2013), the contagion phenomenon was analyzed for the Romanian and PIIGS (Portugal, Ireland, Italy, Greece and Spain) capital markets, considering the main economic and social events occurred during 2008-2014. It was proved that Italy and Spain are the most sensitive to the financial shocks, the former causing the largest spillover and the latter being the most affected by the spillover generated by the shocks in the other markets.

The obtained results from the VAR models must be cautiously analyzed and used with complementary methods, in order to derive adequate conclusions. For example, in the case of strong persistent variables, the use of Impulse-Response Analysis can lead to unuseful conclusions (*as the errors' variance can be abnormal*). The same happens when the structural changes in the analyzed variables are not considered when applying the VAR model.

Moreover, it is necessary to note that the selection order in a VAR model is important for the analysis of the relationship between the considered variables. Therefore, an economic reasoning might be used for the selection order considered, such that the proposed model to be useful (*beside the statistical testing of its validity*).

### 3. Methodology and data

We use the Diebold and Yilmaz (2008) approach, based on a spillover index, defined from the variance decomposition of the forecasted errors from VAR models (using a Cholesky factorization). So, the spillover index is defined as the sum of individual contributions to the estimated errors' variance, determined by some shocks on each of the analyzed assets.

For a stationary VAR model with two variables and one lag, we derive the spillover index formula as follows. The VAR model can be written as  $x_t = \Phi x_{t-1} + \varepsilon_t$ , where  $x_t = \begin{pmatrix} x_{1,t} \\ x_{2,t} \end{pmatrix}$  and  $\Phi$  is a (2x2) matrix. Considering a stationary model, then the representation in moving average of the VAR model is  $x_t = \Theta(L) \varepsilon_t$ , where  $\Theta(L)$  is the inverse of the matrix  $(I-\Phi L)$ .

If we denote with  $Q_t^{-1}$  the unique Choleski decomposition matrix of the covariance matrix of the error terms  $\varepsilon_t$ ,  $A(L) = \Theta(L)Q_t^{-1}$  and  $u_t = Q_t \varepsilon_t$ , then we obtain  $E(u_t u_t') = I$ . The previous equation can be rewritten as  $x_t = A(L)u_t$ .

Starting with this model, the optimal estimation (*derived from a Wiener-Kolmogorov linear optimization process*) for the next period is given by the relation  $x_{t+1,t} = \Phi x_t$ , in which the error vector is given by:

$$e_{t+1,t} = x_{t+1} - x_{t+1,t} = A_0 u_{t+1} = \begin{bmatrix} a_{0,11} & a_{0,12} \\ a_{0,21} & a_{0,22} \end{bmatrix} \begin{bmatrix} u_{1,t+1} \\ u_{2,t+1} \end{bmatrix}.$$

Therefore, the covariance matrix is given by  $E(e_{t+1,t} e_{t+1,t}') = A_0 A_0'$ , and the variance of the forecasted errors for the next period is equal to  $a_{0,11}^2 + a_{0,12}^2$  for  $x_{1t}$  variable and, respectively, equal to  $a_{0,21}^2 + a_{0,22}^2$  for  $x_{2t}$  variable.

We found that, for each variable, the variance of the forecasted error has been divided in components that are specific to the shocks occurred on the two variables. It can be defined *own part of variance* for asset  $x_i$  as the percentage from the variance of the forecasted error for the next period determined by the shocks on the  $x_i$  variable (*in the previous case,  $a_{0,11}^2$  for  $x_{1t}$  and  $a_{0,22}^2$  for  $x_{2t}$* ). Also, it can be defined *cross part of variance* for  $x_i$  asset as being the percentage from the variance of the forecasted error determined by the shocks on  $x_j$  variable (with  $i \neq j$ )

Summing up, for a VAR model with two variables and one lag, the contagion is estimated by  $a_{0,12}^2$  (*this is the contribution the shocks on the  $x_{1t}$  variable have on  $x_{2t}$  variable*) and  $a_{0,21}^2$  (*the contribution the shocks on the  $x_{2t}$  variable have on  $x_{1t}$  variable*). It can be defined the *total spillover* as being given by the relation  $a_{0,11}^2 + a_{0,12}^2 + a_{0,21}^2 + a_{0,22}^2$  (*that sum up the total effect of contagion between the two assets*). In order to ease the interpretation of this number, it is usually transformed to an index, by dividing it by the total variance of the forecasted error, obtaining the *spillover index*.

Because the total variance of the forecasted error is equal to  $\alpha_{0,11}^2 + \alpha_{0,12}^2 + \alpha_{0,21}^2 + \alpha_{0,22}^2 = \text{trace}(A_0 A_0')$ , then the definition of the *spillover index* is given by:

$$S = \frac{\alpha_{0,11}^2 + \alpha_{0,12}^2}{\text{trace}(A_0 A_0')} \cdot 100.$$

Generalizing this formula, for a VAR model with N-variables of order  $p$ , it can be obtained the *spillover index* formula (for the next period):

$$S = \frac{\sum_{i,j=1, i \neq j}^N \alpha_{0,ij}^2}{\text{trace}(A_0 A_0')} \cdot 100$$

For a VAR model with N-variables of order  $p$  and H-future periods, the spillover index formula is given by:

$$S = \frac{\sum_{h=0}^{H-1} \sum_{i,j=1, i \neq j}^N \alpha_{h,ij}^2}{\sum_{h=0}^{H-1} \text{trace}(A_h A_h')} \cdot 100.$$

The methodology proposed by Diebold and Yilmaz will be used for data for the January 1st, 2007-September 15th, 2016 time frame, representing the main indices of Romania and other 10 countries, with developed capital markets (*France, Germany, United Kingdom, Austria and US*), emerging capital markets (*Czech Republic, Greece, Poland and Hungary*) and frontier markets (*Romania and Bulgaria*), using the MSCI classification (*available mid-September 2016*).

#### 4. The results

We collected data for the January 1st, 2007-September, 15th, 2016 time interval representing the closing values of the main indices from 11 capital markets: DJIA (US), FTSE 225 (United Kingdom), CAC40 (France), DAX30 (Germany), ATX (Austria), PX (Czech Republic), ATHEX (Greece), WIG20 (Poland), BUX (Hungary), SOFIX (Bulgaria) and BET (România), available on [www.stooq.com](http://www.stooq.com) and [www.yahoo.com](http://www.yahoo.com) (*finance section*), as well as the official websites of the market operators. We used these data to calculate the daily returns of the analyzed markets, to construct a VAR model and, therefore, to make the variance decomposition, in order to define a spillover index.

Considering the daily returns for each index in the analyzed time frame, we use the Granger causality tests (*for each pair of the daily returns series*) in order to capture the causality relations. In Table 1 are presented a part of these results, being emphasized the relation of the BET index with the other 10 indices.

**Table 1 Pairwise Granger Causality Tests for selected indexes (01.01.2007-15.09.2016)**

Null Hypothesis:	Obs	F-Statistic	Prob.
DJIA does not Granger Cause BET	2532	210.398	3.E-85
BET does not Granger Cause DJIA		1.49813	0.2237
FTSE does not Granger Cause BET	2532	39.8035	1.E-17
BET does not Granger Cause FTSE		2.92872	0.0536
DAX does not Granger Cause BET	2532	53.3704	2.E-23
BET does not Granger Cause DAX		2.09874	0.1228
CAC40 does not Granger Cause BET	2532	40.8252	4.E-18
BET does not Granger Cause CAC40		0.79771	0.4505
ATX does not Granger Cause BET	2532	50.3549	4.E-22
BET does not Granger Cause ATX		0.90415	0.4050
WIG20 does not Granger Cause BET	2532	32.7124	9.E-15
BET does not Granger Cause WIG20		0.88840	0.4114
ATHEX does not Granger Cause BET	2532	13.5200	1.E-06
BET does not Granger Cause ATHEX		0.20786	0.8123
BUX does not Granger Cause BET	2532	20.6590	1.E-09
BET does not Granger Cause BUX		0.34060	0.7114
PX does not Granger Cause BET	2532	23.1861	1.E-10
BET does not Granger Cause PX		3.23226	0.0396
SOFIX does not Granger Cause BET	2532	3.12541	0.0441
BET does not Granger Cause SOFIX		4.85706	0.0078

Source: [www.bvb.ro](http://www.bvb.ro), own calculation

From this table, the probability values indicate that, except for Bulgaria, the Romanian capital market is not in a causality relation with any other capital market (*BET does not Granger cause any of the other 9 capital markets*). Moreover, from the Table 1 we can find that is rejected the null hypothesis that the 10 analyzed capital markets does not Granger cause the BET index (*with the only exception being Bulgaria, but the probability level being less than 5%*). We can conclude that the Romanian capital market is influenced by the other 10 capital markets (*including the ones that are European Union's members*).

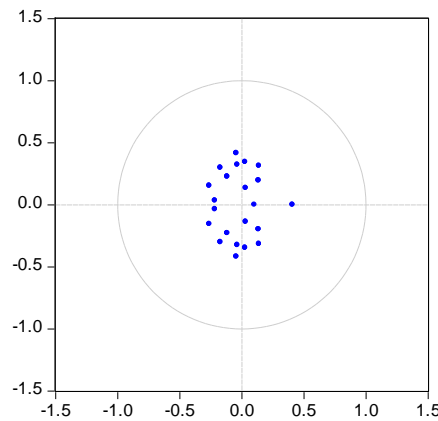
Using the conclusions derived from the Granger causality tests, we can say that the US market has a significant influence over the other markets, as it is rejected every null hypothesis of DJIA not being in Granger causality relation.

Considering the importance of each analyzed capital market within the global financial system, we construct a VAR model for the 11 time series, the selection order being DJIA, FTSE,

DAX, CAC40, ATX, WIG20, ATHEX, BET, BUX, PX and SOFIX for 2 lags, using the collected daily data.

We found that the VAR model is stable, as can be seen from the fact that all eigenvalues are less than one in absolute value (*graphically represented in Figure 1*).

**Figure 1 Inverse Roots of AR Characteristic Polynomial**



Source: own calculation

Applying the VAR Granger Causality test on the daily returns time series, we found that the returns of the US, French and Austrian capital markets have influence on the daily returns' volatility of the BET index from the Bucharest Stock Exchange (the results being presented in Table 2).

**Table 2 VAR Granger Causality/Block Exogeneity Wald Test (01.012007-26.08.2016)**

Dependent variable: BET

Excluded	Chi-sq	df	Prob.
DJIA	291.0020	2	0.0000
FTSE	1.686876	2	0.4302
DAX	0.512708	2	0.7739
CAC40	13.65241	2	0.0011
ATX	12.47026	2	0.0020
WIG20	3.654004	2	0.1609
ATHEX	2.820635	2	0.2441
BUX	0.303831	2	0.8591
PX	1.016233	2	0.6016
SOFIX	5.744818	2	0.0566
All	468.0143	20	0.0000

Source: own calculation

Furthermore, starting from the methodology proposed by Diebold and Yilmaz, we make the variance decomposition of the forecasted errors of the VAR model for the daily data of the selected 11 time series. From the variance decomposition, we calculate the spillover index for daily returns, which reveals the impact the external and internal factors have on the contagion effect (*the results being presented in Table 3*).

Analyzing the data from the Table 3, we found that, for Romania, the shocks present on the external markets explain 34.32% of the volatility of the Romanian capital market, the largest contributors being the US and UK markets and, also, but less important, being the capital markets from Austria, Poland and Germany. This situation is due to the fact that largest investors on the Romanian capital market are foreign investors (*especially investors from the US, the UK, Austria and Poland*). The contribution of the Austrian capital market can be explained by the listing on the Bucharest Stock Exchange of two large issuers that are also traded on the Wiener Boerse (*from the energy and banking sectors*). The Romanian capital market is also influenced by the evolutions on the Polish capital market, the largest capital market in the Eastern and Central Europe, where are present large institutional investors, that allocate some of their funds for investments in the issuers listed on the Bucharest Stock Exchange.

On the other hand, this result emphasizes the fact that Romanian retail investors are sentiment driven investors, as the evolution on the developed markets impact the decisions made by the retail investors (*and, considering the poor liquidity, this drives to large swings in prices and therefore in amplified volatility*).

We also found that the Romanian capital market's influence on the other analyzed markets is a marginal one, only of 7.46%, the largest impact being identified on the capital markets of Bulgaria, the Czech Republic and Hungary (*smaller than the Bucharest Stock Exchange, in terms of market capitalization*).

Also, the data presented in Table 3 show that the most exposed capital markets to external shocks are the French, the German, the Austrian, the Czech, the Polish and the Hungarian markets, that receive from the other countries 87.82%, 70.41%, 68.46%, 63.68%, 46.39% and, respectively, 46.17% of the shocks, the largest part from the shocks occurred in the developed markets, such the US and the UK markets.



**Table 3 The spillover index for daily returns (01.01.2007-15.09.2016)**

	US	United Kingdom	Germany	France	Austria	Poland	Greece	Romania	Hungary	Czech Republic	Bulgaria	Contribution from the other markets
US	97.80515	0.209605	0.147917	0.615521	0.029549	0.004833	0.255236	<b>2.08E-05</b>	0.150595	0.776144	0.005429	2.19485
United Kingdom	40.29816	57.0946	1.018672	1.008005	0.011056	0.003222	0.261058	<b>0.178649</b>	0.00094	0.118038	0.007601	42.9054
Germany	45.76294	22.62085	29.5855	1.390601	0.0079	0.001513	0.243083	<b>8.21E-02</b>	0.018341	0.28423	0.00292	70.4145
France	45.33409	27.73445	14.27794	12.17104	0.002303	0.023255	0.27654	<b>0.042922</b>	0.016633	0.117552	0.003286	87.82896
Austria	36.2761	24.66542	5.300769	1.688682	31.53401	0.018263	0.287312	<b>0.000713</b>	0.173815	0.052898	0.002017	68.46599
Poland	24.29902	16.19329	2.841232	1.374104	1.436384	53.60986	0.043331	<b>0.036547</b>	0.011815	0.100477	0.053935	46.39014
Greece	12.54636	10.73973	1.194138	0.820586	1.554485	1.147416	71.31504	<b>0.183705</b>	0.067768	0.288027	0.142743	28.68496
Romania	<b>21.15065</b>	<b>6.189753</b>	<b>1.041355</b>	<b>0.307689</b>	<b>3.788497</b>	<b>1.22466</b>	<b>0.587659</b>	<b>65.68</b>	<b>0.010861</b>	<b>0.000778</b>	<b>0.018102</b>	<b>34.32</b>
Hungary	22.73456	10.38321	2.62204	1.906605	2.269819	4.88174	0.190332	<b>1.010708</b>	53.82963	0.019435	0.151918	46.17037
Czech Republic	28.48452	17.28085	1.075358	1.102772	7.616908	4.442948	0.716831	<b>1.849753</b>	1.008851	36.31081	0.110393	63.68919
Bulgaria	10.79103	1.105027	0.257346	0.266022	0.988762	0.283062	0.086454	<b>4.079729</b>	0.015738	1.044203	81.08263	18.91737
Contribution to the other markets	287.6774	137.1222	29.77677	10.48059	17.70566	12.03091	2.947836	<b>7.464872</b>	1.475357	2.801782	0.498344	509.9817
Total Contribution	385.4826	194.2168	59.36227	22.65163	49.23967	65.64077	74.26288	<b>73.14487</b>	55.30499	39.11259	81.58097	1100
												<b>46.36198</b>

Source: own calculation

When we construct a single index for the collected data, we find that 46.36% of the variance of the forecasted errors is due to the contagion effect, as measured by the spillover index. This value reflects the interaction of every analyzed market with the global financial system and the occurrence, in this time interval, of the global financial crisis, that lead to an increase in the volatility of the prices (*data volatility and the way we construct the VAR model partially explain the statistically identified relations from Table 3*).

## 5. Conclusions

Using the methodology proposed by Diebold and Yilmaz (2008) and data from the January 1st, 2007-September, 15th, 2016 time interval, for 11 capital markets (*developed countries - USA, United Kingdom, France and Germany, and from the Central and Eastern Europe -Austria, Poland, Greece, Romania, Hungary, Czech Republic and Bulgaria*) we developed a spillover index, in order to analyze the presence of the contagion phenomenon. In this regard, we used a VAR model for daily returns that explains the Romanian capital market's returns in relation with the other markets. We obtained that the volatility of the daily returns of the Romanian capital market are determined by the volatility present on the most mature capital markets (the US and UK capital markets), as well as on the most important capital markets from the Central and Eastern Europe, namely Austrian and Polish ones.

Because the obtained results show connections between the Central and Eastern Europe capital markets and the developed markets, they are of interest for a large spectrum of users (*supervisory authorities, institutional investors, researchers, etc.*), interested in finding the contagion effects on the stability of capital markets. This result shows the need to start the reform on the Romanian capital market, in order to strengthen its place as a financing venue for the Romanian companies, especially considering the perspective of the Capital Markets Union process intended to be initiated starting early 2019.

## References:

1. Armeanu, D.S., Dinică M.C., Burcă, A.M., Negru, A. and Cioacă, S.I., 2012. Correlation of DJIA, DAX and BET indexes under normal circumstances and during a financial crisis situation. *Internal Auditing& Risk Management*, 7(3), pp.23-36.
2. Armeanu, D.S., Doia, C.A., Hăncilă, M. and Cioacă, S., 2013. The analysis of the correlation intensity between emerging market during economic crisis. *Romanian Statistical Review Supplement*, 61(2), pp.307-318.
3. Armeanu, D.S., Pascal, C.E. and Cioacă, S.I., 2014. Managing contagion risk during economic, financial and political shocks. *Proceedings of the 8<sup>th</sup> International Management Conference “Management challenges for sustainable development”*, November 6<sup>th</sup>-7<sup>th</sup>, 2014, Bucharest, pp.1148-1157.
4. Diebold F. and Yilmaz, K., 2008. Measuring financial asset return and Volatility Spillovers, with application to global equity markets. Available: [www.nber.org/papers/w13811](http://www.nber.org/papers/w13811) [Accessed September 26<sup>th</sup>, 2016]
5. Forbes K. and Rigobon R., 2002. No Contagion, Only Interdependence: Measuring Stock Market Comovements. *The Journal of Finance*, LVII(5), pp.2223-2261.
6. Helleiner, E., 2011. Understanding the 2007-2008 Global Financial Crisis: Lessons for Scholars of International Political Economy. *The Annual Review of Political Science*. [Online] 14, pp.67-87. Available: doi: 10.1146/annurev-polisci-050409-112539 [Accessed September 26<sup>th</sup>, 2016]
7. Pfaff, B., 2008. VAR, SVAR and SVEC Models: Implementation with R Package vars. *Journal of Statistical Software*, 27(4), pp.1-32.
8. Reinhart, C. and Rogoff, K. 2009. *This time is different. Eight centuries of financial folly*. New Jersey: Princeton University Press, Princeton
9. Sims, C., 1980. Macroeconomics and reality. *Econometrica*, 48(1), pp.1-48.
10. Stock, J. and Watson, M., 2001. Vector Autoregressions, *Journal of Economic Perspectives*, 15(4), pp.101-115.

# Настоящий период движения на Запад центра мировой торговли и трагическая судьба России – быть в третий раз арбитром в битке между старым центром и новым претендентом (in Russian)

**Проф. д.с.н. Георги НАЙДЕНОВ**

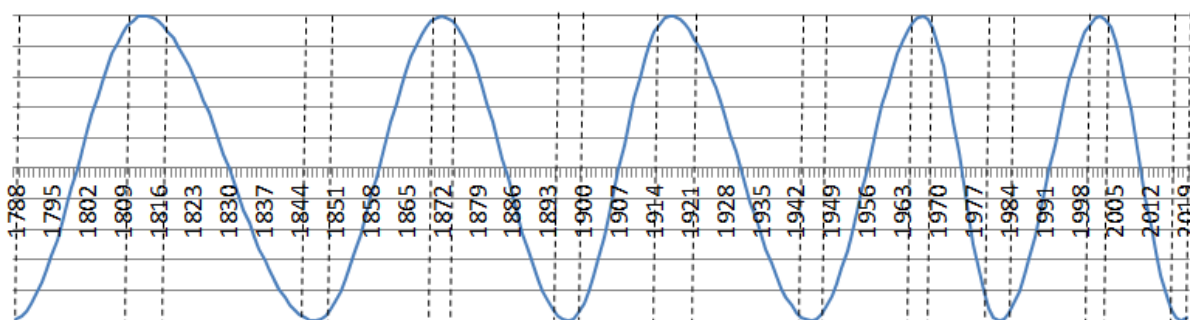
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Движение на Запад центра мировой торговли исследовали многие ученые. В первую очередь необходимо отметить исследования Ф. Броделя.<sup>1</sup> Временной мерной единицей, имеющей место в исследовании движения центра мировой торговли, является **столетие**, которое состоит из двух длинных волн Кондратьева. В настоящее время мировая экономика находится в середине третьего цикла эволюции мирового рынка с начала первой индустриальной революции. (См. фиг. 1) Они образуют 2,5 столетних циклов в эволюции мирового рынка.

**Фигура 1. Пять циклов экономической конъюнктуры, согласно Владимиру Пантину<sup>2</sup>**



<sup>1</sup> Бродел, Ф., Световното време, изд. Прозорец, С., 2005 год.

<sup>2</sup> Пантин, В. И., В. В. Лапкин, Философия исторического прогнозирования: ритмы истории и перспективы мирового развития, изд. "Феникс+", Дубна, 2006, стр. 300

В середине каждого цикла эволюции мирового рынка происходит столкновение между старым центром мировой торговли и новым претендентом. То есть, на дне перехода с нисходящей фазы первой длинной волны Кондратьева к восходящей фазе второй длинной волны Кондратьева, имеет место **решительное** военное столкновение, которое определяет, будет ли старый центр таким еще на один цикл, или центром станет претендент. Однако, этому решительному столкновению предшествует „**предварительное**“ военное столкновение, которое проводится на вершине той же самой нисходящей волны.

При первом цикле в эволюции мирового рынка с начала первой индустриальной революции предварительным военным столкновением являются завоевательные войны Наполеона в Европе и агрессия этих многонациональных войск против России. Решительным столкновением являются буржуазные революции в Европе 1848 г. и их поражение с решительным участием царской России. То есть, в соперничестве между старым центром мировой торговли – морской Британской империей и новым претендентом – сухопутной Французской империей, русский арбитраж в пользу морской империи. Великобритания остается центром мировой торговли еще на один цикл в эволюции мирового рынка.

При втором цикле эволюции мирового рынка против старого центра – Великобритании, имеются два новых претендента – морская империя США и континентальная империя Германия. Предварительным военным столкновением при втором цикле является Первая мировая война. Решительным столкновением оказывается Вторая мировая война. В обеих войнах Россия сыграла решающую роль в разгроме континентальной империи и превращении морской империи США в новый центр мировой торговли.

Судьба русского народа трагическая. В своих столкновениях за контроль над мировыми ресурсами и рынками, соперничающие между собой фракции мирового капитала неизбежно прибегают к арбитражу России. Основные причины следующие: а) У континентального претендента на новый центр мировой торговли нет физической возможности совершить десант на территории старого центра, так как он, будучи морской империей, обладающей сильным военно-морским флотом, успешно защищает свои берега; б) Морской транспорт дешевле и быстрее сухопутного, что дает преимущество для развития мировой экономики морской империи; в) Колоссальные природные богатства России представляют собой привлекательную наживу для

континентального претендента, так что, будучи лишенным возможности сломить старый центр, континентальный претендент неизбежно направляется в Россию.

При двух предыдущих циклах в эволюции мирового рынка арбитраж в ходе соперничества между старым центром и новым претендентом обошелся русскому народу колоссальной ценой – десятками миллионов жертв, многолетними страданиями, муками, нищетой.

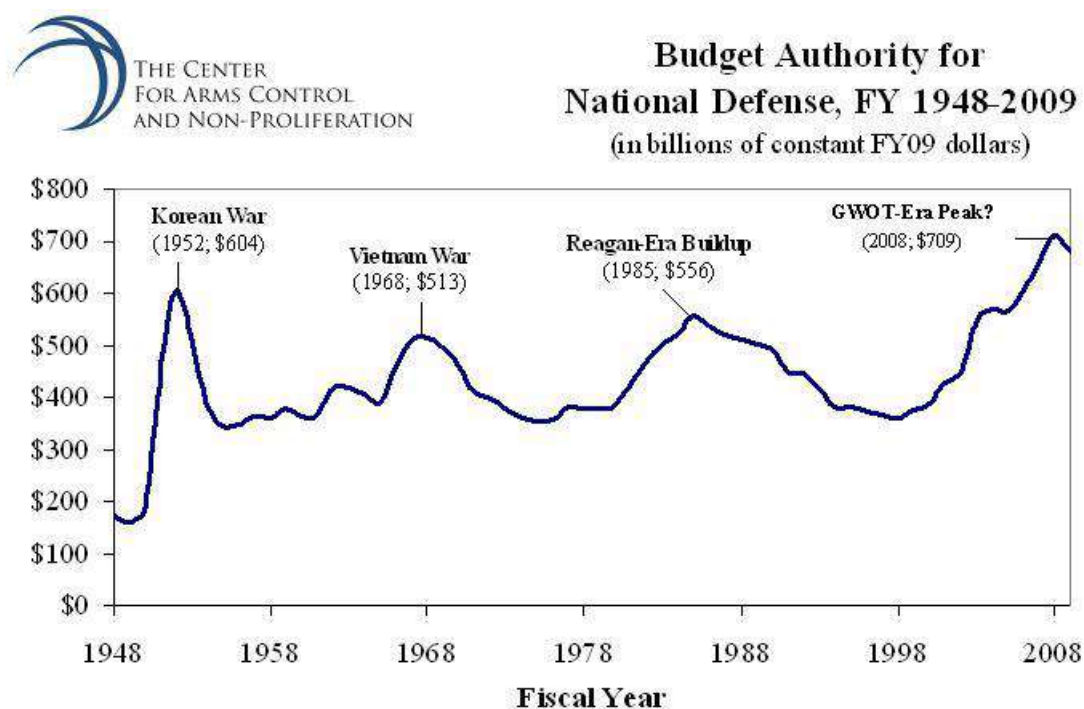
В настоящее время – в настоящем третьем цикле эволюции мирового рынка все повторяется. Снова Россия и русский народ являются арбитром в столкновении между основными фракциями мирового капитала. С одной стороны, морская империя США, которая пытается остаться центром мировой торговли еще на один цикл в эволюции мирового рынка. С другой стороны, новый претендент – Китай. Каким будет результат арбитража России? Присудит ли Россия в третий очередной раз в пользу морской империи, или впервые ее арбитраж будет в пользу континентального претендента? На первый взгляд ответ ясен: между Россией и Китаем существует тесный союз против морской империи США. Они действуют однонаправленно на международной арене, проводят совместные военные учения, создали экономический союз БРИКС. Но, увы – те же самые были отношения между Россией и Германией непосредственно перед Первой и Второй мировыми войнами. Так что эти аргументы не достаточны. Тем более, что евразийский проект нового шелкового пути развивается весьма медленно. Экономическое сотрудничество между Россией и Китаем также развивается весьма медленно. Темп теряется, что может иметь фатальные последствия как для России, так и для Китая. Что мы имеем ввиду?

Наши тезисы следующие: а) Мировая ядерная война вспыхнет в один из следующих двух периодов восходящей фазы американского военного бюджета; б) Россия снова станет арбитром в соперничестве между старым центром и новым претендентом; в) В основе соперничества между морской империей США и континентальной Китайской империей лежит столкновение интересов двух мощных групп капитала. В зависимости от того, когда начнется третья мировая ядерная война – в предстоящей восходящей фазе или в следующей восходящей фазе американского военного бюджета, арбитраж России будет в пользу Китая в первом случае или в пользу США во втором случае; г) Китай может категорически склонить весы в свою пользу, если успеет в течение ближайших 10 лет гарантировать уничтожение американских военных баз, расположенных вокруг его территории.

Выясним подробнее наши тезисы!

А. Почему мы считаем, что Третья мировая ядерная война вспыхнет в один из следующих двух периодов восходящей фазы американского военного бюджета? Потому что **крупные** войны американская англо-саксонская и американская еврейская элиты разжигают именно во время восходящих фаз американского военного бюджета. См. фигуру 2<sup>3</sup>.

**Фигура 2. Военный бюджет США в сопоставляемых ценах**



В нисходящей фазе военного бюджета американская англо-саксонская и американская еврейская элиты также разжигают войны. Но эти войны не такие **масштабные**, как войны, которые разжигаются во время восходящей фазы.

Б. Почему считаем, что Россия снова будет арбитром в соперничестве между старым центром и новым претендентом?

Б.1. Потому что Россия единственное государство, чей ядерный потенциал может сломать позвоночник морской империи – США. Россия и человечество в целом **кровно** заинтересованы в сокрушении военной мощи США.

После „нежных“ революций в конце 80-ых годов 20-ого века, американская англо-саксонская и американская еврейская элиты трансформировали „холодную“

<sup>3</sup> Данные о военном бюджете США эксцерпированы из статьи Трависа Шарпа „Текущие расходы на оборону США в сравнении с расходами после 1948 года“. Они в сопоставляемых ценах и относятся к периоду 1948-2009 гг.

войну против России в „горячую“ войну. Уже четверть века американская англо-саксонская и американская еврейская элиты избивают россиян на русской, украинской, а теперь начали и на сирийской территории. Русская славянская и русская еврейская элиты до сих пор реципрочно не отвечают – т.е., они не избивают американцев ни на американской, ни на какой бы то ни было другой территории. Но **Возмездие** неизбежно! Русский народ и его элита бесконечно терпеливы. Но американская англо-саксонская и американская еврейская элиты давно перешли границы возможного терпения.

Б.2. Войну, которую американская англо-саксонская и американская еврейская элиты ведут против России и „санитарный“ кордон<sup>4</sup>, который создают вокруг нее, **фатальны** для развития мировой экономики. В настоящее время мировая экономика находится в период, в который технологии происшедшего в 80-ых годах технологического переворота должны охватить все поле мирового рынка.<sup>5</sup> То есть, очередное расширение мирового рынка должно „откупорить“ новые формы разделения труда, новые формы финансовых отношений и резервную валюту, новый многополюсный политический порядок. Это общественно необходимые потребности для естественного развития мировой экономики. Военная мощь и агрессивные войны, которые американская англо-саксонская и американская еврейская элиты ведут против России и других богатых природными ресурсами стран, практически **блокируют** развитие мировой экономики и переход в следующую фазу развития капиталистического способа производства. Эта агрессивная политика американской англо-саксонской и американской еврейской элит **целенаправлена**. Милтон Фридман с брутальной наглостью объясняет, что цель США – помешать тому, чтобы немецкие технологии связались с русскими природными ресурсами. Также, попытка военного переворота в Турции является ярким доказательством того, что американская англо-саксонская и американская еврейская элиты готовы применять военные средства, которые мешают созданию связи двух самых развитых в экономическом отношении районов Евразии – с одной стороны, Китая и Юго-Восточной Азии, с другой стороны, Европы по пути шелка. **Военная мощь США – основной барьер, препятствующий нормальному, естественному развитию мировой экономики.** Военная мощь США толкает человечество к хаосу и бесконечным войнам. Так что, неизбежно то, что

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<sup>4</sup> Дуга враждебных по отношению к России правительств государств, расположенных от Балтийского до Черного моря.

<sup>5</sup> См. более подробно Пантина, В. И., В. В. Лапкина, Философия исторического прогнозирования: ритмы истории и перспективы мирового развития, изд. „Феникс+“, Дубна, 2006, стр. 280-308.



Россия, будучи единственной, обладающей нужным ядерным потенциалом, снова станет арбитром и разрешит проблемы развития мировой экономики и общечеловеческого развития через нанесение превентивного удара высокоточными маломощными ядерными зарядами на территорията США. Переходим к следующему тезису!

В. Кто такие капиталовые группы, столкновение и интересы которых находятся в основе соперничества между морской империей США и континентальной Китайской империей? И почему мы считаем, что в зависимости от того, начнется ли мировая ядерная война в предстоящей восходящей фазе или в следующей фазе американского военного бюджета, арбитраж России будет в пользу Китая, в первом случае, или в пользу США, во втором случае?

Две основные капиталовые группы лежат в основе соперничества между США и Китаем. Одна группа включает в себя те, которые с конца 70-ых годов, в связи с реформами Дэна Сяопина, начинают интенсивно инвестировать в Китай. Обозначим их символом Po 1! Другая группа включает в себя те, чьи капиталовложения в основном в американском военно-промышленном комплексе и в американском нефтяном и наркобизнесе. Обозначим их символом Po 2.

Po 1 в основном англо-саксонского и еврейского происхождения. У них преобладают еврейские капиталы Ротшильдов. Именно поэтому обозначаю их символом Po 1. Помимо капиталовложений в Китае, Po 1 обладает крупными капиталовложениями с большой протяженностью во времени в Южной и Юго-Восточной Азии. Их капиталовложения лежат в основе быстрого развития производительных сил в Китае и Юго-Восточной Азии. Абстрагируюсь от того, где местонахождение их „ядра“. Они могут находиться, например в Сингапуре, куда клан Ротшильдов перенес свой центральный офис. Но, возможно, их местонахождение не только в Китае и Юго-Восточной Азии, но и в Великобритании, США, Швейцарии и пр. Эта капиталовая группа находится в **симбиозе**, а также в **соперничестве** с китайским ханским капиталом и китайской политической элитой. Мощный центр власти Po 1 вместе с китайской ханской элитой стремятся к тому, чтобы Китай стал новым центром мировой торговли; стремятся к трансформации мировой финансовой системы, к ликвидации доминирования доллара как мировой резервной валюты, а также к многополюсному миру. Для сохранения **ценности** своих капиталовложений и для создания возможности развития мировой экономики китайская ханская элита и Po 1 заинтересованы в том, чтобы Россия нанесла первый опережающий удар против

США. Тогда капиталовложения их основного соперника – американской англо-саксонской и американской еврейской элит обесценятся и грандиозная битва за контроль над мировыми ресурсами и мировым золотом закончится в пользу Ро 1.

Поведение Ро 1 и китайской ханской элиты по отношению к России весьма сложное и разнонаправленное. С одной стороны, китайская ханская элита и Ро 1 действуют однонаправленно по отношению к России на международной **экономической** сцене – создание экономических союзов, соперников экономических союзов, созданных Ро 2, изменение мировой финансовой системы, вытеснение доллара как мировой валюты и пр. С другой стороны, их поведение на **политической** сцене разнонаправленное. Ханская элита действует однонаправленно по отношению к русской славянской и русской еврейской элитам. Но на политической сцене Ро 1 действует **против** России. Это легко можно установить, если проследить поведение прессы Великобритании, находящейся под контролем Ротшильдов. А также и европейской прессы, которая в большей или меньшей степени так же под влиянием этого клана и еврейской европейской диаспоры. Пресса усиленно **чернит** Россию и Путина. Причина двойственного поведения Ро 1 по отношению к России кроется в том, что они хотят принудить русскую славянскую и русскую еврейскую элиты как можно скорее нанести превентивный удар против США. Или если не успеют, по крайней мере будут стремиться вызвать ядерный удар со стороны США против России. Так как, если не успеют вызвать ядерную войну в ближайшем десятилетии, при следующей восходящей волне американского военного бюджета, по всей вероятности, Россия будет воевать с Китаем. Еврейская составляющая в Ро 1 имеет трехтысячную историю. У них чрезвычайно развитое чутье на „пульсации“ социального времени. Не знаю, до какой степени они делали вычисления, но им совершенно ясно, что если не успеть **сейчас** уничтожить военную мощь США, в 40-ых годах XXI века, скорее всего война будет вестись между Россией и Китаем. Вот почему между ними и китайской ханской элитой есть своеобразное „разделение труда“. Китайская ханская элита приняла на себя обязательство создать с Россией достаточно мощный в военном отношении и в политическом отношении союз. А у Ро 1 обязательство через сатанизирование России и углубление войны, которую ведет против нее Ро 2, достичь ядерной войны между Россией и США. Причем для них желательно, чтобы Россия нанесла опережающий ядерный удар.

Ро 2 также в основном англо-саксонского и еврейского происхождения. Но при них преобладают англо-саксонские капиталы. Означаю их символом Ро 2, потому что

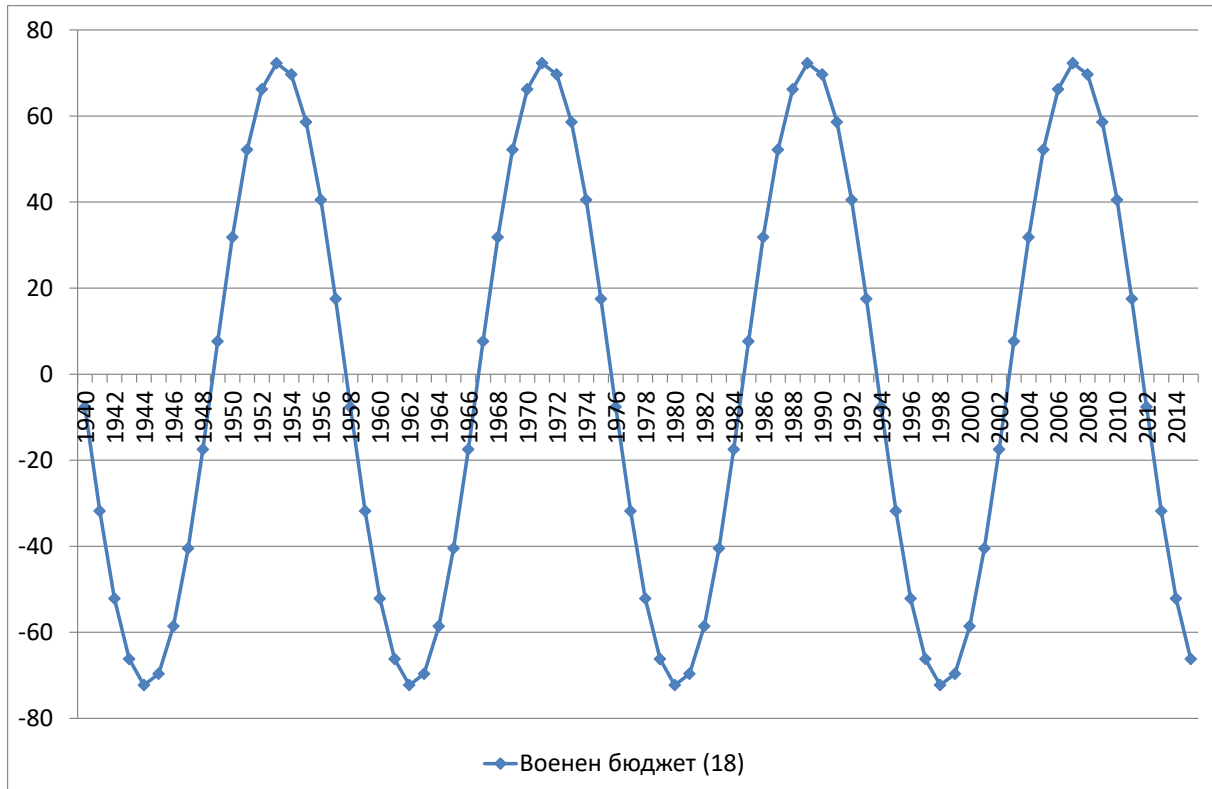
Рокфеллеры – своеобразное "ядро" этих капиталов. Поведение этих капиталов определяется в большей степени англо-саксонским капиталом, чьи инвестиции в американском военно-промышленном комплексе и американском нефтяном и наркобизнесе. Но Ро 2 принадлежат и серьезные еврейские капиталы в американском финансовом секторе, американская торговля, масс-медия, коммуникации, фильмопроизводство и распространение и пр. Эти капиталы также оказывают влияние на американскую внутреннюю и внешнюю политику. С одной стороны, эти капиталы и соответственно американская еврейская элита **лояльны** по отношению к американской англо-саксонской элите.<sup>6</sup> Но их отношения к англо-саксонским капиталам не однозначны. Американские еврейские капиталы действуют в противоположном векторе при формировании динамики американского военного бюджета. Когда „**общественная нагрузка**” на военные расходы станет **невыносимой** для экономики населения, под влиянием американской еврейской элиты начинается уменьшение (период спада) военного бюджета. В динамике американского военного бюджета имеются волны различной продолжительностью.<sup>7</sup> Самой значимой для внутренней и внешней политики является цикличность длиной волны 18 лет. (См. фигуру 3).

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<sup>6</sup> Факт, что американская еврейская элита посредством своего влияния на европейскую еврейскую диаспору поставила в вассальной зависимости европейские элиты, показателен для его лояльности.

<sup>7</sup> См.: Найденов, Г., К. Харалампиев, Локални и глобални рискови фактори за развитието на България и света през второто десетилетие на XXI век, Годишник на УНСС, 2015, стр. 77-81.

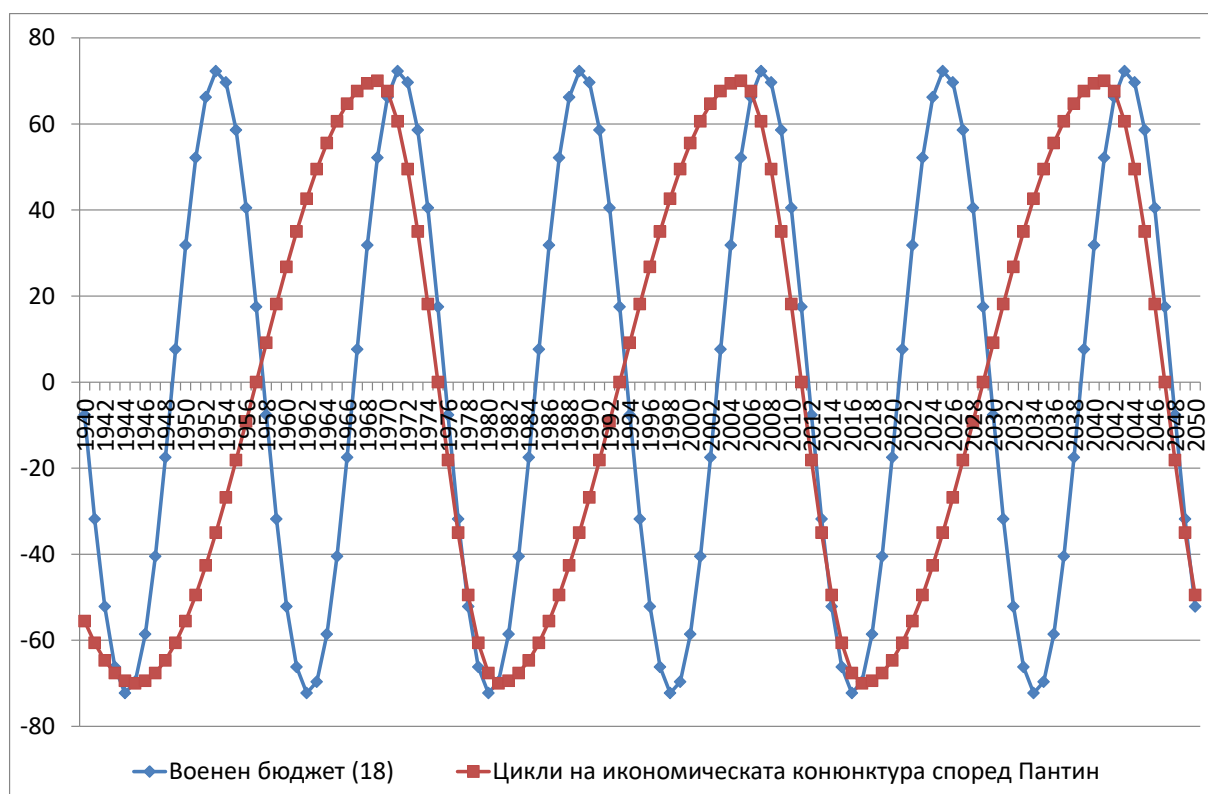
**Фигура 3. Цикличность американского военного бюджета длиной волны 18 лет**



Видно, что в настоящее время американский военный бюджет на дне своей нисходящей фазы. В ближайшие 10 лет он будет находится в своей восходящей фазе. Именно этот период самый рисковый для разжигания мировой войны. Так как в такой период доминирование американской англо-саксонской элиты над американской еврейской элитой особенно сильное. В такой период американская внешняя политика становится **особенно агрессивной** и разжигаются **крупные войны**.

Экстраполируем цикличность американского военного бюджета и длинных волн Кондратьева, согласно системе Пантина до середины XXI века.<sup>8</sup> Накладываем обе динамики. (См. Фигуру 4.)

<sup>8</sup> Потому что в первой половине века „случаются“ предварительная и решительная мировые войны. По крайней мере, это так в XIX и XX вв.



Видно, что самый рисковый период разжигания мировой ядерной войны – с **2016 по 2025 г.** В этот период происходит **накладывание** двух рисковых факторов: а) дно перехода с нисходящей первой волны к восходящей второй волне; б) восходящая фаза американского военного бюджета. Вторая зона разжигания мировой ядерной войны – это период от **середины 30-ых до середины 40-ых** годов. Тогда совпадают вершины двух волн – мировой конъюнктуры и американского военного бюджета. По мнению Пантина и Лапкина во всех самых низких и самых высоких точках длинных волн Кондратьева вероятность войн большая, чем вне них. Мы считаем, что даже если это так, самый важный период с точки зрения риска мировой войны – это дно перехода с нисходящей первой волны к восходящей второй волне. Мой тезис состоит в том, что бесспорно в период от середины 30-ых годов до середины 40-ых годов существует риск мировой войны. Но этот риск на один уровень ниже, чем риск в период 2016 – 2025 гг.

Наибольшую вероятность имеет то, что в 2017 г. под давлением Р<sub>0</sub> 2 новый американский президент предпримет курс разжигания мировой ядерной войны. На данный момент агрессивное поведение Р<sub>0</sub> 2 вполне **иррационально** и в противовес их интересам. Что имею ввиду?

Интересы Ро 2 сводятся к тому, чтобы мировая война была не в настоящей, а в следующей восходящей фазе американского военного бюджета, которая начнется во второй половине 30-ых годов. Если Ро 2 успешно противопоставит себя Ро 1 и не позволит разжигания ядерной войны между США и Россией в следующие 10 лет, китайската экономика неизбежно впадет в **стагнацию**. В 30-ых годах китайская индустрия уже "засосет" многомиллионную массу рабочей силы, упражняющую ручной аграрный труд. С одной стороны, это неизбежно приведет к созданию предпосылок возникновения плюралистической политической системы. Это по всей вероятности приведет к гражданской войне или хотя бы к „смутным временам“.<sup>9</sup> С другой стороны, создадутся предпосылки к стремлению расширения „жизненного пространства“. Это стремление с наибольшей вероятностью направится к русским территориям или к протектированным Россией государства. И это приведет опять к мировой войне – по всей вероятности, ядерной. Но территорията США не будет подвергаться ядерной атаке.

В полном противоречии со своими интересами, в настоящее время Ро 2 толкает мир к мировой ядерной войне. Не учитывая своих интересов, на практике Ро 2 „работает“ для интересов своего противника – Ро 1. Вместо того, чтобы сдерживать свою агрессивную политику и „удержатся“ около двадцати лет, когда их проблемы успешно разрешатся за счет Ро 1 и китайской ханской элиты, на данный момент они делают все возможное, чтобы разжечь мировую ядерную войну. В этой войне они потеряют битву с Ро 1. При этом независимо от того, Россия или США нанесет первый ядерный удар.

Поведение Ро 2, **иррациональное** с точки зрения их интересов, показывает высокую степень **деградации** американской англо-саксонской и американской еврейской элит.

Г. Вот почему считаем, что Китай может категорически склонить весы в свою пользу, если успеет в рамках ближайших 10 лет гарантировать уничтожение американских военных баз, расположенных вокруг его территории.

Это так, потому что кроме превентивного ядерного удара по военным объектам США на его территории, Россия должна уничтожить посредством ядерных ударов американские военные базы во всем мире. У нас опасения, что на данный момент это

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<sup>9</sup> Более подробно см.: Найденов, Г., К. Харалампиев, Прогнозиране на кризи – икономическата динамика на Китай и „светлите перспективи“, Четвърта международна научна конференция „Общество на знанието“. Несебър, 2011

ей не под силу. Если китайская ханская элита с помощью Ро 1 подготовит в ближайшем десятилетии уничтожение ядерным оружием американских военных баз, расположенных вокруг его территории, у русской славянской и русской еврейской элит будет сильная мотивация для нанесения превентивного ядерного удара против США.

### **Библиография:**

1. Бродел, Ф., Световного време, изд. Прозорец, С., 2005
2. Найденов, Г., К. Харалампиев, Локални и глобални рискови фактори за развитието на България и света през второто десетилетие на XXI век, Годишник на УНСС, 2015
3. Пантин, В. И., В. В. Лапкин, Философия исторического прогнозирования: ритмы истории и перспективы мирового развития, изд. "Феникс+", Дубна, 2006
4. Sharp, T. (2009) Current U.S. Defense Spending vs. Spending Since 1948.  
[http://armscontrolcenter.org/policy/securityspending/articles/022609\\_fy10\\_topline\\_growth\\_since48/](http://armscontrolcenter.org/policy/securityspending/articles/022609_fy10_topline_growth_since48/)

## **Human resources management at Bulgarian sea ports – problems and perspectives for development**

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**Abstract:** *The organization and management of human resources in maritime transport is distinguished by its characteristics as a result of the necessity of speeding up the cargos delivery time, as well as the effective and productive carrying out of the main and comprehensive services at ports. In this regard the main objective of the current paper is to study the human resources management at Bulgarian sea ports Varna and Burgas in order its specifics to be revealed, the main problems to be outlined and measures to be proposed. The proposed model for analysis could be successfully applied in analyzing the human resources management system in the other transport modes or in other countries with transition economies.*

**Key words:** *human resources; sea ports; effective management.*

**JEL codes:** *J 21; R 49*



## Introduction

Human resources management is a key element of the management process of maritime transport, as personnel, engaged with transshipment activities and those, working on board are responsible for safe and secure navigation and regular and strict control of the transshipment operations.

Till now, there are many publications in the field of human resources management in transport conducted by Bulgarian and foreign authors. E.g. Vassilev, E. (2008) determines human resources management as a sub-process of the management of organizations without distinguishing the specifics of personnel in different transport modes. In her monograph book, Tzvetkova, Sv. (2016) analyzes human resources management in parallel with the development of transport sector again without putting the accent on the specific characteristics of personnel in each transport mode. In their research, Paulica & Mednikarov (2013, pp. 27-32) have studied personnel in maritime industry, but they put the focus on the enhancement of its qualification. Other publications (Aronsson & Barkloef, 1982); (Tichon, M., 2005); are also identified, but they examine human resources management mainly in road transport.

However, the aforementioned publications do not cover the main objective and hypothesis of the current research.

The main objective that the author poses is to outline the specific characteristics of human resources management at Bulgarian sea ports Varna and Burgas. The hypothesis the author proves is that analyzing the process of human resources management through application of modeled indicators, will allow problems to be precisely determined and as a result key measures for their surmounting to be taken. The object of the research is human resources at sea ports and the subject – the methods through which the problems are identified and measures are proposed.

For the realization of the research, the following scientific methods will be applied:

- *Statistical* – necessary for the examination of information from the EUROSTAT Database, Bulgarian National Statistical Institute and Annual Reports of Varna and Burgas ports;
- *Analytical* – to analyze the gathered data to evaluate the studied indicators, concerning human resources management at sea ports;
- *Methods of induction and deduction* – to summarize the problems hindering human resources management at sea ports and to propose measures for future development.

As a result of the research, the following indicators will be analyzed as well as the correlations among them: *average wage of an employee at sea ports; labor productivity according to the cargo volumes transshipped; revenues of a person employed and number of employees at sea ports*. The specifics of human resources management at sea ports will be revealed, the existing problems in this field will be identified and particular measures for their development will be proposed.

## **1. Human resources management in maritime transport**

Human resources management at Bulgarian sea ports reveals opportunities for its optimization, which could multiply the financial results of infrastructure operators in accordance with the classical microeconomic function on production. Having in mind the aforementioned, the personnel is of great importance for the development of the transport sector and especially for the maritime transport as it contributes for the safe and secure navigation, timely transshipment operations and increasing the productiveness of ports and ships.

When studying the human resources management in maritime transport, it must be indicated that this process is affected by two groups of factors. The first one includes the so called *external factors* (Ehrenberg, R, Smith, R, 2012, pp. 25) that consist of the following:

a. *State policy for human resources management in the maritime transport* – there are many legal acts in the field of maritime transport<sup>12</sup>, which concern the requirements for occupation admission; duration of the working day; working conditions at ports and at ships; conditions of the insurance system and etc. However, there is no purposeful state policy to motivate graduates to continue their professional realization in the field of maritime transport.

b. *Globalization of the economy* – as a result of the world economic and financial crisis, many industries which are main consumers of the maritime transport services, closed up their productions (e.g. Kremikovtzi JSc, which is a key consignor in the carriage of oversized and general cargos through maritime transport liquidated its production in 2009).

c. *Status of the labor market in transport sector* – the main participants in the labor market at transport sector are work force, transport operators and intermediaries. In this regard the demand for labor in transport is determined by the transport companies' number while the supply of labor will be defined by the active population which holds the necessary

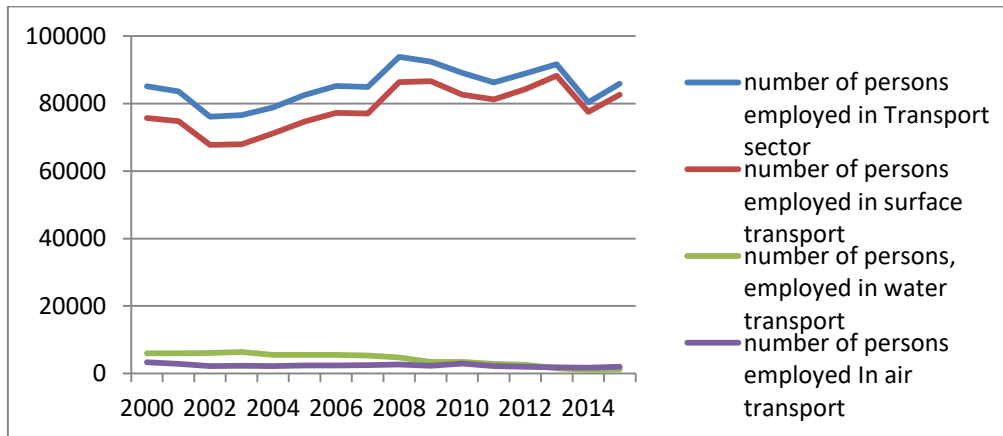
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<sup>1</sup> Merchant Shipping Code and the corresponding legal acts;

<sup>2</sup> Law on the Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria and the corresponding legal acts

professional qualification, knowledge and experience to take part in the freight and passenger carriages. During the period 2002-2008 a significant drop in the number of licensed transport operators is observed as 7761 of them have closed their economic activity up. As a result a great number of the employees in transport sector are shortened. After this period a trend of increase is reported but after 2010 the number of transport companies is constant. (National Statistical Institute of Bulgaria, 2016).

**Fig. 1 Dynamics of the persons employed in relevant transport modes**



Source: National Statistical Institute of Bulgaria

The biggest number of employees could be seen in the surface transport (road and railway) – 92% of the total number of transport workers, which is normally distributed as the number of the licensed road transport operators is the biggest compared to the other transport modes. On second place is the share of water transport (maritime and inland waterway) – 4,9%, and on the last place is the air transport – 2,7%. The general trend observed is of continuous decrease in the number of persons employed at transport sector after 2010. According to the database of National Statistical Institute of Bulgaria, the mechanical growth in the country is negative, which means that most of the active population immigrates to other member states as the average wages there are much higher.

d. Demographic trends – deepening crisis in the last years together with the observed negative mechanical growth are prerequisites for the permanent decrease in the number of working force in the country. On the other hand, the unpleasant economic conditions in Bulgaria prove to be a reason for the increase of the monthly average household costs that grew up to 1,5 points in 2014 compared to 2013 (National Statistical Institute of Bulgaria, 2016) while at the same time household monthly incomes decrease with 1,2 points for the same period. This results negatively on the structure of the labor market in transport sector.

e. Development of technology and innovations – the application of information and communication technologies is an important tool for the development of the transport sector and for the effectiveness increase of freight and passenger carriages. The automation of the transport processes and the organization of carriages allow real-time tracking of working time of employees as well as the working conditions on board of vehicles or at the infrastructure sites.

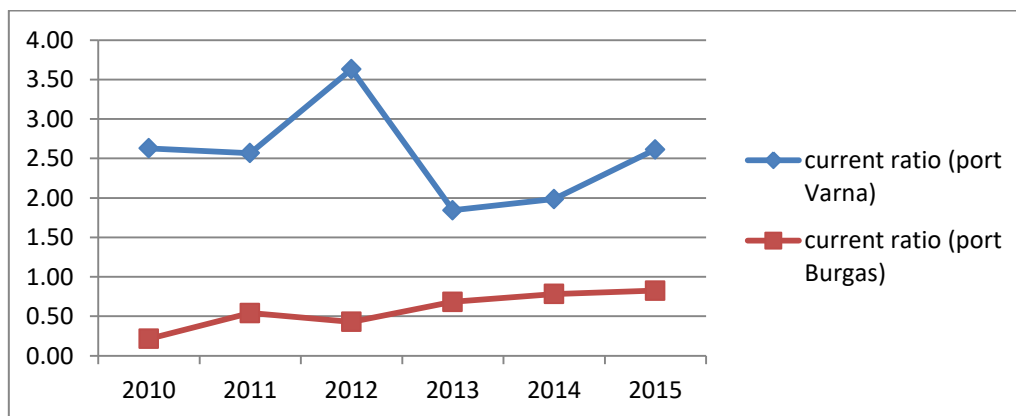
Except for the aforementioned external factors, important for the human resources management are also the following *internal factors*:

a. Size of the organizations – this factor is of great significance for the human resources management structure. In this regard, the sea ports Varna and Burgas could be determined as large organizations, as the average number of employees is over 500 and the transport workers at port Varna are 1623 (port Varna, 2015), and at port Burgas – 602 (port Burgas, 2015). As far as the transportation services in maritime transport are concerned, the largest seafarer Navigation Maritime Bulgaria JSc falls among the big companies as its number of employees is over 1000 (NAVBU, 2016). This factor is directly related to the fluctuations of manpower. On the other hand, however, the large number of personnel must be provided with continuous increasing cargo and passenger volumes through the sea ports.

b. Financial status of organizations– the good financial security of the companies is a prerequisite for more efficient recruitment system, staff assessment, education and motivation of the employees (Torrington, D, 2006). Some of the most important factors that directly influence the financial status of sea ports are:

Current ratio – this indicator is presented on figure 2 and its purpose is to reveal if the infrastructure operators at port Varna and port Burgas are capable of paying their current debts by the current assets.

**Fig. 2 Dynamics in the current ratio at Bulgarian sea ports**



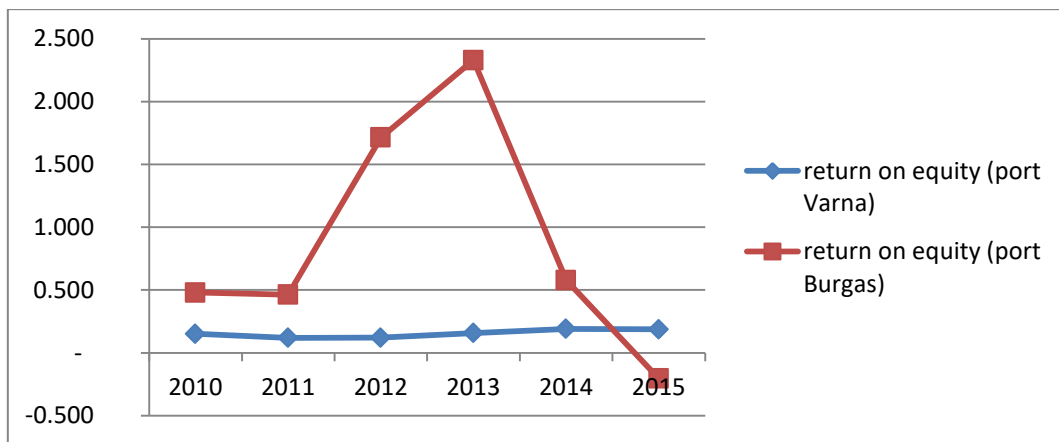
Source: Annual reports of port Varna and port Burgas for 2010-2015 and author's calculations

For the current ratio at port Varna, periods of drop and growth are observed (in 2012 the coefficient value is the highest – 3,63), and it keeps values higher than 1. This means that the financial and trade policy of the infrastructure operator allows seamless paying of the liabilities by the current assets. This leads to personnel costs and liabilities increase which will result in higher productiveness and competitiveness.

Having in mind the values of the current ratio at port Burgas, the infrastructure operator is not able to cover its current liabilities by the assets (current ratio is the lowest in 2010 – 0,21 and in 2015 it grows four times – 0,82, but this value is still lower than 1). As a result the running costs at the port are decreased, incl. the personnel costs, wage costs and insurance costs.

Return on equity (ROE) – the calculation of this indicator is of great importance for the maritime transport as the economic activity in sea ports is capital intensive and it is carried out by the fixed assets such as transshipment facilities and warehouses. In this regard we have to expect the values of this coefficient to be higher than 1.

**Fig. 1 Dynamics in the return on equity at Bulgarian sea ports**



Source: Annual reports of port Varna and port Burgas for 2010-2015 and author's calculations

On figure 3 one can see that a growth in the values of ROE is observed for port Burgas, as the coefficient is the highest in 2013 – 2,33, but in 2015 decreases significantly and its value is negative – -0,203. This means that the capital intensive economic activity at the port is not done efficiently. The main reasons for this are the usage of outdated transshipment facilities, the prolonged time for ship servicing and lower personnel productiveness.

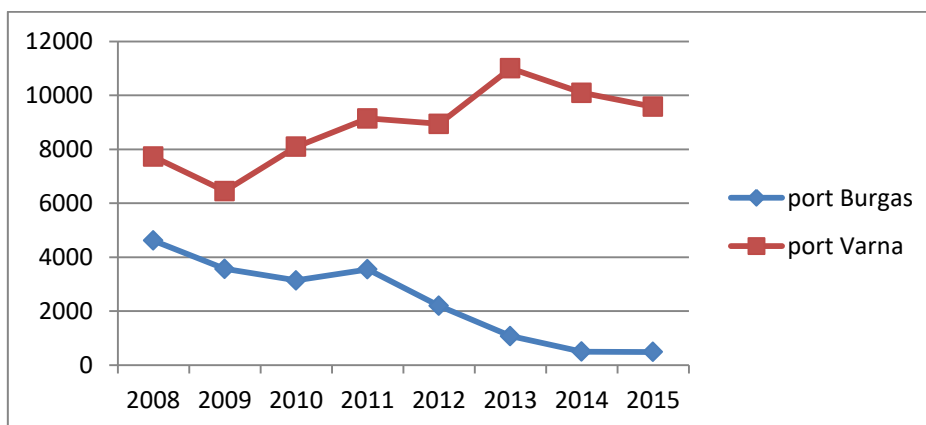
The ROE of port Varna is constant and it is changing in a range between 0,151 in 2010 to 0,188 in 2015. This means that the fixed assets of the port are not efficiently used in order the invested money by the stakeholders to be profitable.

## 2. Current status of the human resources management system at the sea ports of Varna and Burgas

The human resources management system is a fundamental element of the economic activity of organizations as it determines the establishment and development of companies. This system includes activities that are of at most importance for the personnel strategic management, its productiveness and the competitiveness of organizations. These activities are as follows: human resources planning; occupation analysis; recruitment and retirement; education and motivation (Boxall, et.al., June 2008, pp.3).

In maritime transport, the process of *human resources planning* is related to the needs determination of human resources. These needs are prompted by the transport and infrastructure operators' strategic goals about the forecasted cargo volumes that must be carried in the relative destination or transshipped at ports. That is why when defining the necessary number of employees at sea ports, the business plan of infrastructure operators must be taken into account.

**Fig. 2 Dynamics in the volume of cargos (thousand of tones) transshipped at port of Burgas and port of Varna**



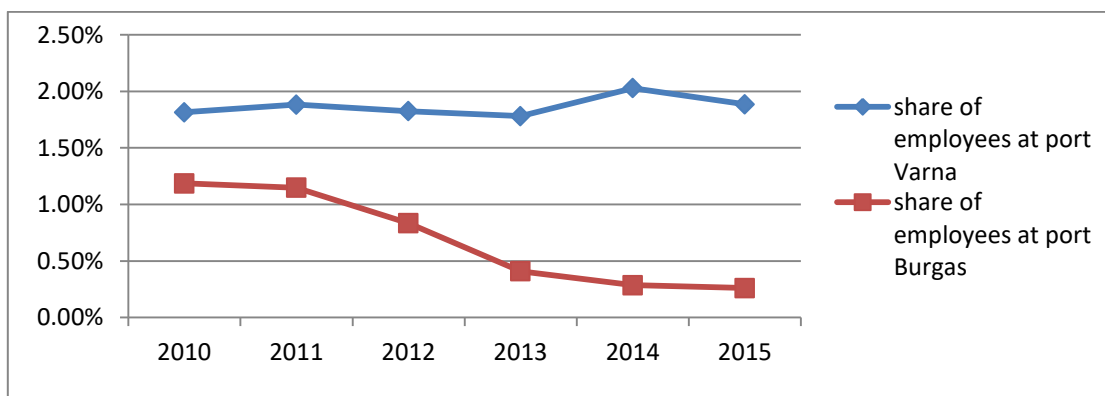
Source: Annual reports of port Varna and port Burgas for 2008 – 2015

As can be seen on figure 4, in port Burgas a general trend of decrease in the volume of cargos transshipped is observed and in 2015 a drop of 89,5% compared to 2008 is reported. What is typical for port Varna is large dynamics in the cargo volumes as after 2013 (when the

amount of cargoes transshipped is the biggest – 11 mln. tons) a trend of continuous decrease begins and in 2015 their volumes reduce with 13%.

The observed dynamics in the cargo volumes transshipped at the sea ports suppose gradual cut down in the number of employees. Taken into account also the negative trend of the financial indicators of ports – current ratio (figure 2) and return on equity (figure 3), the infrastructure operators are incapable of paying their liabilities to the personnel and keeping the necessary rate of employment.

**Fig. 3 Dynamics in the number of persons employed at Bulgarian sea ports as a share of the total number of employees in transport sector**



*Source: National Statistical Institute of Bulgaria and author's calculations*

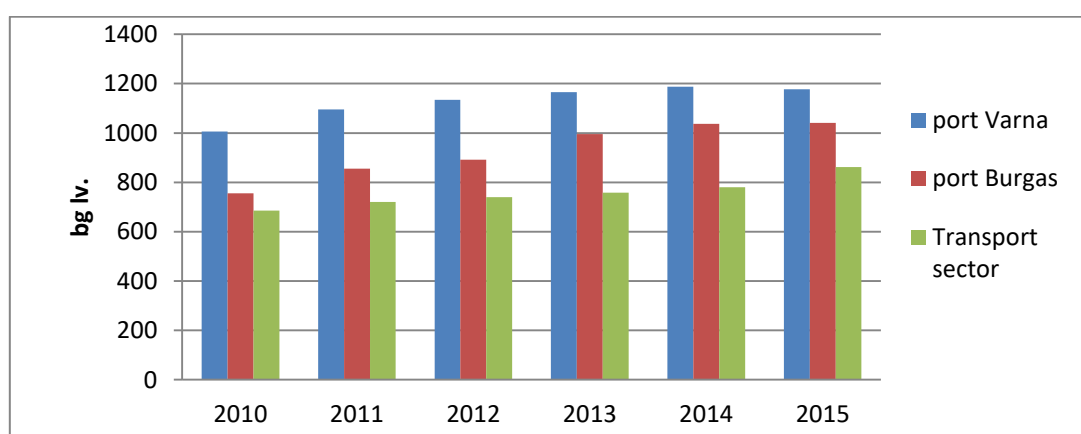
The share of employees at port Varna (1,87%) and port Burgas (0,69%), as one can see on figure 5, is insignificant compared to the total number of people employed in the transport sector. This means that maritime transport is still not an attractive environment for professional realization of graduates. Moreover a general trend of gradual decrease in the number of transport workers is observed at port Burgas (a drop of 78,1% in 2015 compared to 2010 is reported), while the number of employees at port Varna is stable, with slight fluctuations in the range between 1619 and 1632. The trends in the employment development at sea ports are following the dynamics in the volumes of cargoes transshipped at ports of Varna and Burgas.

Another key element of the human resources management system at sea ports is the personnel recruitment. It is a process on which depend the possibilities of infrastructure operators to attract transport workers with the appropriate and eligible qualification and competences. In this way, the main leading condition when companies demand for labor force in transport sector is employees to cover all of the legal requirements for occupation. In the maritime transport, all workers must be medically fit to work on the board of ships or at ports;

have approved education (to graduate university or high school in sea or technical specialties) and have seagoing internship when it is required. In accordance with the aforementioned requirements and specifics of the main and comprehensive activities done at the sea ports, the most widespread occupations (National Statistical Institute of Bulgaria, 2016) at ports are stevedore; expert in transshipment operations; manager trade exploitation; head of sea station and etc.

Of great importance for the efficient functioning of the working force at sea ports, except for the legal requirements, is the employment price. It is prompted by the fact that wages of transport workers must ensure normal living standard. On the other hand monthly wages directly influence the amount of money in circulation, as most of it is spent by the employees for their household utilities, social and physiological needs satisfaction.

**Fig. 4 Dynamics in the average month wage at Bulgarian sea ports and at the transport sector as a whole**



Source: National Statistical Institute of Bulgaria and author's calculations

On figure 6 a trend of continuous increase in the wages in sea ports is observed. Its level is higher than the average for the transport sector. The highest wages are paid to the transport workers at port of Varna and they are in the ranges between 1006 and 1177 BGL. Comparatively lower are the average monthly wages at port of Burgas (between 750 and 1040 BGL), which however reported a growth of 37,9% in 2015 in comparison to 2010. The observed increase in the values of the indicator follows a logic trend as, *first* of all – the conditions for transshipment operations at sea ports are continuously developing so as the customers 'needs to be satisfied and *second* – new information and communication technologies are applied to the organization and management of the port and transport activity which fact supposes better professional qualification of transport workers and higher wages.

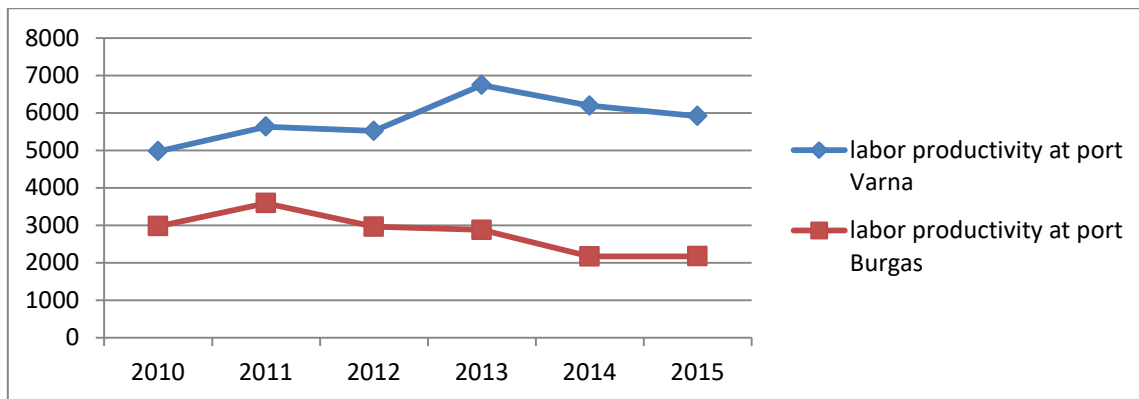


However, compared to the other member states, Bulgaria ranks in the last place on this indicator as in accordance with the officially published data on EUROSTAT, the wages at sea ports are 12 times lower than these in the old member-states and 4 times lower than wages in the new ones.

Independently of the rising level of wages at sea ports, it is important to be determined if it carries out its reproductive function – to ensure normal living standard for transport workers and their families. For this purpose the dynamics in the consumer price index (CPI) must be analyzed. The main reported trends in the CPI are of drops and growths. To the present moment the annual rising of consumer prices is at faster pace than the average annual increase in the wages at sea ports. For example, in 2015 the inflation increased with 1,3 points or a growth of 92% compared to 2014 (National Statistical Institute of Bulgaria, 2016) while at the same time the wages at sea ports reported only a growth of 4,7%.

Crucial for the effective functioning of the human resources management system is the labor productiveness. It is determined by a group of factors, such as: education and qualification; application of information and communication technologies; innovation in the transshipment operations; better working conditions; change in the cargo volumes structure and destinations and etc. Taking into account the specifics of main and comprehensive activities at ports, the labor productiveness could be calculated while comparing the output volumes and the labor input. (Tichon, M., 2005, pp. 78).

**Fig. 5 Dynamics in the labor productivity at Bulgarian sea ports in tones**



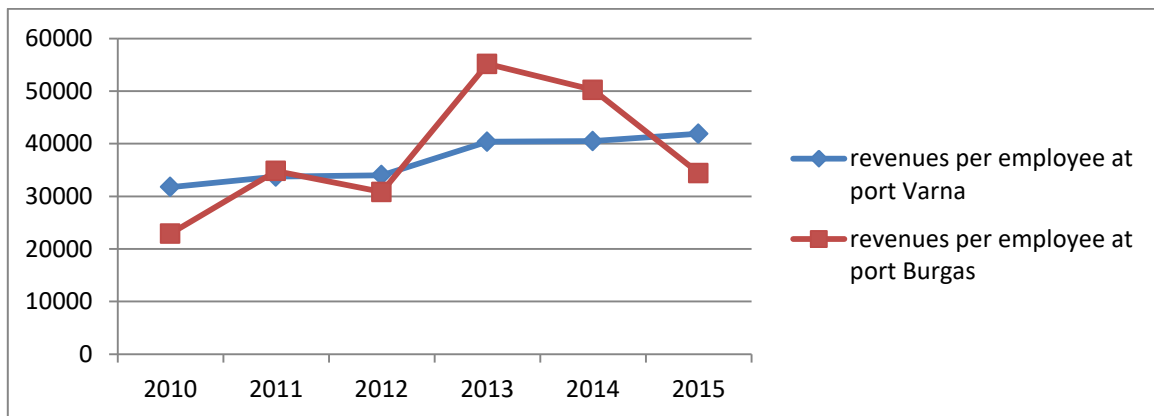
*Source: Calculations of the author*

On figure 7 the labor productiveness at sea ports is presented as higher rates of decline could be seen at port of Burgas – 39,6% in 2015 compared to 2011, when the average cargos transhipped per an employee was 3590 tons. Approximately two times higher is the labor productiveness at port of Varna, however it also decreased in 2015 with 12,3% in comparison

to 2013 when it was the highest (6740 tons). The observed dynamics in the labor productiveness at sea ports is following the trends of the cargo volumes transshipped (see figure 4) and the number of persons employed (figure 5). For the examined period, drops in the cargo volumes at ports are reported and also some individual terminals of the ports are given to concession which facts result in much of the employees to be discharged.

In general the specifics of labor productiveness at sea ports are related to the revenues per employees. In this regard on figure 8, the dynamics of this indicator are presented.

**Fig. 6 Dynamics in the revenues per employee at Bulgarian sea ports**



*Source: Annual Reports of port Varna and port Burgas for 2010-2015 and author's calculations*

For the revenues per employee at port of Burgas periods of decline and growth are reported. In 2013 the values of the indicator are the highest (55,1 thousand BGL), which dues to the smaller number of workers during this period as well as to the bigger share of comprehensive operations carried out at the port. In comparison, the revenues per employee at port of Burgas decrease two times as a result of both the lower labor productiveness and lower cargo volumes transshipped.

For port of Varna a trend of continuous increase in the revenues per employee is observed, as in 2015 a growth of 31,8% compared to 2010 is reported. Consequently the main activities at the port are carried out efficiently, as the average wage costs for the same period are also increasing but with lower rates than the increase of the revenues per employee (17%).

### Conclusions

The efficient performance of sea ports is determined to a large extent by the presence of enough and qualified personnel, as well as by the favorable conditions of the working environment. Based on the analysis done in the previous chapters about the human resources management in maritime transport, the following conclusions could be made:

**Firstly** – the number of transport workers at sea ports decrease each following year as in 2015 a drop of 31,1% compared to 2010 is observed. The share of persons employed at

ports of Varna and Burgas is hardly 1,28% of the total number of workers in the transport sector.

**Secondly** – a trend of continuous discharge of transport workers at sea ports is reported as well as lower labor productiveness.

**Thirdly** – although a growth of 26% in the amount of wages at sea ports is reported for 2015 compared to 2014 the workers monthly incomes could not efficiently perform their reproductive function as the consumer price index increases at faster pace for the same period.

**Lastly** – the revenues per employee at sea ports decrease with 20,1% in 2015 in comparison to 2013.

As a result of the analyzed system of indicators, the main problems that hinder the effective human resources management at sea ports could be outlined as well as measures for their surmounting could be proposed. In this regard the regression analysis is applied in order to be determined which of the indicators influence the most the fluctuations in the number of workers and in this way the appropriate measures to be taken into account.

The biggest influence over the fluctuations in employment at ports exercises the rates of wages, as 90,9% of the variations in the number of persons employed due to the payments of labor. In this regard the level of wages must be standardized with the level of wages in the other member-states as in short-term run to those in the new member-states (Poland, the Czech Republic, Romania).

On the next place, crucial significance for the effective human resources management have the revenues per employee and 71% of the variations in the number of workers at sea ports due to this indicator. Some of the measures that could be taken into account are *firstly* – much more cargo flows to be attracted as a result of the implementation of innovative transshipment facilities and *secondly* – implementation of autonomous, competitive, efficient and transparent infrastructure charges pricing in accordance with the trade and financial policy of the ports.

As a result of the regression analysis, it was specified that the consumer price index also influence the fluctuations in the number of persons employed at sea ports, as approximately 54% of the dynamics in the number of transport workers due to the inflation. The introduction of wages which amount rises at faster pace than the consumer prices will both allow better image of the maritime transport as a favorable environment for professional realization of young graduates to be achieved and will contribute to better living standard of the transport workers.

## References:

1. Vasilev, E., (2008), „Human resources management in transport”, Sofia, University Publishing House – UNWE;
2. Tzvetkova, Sv., (2016), “Specific characteristics of human resources management in transport company”, Sofia, University Publishing House – UNWE;
3. Aronsson, G., Barkloef, K. (1982), “The working environment for local transport personnel”, Stockholm, Gardell;
4. Tichon, M., (2005), “An investigation of personality traits I relation to the job performance of delivery drivers”, Tennessee, PhD diss., University of Tennessee;
5. Paulica, A., Radu, H., Mednikarov, B., Kalinov, K. (2013), “Enhancing management capacity of the maritime industry personnel”, Constanta Maritime University Annals, Nautica edition, pp. 27-32
6. Ehrenberg, R, Smith, R. (2012), “Modern Labor Economics – theory and public policy”, 11<sup>th</sup> edition, Prentice Hall, Pearson Education, Boston, pp.25;
7. National Statistical Institute of Bulgaria (2016), <http://www.nsi.bg/bg/content/3168/%D0%B4%D0%BE%D1%85%D0%BE%D0%B4%D0%B8-%D1%80%D0%B0%D0%B7%D1%85%D0%BE%D0%B4%D0%B8-%D0%B8-%D0%BF%D0%BE%D1%82%D1%80%D0%B5%D0%B1%D0%BB%D0%B5%D0%BD%D0%B8%D0%B5-%D0%BD%D0%B0-%D0%B4%D0%BE%D0%BC%D0%B0%D0%BA%D0%B8%D0%BD%D1%81%D1%82%D0%B2%D0%B0%D1%82%D0%B0>, accessed on 24.10.2016;
8. Port Varna (2015), Annual Report for the economic and financial activity of the port, Ministry of Transport, Information technologies and Communications;
9. Port Burgas (2015), Annual Report for the economic and financial activity of the port, Ministry of Transport, Information technologies and Communications;
10. Navigation Maritime Bulgare (2016), <http://www.navbul.com/en/company/profile/index.php>, accessed on 24.10.2016;
11. Torrington, D., et.al. (2006), “Human resource management”, Prentice Hall, sixth edition, pp.115;
12. Boxall, et.al., (June 2008), “Human resources management: scope, analysis and significance”, Oxford Handbook Online, pp.3;
13. National Statistical Institute of Bulgaria (2016), <http://www.nsi.bg/bg/content/261/basic->

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[%B8%D1%82%D0%B5](#), accessed on 25.10.2016;

## Social costs of the inefficient management of the EU funds for Bulgaria

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**Abstract:** *The study identifies and defines the social costs of the inefficient management of EU funds for Bulgaria. It is analyzed the last due programme period (2007-2015) and its prolongation. As methodology of the research the V4 BM model of Al-Debei and Avison (2010) which has not been used for analysis of EU funds management for cohesion policy in the public sector, is applied. In this way its potential for application in this field is tested. The concept of the study could be successfully used for analysis of the social costs of inefficient management of EU funds in other member-states.*

**Key words:** *social costs, V4 BM model, absorption of EU funds*

**JEL Codes:** *F15, H43, O21*

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## Introduction

Lessons learned from the previous programme period 2007-2013 in the absorption of EU funds for Bulgaria are of great importance for the successful fulfilment of the new programme period 2014-2020.

Our country is still far from the pre-crisis period growth rates of 7% per year (2004-2007) compared to 3.5% for 2015.[1] Its economy is to a large extent related to and dependant on the EU grants, mainly for technology innovations and public infrastructure construction, as well as for balancing the aggregate demand of cash flows, related to the fulfillment of projects by Bulgarian companies, their turnovers and wages.

That is why, it is very important the EU funds absorption to be accomplished in an efficient way in order better competitiveness and better living standards for society to be achieved.

*The main objective* of the research is to identify and define the social costs, caused by the inefficient management and absorption of the EU funds for Bulgaria. Such kind of analysis could be of great importance for the applying countries for EU membership like FYROM, Turkey and Serbia in order much more efficient structuring and design of the systems for EU funds management, including the pre-accession programmes to be achieved.

*The thesis* of the current study is that the present model, concerning the reporting of EU funds absorption for Bulgaria does not give information for the social costs caused by its ineffectiveness, which fact hinders its optimization and the public control over this kind of activity and needs changes.

*The object* of the analysis is the management system of the EU funds for Bulgaria and *the subject* is the functional and structural correlations of the existing model for management of the system and its main indicators.

*In methodological aspect*, by testing the potential of V4 BM model of Al-Debei and Avison (2010) for analysis of the EU funds management for cohesion policy in the public sector, will be identified the real absorption of EU funds for Bulgaria.[2] The identification of social costs as a result of the inefficient EU funds management and absorption for Bulgaria will be made by means of descriptive analysis.

For some of the calculations, the model of I.Paliova, T.Lybek (2014) will be applied. [3]

The information provision of the study is mainly based on public databases such as statistical data, officially published by the national government and EC.

The restrictive conditions of the study result from the format of the research – a conference paper and that is why the analysis will be indicative.

The study covers the funding through the EU cohesion and structural funds. Funding through Agricultural and Fisheries Funds is not examined in the research. Such activities that could not be finished till the end of 2015 will be funded by the beneficiaries and they are also not covered by the research. Phase funding gives opportunities single phases of relevant projects to be funded by the new programme period but this topic is not examined in the current study.

### **1. Application of the V4 BM model in reporting the real absorption of EU funds (for Bulgaria)**

The application of V4 BM model of Al-Debei and Avison (2010) when reporting real absorption of EU funds is a way through which business-modeling could be successfully used in public sector analysis. Specifically for this model, in the literature review, no publication related to the application of the model in public sector analysis, especially in the field of EU funds absorption was found.

Although business models are oriented towards better opportunities for companies 'profit maximization and their application in the public sector aims better public goods provision and society welfare, their usage as a whole is directed towards better effectiveness of each organization. That is why, these models could be applied in the public sector analysis while studying its specifics compared to the private sector.

Another example of a business-model, used for analysis of the public sector is McKinsey 7S Framework - Waterman, R. H., Peters, T. J., & Phillips, J. R. (1980).[4] It is successfully used for studying the effective management of EU funds by Sht. Nozharov (2014).[5]

V4 BM model has four main dimensions: Value Proposition, Value Architecture, Value Network and Value Finance, including many elements. The current study will consecutively focus on each dimension as the accent will be put on the failures.

The main organization on which the model will be tested is the Bulgarian government and more specifically those structures which are occupied with the management and absorption of the EU funds for Bulgaria.

#### **A. Value Proposition**

Bulgaria received 3.8% of the total EU funds (175.9 billion. Euros) for the period 2007-2013 (KPMG, 2016).[6] The funding of 6.7 billion. Euros for Bulgaria is allocated into 7 operational programmes in the European structural and cohesion funds (ERDF, CF, ESF).[7]



The main objectives of the EU grants are cohesion and removing the gaps in socio-economic perspective with the other member-states as well as the negative effects of the global economic crisis. In this regard as Value Proposition in this case will be taken the public goods, which are produced with the help of EU funds and whose main objective is better living standards and effects for economy and convergence to be achieved.

The main failures which could be identified in this field are the following:

First of all, shifting the accent from quality public goods provision in Bulgaria to maximum absorption of the EU funds. In this way the public authorities shift the public attention from quality of the final product (e.g. efficient functioning of a local wastewater treatment plant) to the sum for the construction of the plant. In this way some paradoxes raise. In relation to the example mentioned, in Operational programme “Environment” many times the public infrastructure is resized in order maximum money from the funds to be absorbed, which leads to inability the operational costs to be covered in the future and not sufficiently working of the infrastructure. Similar case is the constructed local wastewater treatment plant in Gorna Oriahovitza, which project price was 17 million. Euros, and that plant was resized.[8]

Second, opportunities for corruption after shifting the accent to maximum absorption of the EU funds. With the example of resizing the public infrastructure was illustrated the shifting of the focus on running up the necessary sums for projects fulfillment. In this way the potential number of people serviced from the local population by construction of a water waste treatment plant is increased in order the total sum for the public procurement and respectively the commission for the executive to be enhanced. In this way most of the public procurements are fulfilled by exact groups of big companies because small and medium enterprises are incapable of constructing such huge objects. This hinders fair competition and public interest of achieving the optimal fulfillment price of the project. For example, in the end of 2015 the government stopped public procurements for over 1 billion. Euros because of suspected irregularities and grouping of ownership of executing companies of large infrastructure public procurements.[9]

## **B. Value Architecture**

This issue is in details examined by the author in his previous publication (Sht. Nozharov, 2014).[5] In this regard, only the main concepts will be abstracted in order their significance to be taken into account in the current study:

First of all, this is the inefficient architecture of the organization’ structure.

The structure of Bulgarian administration, occupied with the EU funds absorption is ineffectively organized in many individual operational programmes, managed by the relative authorities of the Bulgarian ministries and coordinated by the Central Coordination Department at Council of Ministers whose main role is coordinating, not decision-making. This structure is dispersed and manages the same types of programmes in different way and with different effectiveness, which causes many functions and occupations to be duplicated as well as leads to budget costs increase. The main conclusions of the aforementioned publication of the author are that it will be better only two managing authorities to be differentiated for all operational programmes in Bulgaria. One for the infrastructural programmes (Environment, Transport, Regional Development) and the other for the non-investment programmes (Science, Better Management and etc.) which to be situated at the Council of Ministers or at the Ministry of the programme with the best results. The previous Managing authorities must be transformed into intermediate units of the new Managing authorities while at the same time their functions are free of outsourced functions in order no duplication of government costs to be reported. This thesis is proved with the examples of Operational programme “Environment” and Operational programme “Transport. Obviously Operational programme “Environment” functions ineffectively in spite of the numerous staff, receiving the same high wages as their colleagues in Operational programme “Transport and fulfilling the same project types. Moreover, the main activities in this programme are outsourced while the staff attends post-graduate courses for hundreds of thousands of Euros for the state account even though they are paid double as overqualified professionals.

Second, it is the inefficient structure and qualification of the staff of the organization. Some of the operational programmes (such as Operational programme “Environment”) consist of a complex structure with a managing authority and intermediate units.[10] Generally the intermediate unit is not a mandatory structure in the European legislation and the member-state or the managing authority decides if they need such body. When such units are established, this leads to great number of senior executives and complex interconnections among them. The complicated hierarchical architecture leads to ineffectiveness, long decision-making processes and lack of balance among many interests and qualifications. Very few operational programmes have efficient structures. Such is for example Operational programme “Transport” which consists only of managing authority. The managing authority directly negotiates with the beneficiaries.[11]

Thirdly, it is the pledged low competence of the staff in the organizational structure. The previously cited research of the author proved that:

- at least one third of the staff in public administration responsible for the EU funds absorption for Bulgaria are appointed without competition. This leads to a high risk of insufficient recruitment of employees who cover only the minimum requirements for the occupation and when competition is held these applicants will not be ranked. The most commonly used method for recruitment is reappointment from low skilled occupation or replacement of an employee on maternity leave. Another way, the competition procedure is bypassed, is to appoint directly part-time employee as a senior expert in EU funds. Subsequently the employee is reappointed to a full-time job;

- the assessment of employees responsible for the management and absorption of EU funds is unreasonable. According to the information about assessment of employees, for the period 2007-2013, approximately half of the staff in public administration (47%) responsible for EU funds absorption substantially over fulfilled their obligations and the other half of them (55%) fulfilled their duties properly, but at the same time the effectiveness of the operational programme is low. At that moment, according to the Brussels Office of the German Society for International Cooperation (GIZ), the sum of the really absorbed EU funds by Bulgaria for the period 2007г.-2013 (reimbursed from EU funds) at the end of the second quarter of 2014 is 48%.<sup>[12]</sup> This means that the capacity of Bulgaria for real absorption of the earmarked funds (really reimbursed by EU) is 50%, and if the European Commission did not extend the term of the programme period ('N+2 or N+3' rule), Bulgaria would suffer significant losses as a result of the inefficient work of these employees who have been excellently assessed.

- the variations in wages of staff responsible for the management of EU funds and staff, occupied with the management of national budget with the same qualifications and fulfilling the same obligations lead to ineffectiveness of the financial processes at public administration. The employees responsible for management of the national budget and at the same time assisting the management of the EU funds are not motivated as their wages are 5 times lower than those of servants occupied with the fulfillment of operational programmes. At the same time their colleagues, receiving high wages are also not motivated to work as they rely on the formal and unreasonable assessment of their work. In this regard prerequisites for deteriorated communications and relations among directorates in relevant ministries and agencies are created.

- the low initial qualification of appointed employees leads to high additional government costs for their re-qualification and supporting their work by outsourcing. For example, for re-qualification of staff at the Managing authority and at the Intermediate Unit of

Operational Programme “Environment” only for two years (2012-2013) are spent half of million Euros. It turns out that in 2012, at the end of the programme period, 30% of the staff is taught how to manage EU funds and projects as well to assign and monitor public procurements. Here raises the question, how these employees performed their obligations during the period 2007-2012.

The level of language proficiency of the staff responsible for the EU funds in Bulgaria is also questioned, although according to the national legislation it is one of the requirements for appointment of such kind of experts. It is interesting that for the period 2008-2014 for the needs of Operational programme “Environment” approximately 200 000 Euros were spent for outsourced translations.

Having in mind the level of qualification of the staff, there will be examined also the share of outsourced activities. While the highly qualified staff of the Managing Authority in Operational programme “Environment” continued to be trained for half of million per year and at the same time received monthly their high wages, most of their duties are outsourced to private companies:

*The Managing Authority* of Operational programme “Environment” has outsourced the activities on mid-term and running assessments of the operational programme, which is its main obligation according to the legislation. Also the activities on risk analysis and management of the contracted grants are outsourced to private companies and are spent approximately 250 000 Euros.

*The Intermediate Unit* of Operational programme „Environment” has also outsourced some of its main functions despite they are its obligation according to the national legislation. For example, the preliminary and follow up control of the public procurements is outsourced to private companies and the sum of the money paid is 130 000 Euros. The activities, related to monitoring and verification of projects is also outsourced and the money paid is 300 000 Euros. The examples are not exhaustive, there are many others, but they will not be listed because of the limited volume of the study.

For the period 2007-2013, in Operational programme „Environment” for staff re-qualification and execution of the main functions of the authority are spent more than 2 million Euros.

It is inadmissible, for the same activity which is inefficient to be paid the highest rates both for public administration and outsourcing. This outsourcing shows that one of the both parties is redundant – either the staff of the public administration who do not exercise their obligations, or the private companies which in spite of the high commissions they receive, the

fulfillment of the projects is not so effective (only 50%), what is the level of absorption of the EU funds for Bulgaria in the mentioned period.

### **C. Value Network**

This issue is also examined in details in the previous publication of the author (Sht.Nozharov, 2014).[5] In this regard, the main conclusions will be abstracted due to their significance for the current research:

First of all, the interconnections and functional relations are ineffective.

What is specific for the period 2007-2013 are the problems in the control systems? The processes in the *follow-up control* are duplicated. Executive Agency “Audit of the European Union Funds” performs functions in accordance with the Internal Audit Law and duplicates the functions of the directorates in internal audit at each Ministry with operational programme which also carry out activities in accordance with the Internal Audit Law. The systems for *preliminary control* are also duplicated. Such type of control is carried out by the staff in the relevant operational programmes and at the same time, preliminary control is exercised by other government bodies such as the Public Procurement Agency. The systems for *follow-up control* are also duplicated. Such control is carried out by the Supreme Audit Institution, by the Public Financial Inspection Agency and by the Prosecutor’s Office of the Republic of Bulgaria. At the same time, each operational programme sets measures for auditing (in some of the programmes the sum equals 2% of the total budget) which in most of the cases are outsourced to private companies.

The large number of participants in the control systems with duplicate functions leads to higher ineligible costs and ineffectiveness. The model needs to be changed.

Additionally the cumbersome application and execution procedures could be examined, as well as the systems for information exchange, the insufficient levels of the so-called e-government, discrepancy in the management and control systems of the operational programmes and etc.

Secondly, the inappropriate structured strategic framework outlines wrong interconnections in the organizational system which leads to conflicts among the participants:

As a long-term strategic document in the field of EU funds could be examined the National Reform Programme.[13] This programme is complemented and specified with various sector strategies in the field of environment, transport, agriculture, regional development and etc. The sector strategies do not correspond with the administrative structure of the public authorities. For example there are various operational programmes where

measures for the environment are set: environment, transport, agriculture, regional development, which is carried out in different way in accordance with the specifics of each operational programme. In addition, the environmental policy is examined differently in the strategic documents of ministry of economy; ministry of transport, ministry of agriculture, ministry of environment and waters. This results in uncoordinated effect of the national budget and EU funds and leads to ineffectiveness of value networks.

#### **D. Value Finance**

To March, 1<sup>st</sup> 2016 Bulgaria reported that 96% of the earmarked EU funds for cohesion policy for the country are absorbed.[14] It covers the period to December 31<sup>st</sup>, 2015 which is the reference date after which the funding is stopped.

The reported percentage for absorption of the EU funds for Bulgaria is incorrect because it does not present the real financial value of the analyzed organization.

In order real results to be achieved, the model of I.Paliova, T.Lybek (2014) will be used.  
[3]

The main data resources used are:

- Progress report 2007–2015 (KPMG, 2016)
- Annual report concerning the strike balance of programmes, co-funded by EU funds and of the countries from the European Economic Area for the period 2007 – 2013, as well as progress made in the programmes from the period 2014 – 2020“.[7]

The output data for Bulgaria according to the aforementioned resources are:

- Available budget of the EU funds: 6.7 billion Euros;
- Contracted budget: 7.0 billion Euros;
- Paid grants with the beneficiaries: 6.4 billion Euros;
- Certified grants: 5.4 billion Euros;
- contract ratio: 105%
- payment ratio: 95%
- certified ratio: 81%

Conclusions:

First of all, Bulgaria has absorbed **1.2 billion Euros** less than the available budget of the EU structural and cohesion funds. This happens because of the reported frauds and that their

amount is bigger than the financial corrections made. They are paid by the national budget and in this way result in public social costs.

Secondly, the Bulgarian state authorities presented incorrect share of EU funds absorption (96%) for the period 2007-2015, which corresponds to the paid grants with beneficiaries but not to the certified ones by the EC grants (81%). The variations of 15% down are a huge deviation.

Thirdly, it is better to be given an example of the absorption percentage and the officially reported percentage of absorption of EU funds in an individual operational programme. Having in mind the huge volume of information about the seven operational programmes as an example will be taken Operational programme “Environment”.

The output data for Operational programme “Environment” 2007-2013 are the following:

- Total budget for the realization of the programme 1 641 623 150 Euros.
- National co-funding: 246 243 473 Euros (15%)
- EU funding: 1 395 379 677 Euros (85%)
- Reported implementation of the programme: 97% of the absorption of the EU funds.

[7]

What is the real percentage of EU funds absorption in Operational programme “Environment”?

To December 31, 2015 the total paid grants to the beneficiaries are 1 792 220 756 Euros, which is 109,17 % of the Operational programme budget.

The total verified grants to December 31, 2015 are 1 491 540 142 Euros, which is 90,86% of the Operational programme budget.

The total certified grants to December 31, 2015 are 1 205 458 058 Euros which is 73,43 % of the Operational programme budget.

The financial corrections in Operational programme made to December 21, 2015 are 97.145 million Euros (97 145 457).

Calculations and conclusions:

1. The variations between the operational programme budget and the certified grants are 436 165 092 Euros.

This means that 27% of the Operational programme total budget is uncertified grants, related to frauds.

2. The variations between the uncertified grants in Operational programme “Environment” and the financial corrections made are 339 019 635 Euros, which is 20% of the operational programme total budget.

According to the calculations made, the reported figure of 97% of EU funds absorption by the Ministry of environment and waters is incorrect. The real one is 15% lower - 72% .

## **2. Identification of the social costs, caused by the inefficient EU funds management and absorption for Bulgaria**

When analyzing this issue, first of all the term “inefficiency of EU funds management and absorption” must be defined. In this aspect two individual elements which are correlated to each other, could be examined:

- **Quantitative inefficiency** – as a result of the lower level of EU funds absorption, and
- **Qualitative inefficiency** – as a result of the low quality of the provided public goods, expected to be constructed by EU funds.

In the first case, the quantitative inefficiency could be calculated in currency in accordance with the presented model in the previous chapter of the study by comparing the planned, contracted, paid and certified ratio of the EU grants.

In the second case, the qualitative inefficiency could be calculated by the decreased number of public infrastructure sites (e.g. less waste depots) or by the number of insufficiently working public infrastructure facilities (e.g. the resized waste water treatment plant in Gorna Oriahovitza, which was mentioned in the previous chapter of the research).

Both types of inefficiency could be measured quantitatively, but in the second case, the quantitatively measurement will not give full picture of the damage endured by the society. In this regard, the initial quantitative assessment of this type of inefficiency is not complete and could be complemented with the qualitative losses for the society. That is why; it is defined as quantitative inefficiency.

Defining the term “inefficiency” of EU funds management and absorption is a prerequisite for the determination of social costs, caused by this inefficiency.

**The inefficiency** (loss of social welfare) in this case **will be caused by:**

- Inefficient government policy (leading to inefficient architecture of the EU funds management and absorption structures);
- Illegal or incompetent behavior of public administration staff, who work inefficiently in this field (due to insufficient control or bad system for recruitment of the personnel);



- Lack of public control also leads to inefficiency (because of the complexity of the matter and low knowledge of citizens in this issues);
- Inefficient intervention of the European Commission for public awareness in the member-states for the real level of EU funds absorption (lack of public information about the certified ratio of the absorbed grants);
- Selfish actions of private companies which want to maximize their profit through inefficient implementation of the projects and spending money for expensive media campaigns for misinterpretation of the public opinion;

Having in mind the aforementioned, the “social costs of the EU funds management and absorption” could be determined as a function of its quantitative and qualitative inefficiency as well as the reasons for it.

That is why, **„social costs of the EU funds management and absorption“ will be defined as:**

- **lower level of absorption of the grants from EU cohesion funds;**
- **provision of public goods with lower quality which will be produced by EU funds;**
- **infringements by EC for the not fully constructed public infrastructure;**
- **lack of convergence, measured by the GDP per capita for the period of EU funding. As another indicator could be used the decreasing number of immigrants to EU member states with average or high GDP per capita;**
- **reallocation of national budget resources from areas which are under the jurisdiction of the national governments to areas entirely funded by EU funds, which leads to low provision of the relative public goods;**
- **increase taxes and fiscal burden because of the filling of the budget deficits, caused by the uncertified EU grants and the necessity of higher share of the national funding;**
- **increased budget expenditures to provide the inefficient public administration responsible for the management of EU funds;**
- **unfair competition among companies, caused by the poor control in funding projects with EU funds in order some companies to conquer huge market shares, based on corruption practices;**
- **missed opportunities in direct foreign investments as a result of the not fully constructed public infrastructure (respectively less jobs and less paid taxes to the budget);**

The so determined “social costs of the EU funds management and absorption” could be measured by different approaches:

**The first hypothesis, concerning the lower level of EU funds absorption**, could be measured by comparing the planned, contracted, paid and certified EU grants and taking into consideration the sum of the uncertified EU grants as well as the financial corrections made by the Managing Authorities to the beneficiaries.

At national level, this sum was mentioned in the previous chapter and for the period 2007-2015, it was 1.2 billion Euros. Taking into consideration that the correct period is 2007-2013, because in 2014 started the new programme period (2014-2020), which has its own financial resources, the direct annual financial loss for the society because of unabsorbed EU grants is 200 million Euros per year.

**The second hypothesis concerning the provision of public goods with lower quality** could be measured by the sum of the first hypothesis (1.2 billion. Euros). This sum could be sufficient for the construction of the entire missing infrastructure in Bulgaria in the field of environment and waters protection. In this way the citizens will receive public goods with better quality.

**The third hypothesis, concerning the infringements by EC for not fully constructed infrastructure** could be measured by the sum of the total infringements, caused by this inefficiency. For example, because of the inefficient absorption of the EU funds in the field of environment, Bulgarian government has not constructed the public infrastructure for waste management and treatments and because of that is given to Court by the European Commission.[15] It is possible a serious penalty to be levied to our country which in this case will be the social costs of the inefficient management of the EU funds for environment.

**The fourth hypothesis, concerning the lack of convergence** could be measured by the potential for increasing the values of GDP per capita during the period of EU funding. For example, for the period 2007-2015, according to the EUROSTAT database, the economic growth of Bulgaria, compared to that of Romania is 30% slower.[16] This means that the reported absorption of EU funds of 96% is incorrect or the constructed public infrastructure is with low quality and does not lead to the necessary economic growth and living standards for the society. In addition, the number of permanently migrating Bulgarians to member states with average or high GDP per capita means that they do not see real effect of the EU funds absorption.

**Fifth hypothesis, concerning the reallocation of national budget resources from areas which are under the jurisdiction of the national governments to areas entirely**

**funded by EU funds**, could be measured by decreasing the volume of financial resources for public services funding. If we take the calculated sum of inefficiency of 200 million Euros per year for the period 2007-2015 then this sum could be successfully used for funding of the health system in Bulgaria. It could be hypothetically accepted that these financial resources are reallocated for filling the deficits, caused by the ineligible costs, i.e. by the inefficient EU funds management.

**Sixth hypothesis, concerning increased taxes and fiscal burden because of the filling of the budget deficits, caused by the uncertified EU grants and the necessity of higher share of the national funding**, could be measured by the sum of the first hypothesis (1.2 billion Euros) and as a result of the classic tax multiplier The social cost will be determined by the distortions of the business cycles or not achieving the planned economic growth.

**Seventh hypothesis, concerning the increased budget expenditures to provide the inefficient public administration responsible for the management of EU funds**, could be measured by the increased cost control (more internal auditors, inspectors, experts in preliminary control, external auditors, various specialized departments for control in the Supreme Audit Institution and etc.). This will indicate that the main departments do not function efficiently and the complex control structure will also lead to inefficiency.

**Eight hypothesis, concerning unfair competition among companies, caused by the poor control in funding projects with EU funds in order some companies to conquer huge market shares, based on corruption practices** could be measured by the increase number of cases at the Commission for competitiveness protection, related to the market power of companies which gain public procurements funded by EU funds and there are many claims against them for inefficient implementation of the projects, which is a signal for corruption practices and influence peddling.

**Ninth hypothesis, concerning missed opportunities in direct foreign investments as a result of the not fully constructed public infrastructure** could be measured by the variations between the planned growth rate of the direct foreign investments as a result of the fully constructed public infrastructure by EU funds and their real rate. For example, some strategic investors preferred investing their financial resources in Romania rather than in Bulgaria, where the public infrastructure is much more efficient.

## **Conclusions**

The current study achieved two main goals. Firstly it proved that V4 BM model of Al-Debei and Avison (2010) could be successfully applied in the public sector, also in the field of EU funds management and absorption for the cohesion policy. Through this model are identified the weaknesses of the national strategic frame and measures for their development are proposed.

Secondly, the real level of EU funds absorption for Bulgaria was identified to be with 15% lower that the reported level by the government, which is a huge deviation.

On third place, the social costs, caused by the inefficient EU funds management and absorption for Bulgaria, are defined.

On fourth place, a conceptual model for measurement of the identified and defined social costs caused by the inefficient EU funds management and absorption for Bulgaria, is presented.

In spite of the presented statistical data and calculations of the social costs, a complete statistical analysis is not made.

The main objective of the current study is to identify and define the social costs caused by the inefficient EU funds management and absorption for Bulgaria in order to be supported the work of the public authorities for society awareness and increased public control.

Even conceptually defined high social costs caused by the inefficiency in this field, the public interest and control in Bulgaria are too low and formal. This leads to taxpayer's losses from other member-states caused by the migration flows, as a result of the lack of convergence and cohesion.

On fifth place, the current study contributes to development of the model for assessment and control of the operational programmes, which could be used by the European Commission offices.

The main objective of the research does not have to be accepted as maximum EU funds absorption, but as an opportunity efficient public services to be provided and construction of qualitative public infrastructure to be achieved. The EU funds absorption must be oriented towards better living standards of the society and competitiveness of the national economy in order cohesion and convergence to be achieved.

The failure and inefficient EU funds absorption in Bulgaria could discourage countries like FYROM, Turkey and Serbia in their ambition to become EU member-states. This could be perceived as a serious reason for deepening the researches in the field of efficient EU funds absorption and management.



The current study is only a concept for identification and measurement of the social costs, caused by the inefficient EU funds management and absorption and if it could raise discussion on this topic, it will be of great public interest.

## References:

1. Eurostat,  
<http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00115&plugin=1>, (19.11.2016)
2. Al-Debei, M. M., & Avison, D. (2010). Developing a unified framework of the business model concept. *European Journal of Information Systems*, 19(3), 359-376;
3. Paliova I., Lybek T. (2014), *Bulgaria's EU funds absorption: maximizing the potential*, IMF Working paper, WP/14/21, <http://www.ipa.gov-ernment.bg/sites/default/files/imf-eufunds.pdf> (20.11.2016)
4. Waterman, R. H., Peters, T. J., & Phillips, J. R. (1980). Structure is not organization. *Business Horizons*, 23(3), 14-26
5. Nozharov Sht. (2014). Model of Effective Management of Bulgarian Public Administration Managing EU Funds. *Economic Alternatives*, Issue 4 EN, (64-77), ISSN: 1312-7462
6. KPMG .(2016) . "EU Funds in Central and Eastern Europe – Progress report 2007–2015",  
<https://assets.kpmg.com/content/dam/kpmg/pdf/2016/06/EU-Funds-in-Central-and-Eastern-Europe.pdf> , (Accessed on 20.11.2016)
7. Parliament of the Republic of Bulgaria. (2016) „Annual report concerning the strike balance of programmes, co-funded by EU funds and of the countries from the European Economic Area for the period 2007 – 2013, as well as progress made in the programmes from the period 2014 – 2020“, Commission in European issues and control of the EU funds, pp.2-5,12 (in Bulgarian)
8. Ministry of environment and waters. (2013). „Appendix 1 – Information about the ecologic assessment of preliminary regional master plan for water and sanitation in Veliko Tarnovo, assigned by Ministry of regional development“, pp.31 and 40 (in Bulgarian), <http://registers.moew.government.bg/eo> , (accessed on 20.11.2016)
9. Council of Ministers (2015), news (in Bulgarian)  
<http://www.government.bg/cgi-bin/e-cms/vis/vis.pl?s=001&p=0212&g> ,(accessed on 20.11.2016)
10. Ministry of environment and waters. (2007). Guide for the fulfillment of Operational programme “Environment 2007-2013”, CCI No: 2007BG161PO005, (in Bulgarian) web: <http://www.eufunds.bg/>, (accessed on 20.11.2016)

11. Ministry of Transport. (2007) .Procedure guide for management and fulfillment of Operational programme “Transport”,(in Bulgarian) ,web: <http://www.optransport.bg/page.php?c=140>, (accessed on 20.11.2016)
12. (GIZ) Deutsche Gesellschaft für Internationale Zusammenarbeit - Representation in Brussels,(2014) <http://insideurope.eu/taxonomy/term/167>, (accessed on 18.05.2015)
13. Council of Ministers of Republic of Bulgaria. (2011). National Reforms Programme 2011-2015, Decision 241 of the Council of Ministers April, 14<sup>th</sup> 2011 (in Bulgarian), web: <http://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=762>, (accessed on 20.11.2016)
14. President of the Republic of Bulgaria. (2016). Speech of the president during a session of the Parliament of Republic of Bulgaria, March, 18<sup>th</sup> 2016, (in Bulgarian), web: <https://www.president.bg/news3096/obrashtenie-na-darzhavniya-glava-rosen-plevneliev-kam-43-oto-narodno-sabranie.html> , (accessed on 20.11.2016)  
Note: the same information is presented also by the Council of Ministers of Republic of Bulgaria
15. EC. (2014). Environment: Commission takes Bulgaria to Court over illegal landfills, 23.01.2014  
[http://europa.eu/rapid/press-release\\_IP-14-47\\_en.htm](http://europa.eu/rapid/press-release_IP-14-47_en.htm) ,(accessed on 20.11.2016)
16. Eurostat,  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_pc&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_pc&lang=en), (accessed on 20.11.2016)

## Подход за анализ и оценка на сивата икономика в хранителната промишленост

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**Abstract:** *One of the forms of unfair competition is shadow economy. The estimation of shadow economy size is a challenge for modern science. The analysis is hard to make due to the complexity of the manufacturing processes, which are highly specific on account of the nature of the products manufactured. In this paper, the author regarded the shelf life of products as a factor that could not be 'bypassed' or hidden by the manufacturer. On this basis, an approach was suggested for the assessment, analysis and control of the concealment of revenue in the food, pharmaceutical and other sectors of economy.*

**Key words:** *current assets, rate of turnover*

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## **I. Подход за анализ и оценка на сивата икономика в хранителната промишленост**

### **Въведение**

Глобалните и радикални промени, с които човечеството навлезе в XXI век засягат всички сфери и области на икономиката, социалния живот, като поставят нови предизвикателства свързани с конкуренцията и конкурентоспособността на бизнес субектите. Несъмнено предизвикателствата свързани с тези промени засягат и възможностите за повишаване конкурентоспособността на хранителната промишленост в България. Проблемът с повишаването и запазване на фирмената конкурентоспособност заема централно място и е от първостепенно значение, защото е важен елемент от националната конкурентоспособност и е особено актуален за фирмите от хранителния сектор. В последните години теорията отчита огромното значение на проявите на нелоялна конкуренция. Едно от основните проявления на нелоялната конкуренция е **сивата икономика**.

**Целта** на настоящата публикация е кратко изследване на проблемите свързани с нелоялната конкуренция, както и подход за анализ на предприятията от хранителната промишленост за оперирането им в сивият сектор.

### **Изложение**

Оценката размера на сивата икономика е предизвикателство за съвременната наука. Трудността на анализа произтича от сложността на производствените процеси, които имат строга специфичност, свързана с характера на произвежданите продукти. За разрешаването проблема със сивата икономика са разработени множество методики на основата на най-различни подходи:

1. *Метод на отклонението на дохода от разхода.*
2. *Монетарен подход*
3. *Метод на основата на потребеление на ел. енергия.*
4. *Метод на отклонение на реалната от официалната заетост.*
5. *Метод на анкетното наблюдение и др<sup>2</sup>.*

Подходът за анализ на предприятието, трябва да е максимално доближен до оперативната му дейност на базата на годишните счетоводни отчети от една страна (чрез счетоводния отчет фирмите прикриват своите доходи), а от друга, да се съпоставят с особенностите на технологията на производство, които не могат да бъдат “заобиколени” или прикрити от производителя. Акцентът на анализа е върху

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<sup>2</sup> <http://www.sliven.bg/doc/Announ/04>

практиката на прикриване на приходите, чрез завишаване разходите за производство<sup>3</sup>. Това предприятията осъществяват, като декларират по-висока цена на закупените суровини, промяна на разходният норматив за производството на продукти, чрез манипулиране методите за отчитане на разходите, методи за калкулиране и др. Груповият метод за отчитане на разходите се прилага при производството на сходни продукти, като се открива т.нар. обща аналитична сметка.<sup>4</sup> Например консервните предприятия произвеждат богат набор от продукти, като много от тях са със сходна план сметка за производство и се различават единствено по цената на суровината (вишни, череша, кайсии и др.). Обща аналитична сметка се открива отделно за компоти, натурални сокове, сушени продукти и др. Чрез тези методи за изчисляване на себестойността е много трудно да се установят реалните разходи за производство на продуктите. Нужно е разработването на подход съобразен със спецификата на производствената дейност на хранителните предприятия. Същността на производството на предприятията от хранителния сектор е производство на продукт, който е със срок на годност. Усилията на предприятието са реализация на готовата продукция в този времеви коридор, защото при неговото изтичане хранителни продукти не могат да се преоценят, а трябва да се бракуват поради вредното им въздействие върху здравето на потребителя.<sup>5</sup> Ето защо времето за измерване на реализацията на хранителния продукт, трябва да е съпостави спрямо срокът на годност ( $T_g$ ). Релацията между срокът на годност на продукта и ефективността на дейността на предприятието се проявява най-добре при ефективността на обращение на краткотрайните активи. Показателят за измерване времетраенето на един оборот на КА:

- *Време за обращение на краткотрайните активи (КА):*

$$t_{об} = \frac{КА_{г}}{Пр} \times 360,$$

*Където:*

$t_{об}$  - време за обращение на КА

$КА_{г}$  - среден размер на средствата заангажирани в КА (лв)

Пр - приходи от продажби (лв)

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<sup>3</sup> Динев Д. "Икономическите измами", Част втора, Институт на експерт проверителите на измами, София 2012

<sup>4</sup> НСС

<sup>5</sup> [lex.bg/laws/ldoc/2134685185](http://lex.bg/laws/ldoc/2134685185)

360 - период на обръщаемост (тримесечие, шестмесечие, деветмесечие или година)<sup>6</sup>

За изложението на подхода се използва този показател.

Изчисляването на времето на обръщение на КА при производството на хранителни продукти спрямо календарното време е неточно, защото:

- не дава информация на кой етап от срока на годност е реализиран продукта
- резултатите въвеждат в заблуда спрямо трайността на продукта.\*

Ето защо предлагам следния подход. За оценка дейността на предприятието на база обръщаемост на активите е нужно въвеждането на следните времена за реализация на продукцията:

### **Минимално време за реализация на продукцията (OT<sup>M</sup>).**

Оперативното минимално време за реализация на продукцията е *пределното времето за реализация, нужно за осигуряване достъпът на хранителния продукт до крайния потребител в приемлив за него срок на годност и едновременно с това се запази рентабилността на производствения процес.* За определяне на оперативното минимално време съществуват няколко варианта:

Първият е, чрез експертно становище на производители, търговци, експерти или анкетно проучане включващо и потребителите за всеки един отделен продукт.

В съвременните пазарни условия много от големите дистрибуторски фирми налагат на производителите изкупуване на готовата продукция при „изтекъл” срок на годност до 50% <sup>7</sup>. Това е вторият подход:  $OT^M = T_2 \times 50\% \Rightarrow OT^M = T_{1об}^M$ ,

Където:

$T_{1об}^M$  - минимално допустимо времетраене на един оборот на КА

### **Фактическо време за реализация на продукцията и фактически брой обороти.**

Фактическото време за реализация на продукцията се определя от счетоводните отчети и се определя, чрез формулата за времетраене на един оборот на КА на стр.2 ( $T_{1об}^{\phi}$ ). Определянето на фактическият брой обороти:

$$Br_{КА}^{\phi} = \frac{\text{отчет.период}}{T_{1об}^{\phi}},$$

Където:

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<sup>6</sup> Ганчев Д. „Икономика на предприятието”, УИ „Васил Априлов” Габрово, 2015

\* Последната актуализация на БДС е през 1991г. В момента не е действащ, но не е отменен, т.е. може да служи за опорна точка за представяне на подхода.

<sup>7</sup> Мнения споделени при лични контакти на авторът с производители и търговци

$Br_{KA}^{\phi}$  - фактически брой обороти за отчетния период.

Производствения процес, трябва да има своята икономическа логика изразяващ се в минимално допустима ефективност. Минимално допустимата ефективност от своя страна се „опира” на няколко фактора, един от които е „незаобиколим” – трайността на продукта! Ето защо, както за определяне ефективността на дейността на предприятието, така и за опериране в сивия сектор е нужно извеждането на показател дефиниращ този незаобиколим фактор. Разглеждането на трайността на продукта, като времеви коридор за реализацията позволява да се изведе такъв показател, който „налага” строго определена времева рамка. За да е обективен анализа на предприятията и съответно да се оцени всеки един елемент на КА, които имат собствено времетраене на оборота е нужно времето за реализация да се пречупи през призмата на трайността на продукта. Единствено минимално допустимото време за реализация на продукта е определено на основата на годността и съответно е незаобиколим фактор от страна на производителите. На основата на тези изводи предлагам подход, **чрез редуциране на минимално допустимото време за реализация на продукцията. Целта е намаляване времевата дистанция с фактическото време. Замисълът на подхода, е чрез симулирано намаляване на минимално допустимото време за реализация на продукцията да се компенсират скритото повишаване на разходите от страна на производителя.** Определяне на редуцираното минимално допустимо времетраене на един оборот на КА, е чрез следната формула:

$$T_{об}^{PM} = T_{об}^M - (T_{об}^M \times K_{\%})$$

Където:

$T_{об}^{PM}$  - редуцирано минимално допустимо времетраене на един оборот на КА

$K_{\%}$  - коригиращ коефициент

Редуцирането на минималното време на брой бороти на КА не е константна величина, а търпи промяна в зависимост от конюнктурата на икономическата реалност за съответната държава, от промяната на всички фактори, които оказват положително или отрицателно влияние върху дела на сивата икономика. **Степента на редуциране, трябва да е съобразен с делът на сивия сектор в икономиката на съответната държава.** Данните на различните организации за степента на сива икономика са твърде противоречиви, като разликата понякога е в пъти. В България различните източници сочат разпространение на сивата икономика от „15 -16%, до 40%. Според... социалните партньори и браншовите организации в някои отрасли размерът на сивата икономика

достига 89-90%”.<sup>8</sup> Официалните проучвания сочат, че делът на сивият сектор в БВП на България е около 32%<sup>9</sup>. Определният процент е средна стойност за икономиката на страната, ето защо е нужно диференциране на анализа по отрасли. Конкретно за хранителният отрасъл степента на натурална икономика оказва влияние върху фирмите производители. Причините за домашно производство са не само икономически, но и социално-психологически и е трудно да бъдат ограничени сред населението. Независимо, че съществуват миграционни процеси от периферията към столицата и по-големите градове и свързаното с това обезлюдяване на селата, количеството на домашно произведена продукция остава сериозна бариера за хранителната ни промишленост.<sup>10</sup> Ето защо смятам, че степента на натурална икономика също трябва да се вземе предвид при определяне процента на редуция на времето.

### **Алгоритъм за определяне коефициента за опериране в сивия сектор на показателите**

Алгоритъмът на изследване включва определяне броя обороти за редуцирано минимално допустимо време и фактическо:

1. Определяне фактическото времетраене на един оборот на КА -  $T_{1об}^{\phi}$
2. Определяне минимално допустимото време за реализация на продукцията.

Минимално допустимото време е минимално допустимото времетраенето на един оборот на КА -  $T_{1об}^m = OT^m$

3. Определяне редуцираното минимално допустимо време:

$$OT^{pm} = OT^m - (OT^m \times Kk_{\%}),$$

Минималното редуцирано време е минимално редуцираното времетраене на един оборот на КА:

$$T_{1об}^{pm} = OT^{pm}$$

$Kk_{\%}$  - коригиращ коефициент

4. Изчисляване броят обороти за фактическо време:

$$Br_{КА}^{\phi} = \frac{отчет.период}{T_{1об}^{\phi}},$$

Където:

<sup>8</sup> Ченгеларова Е.сп.Наука, кн.6 / 2011 г. том XXI , издания на СУБ

<sup>9</sup> <http://www.bia-bg.com/service/view/12945>

<sup>10</sup> Иванов И, Тошев Д.”Натуралната икономика и нейната тежест върху стопанския живот в България”. СУБ-Пловдив, 2015 г.

$Br_{KA}^{\phi}$  - фактически брой обороти

5. Изчисляване стойността на един фактически оборот

$$T_{1об}^{cm\phi} = \frac{KA}{Br_{KA}^{\phi}},$$

Където:

$T_{1об}^{cm\phi}$  - стойността на един фактически обороти

6. Определяне броят обороти за редуцирано минимално допустимо време:

$$Br_{KA}^{pm} = \frac{\text{отчет.период}}{OT^{pm}}$$

Където:

$Br_{KA}^{pm}$  - редуциран минимално допустим брой обороти

7. Определяне стойността на редуцираните минимално допустими брой обороти:

$$KA^{pm} = T_{KA}^{cm\phi} \times Br_{KA}^{pm}$$

Където:

$KA^{pm}$  - стойността на КА за редуциран минимално допустим брой обороти

8. Всеки отделен елемент на КА в зависимост от дяловото си участие има различна тежест за опериране в сивия сектор. Материалните запаси и краткосрочните вземания например имат много по-голяма тежест от останалите елементи на КА, следователно и за опериране в сивия сектор. Това трябва да намери отражение, чрез допълнителна редукция на стойността на минимално редуцираните показатели, като чрез отношението между стойността на показателя и стойността на КА се извежда индивидуален редуциран показател:

$$P^{up} = P^{mp} + \left( P^{mp} \times \frac{P^{mp}}{KA} \right),$$

Където:

$P^{up}$  - стойността на индивидуално редуцираният показател

$P^{mp}$  - стойността на минимално редуцираният показател

9. Определяне коефициента за опериране в сивия сектор на КА:

$$K_{KA}^{cc} = \frac{P^{up}}{KA^{\phi}},$$

Където:

$K_{KA}^{cc}$  - коефициента за опериране в сивия сектор на КА.

$P^{up}$  - стойността на индивидуално редуцираният показател

Коефициентът за опериране в сивия сектор, трябва да е единица или по-голям от единица. Показателите парични средства, краткосрочни инвестиции, разходи за бъдещи периоди, краткосрочни задължения се определят, чрез следният подход:

- Определяне стойността на показателя от отчета на предприятието
- Известна е стойността на показателя за оперативния брой обороти, известни са оборотите за минимално допустимото време за реализация, на принципа на просто тройно правило се определя минималната стойност на показателя.
- Определяне стойността на показателя за редуцираното мин. допустимо време:

$$P^{pm} = P^m - (P^m \times Kk_{\%}),$$

Където:

$P^m$  - стойността на изследвания показател за минимално допустимото време

$P^{pm}$  - стойността на показателя за редуцираното минимално допустимо време

Следва изчисляване стойността на индивидуално редуцираният показател

Всички елементи на КА със собствен цикъл на обращение се определят по този алгоритъм (виж таблица №1, стр.8).

**Таблица № 1**

показатели	Коефициент за опериране в сивия сектор
ОК	$K_{OK}^{cc} = \frac{OK^{um}}{KA^{\phi}}$
МЗ	$K_{M3}^{cc} = \frac{M3^{um}}{KA^{\phi}}$
КВз	$K_{B3}^{cc} = \frac{KB3^{um}}{KA^{\phi}}$
Тзад	$K_{T3ad}^{cc} = \frac{T_{3ad}^{um}}{KA^{\phi}}$
Пс	$K_{Ps}^{cc} = \frac{Ps^{um}}{KA^{\phi}}$
Рбп	$K_{Pbn}^{cc} = \frac{Pbn^{um}}{KA^{\phi}}$
Ки	$K_{Ki}^{cc} = \frac{Ki^{um}}{KA^{\phi}}$
КЗ	$K_{K3}^{cc} = \frac{K3^{um}}{KA^{\phi}}$

## Коефициенти за опериране в сивия сектор

### Ликвидност

Един от показателите за оценка финансовото състояние на производственото предприятие е чрез ликвидността. Ликвидността е „Количественната характеристика на способността на предприятията да изплащат текущите си задължения с наличните краткотрайни активи (без разходи за бъдещи периоди).”<sup>11</sup> В зависимост от това, кои активи са включени различаваме следните видове<sup>12</sup>:

$$K_{ол} = \frac{КА}{КЗ}, K_{бл} = \frac{КВз + Ки + Пс}{КЗ}, K_{нл} = \frac{Ки + Пс}{КЗ}, K_{ал} = \frac{Пс}{КЗ},$$

Където:

$K_{ол}$  - коефициент на обща ликвидност,  $K_{бл}$  - коефициент на бърза ликвидност,  $K_{нл}$  - коефициент на незабавна ликвидност,  $K_{ал}$  - коефициент на абсолютна ликвидност,  $КА$  - краткотрайни активи,  $МЗ$  материални запаси,  $КВз$  - краткосрочни вземания,  $Пс$  - парични средства,  $Ки$  - краткосрочни инвестиции,  $КЗ$  - краткосрочни задължения.

Определянето на ликвидността по новия подход включва определянето на ликвидността за фактически и редуцирани минимално допустими стойности:

$$K_{ол}^{рм} = \frac{КА^{рм}}{КЗ^{рм}}; K_{бл}^{рм} = \frac{КВз^{рм} + Ки^{рм} + Пс^{рм}}{КЗ^{рм}}; K_{нл}^{рм} = \frac{Ки^{рм} + Пс^{рм}}{КЗ^{рм}}; K_{ал}^{рм} = \frac{Пс^{рм}}{КЗ^{рм}}$$

$$K_{ол}^{\phi} = \frac{КА^{\phi}}{КЗ^{\phi}}; K_{бл}^{\phi} = \frac{КВз^{\phi} + Ки^{\phi} + Пс^{\phi}}{КЗ^{\phi}}; K_{нл}^{\phi} = \frac{Ки^{\phi} + Пс^{\phi}}{КЗ^{\phi}}; K_{ал}^{\phi} = \frac{Пс^{\phi}}{КЗ^{\phi}}$$

Изменението на коефициентите на ликвидност между редуцираните минимални и фактически стойности определят степента за опериране в сивия сектор на проучваното предприятие, като стойността трябва да е отрицателна:

$$\Delta K_{ол} = K_{ол}^{\phi} - PK_{ол}^{рм} \quad \Delta K_{бл} = K_{бл}^{\phi} - PK_{бл}^{рм}$$

$$\Delta K_{нл} = K_{нл}^{\phi} - PK_{нл}^{рм} \quad \Delta K_{ал} = K_{ал}^{\phi} - PK_{ал}^{рм}$$

### Алгоритъм за определяне ефективността на обращение на КА

1. Определяне фактическото времетраене на един оборот на КА
2. Определяне минимално допустимото време за реализация на продукцията.

Минимално допустимото време е минимално допустимото времетраенето на един оборот на КА -  $T_{КА}^м = OT^м$

3. Изчисляване броят обороти за фактическо време:

<sup>11</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014 (стр. 197)

<sup>12</sup> [http://efpages.blogspot.bg/2014/12/blog-post\\_94.html](http://efpages.blogspot.bg/2014/12/blog-post_94.html)



$$Br_{KA}^{\phi} = \frac{\text{отчет.период}}{T_{KA}^{\phi}},$$

Където:

$Br_{KA}^{\phi}$  - фактически брой обороти

4. Определяне броят обороти за минимално допустимо време

$$Br_{KA}^m = \frac{\text{отчет.период}}{OT^m},$$

Където:

$Br_{KA}^m$  - минимално допустим брой обороти

5. Изчисляване стойността на един фактически оборот

$$T_{KA}^{cm\phi} = \frac{KA}{Br_{KA}^{\phi}},$$

Където:

$T_{KA}^{cm\phi}$  - стойност на един фактически обороти

6. Определяне стойността на минимално допустимият брой обороти

$$Br_{KA}^{cm\phi} = T_{KA}^{cm\phi} \times Br_{KA}^m,$$

Където:

$Br_{KA}^{cm\phi}$  - стойност на минимално допустимият брой обороти

7. Определяне коефициента на ефективност на обращение на КА:

$$K_{KA} = \frac{Br_{KA}^{cm\phi}}{Br_{KA}^{\phi}} = \frac{KA^m}{KA^{\phi}},$$

Където:

$K_{KA}$  - коефициента на ефективност на обращение на КА

$KA^m, KA^{\phi}$  - стойност на показателя за минимално допустимо и фактическо време

За определяне конкурентоспособността на предприятията

Чрез този алгоритъм се определят стойността на показателите със собствен цикъл на обращение. Коефициентите за ефективност на паричните средства, краткосрочни инвестиции, разходи за бъдещи периоди и коефициент на тежест на краткосрочните задължения се определят по-горе описаният начин следния начин на стр.7

- Определяне коефициентът на ефективност на показателя:

$$K_{\Pi} = \frac{\Pi^M}{\Pi^{\phi}},$$

Където:

$K_{\Pi}$  - коефициентът на ефективност на изследвания показател

$\Pi^M, \Pi^{\phi}$  - стойността на показателя, съответно за минимално допустим и фактически брой обороти

## II. Методология за анализ и оценка ефективността на предприятията от хранителния сектор

Целта на методологията е да изрази релацията между производството на безопасни за здравето на потребителя храни и ефективността на обръщаемост на активите. Подхода позволява точна оценка на моментното ниво на продуктовата конкурентоспособност на предприятията. В производствената си дейност предприятията използват отделна аналитична сметка на продуктите за изчисляване себестойността. Това се налага поради голямото асортиментно разнообразие. Спецификата е в сходството не само на общият разходен норматив за отделните продукти, но и сходната трайност на продукта. Ето защо при оценка времето на един оборот на КА за определен продукт със срок на трайност не трябва да се използва общата стойност от отчета на предприятието на КА и неговите елементи, защото в тези стойности са включени всички произведени продукти, които са с различна трайност. Това ще доведе до грешна стойност на крайният резултат. Изследване дейността на фирмите от хранителния бранш се извършва в динамика, за минимум три отчетни периода. За да се извърши точен анализ на нивото на конкурентоспособност, определеното минимално допустимо време за реализация на продукцията, трябва да е еднакво по времетраене за всички изследвани предприятия:

1. Стойността на показателите на продуктите за отчетния период са изчислени, чрез горепосоченият алгоритъм: от счетоводните отчети на анализираното предприятие -  $MZ_{1T}^M, KBZ_{1T}^M, PC_{1T}^M, Ku_{1T}^M, Pbn_{1T}^M \div MZ_{1T}^{\phi}, KBZ_{1T}^{\phi}, PC_{1T}^{\phi}, Ku_{1T}^{\phi}, Pbn_{1T}^{\phi}$ , като 1 е продукт или група продукти отчитащи се на отделна аналитична сметка, а T е трайността.
2. В икономическата практика тежестта (значимостта) на показателите се определят от мениджърите на предприятията или от експерти. За определяне значението на показателите се използват и анкетни прокарвания включващи и потребителите. За да се избегне субективния фактор притеглящите тегла се определят, чрез съотношението

между стойностите на елементите на КА и стойността на КА. Ако приема, че КА е единица, то сумата от притеглящите тегла на елементите на КА е също единица. Определянето на притеглящите тегла зависи от спецификата на производството. Така например при производство на хранителни продукти с една и съща суровина, но краен продукт с различна трайност (млечна промишленост) в знаменателя КА е един и същ, докато при производство на хранителен продукт или група продукти отчитащи се на отделна аналитична сметка, различна технологична обработка, но със сходна трайност за определянето на притеглящите тегла използващи различни по стойност суровини и материали в знаменателя  $КА^{-\text{вн}}$  са различни.

3. Определяне на притеглените стойности на показателя за съответния продукт, е чрез произведението между стойността на показателя и притеглящите тегла за минимално допустимо и фактическо време.

4. Комплексната оценка за анализираният период за всеки продукт или група продукти за минимално допустимо и фактическо време се получава, чрез сумата от притеглените тегла на съставлящите я елементи, разделена на техния брой:

5. Общата комплексната оценка за произведената продукция за отчетния период се получава, чрез сумата от комплексните оценки на продуктите за минимално допустимо и фактическо време разделена на техният брой

6. Крайната комплексна оценка на изследваното предприятие е сумата от общите комплексни оценки разделени на броят отчетни периоди.

**Таблица № 2**

№ продукт	с-ст на показател $П^{м/ф}$ минимално и фактически	притег. тегло $ТП^{м/ф}$ минимално и фактически	притеглена с-ст $ПС^{м/ф}$ минимално и фактически	комплексна оценка за всеки един продукт
№ 1	$П^1$	$П^{1Т}$	$П_{СТ}^1$	$K_1 = \frac{ПС_{МЗ}^1 + ПС_{Вз}^1 + ПС_{Пс}^1 + ПС_{Ку}^1 + ПС_{р\text{бн}}^1}{5}$
№ 2	$П^2$	$П_2^Т$	$П_{СТ}^2$	$K_2 = \frac{П_{МЗ}^2 + П_{Вз}^2 + П_{Пс}^2 + П_{Ку}^2 + П_{р\text{бн}}^2}{5}$
-	-	-	-	-

№N	$\Pi^N$	$\Pi_N^T$	$\Pi_{CT}^N$ $\Sigma = 1$	$K_N =$ $\frac{\Pi_{M3}^N + \Pi_{B3}^N + \Pi_{Пс}^N + \Pi_{Ку}^N + \Pi_{Рбн}^N}{5}$
<b>Общата комплексната оценка</b>				$OK_1 = \frac{K_1 + K_2 + \dots + K_N}{N}$
<b>Крайната комплексна оценка</b>				$KKO_K = \frac{OK_1 + OK_2 + \dots + OK_N}{K}$
<b>Ефективността на производствената дейност</b>				$E\phi = \frac{KKO_K^M}{KKO_K^\phi}$

### Определяне ефективността на дейността

7. За определяне ефективността на производствената дейност, резултатите получени за минимално допустимо и фактическо време се съпоставят. За положителна се смята тенденцията на намаляване.

### Методология за определяне вероятността за опериране в сивия сектор на предприятия от хранителната промишленост

Последователността на етапите на методологията за опериране в сивия сектор са идентични с етапите за определяне ефективността на КА.

1. Стойността на показателите на продуктите за отчетния период са изчислени, чрез горепосоченият алгоритъм: от счетоводните отчети на анализираното предприятие -  $M3_{1T}^{PM}, KB3_{1T}^{PM}, Пс_{1T}^{PM}, Ку_{1T}^{PM}, Рбн_{1T}^{PM} \div M3_{1T}^{\phi}, KB3_{1T}^{\phi}, Пс_{1T}^{\phi}, Ку_{1T}^{\phi}, Рбн_{1T}^{\phi}$ , като **1** е продукт или група продукти отчитащи се на отделна аналитична сметка, а **T** е трайността.

2. Всеки отделен елемент на КА има индивидуална тежест за опериране в сивия сектор. За определяне индивидуалната тежест за всеки отделен елемент на КА е нужно получената стойност за редуцираният брой обороти да се умножи по индивидуалният коефициент за опериране в сивия сектор. Индивидуалният коефициент за опериране в сивия сектор се определя, чрез взимоотношението между редуцираната стойност на показателя и стойността на КА:

$$\Pi^{up} = \frac{\Pi^{PM}}{КА}$$

Където:

$\Pi^{up}$  - индивидуална редуцирана стойност на изследваният елемент на КА

$\left[ \frac{\Pi^{рм}}{КА} \right]$  - индивидуален коефициент за опериране в сивия сектор

Полученият коефициент е притегленото тегло на анализираният елемент на КА.

3. Определяне на притеглените стойности на показателя за съответния продукт, е чрез производението между стойността на показателя и притеглящите тегла за индивидуална редуцирана и фактическа.

4. Комплексната оценка за анализираният период за всеки продукт или група продукти за индивидуална редуцирана стойност и фактическа се получава, чрез сумата от притеглените тегла на съставлящите я елементи, разделена на техния брой:

5. Общата комплексната оценка за произведената продукция за отчетния период се получава, чрез сумата от комплексните оценки на продуктите разделена на техният брой.

6. Крайната комплексна оценка на изследваното предприятие е сумата от общите комплексни оценки разделени на броят отчетни периоди.

7. Определяне степента на опериране в сивия сектор, е чрез съпоставянето между фактическата и индивидуално редуцирана комплексна, обща или крайна комплексна оценка за всеки един продукт или група продукти отчитащи се на отделна аналитична сметка Индикация за опериране в сивия сектор е при коефициент единица или по-голям от единица

Изчисляването на крайните комплексни оценки на проучваните предприятия за определяне на ефективността на дейността им, а също и вероятността за опериране в сивия сектор се реализира на таблица №3, стр. 14

**Таблица № 3**

№ продукт	с-ст на показател $\frac{\Pi^{рм}}{\phi}$ за редуцирани и фактически	притег. тегло $\frac{ТП^{ур}}{\phi}$ за индивидуално редуциран и фактически	притеглена с-ст $\frac{ПС^{ур}}{\phi}$ индивидуално редуциран и фактически	комплексна оценка за всеки един продукт
№ 1	$\Pi^1$	$\Pi^{1T}$	$\Pi_{CT}^1$	$K_1 = \frac{ПС_{МЗ}^1 + ПС_{Вз}^1 + ПС_{Пс}^1 + ПС_{Ки}^1 + ПС_{рбн}^1}{5}$

№ 2	$\Pi^2$	$\Pi_2^T$	$\Pi_{CT}^2$	$\frac{K_2 = \Pi_{MB}^2 + \Pi_{B3}^2 + \Pi_{Пс}^2 + \Pi_{Ку}^2 + \Pi_{рбн}^2}{5}$
-	-	-	-	-
№ N	$\Pi^N$	$\Pi_N^T$	$\Pi_{CT}^N$	$\frac{K_N = \Pi_{MB}^N + \Pi_{B3}^N + \Pi_{Пс}^N + \Pi_{Ку}^N + \Pi_{рбн}^N}{5}$
			$\Sigma = 1$	
<b>Общата комплексната оценка</b>				$OK_1 = \frac{K_1 + K_2 + \dots + K_N}{N}$
<b>Крайната комплексна оценка</b>				$KKO_K = \frac{OK_1 + OK_2 + \dots + OK_N}{K}$
<b>Коефициент за опериране в сивия сектор</b>				$K^{cc} = \frac{KKO_K^{up}}{KKO_K^{\phi}}$

### Определяне вероятността за опериране в сивия сектор

#### Анализа на производствения процес на хранителното предприятие

##### Производствен процес.

Подходът за подобряване дейността на предприятията включва и оптимизиране управлението на ДА. При постъпване на суровините в производството се задвижват машините и съоразенията на предприятието. В процеса на производствената дейност дълготрайните активи (машинния парк) се изхабяват „материално и стойностно. Изхабяването изразява загуба на потребителска стойност, а амортизацията е стойностен израз на изхабяването”<sup>13</sup> За да се определят амортизационните отчисления е нужно да се определят нормите на амортизация, амортизационната стойност и амортизационната квота:

$$Ha = \frac{100}{Tg} ,$$

Където:

Ha – годишна норма на амортизация

Tg – срок на годност на даден актив в години

$$Ak = Ac \times Ha ,$$

Където:

Ak – сумата, която предприятието, трябва да начисли

<sup>13</sup> Пак там

Ас – отчетната стойност на ДМА

Според действащото законодателство начисляването на данъчната амортизация е уредено в чл.58, ал.1 и е в сила от 01.01.2008г

В контекста на новия подход предлагам амортизационните отчисления да следват естествения ход на производство, т.е. постъпване на суровината в производството - натоварване на ДМА. Според планирания брой на обороти, се планират и амортизационните отчисления на машинният парк ангажиран в производството на съответния продукт. Следователно нормата на амортизация и амортизационната квота по линията метод ще придобие следния вид:

$$Ha = \frac{100}{Br_{\text{ДА}}^{\phi}},$$

Където:

Ha – норма на амортизация

$Br_{\text{ДА}}^{\phi}$  – фактически брой обороти за целия амортизационен период.

Пример: Фирма произвежда един продукт, като за целта използва ДА на стойност 1000 лв. Фактическото време за реализация на произвеждания продукт е 28 дни, а минималното редуцирано време за реализация е 40 дни. Планираните обороти на активите са 5. Производството стартира на 01.01.

$$Ha = \frac{100}{Br_{\text{ДА}}^{\phi}} = \frac{100}{5} = 20\% \div Ak = Ac \times Ha = 1000 \times 20\% = 200$$

**Таблица № 4**

ОТ <sup>PM</sup>					ОТ <sup>Ф</sup>				
ОТ <sup>Ф</sup>	обороти	Ас лв	Н %	Ак лв.	ОТ <sup>М</sup> <sub>p</sub>	обороти	Ас лв.	Ha%	Ак лв.
01.01	1	1000	20	200	01.01.	1	1000	20	200
09.02	2	1000	20	200	29.01	2	1000	20	200
20.03	3	1000	20	200	26.02.	3	1000	20	200
29.04	4	1000	20	200	25.03.	4	1000	20	200
08.06	5	1000	20	200	22.04.	5	1000	20	200
			$\Sigma \approx$ <b>100</b>	$\Sigma$ <b>≈1000</b>				$\Sigma \approx$ <b>100</b>	$\Sigma$ <b>≈1000</b>

### **Брой амортизационни отчисления за редуцирано минимално и фактическо време**

Броят на амортизационните отчисления за фактическото време и редуцирано минимално време за реализация е даден на таблица №:4, стр.15. От данните се вижда, че предприятието не оперира в сивия сектор, защото при фактическото време изплащането е по-бързо от редуцирано минималното време

### **Анализ на производствения капацитет на предприятието за опериране в сивия сектор**

Производството в хранителната индустрия се движи в ограничена времева рамка – трайността на продукта, като минималното време за реализация на продукцията е долната граница за минималната рентабилност на производството. Трайността на продукта влияе на темпът на натоварване на машините и съоразенията. До сега се смяташе, че колкото броят на оборотите на КА е по-голям, толкова ефективността на обрацаемост е по-висока. Броят на оборотите не е признак за по-висока ефективност, защото при по-малка трайност оборотите са повече на брой, но се произвежда по-малко продукция, защото липсва „комфорта” на големият срок за реализация - големият срок предразполага и към повече произведена продукция.

Определянето на производствения капацитет (ПФК) на участъка, цеха или предприятието е:

$$ПФК = Бмс + Еф + Нпр ,$$

Където:

ПФК – производствен капацитет на фирмата

Бмс – средносписъчен състав на машините

Еф – ефективен фонд работно време

Нпр – норма на производителност на машините<sup>14</sup>.

**Релацията между подновяването на производствения процес и трайността на продукта е при определянето на ефективния фонд (Еф) работно време.**

Ефективният фонд се изчислява за прекъснат режим на работа:

$$Еф = Кф - (Тор + Тпр + Тнпр) ,$$

Където:

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<sup>14</sup> Пак там



Еф – ефективен фонд работно време

Кф – календарен фонд работно време

Тор – време за основен ремонт

Тнпр – време за технологични неизбежни прекъсвания

Тпр – почивни и пранични дни<sup>15</sup>

**За да се изрази зависимостта между трайността на продукта и подновяването на производствения процес е нужно ефективния фонд да се определят през призмата на трайността на продукта. Пряка зависимост от трайността имат броят на оборите на активите. Ето защо формулите за изчисляване на фонд работно време, трябва да се адаптират към броят на оборите на активите.**

За изчисляване ефективния фонд работно време за един оборот, ефективния фонд се разделя на дните в годината и се умножава по фактическо време за реализация:

$$E\phi_{1ob}^{\phi} = \frac{E\phi}{360} \times T_{1ob}^{\phi}$$

За определяне фактическия брой обороти ефективния фонд работно време за отчетния период се разделя на ефективен фонд работно време за един оборот на активите за продукт:

$$Br_{E\phi}^{\phi} = \frac{E\phi}{E\phi_{1ob}^{\phi}}$$

Пример:

Предприятие от хранителния сектор за изминалия отчетен период за производството на продукт **А** има КА на стойност 2300 хил.лв. и приходи в размер на 5400 хил.лв. Производствения цикъл трае 24 ч. Фирмата е планирала: работа на една машина с достигане на проектната производителност от 100 единици на час; при петдневна работана седмица и неработни дни 110 (в това число почивни и празнични), режим на работа три смени, като продължителността на една смяна е 8 ч.; време предвидено за капиталови ремонти – 6% от режимният фонд от време за работа на машината. Да се изчисли и съпостави количеството на произведена продукция за фактическото и редуцирано минимално време за реализация.<sup>16</sup>

- Определяне времетраенето на един оборот на КА:

<sup>15</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014

<sup>16</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014, Адаптиран вариант на задача

$$T_{106}^{\phi} = \frac{KA}{\text{приходи}} \times 360 \div T_{106}^{\phi} = \frac{2300}{5400} \times 360 \approx 154 \text{ дни}$$

- Определяне фактическия брой обороти на КА:

$$Br_{KA}^{\phi} = \frac{\text{отчет.период}}{T_{106}^{\phi}} = \frac{360}{154} = 2.33 \text{ об.}$$

- Определяне на минимално допустимото време за реализация

Ръководството на предприятието е решило с оглед икономическата конюнктура минимално допустимото време за реализация да е  $OT^M = 500$  дни. За оценка за опериране в сивия сектор минимално допустимото време се редуцира с 32%:

$$T_{106}^{PM} = T_{106}^M - (T_{106}^M \times 32\%) = 340 \text{ дни}$$

- Определяне на минималния брой обороти

$$Br_{об}^{PM} = \frac{\text{отчет.период}}{OT^M} = \frac{360}{340} = 1.05 \text{ об.}$$

- Количество произведен продукт A за фактическо време за реализация:

$$K\phi = 360 \times 24 = 8640 \text{ ч.}; P\phi = 6000 \text{ ч.}; E\phi = P\phi - (P\phi \times 6\%) = 6000 - 360 = 5640 \text{ ч.}$$

$$E\phi_{154} = \frac{5640}{360} \times 154 = 2412 \text{ ч.}$$

Ефективен фонд работно време за един оборот при фактическо време за реализация е 2412ч. За определяне на ефективния фонд работно време, получената стойност за един оборот се умножава по фактическия брой обороти:

$$E\phi_{154} = 2412 \times 2.33 = 5621 \text{ ч.}$$

- За отчетния период е произведена продукция:

$$ПФК_{154} = 1 \times 100 \times 5621 = 562100 \text{ брой продукти за един оборот}$$

- Количество произведен продукт A за редуцирано минимално време за реализация:

Ефективен фонд работно време за един оборот при фактическо време за реализация е 2412ч.

- За определяне на редуцираният минимален ефективния фонд работно време, фактическата стойност за един оборот се умножава по броя обороти за редуцирано минимално време:

$$E\phi_{380}^{PM} = 2412 \times 1.05 = 2532.6 \text{ ч.}$$

- За отчетния отчетния период е произведена продукция:

$ПФК_{380}^{PM} = 1 \times 100 \times 2532.6 = 253260$  брой продукти за един оборот:

- Оценката за опериране в сивия сектор, е чрез съпоставянето на:

$$K_A^{cc} = \frac{ПФК^{PM}}{ПФК^{\phi}} = \frac{253260}{562100} = 0.45,$$

Където:

$K_A^{cc}$  - коефициент за опериране в сивия сектор за производството на продукт A

### **Изводи:**

1. От формите на нелоялна конкуренция с най-голяма актуалност е сивата икономика, не само във вътрешно-икономически аспект, но и в контекста на членството на България в ЕС, защото води до увеличаване на вноската на страната ни в ЕС и до намаляване на помощите от ЕС за България, а от тук и до понижаване на конкурентоспособността. Независимо от личните ми убеждения, че акцентът към наказателните мерки, които преобладават в борбата със сивата икономика са неефективни, разработване на методики са актуални и навременни. Чрез този подход, който предлагам се измества ударението върху анализа на дейността на фирмите, като се взима предвид фактори, които не могат да се „заобиколят“ от производителите и не са анализирани до сега.
2. Анализът поставя въпросът за актуалността на БДС не само за производството на безопасни за здравето на потребителя храни, но и като времева рамка, в която е възможно да се определи оперирането в сивия сектор не само на предприятия от хранителния бранш, но и за всички сектори на икономиката, в които крайният продукт трябва да се унищожи след изтичане на трайността му.

### **Опасения:**

**Авторът има опасения, че ако се приеме този подход за анализ или неговия принцип, подхода ще се превърне в много опасно оръжие за разправа с икономически опоненти! Достатъчно е само да се повиши процентът на корекция за минимално допустимото време!**

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## Библиография:

1. Аврамов Й. "Корпоративни финанси", изд. Сиела, София 2008 г.
2. БДС 1991 г.
3. Ганчев Д. „Икономика на предприятието”, УИ „Васил Априлов” Габрово, 2015
4. Ганчев Д. "Ръководство за упражнения по Икономика на предприятието, Габрово 2014
5. Димитрова П., Василева Л. "Управление на риска и вземане на решения", София 2005 г.
6. Дончев Д. Велев Мл. Димитров Й. "Бизнесикономика", изд. СОФТТРЕЙД, София, 2003 г
7. Иванов И. "Алтернативен способ за анализ ефективността на обращение на краткотрайните активи в хранителните предприятия и неговите практически приложения", Международна научна конференция "Високи технологии. Бизнес. Общество", Боровец 2016 г.
8. Иванов, И., "Значение на скоростта на обръщаемост на краткотрайните активи за хранителната индустрия" Научна сесия „Техника и технологии, естествени и хуманитарни науки”, Пловдив 2015
9. Иванов И, Тошев Д. "Натуралната икономика и нейната тежест върху стопанския живот в България". СУБ-Пловдив, 2015 г.
10. Моллов Пл. „Качество на храните, рагулиране, контрол, управление”, София 2013
11. Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014
12. Попов Г., Маринова Ю. "Икономика и организация на фирмата", изд. „ГорексПрес”, София 2006
13. Смит А. „Богатство на народите” С, 1983
14. Христов В. "Корпоративни финанси, изд. ИМН Пловдив, 2007г.
15. Lex.bg/. Допълнителни разпоредби, §1, ал. 34
16. <https://bizanaliz.weebly.com/uploads/2/4/0/7/24079611/ikanaliz>
17. [efpages.blogspot.bg/2014/12/blog-post\\_94.html](http://efpages.blogspot.bg/2014/12/blog-post_94.html)
18. [lex.bg/laws/ldoc/2134685185](http://lex.bg/laws/ldoc/2134685185)
19. <https://bg.wikipedia.org/>

## Анализ и оценка ефективността на обръщаемост на краткотрайните активи на предприятия от хранителния сектор

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**Abstract:** *System HACCP is important for producers of food products and provides safety and quality of final product. The system is internationally recognized for risk analysis and avoiding errors during manufacturing process. These requirements do not exhaust entirely the problem about production and delivery of safe for health foods. Together with the introduction of durability as time corridor for realization displays new factor. This is expressed relation between safety and effectiveness of food manufacturing process.*

**Key words:** *current assets, rate of turnover*

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## I. Цел

Разрешаването на икономическите проблеми зависят от взаимовръзката между науката и практиката. Много често една от двете страни смята, че е определяща за развитието на икономиката за сметка на другата. Така например действия от страна на мениджърите в производствения процес се подминават от страна на науката и не се търси, както тяхното обяснение, така и опит да изясни, чрез математически модели тези действия. През последните години се наблюдава стремеж на производителите на храни да увеличат срока годност на продуктите. Този факт все още не е обяснен в дълбочина от икономическата наука. Целта на автора е да предложи по-ефективен анализ на ефективността на обръщаемост на краткотрайните активи свързан със срока на годност на хранителния продукт, чрез който се извършва по-добра оценка на разходите, приходите и сроковете за реализация на продукта.

## Изложение

Предлагам подход за анализ на хранителните предприятия, който разкрива възможности за повишаване ефективността на предприятия, а от друга отчита технологичните особености в производството. Пресечната точка между икономика и технология е **трайността на продукта**. *Спецификата на подхода се изразява в разглеждането на трайността на продукта, като времеви коридор за реализация.*<sup>2</sup> Същността на производството на предприятията от хранителния сектор е един краен продукт, който е със срок на годност. Срокът на годност е сред задължителната информация за храните, регламентирана в закона за храните, в частта етикетирание (чл. 7. алинея втора, чл.9, алинея първа, втора и трета, чл. 10, алинея първа)<sup>3</sup>. При производството на хранителни продукти производителите използват следните термини за обозначаване срока на годност – („срок на минимална трайност се обозначава с израза най-добър до..., когато в датата е посочен определен ден или годен за употреба до края на..., в останалите случаи.... Не се изисква да се посочи трайността на алкохолни напитки, вино, сол, оцет и др.... При бързо развалящите се храни се използва изразът използвай преди..., и се посочва датата”)<sup>4</sup>. При неговото изтичане хранителните продукти не могат да се преоценят, а трябва да се бракуват поради

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<sup>2</sup> Иванов,И.,„Значение на скоростта на обръщаемост на краткотрайните активи за хранителната индустрия” Научна сесия „Техника и технологии, естествени и хуманитарни науки”, Пловдив 2014

<sup>3</sup> lex.bg/laws/ldoc/2134685185

<sup>4</sup> Моллов Пл. „Качество на храните, рагулиране, контрол, управление”, София 2013

вредното им въздействие върху здравето на потребителя.<sup>5</sup> Ето защо при оценка ефективността на обръщение на КА на хранителното предприятие задължително трябва да се отчита фактора време, изразяващ се не само в календарно време – тримесечие, шестмесечие, деветмесечие и годишно, а и спрямо продължителността на годността на продукта. Релация се проявява най-добре, чрез **ефективността от ускоряване обръщаемостта на краткотрайните активи**. „Под скорост се разбира времето, през което оборотния капитал, ангажиран в краткотрайните активи, преминава през фазите на възпроизводствения цикъл”<sup>6</sup>. За определяне времето за обръщение на КА се използва следния показател:

*Време за обръщение на краткотрайните активи (КА):*

$$t_{об} = \frac{КА_{Г}}{Пр.} \times 360,$$

*Където:*

*t<sub>об</sub> - време за обръщение на КА*

*КА<sub>Г</sub> - среден размер на средствата заангажирани в КА (лв)*

*Пр. - приходи от продажби (лв)*

*360- период на обръщаемост (тримесечие, шестмесечие, деветмесечие или година)*

Трансформацията на КА може да се престава най-добре, чрез формулата:

*Пари – Стока – Пари'*

*„Първи стадий ....се закупуват средства за производство, втори стадий, извършващото се потребление на производствения процес на закупените фактори, трети стадий е завършващ...готовите продукти се реализират на пазара и се формират парични приходи.....по-големи от първоначално инвестиранте”<sup>7</sup>*

Изчисляване времето на обръщение на КА за производството на хранителни продукти спрямо календарното време е неточно, защото:

- не дава информация на кой етап от срока на годност е реализиран продукта
- резултатите въвеждат в заблуда спрямо трайността на продукта.\*

Ето защо предлагам следния подход. За оценка дейността на предприятието на база обръщаемост на активите е нужно въвеждането на следните времена за реализация на продукцията.

<sup>5</sup> lex.bg/laws/ldoc/2134685185

<sup>6</sup> Пак там (стр. 53)

<sup>7</sup> Ганчев Д. „Икономика на предприятието”, УИ „Васил Априлов” Габрово, 2014 (стр. 45)

\* Последната актуализация на БДС е през 1991г. В момента не е действащ, но не е отменен, т.е. може да служи, като опорна точка за представяне на подхода.

### Теоретично време за реализация на продукцията (ТТ).

Теоретичното време за реализация на продукцията е трайността на продукта.

$$TT = T_z,$$

Където:

ТТ – теоретично време за реализация на продукцията

Тг – трайността на продукта

Теоретичният минимален брой обороти се определя:

$$Br_{KA}^{T_m} = \frac{\text{отчет.период}}{T_z},$$

Където:

$Br_{KA}^{T_m}$  - теоретичен минимален брой обороти

### Минимално допустимо време за реализация на продукцията ( $OT^m$ ) и минимално допустим брой обороти

Оперативното минимално време за реализация на продукцията е *пределното време за реализация, нужно за осигуряване достъпът на хранителния продукт до крайния потребител в приемлив за него срок на годност и едновременно с това се запази рентабилността на производствения процес.*

За определяне на оперативното минимално време съществуват няколко варианта.

Първият е, чрез експертно становище на производители, търговци, експерти или анкетно проучане включващо и потребителите за всеки един отделен продукт или група продукти отчитащи се на отделна аналитична сметка.

В съвременните пазарни условия много от големите дистрибуторски фирми налагат на производителите изкупуване на готовата продукция при „изтекъл” срок на годност до 50% <sup>8</sup>. Това е втория подход:  $OT^m = T_z \times 50\% \div OT^m = T_{1KA}^m$

Където:

$T_{1KA}^m$  - минимално допустимото времетраене на един оборот на КА

Минимално допустимият брой обороти се определя, чрез отношението между отчетен период и минимално допустимото време за реализация:

$$Br_{KA}^m = \frac{\text{отчет.период}}{OT^m (T_{1об}^m)},$$

Където:

$Br_{KA}^m$  - минимално допустим брой обороти за отчетния период

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<sup>8</sup> Мнения споделени при лични контакти на авторът с производители и търговци



## Фактическо време за реализация на продукцията и фактически брой обороти.

Фактическото време е времетраенето на един оборот на КА ( $T_{1КА}^{\phi}$ ). Определянето на фактическият брой обороти:

$$Br_{КА}^{\phi} = \frac{\text{отчет.период}}{T_{1КА}^{\phi}},$$

Където:

$Br_{КА}^{\phi}$  - фактически брой обороти за отчетния период.

### Алгоритъм за определяне коефициента на ефективност на елементите на КА

1. Определяне фактическото времетраене на един оборот на КА
2. Определяне минимално допустимото време за реализация на продукцията.

Минимално допустимото време е минимално допустимото времетраене на един оборот на КА -  $T_{1КА}^m = OT^m$

3. Изчисляване броя обороти за фактическо време:

$$Br_{КА}^{\phi} = \frac{\text{отчет.период}}{T_{1КА}^{\phi}},$$

Където:

$Br_{КА}^{\phi}$  - фактически брой обороти

4. Определяне броя обороти за минимално допустимо време

$$Br_{КА}^m = \frac{\text{отчет.период}}{OT^m},$$

Където:

$Br_{КА}^m$  - минимално допустим брой обороти

5. Изчисляване стойността на един фактически оборот

$$T_{1КА}^{стф} = \frac{КА}{Br_{КА}^{\phi}},$$

Където:

$T_{1КА}^{стф}$  - стойност на един фактически оборот

6. Определяне стойността на минимално допустимият брой обороти

$$Br_{КА}^{стм} = T_{1КА}^{стф} \times Br_{КА}^m,$$

Където:

$Br_{КА}^{стм}$  - стойност на минимално допустимият брой обороти

7. Определяне коефициента на ефективност на обращение на КА:

$$K_{КА} = \frac{Br_{КА}^{стм}}{Br_{КА}^{стф}} = \frac{СКА^м}{СКА^ф},$$

Където:

$K_{КА}$  - коефициента на ефективност на обращение на КА

$СКА^м, СКА^ф$  - стойността на КА, съответно за минимално и фактическо време.

Чрез този алгоритъм се определят стойността на показателите със собствен цикъл на обращение. Коефициентите за ефективност на паричните средства, краткосрочни инвестиции, разходи за бъдещи периоди и коефициент на тежест на краткосрочните задължения се определят по следния начин:

- Определяне стойността на показателя от отчета на предприятието
- Определяне стойността на показателя за минимално допустимия брой обороти. Известна е стойността на показателя за оперативния брой обороти, известни са оборотите за минимално допустимото време за реализация, на принципа на просто тройно правило се определя минималната стойност на показателя.
- Определяне коефициентът на ефективност на показателя:

$$K_{\Pi} = \frac{\Pi^м}{\Pi^ф},$$

Където:

$K_{\Pi}$  - коефициентът на ефективност на изследвания показател

$\Pi^м, \Pi^ф$  - стойността на показателя, съответно за минимално допустим и фактически брой обороти

Новият подход позволява дефинирането на следните показатели:

**Таблица № 1**

работни показател и	фактически показател	минимален показател	максимален показател	минимално допустим показател
$КА_{обр}$	$КА_{обр}^ф = \frac{приход^ф}{КА^ф}$	$КА_{обр}^м = \frac{приход^м}{КА^ф}$	$КА_{обр}^{мс} = \frac{приход^ф}{КА^м}$	$КА_{обр}^{мд} = \frac{приход^м}{КА^м}$
$КА_{нат}$	$КА_{нат}^ф = \frac{КА^ф}{приход^ф}$	$КА_{нат}^м = \frac{КА^м}{приход^ф}$	$КА_{нат}^{мс} = \frac{КА^ф}{приход^м}$	$КА_{нат}^{мд} = \frac{КА^м}{приход^м}$

$OK_{обр}$	$OK_{обр}^{\phi} = \frac{приход^{\phi}}{OK^{\phi}}$	$OK_{обр}^m = \frac{приход^m}{OK^{\phi}}$	$OK_{обр}^{mc} = \frac{приход^{\phi}}{OK^m}$	$OK_{обр}^{m\phi} = \frac{приход^m}{OK^m}$
$OK_{нат}$	$OK_{нат}^{\phi} = \frac{OK^{\phi}}{приход^{\phi}}$	$OK_{нат}^m = \frac{OK^m}{приход^{\phi}}$	$OK_{нат}^{mc} = \frac{OK^{\phi}}{приход^m}$	$OK_{нат}^{m\phi} = \frac{OK^m}{приход^m}$
$MЗ_{обр}$	$MЗ_{обр}^{\phi} = \frac{приход^{\phi}}{MЗ^{\phi}}$	$MЗ_{обр}^m = \frac{приход^m}{MЗ^{\phi}}$	$MЗ_{обр}^{mc} = \frac{приход^{\phi}}{MЗ^m}$	$MЗ_{обр}^{m\phi} = \frac{приход^m}{MЗ^m}$
$MЗ_3$	$MЗ_3^{\phi} = \frac{MЗ^{\phi}}{приход^{\phi}}$	$MЗ_3^m = \frac{MЗ^m}{приход^{\phi}}$	$MЗ_3^{mc} = \frac{MЗ^{\phi}}{приход^m}$	$MЗ_3^{m\phi} = \frac{MЗ^m}{приход^m}$
$KBз$	$Bз^{\phi} = \frac{Bз^{\phi}}{приходи^{\phi}}$	$Bз^m = \frac{Bз^m}{приходи^{\phi}}$	$Bз^{mc} = \frac{Bз^{\phi}}{приходи^m}$	$Bз^{m\phi} = \frac{Bз^m}{приходи^m}$
$T_{зад}$	$T_{зад}^{\phi} = \frac{Зад^{\phi}}{\sum D^{\phi}}$	$T_{зад}^m = \frac{Зад^m}{\sum D^{\phi}}$	$T_{зад}^{mc} = \frac{Зад^{\phi}}{\sum D^m}$	$T_{зад}^{m\phi} = \frac{Зад^m}{\sum D^m}$

Таблица за видовете показатели

Ликвидност

Ликвидността се изразява в уменията на фирмата да трансформира наличните активи в парични средства. В зависимост от това, кои активи са включени различаваме следните видове<sup>9</sup>:

$$Kол = \frac{КА}{КЗ} \quad Kбл = \frac{KBз + Ки + Пс}{КЗ} \quad Kнл = \frac{Ки + Пс}{КЗ} \quad Kал = \frac{Пс}{КЗ}$$

Където:

*Кол* - коефициент на обща ликвидност, *Кбл* - коефициент на бърза ликвидност, *Кнл* - коефициент на незабавна ликвидност, *Кал* - коефициент на абсолютна ликвидност, *КА* - краткотрайни активи, *МЗ* материални запаси, *KBз* - краткосрочни вземания, *Пс* - парични средства, *Ки* - краткосрочни инвестиции, *КЗ* - краткосрочни задължения, *Ликвидността съществува, когато е спазено условието коефициентите да са по-големи от единица.*<sup>10</sup>

Определянето на ликвидността по новия подход включва определянето на ликвидността за фактически и минимално допустимите стойности. Целта е да се

<sup>9</sup> [http://efpages.blogspot.bg/2014/12/blog-post\\_94.html](http://efpages.blogspot.bg/2014/12/blog-post_94.html)

<sup>10</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014 (стр. 197)

представи ефективността на всеки един от изследваните показатели за изследвания период, чрез разликата между фактичестката и минимално допустимата ефективност.

$$Kол^м = \frac{СКА^м}{СКЗ^м}, Kбл^м = \frac{СКВз^м + СКи^м + СПс^м}{СКЗ^м}, Kнл^м = \frac{СКи^м + СПс^м}{СКЗ^м}, Kал^м = \frac{СПс^м}{СКЗ^м}$$

$$Kол^ф = \frac{СКА^ф}{СКЗ^ф}, Kбл^ф = \frac{СКВз^ф + СКи^ф + СПс^ф}{СКЗ^ф}, Kнл^ф = \frac{СКи^ф + СПс^ф}{СКЗ^ф}, Kал^ф = \frac{СПс^ф}{СКЗ^ф}$$

Степента на изменение на коефициентите на ликвидност определят финансовото състояние на проучваното предприятие:

$$\Delta Kол = Kол^ф - Kол^м, \Delta Kбл = Kбл^ф - Kбл^м, \Delta Kнл = Kнл^ф - Kнл^м, \Delta Kал = Kал^ф - Kал^м$$

## **II. Отчитане на стоково-материалните запаси при постъпване в производството**

Характерно за отчета на дейността на предприятията от хранителният сектор е използването на отделна аналитична сметка за изчисляване себестойността. Това се налага поради голямото асортиментно разнообразие на произвежданите продукти. Например за млечния сектор има отделни аналитични сметки за производството на кисели млека, пресни млеко, сирена и др. За консервния сектор се откриват отделни аналитични сметки за производството на компоти, сладка, натурални сокове, сушени плодове и др. Спецификата е в сходството не само на общият разходен норматив за отделните продукти, но и сходното времетраене на изписване на суровини и материали, сходната трайност на продуктите, на продължителността на производствения цикъл и използването на едни същи машини и съоразения. Това позволява определянето на:

- сходно ефективно време за реализация на продукцията
- сходно минимално време за реализация на продукцията
- сходни по времетраене изписване на суровини и материали
- сходно обновяване на МЗ
- сходно определяне на стоково-материалните запаси
- сходни амортизационни отчисления
- сходен общ ефективен фонд работно време

### **Определяне размера на материалните запаси**

За да стартира производствения процес е необходимо определяне на количеството на стоково материалните запаси.

МЗ биват – „текущ, гаранционен и подготвителен (когато технологичния процес изисква предварителна подготовка на използване суровини)”<sup>11</sup>. Текущият е свързан с обезпечване на нормалната оперативна дейност на предприятието, а гаранционния е за подпомагане на нормалния ритъм на производство.

### Определяне на минимален текущ запас

За определянето на минималния текущ запас е нужно определянето на минималния брой обороти:

$$Br_{об}^м = \frac{отчет.период}{OT^м},$$

Където:

$Br_{об}^м$  - минималния брой обороти::

Минимално допустимия брой обороти е броят на доставките, а минимално допустимото време е интервала между две доставки за продукта:

$$TZ_f^м = P_f \times OT^м$$

Където:

$TZ^м$  – количеството на минималния текущ запас за f-тия материал

$P_f$  – размер на среднодневното потребление за материал f

$OT^м$  - минимален интервал между две доставки за продукта

Финасовото изражение на минималния текущ запас е минималния ОК.

### Определяне на текущ запас

За да се определи текущият оперативен запас е нужно да се изчисли броят на фактическите обороти:

$$Br_{об}^ф = \frac{отчет.период}{T_{1об}^ф}$$

Броят на оборотите е броят на доставките, а фактическото времетраене на един оборот е периода между две доставки:

$$TZ_f^ф = P_f \times T_{1об}^ф,$$

Където:

$TZ_f^ф$  – фактически текущ запас за f-тия материал

$P_f$  – размер на среднодневното потребление за f-ия материал

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<sup>11</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014 (стр. 127)

Чрез определянето на фактическия текущ запас се определя текущият ОК на предприятието.

### Постъпване на суровините и материалите в производството

Характерно за хранителното производство е работата със суровини или материали, които са бързоразвалящи. Нужно е за кратко време да се преработят в готова продукция или полуфабрикат, с което се спестяват не само разходи за съхранение, но е и предпоставка за производството на безопасни и качественни хранителни продукти. Описаната релация между трайността на продукта и производствения процес позволява да изведе следното заключение: **Броят на оборотите на краткотрайните активи е право пропорционален на потреблението и обратно пропорционален на продължителността на срокът на годност на хранителния продукт.** Колкото е по-малка трайността, толкова броят на оборотите е по-голям. Следователно подновяването на производствения процес, а от там и постъпването на суровините, материалите и времето за обновление на МЗ в складовата база зависи от срока на годност на произвеждания продукт, като периода на изписане на суровините и материалите и обновяването на МЗ е един и същ.

Например:

За нуждите на производството на продукти с  $OT^{\Phi}$ , съответно за продукт А = 18 дни и продукт Б = 16 дни е закупена суровина Х. Използва се методът *първа входяща – първа изходяща*. Фактическият интервал от време за реализация на продукцията, а от там и фактическият интервал на изписаните материали е 18 дни за продукт А, а фактическият интервал от време за реализация на продукцията, а от там и фактическият интервал на изписаните материали за продукт Б е 16 дни. Ако допуснем, че производственият цикъл е сходен по времетраене и съществува равенство на разходите по съхранение и разходи по доставка и потребление, отчета на изписаните материали ще изглежда така (виж таблица № 2)

**Таблица №2**

фактически интервал време на изписаните материали за продукт <u>А</u>	фактически интервал време на изписаните материали за продукт <u>Б</u>
01.01.	01.01.
19.01.	17.01.
06.02	02.02.

24.02..	18.02.
13.03.	05.03.

### Ред на изписване на суровини

От таблицата се вижда, че изписаните материали за продукт Б приключва с около седмица по-рано от продукт А.

Концепцията на подхода позволява да се определи количеството на закупена продукция. За улеснено представяне на идеята използвам метода на „минимума при равенство на разходите по съхранение и разходи по доставка и потребление”<sup>12</sup>. Предприятие А произвежда продукти X и Y. потреблението е едно и също за двата продукта. Продукта X има срок на годност 90 дни, а продукта Y – 180 дни. Това означава, че ако минималното оперативно допустимо време за реализация на продукт Y е 100 дни и е два пъти по-голямо от минимално оперативното допустимо време за реализация на продукт X (50 дни), за нуждите на производството на продукт Y е възможно закупуване на суровини два пъти повече от продукт X.

### Определяне производствения капацитет на предприятието

За да се определи ПФК се определят календарния фонд, режимния фонд и ефективния фонд работно време.

Календарния фонд работно време се определя по следния начин:

$$Кф = Дк \times Чд$$

Където:

Дк – брой на дните в календарния период

Чд – часовете в денонощието<sup>13</sup>

Определяне на режимен фонд работно време (Рф):

$$Рф = Дк - [(Дп + Дпр) \times Сд \times Чсм],$$

Където:

Рф – режимен фонд

Дп – почивни дни през годината

Дпр – празнични дни в годината

Сд – брой смени в денонощието

Чсм – часове в една смяна<sup>14</sup>

<sup>12</sup> Дончев Д, Велев Мл, Димитров Й. “Бизнесикономика”, изд. СОФТТРЕЙД, София, 2003 г., (стр.117)

<sup>13</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014

<sup>14</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014

Производственият процес включва и време за основни ремонти, както и неизбежни аварии. За да се отчетът тези прекъсвания се определя ефективният фонд работно време:

$$Ef = Kф - (Tор + Tпp + Tнпp),$$

Където:

Еф – ефективен фонд работно време

Кф – календарен фонд работно време

Tор – време за основен ремонт

Tнпp – време за технологични неизбежни прекъсвания

Tпp – почивни и пранични дни<sup>15</sup>

**За да се изрази релацията между трайността на продукта и подновяването на производствения процес е нужно календарния фонд, режимния фонд и ефективния фонд да се определят през призмата на трайността на продукта. Пряка зависимост от трайността имат броят на оборите на активите. Ето защо формулите за изчисляване на различните фонд работно време, трябва да се адаптират към броят на оборите на активите.**

Релацията между подновяването на производствения процес и трайността на продукта се проявява при определяне на ефективния фонд работно време:

$$Ef = Kф - (Tор + Tпp + Tнпp)$$

Изчисляване на ефективен фонд работно време за един оборот на активите:

$$Ef_{1об}^{Aф} = \frac{Ef}{360} \times T_{1об}^{Aф},$$

Където:

$Ef_{1об}^{Aф}$  - ефективен фонд работно време за продукт А.

$T_{1об}^{Aф}$  - фактическо времетраене на оборота на КА за продукт А

За определяне фактическия брой обороти, ефективния фонд работно време за отчетния период се разделя на ефективен фонд работно време за един оборот на активите за продукт – А:

$$Ef_{об}^{Aф} = \frac{Ef}{Ef_{Aоб}^{Aф}},$$

Където:

$Ef_{об}^{Aф}$  - ефективния фонд работно време за продукт А

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<sup>15</sup> Пак там



Пример:

Предприятие от хранителния сектор за изминалия отчетен период за производството на продукт A има КА на стойност 2300 хил.лв. и приходи в размер на 5400 хил.лв. Производствения цикъл трае 24 ч. Фирмата е планирала: работа на една машина с достигане на проектната производителност от 100 единици на час; при петдневна работана седмица и неработни дни 110 (в това число почивни и празнични), режим на работа три смени, като продължителността на една смяна е 8 ч.; време предвидено за капиталови ремонти – 6% от режимният фонд от време за работа на машината. Да се изчисли и съпостави количеството на произведена продукция за фактическо и минимално време за реализация:<sup>16</sup>

- Определяне времетраенето на един оборот на КА:

$$T_{\text{об}}^{\phi} = \frac{КА}{\text{приходи}} \times 360 \div T_{\text{об}}^{\phi} = \frac{2300}{5400} \times 360 \approx 154 \text{ дни}$$

- Определяне фактическия брой обороти на КА:

$$Бр_{КА}^{\phi} = \frac{\text{отчет.период}}{T_{\text{об}}^{\phi}} = \frac{360}{154} = 2.33 \text{ об.}$$

- Определяне на минимално допусатимото време за реализация

Ръководството на предприятието е решило с оглед икономическата конюнктура минимално допустимото време за реализация да е  $OT^M = 380$  дни.

- Определяне на минималния брой обороти

$$Бр_{об}^M = \frac{\text{отчет.период}}{OT^M} = \frac{360}{380} = 0.947 \text{ об.}$$

- Количество произведен продукт A за фактическо време за реализация:

$$K\phi = 360 \times 24 = 8640 \text{ ч.}; P\phi = 6000 \text{ ч.}; E\phi = P\phi - (P\phi \times 6\%) = 6000 - 360 = 5640 \text{ ч.}$$

$$E\phi_{154} = \frac{5640}{360} \times 154 = 2412 \text{ ч.}$$

Ефективен фонд работно време за един оборот при фактическо време за реализация е 2412ч. За определяне на ефективния фонд работно време, получената стойност за един оборот се умножава по фактическия брой обороти:

$$E\phi_{154} = 2412 \times 2.33 = 5621 \text{ ч.}$$

- За отчетния период е произведена продукция:

$$ПФК_{154} = 1 \times 100 \times 5621 = 562100 \text{ брой продукти за един оборот}$$

<sup>16</sup> Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014, Адаптиран вариант на задача

- Количество произведен продукт A за минимално време за реализация:

Ефективен фонд работно време за един оборот при фактическо време за реализация е 2412ч.

- За определяне на минималния ефективния фонд работно време, фактическата стойност за един оборот се умножава по броят обороти за минимално време:

$$Ef_{380}^M = 2412 \times 0.947 = 2284.16ч.$$

- За отчетния отчетния период е произведена продукция:

$$ПФК_{380}^M = 1 \times 100 \times 2284.16 = 228416 \text{ брой продукти за един оборот:}$$

- Оценката за ефективността на производството за продукт A:

$$K_A = \frac{ПФК^{Am}}{ПФК^{Af}} = \frac{228416}{562100} = 0.40$$

**Резултатът от анализа потвърждава релацията между количеството произведена продукция и трайността на продукта.**

На основата на отделните аналитични сметки за производството на хранителните продукт се определя общ ефективен фонд работно време:

$$OEF = \frac{(Ef^{1T} + Ef^{2T} + \dots + Ef^{NT})}{N}$$

Където:

OEF – общ ефективен фонд работно време

$Ef^{1T}, \dots, Ef^{NT}$  - ефективно време за реализация на продуктите със трайност T и брой от едно до N

Изчисляването на ПФК за цялата произвеждана продукция е:

$$ПФК = (Бмс^{1T} \times Ef^{1T} \times Нпр^{1T}) + (Бмс^{2T} \times Ef^{2T} \times Нпр^{2T}) + \dots + (Бмс^{NT} \times Ef^{NT} \times Нпр^{NT})$$

Където:

$1T, 2T, \dots, NT$  - трайността на произвежданите продукт по различни аналитични сметки.

$Бмс^{1T} \dots Бмс^{NT}$  - машини и съоразения, които произвеждат сходни продукти със съответната трайност на продукта по различните аналитични сметки

$$ПФК = \sum_{N=1}^k Бмс^{NT} \times Ef^{NT} \times Нпр^{NT}$$

Където:

N – броят на сходните произвеждани продукти.

N се мени от едно до K

## Ценова политика на хранителното предприятие

В контекста на предложеният подход смятам, че ценообразуването на хранителния продукт, трябва да е на основата не само на разходите за производство, търсенето, предлагането, но и на срокът на годност. Колкото е по-бързоразвалящ хранителния продукт, надценката трябва да е по-малка, независимо от разходите и потреблението. Подходът сам го описал в публикацията “Допълнителен фактор за определяне цената на хранителния продукт”<sup>17</sup>, където за определяне на цената на продукта в зависимост от трайността използвам диагностичният метод за ценообразуване в зависимост от средната цена на аналогичното изделие. Предлагам алтернативен вариант за определяне цената на хранителния продукт. Подходът за определяне на надценката включва определяне на коригиращ коефициент на база трайност на продукта за всеки от произведените продукти по следната класическа формула (адаптирана от автора)<sup>18</sup>:

$$Kx = \frac{K^{\phi}}{K^{mc}},$$

Където:

$Kx$  – коефициентът на  $X$  изследваната величина

$K^{\phi}$  – фактическа величина

$K^{mc}$  – максимална величина

$$K_{GX} = \frac{T_X^{\phi}}{T_{MAX}^{\phi}},$$

Където:

$K_{GX}$  - коригиращ ценови коефициент за продукт “X”

$T_X^{\phi}$  - фактическото времетраене на оборота, а от там и фактическото оперативно време за реализация на продукт „X”

$T_{MAX}^{\phi}$  - максималното оперативно време за реализация на произвеждания от предприятието продукт

Пример: Фирма “Y” за изминалата година е произвела бяло сламурено сирене. В зависимост от режимът на съхранение продуктът има срок на трайност 180 дни, 300 дни и 360 дни.<sup>19</sup> Пълните разходи за производство и реализация са еднакви.

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<sup>17</sup> Иванов И.”Допълнителен фактор за определяне цената на хранителния продукт”, Международна конференция “Високи технологии, бизнес, общество” Боровец 2106 г. ISSN 1310-3946

<sup>18</sup> Велев Мл. „Оценка и анализ на фирмената конкурентоспособност”, изд.Софттрейд, София 2004 г.

<sup>19</sup> По БДС 1991 г.

- Бяло саламурено сирене със срок на годност 180 дни и фактическо време за реализация ОТфак  $\approx 100$  дни
- Бяло саламурено сирене със срок на годност 300 дни и фактическо време за реализация ОТфак  $\approx 200$  дни
- Бяло саламурено сирене със срок на годност 360 дни и фактическо време за реализация ОТфак  $\approx 230$  дни

Определяне коригиращият коефициент за продукт сирене<sub>180</sub>, сирене<sub>300</sub>, сирене<sub>360</sub>:

$$\text{Сирене}_{360} = \frac{360}{360} = 1, \text{Сирене}_{300} = \frac{300}{360} = 0.833, \text{Сирене}_{180} = \frac{180}{360} = 0.5$$

Приемам, че цената на продукта с пълните разходи за производство и реализация е 9 лв. Определената надценка на производителя е 20%. Коригираната надценка за продуктите се определя по формулата:

$$Кнад_X = Над \times Кг_X,$$

Където:

$Кнад_X$  - коригирана надценка за продукт X

$Над$  – определена надценка

$$\text{Сирене}_{360} = 1 \times 20\% = 20\%, \text{Сирене}_{300} = 0.833 \times 20\% = 16\%, \text{Сирене}_{180} = 0.5 \times 20\% = 10\%$$

Определяне на крайната цена:

$$Кцена_X = Кцена_X + (Кцена_X \times Кнад_X),$$

Където:

$Кцена_X$  - крайна цена на продукт

Цената преди начисляване на ДДС:

$$\text{Цсирене}_{360} = 9 + (9 \times 20\%) = 10.8 \text{ лв.}, \text{Цсирене}_{300} = 9 + (9 \times 16\%) = 10.44 \text{ лв.},$$

$$\text{Цсирене}_{180} = 9 + (9 \times 10\%) = 9.9 \text{ лв.}$$

Определената цена не е окончателна, защото от момента на складиране на хранителния продукт срокът на годност започва да “тече”. В този времеви коридор трябва да се вмести и производители и търговци. Ето защо е нужно редуциране на цената в зависимост от това, на кой етап от оперативното време се реализира продукта. Ако при продажбата срокът на годност е „изтекъл” с 30%, то цената, трябва да се коригира надолу с 30%. При изтичане на фактическото време за реализация, продукта трябва да се продаде на цена равна на себестойността му, защото опасността от нереализация му, а от там и бракуването му ще доведе до по-големи загуби.

Редуцирането на цената е възможно и на основата на минимално допустимото време за реализация на продукта в зависимост от конюнктурата на пазара.

Пример:

Ако сирене с трайност 360 дни се реализира при 30% изтекъл срок на годност, следва редуцирането на надценката с 30%:

$$P_{над}_{360} = Над_{360} - (Над \times 30\%) = 1,12 \text{ лв}$$

$$P_{цена}_A = 10,8 - 1,12 = 9,68 \text{ лв.}$$

Където:

$P_{над}_{360}$  – редуцирана надценка за сирене с трайност 360 дни

$P_{цена}_{360}$  - редуцирана цена на сирене с трайност 360 дни

Регулирането на надценката за търговеца е идентична.

### **Еластичност на търсене и предлагане спрямо цената**

Под еластичност на предлагането спрямо цената се разбира съотношението между процентното изменение на предлаганото количество спрямо предизвквалото го процентно изменение на цената.<sup>20</sup> Цената на продукта от примера е съобразена с корелацията между процента на надценката и „комфорта на продължителността на трайност на продукта”. Но продукт с по-голяма трайност има и по-голям ефективен фонд работно време, т.е. в цената трябва да се включи и фактора количество на произведена продукция. **Идеята на автора, е чрез промяна трайността на продукта да се въздейства на произвежданото количество, а от там и на цената.**

Използвам горния пример за ценообразуване и горният пример за изчисляване на ПКФ като го адаптирам за по-добро изложение на идеята.

$$Ц_{сирене}_{360} = 9 + (9 \times 20\%) = 10,8 \text{ лв.}, Ц_{сирене}_{300} = 9 + (9 \times 16\%) = 10,44 \text{ лв.}$$

$$Ц_{сирене}_{180} = 9 + (9 \times 10\%) = 9,9 \text{ лв}$$

При производството на бяло сламурено сирене производствения цикъл трае около 60 дни.<sup>21</sup> Производителността на машина за рязане на саламурено сирене от пита с точно тегло на час е – 3600 парчета.<sup>22</sup> Производителността на технологичната линия е 10 т на ден.

Изчисляване на ПКФ за производството на сирене<sub>180</sub> за един оборот.

Ефективен фонд работно време е:

<sup>20</sup> <http://pgikj.com/wp-content/uploads/2012/03/Mikro-9klas.pdf>

<sup>21</sup> Балтаджиева М. "Технология на млечните продукти", изд. Земиздат, София 1997 г.

<sup>22</sup> <http://www.storm-engineering.bg/bg/exact-weight/>

$$E\phi = P\phi - (P\phi \times 6\%) = 6000 - 360 = 5640 \text{ ч.}; E\phi_{10\phi}^{180} = \frac{5640}{360} = 1566 \text{ ч.}$$

$$ПКФ^{180} = 1 \times 3600 \times 1566 = 5637600 - \text{парчета}$$

2. Изчисляване на ПКФ за производството на сирене<sub>300</sub> за един оборот

$$E\phi_{10\phi}^{300} = \frac{5640}{360} \times 200 = 3133 \text{ ч.}, ПКФ^{300} = 1 \times 3600 \times 3133 = 11278800 - \text{парчета}$$

3. Изчисляване на ПКФ за производството на сирене<sub>360</sub> за един оборот

$$E\phi_{10\phi}^{360} = \frac{5640}{360} \times 230 = 3603.33, ПКФ^{360} = 1 \times 3600 \times 3603 = 12971880 - \text{парчета}$$

Ако едно парче сирене е 100 гр. следва, че един тон е 10000 парчета. Количеството на потребление на саламурено сирене е 1100 т. на месец.

За оптимизиране баланса между предлагано количество и цена е нужно да се оптимизира фактическото време за реализация на продукта, чрез условна промяна на трайността на предлаганият продукт.

Търсеното количество е 1100 т.. Анализа се движи по обратният ред на определяне ПФК:

$$ПФК = Бмс \times E\phi \times Нпр \Rightarrow 1100 = 1 \times X_{E\phi} \times 3600,$$

Където:

$X_{E\phi}$  - търсен ефективен фонд работно време

Чрез използване на просто тройно правило се изчислява редуцираното фактическо време за реализация на продукцията. При производството на саламурено сирене с трайност 300 дни продължителността на оборота е най-близо до предлаганото количество:

$$\frac{200.об. - 1127.8т.}{X.об - 1100} = \quad , X_{об} = \frac{200 \times 1100}{1127.8} \approx 195 \text{ дни (OT}^\phi) \\ = 1127 \times 8X = 200 \times 1100$$

Оптималното времетраене на един оборот е 195 дни

За един оборот  $E\phi$  работно време е:

$$E\phi_p = \frac{5640}{360} \times 195 = 3055 \text{ ч.}, ПФК \text{ за един оборот е: } ПФК = 1 \times 3055 \times 3600 = 10998000 \text{ пр.}$$

$$\text{Един тон се състои от 10 000 парчета} \Rightarrow \frac{10998000}{10000} = 1099.8 \text{ т.}$$

Фирмите за да оптимизират дейността си е нужно да се стремят времетраене на един оборот е 195 дни.

Определяне на надценката:

$$Сирене_{195} = \frac{195}{360} \approx 0.54, \quad НСирене_{180} = 20 \times 0.54 = 10.8\%$$

Цената преди начисляване на ДДС:

$$Кцена = 9 + (9 \times 10.8\%) = 9.97 \text{ лв.}$$

### **Заклучение:**

**Подхода позволява определянето на минимално допустимите стойности на всички показатели на изследваното предприятие за отчетния период. Определянето на минимално допустимите стойности има голямо значение за фирмената сигурност, управление на риска, планиране на производствения капацитет на предприятията, планиране на инвестиционен проект и др.**

Основния показател за ефективността на обращение на краткотрайните активи е неговата скорост. Скоростта зависи не само от темпът на потребление на произвежданите продукти (чрез който се ускоряват оборотите на КА), но и от продължителността на производствения цикъл. Представения подход за анализ спомага за оптимизиране на производствените процеси. С въвеждането на минималното време за реализация на продукцията се извежда нов фактор. **Колкото на по-ранен етап е реализиран продукта, толкова от една страна е по-безопасен за здравето на потребителя, а от друга ускорява обръщаемостта на краткотрайните активи. И именно в това се изразява релацията между безопасност и ефективност на производствения процес на храни.** При оценката времетраенето на оборота се анализира не само скоростта, но е и показател за това как потребителите оценяват съставките и тяхното съотношение в продукта. Чрез този подход много по-добре се анализира не само скоростта на обръщаемост на КА, но е пряк индикатор за ефективността на разходния норматив на предприятието. Това е отлична изходна база за сравняване нивото на продуктовата конкурентоспособност на ализиранията предприятия. Съществува естествена корелация между качеството и трайността на хранителния продукт. Ето защо е от значение скоростта на обръщаемост на активите в производствения процес. Подобрява ефективното управление на всички елементи на краткотрайните активи и др.

### **Предложения**

- Използването на БДС да се възстанови, както и актуализирането му спрямо съвременните тенденции при производството на храни.
- Поправка на закона за счетоводството позволяващ измерването на производственото време да е:
- Спрямо трайността на продукта.
- Използването на броя обороти на краткотрайните активи през различните приети от закона отчетни периоди.

### **Благодарности**

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### Библиография:

1. Аврамов Й. "Корпоративни финанси", изд. Сиела, София 2008 г.
2. БДС 1991 г.
3. Ганчев Д. „Икономика на предприятието”, УИ „Васил Априлов” Габрово, 2015
4. Ганчев Д. "Ръководство за упражнения по Икономика на предприятието, Габрово 2014
5. Димитрова П., Василева Л. "Управление на риска и вземане на решения", София 2005 г.
6. Дончев Д. Велев Мл. Димитров Й. "Бизнесикономика", изд. СОФТТРЕЙД, София, 2003 г
7. Иванов И. "Алтернативен способ за анализ ефективността на обращение на краткотрайните активи в хранителните предприятия и неговите практически приложения", Международна научна конференция "Високи технологии. Бизнес. Общество", Боровец 2016 г.
8. Иванов, И., „Значение на скоростта на обръщаемост на краткотрайните активи за хранителната индустрия" Научна сесия „Техника и технологии, естествени и хуманитарни науки”, Пловдив 2015
9. Моллов Пл. „Качество на храните, рагулиране, контрол, управление”, София 2013
10. Попов Г., Алексиева В., Милушева В. „Икономика на фирмата”, Пловдив 2014
11. Попов Г., Маринова Ю. "Икономика и организация на фирмата", изд. „ГорексПрес”, София 2006
12. Смит А. „Богатство на народите” С, 1983
13. Христов В. "Корпоративни финанси, изд. ИМН Пловдив, 2007г.
14. Lex.bg/. Допълнителни разпоредби, §1, ал. 34
15. <https://bizanaliz.weebly.com/uploads/2/4/0/7/24079611/ikanaliz>
16. [efpages.blogspot.bg/2014/12/blog-post\\_94.html](http://efpages.blogspot.bg/2014/12/blog-post_94.html)
17. [lex.bg/laws/ldoc/2134685185](http://lex.bg/laws/ldoc/2134685185)
18. <https://bg.wikipedia.org/>

## КРИТИЧНО СЪОБЩЕНИЕ

от ас. д-р инж. Иван Николов Иванов, УХТ – Пловдив, кат. Индуриален Бизнес и Предприемачество

Уважаеми колеги,

На 13 – 14 октомври 2016 г. участвах в организираната от Вас научна конференция “II Annual Conference of Monetary and Economic Research Center” с публикациите „ПОДХОД ЗА АНАЛИЗ И ОЦЕНКА НА СИВАТА ИКОНОМИКА В ХРАНИТЕЛНАТА ПРОМИШЛЕНОСТ” и „АНАЛИЗ И ОЦЕНКА ЕФЕКТИВНОСТТА НА ОБРАЩАЕМОСТ НА КРАТКОТРАЙНИТЕ АКТИВИ НА ПРЕДПРИЯТИЯ ОТ ХРАНИТЕЛНИЯ СЕКТОР”. В изложението на анализа са допуснати грешки от моя милост, поради което желая да направя уточнения с цел тяхната поправка:

1. В публикациите се анализира времето за което, трябва да се реализират продуктите. Това време е записано, като минимално и минимално допустимо време за реализация.

### Уточнение:

*Времето за реализация е максимално и максимално допустимо! При съпоставянето на това времетраене с отчетният период се получава и съответният минимален или минимално допустим брой обороти на КА!*

2. На места в публикациите един оборот на КА ( $T_{1об}$ ) е представян и като  $OT^M$  или  $OT^Ф$

### Уточнение:

$OT^M$  или  $OT^Ф$  са минимални и фактически времена за реализация на готовата продукция, а не времетраенето на един оборот на КА!

3. На стр. 4, 5 е публикуван алгоритъм за определяне ефективността на дейността на предприятията. На основата на алгоритъма се излъчват минималните стойности на елементите на КА. Ефективността се измерва, чрез съпоставяне на минималните стойности на КА с фактическите.

### Уточнение:

*При определяне на минималният брой обороти, трябва към отчетният период да се съпостави минималното времетраене на оборота на КА, а не времето за реализация -  $OT^M$ ! В разработеният алгоритъм се излъчват минималните стойности на КА. Определянето на минималните стойности на паричните средства, краткосрочните инвестиции и разходите за бъдещи периоди се извършва, чрез просто тройно правило. Излъчването е възможно и чрез описаният алгоритъм. Просто посочих алтернативен вариант!*

4. На стр. 6 е дадена таблица с различните видове показатели. Показателите са излъчени на основата на различните времена за реализация.

**Уточнение:**

*Икономическата логика не допуска съществуването някой от представените показатели! На основата на подхода се дефинират показатели на базата на теоретичното време за реализация спрямо фактическото, минимално допустимо време спрямо фактическото и техните реципрочни варианти.*

5. На стр. 8 за определянето на минималният текущ запас е записано: За определянето на минималния текущ запас е нужно определянето на минималния брой обороти:

$$Br_{об}^м = \frac{отчет.период}{OT^м}$$

**Уточнение:**

За определяне на минималният текущ запас се използва времетраенето на един оборот на КА, а не времето за реализация

6. На стр. 12, 13 при определянето на производственият капацитет за нуждите на анализа се дефинира – *минимален брой обороти*. В примера минималният брой обороти се определя на базата на максимално допустимото време за реализация, която надхвърля, като времетраене една календарна година:

*Цитат: Ръководството на предприятието е решило с оглед икономическата конюнктура минимално допустимото време за реализация да е  $OT^{мcd} = 380$  дни.*

*Определяне на минималния брой обороти*

$$Br_{об}^{мd} = \frac{отчет.период}{380} = 0.94 об$$

**Уточнение:**

*Симулираното времетраене на производствения цикъл от примера е 0.947 от времетраенето на фактическия производствен цикъл, като количеството произведена продукция е 228416 бр. В даденият пример изчислението на минималния Ефективен фонд време е на основата на максимално допустимото време за реализация – 380 дни. Това предполага, че трайността на произвежданият продукт се движи в границите около 450 дни. Но в хранителната индустрия се произвеждат продукти и с по-голяма трайност, като съвременните тенденции надхвърлят 720 дни. Ако се спази подхода за определяне на минималният Ефективен фонд работно време, то за продукти с по-голяма трайност количеството на минимално произведената продукция ще се редуцира още повече, а това противоречи на икономическата реалност. Минималното количество произведена продукция е за един производствен*

цикъл. В даденият пример за един производствен цикъл се произвежда 241200 бр. продукт, т.е. на практика е невъзможно да се произведат 228416 броя продукти.

7. На същата стр.13 се определят и броят обороти на Ефективният фонд време:

$$E\phi = P\phi - (P\phi \times 6\%) = 6000 - 360 = 5640 \text{ ч.}$$

$$E\phi_{106}^{154} = \frac{5640}{360} \times 154 = 2412 \text{ ч.}$$

Ефективен фонд работно време за един оборот при фактическо време за реализация е 2412ч. За определяне на ефективния фонд работно време, получената стойност за един оборот се умножава по фактическия брой обороти:

$$E\phi_{154} = 2412 \times 2.33 = 5621 \text{ ч}$$

#### Уточнение:

Видна е разликата във времетраенето на Ефективният фонд време в часове и в брой обороти. За да се излъчи точно времетраенето е нужно Ефективният фонд време да се съпостави на броят обороти на КА:

$$E\phi_{106}^{154} = \frac{E\phi^{154}}{Br_{KA}^{\phi}} = \frac{5640}{2.33} = 2420.6 \text{ ч.}$$

8. На стр. 15, 16 се анализира ценообразуването на хранителният продукт. Записано е:

В зависимост на кой етап от срока на годност се реализира продукта се редуцира цената на производителя и съответно и търговската отстъпка. Ако при продажбата срокът на годност е „изтекъл” с 30%, то цената, трябва да се коригира надолу с 30%. При изтичане на фактическото време за реализация, продукта трябва да се продаде на цена равна на себестойността му, защото опасността от нереализация му, а от там и бракуването му ще доведе до по-големи загуби. В зависимост от конюнктурата на пазара редуцирането на цената е възможно и на основата на минимално допустимото време за реализация на продукта.

Пример:

Ако сирене с трайност 360 дни се реализира при 30% изтекъл срок на годност, следва редуцирането на надценката с 30%:

$$P_{над_{360}} = Над_{360} - (Над \times 30\%) = 1.12 \text{ лв. } P_{цена_{360}} = 10.8 - 1.12 = 9.68 \text{ лв. ,}$$

#### Уточнение:

Времената за реализация е съобразено с трайността на продукта и са максимално и максимално допустимо! Според философията на подхода предприятието ще инкасира загуба при реализация на продукцията след максимално допустимото време, а не след фактическото!

#### Уточнение за примера:

Ако сирене с трайност 360 дни се реализира при 30% изтекъл срок на годност, следва редуцирането на надценката с 30% и цената:

$$P_{\text{цена}_{360}} = \text{Цена}_{360} - (\text{Над} \times 30\%) = 1.12 \text{ лв.}$$

9. На стр. 15 е публикувано:

- Бяло саламурено сирене със срок на годност 180 дни и фактическо време за реализация ОТфак  $\approx 100$  дни
- Бяло саламурено сирене със срок на годност 300 дни и фактическо време за реализация ОТфак  $\approx 200$  дни
- Бяло саламурено сирене със срок на годност 360 дни и фактическо време за реализация ОТфак  $\approx 230$  дни

Определяне коригиращият коефициент за продукт сирене<sub>180</sub>, сирене<sub>300</sub>, сирене<sub>360</sub>:

$$\text{Сирене}_{360} = \frac{360}{360} = 1$$

$$\text{Сирене}_{300} = \frac{300}{360} = 0.833$$

$$\text{Сирене}_{180} = \frac{180}{360} = 0.5$$

**Уточнение:**

*При определяне на коригиращият коефициент, трябва да се използва фактическото време за реализация, а не трайността на продукта, което по същество не е грешка, но когато се анализира оперативната дейност, трябва да се използва оперативното (фактическо) времетраене.*

10. На стр. 18 се излъчва подход за оптимизиране производствената дейност на предприятието на основата на еластичността на търсене и предлагане. Цитирам онази част от алгоритъма, която подлежи на уточнение:

$$\begin{aligned} & \frac{200\text{об.} - 1127.8m}{X\text{об} - 1100m} = \\ & = X_{\text{об}} = \frac{200 \times 1100}{1127.8} \approx 195 \text{ дни } (T_{1\text{об}}^{\phi}) \end{aligned}$$

Оптималното времетраене на един оборот е 195 дни.

За един оборот Еф работно време е:

$$E\phi_{195}^{300} = \frac{5640}{360} \times 195 = 3055 \text{ ч.}$$

ПФК за един оборот:  $ПФК = 1 \times 3055 \times 3600 = 10998000$  парч.

Един тон се състои от 10 000 парчета  $\Rightarrow \frac{10998000}{10000} = 1099.9$  т.

Фирмите за да оптимизират дейността си е нужно да се стремят времетраенето на един оборот да е 195 дни.

Определяне на надценката:

$$\text{Сирене}_{195} = \frac{195}{360} \approx 0.54$$

$$\text{Цсирене}_{195} = 20 \times 0.54 = 10.8 \text{ лв.}$$

Цената преди начисляване на ДДС:

#### **Уточнение**

За да се определи икономическият ефект от ускоряване на обращаемостта се прилага следната формула:

$$Ie = \frac{Pr_0(t_{OB1} - t_{OB0})}{360},$$

$$Ie = \frac{11879 \times (195 - 200)}{360} \approx -165 \text{ лв.}$$

#### **Заклучение**

От личен опит мога да добавя, че когато се изучава неизвестен или малко проучен подход за анализ дейността на предприятията е нужно време за „ферментация“ на изложените идеи и тяхната материализация, т.е. нужно е да „отлежи“ и анализира от всички възможни страни! Изложените поправки се отнасят, както за двете методики, които анализират ефективността на дейността и неформалната икономика, така и за анализа за неформалната икономика!

Пловдив  
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## On barter money – philosophically (in Bulgarian)

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**Abstract:** *This paper is an attempt to initiate a study of money from philosophical-pragmatism point of view using the metaphor "barter money", which is the object of the research. The relation between money and exchange is highlighted once again as fundamental to their existence. Money is represented as a constitutive exchange complex, consisting of two substances. They are equivalent and form and are inseparable in its existence. From these grounds, the money profile should ultimately be detached by its image as commodity only with is just one of possible forms. Contemporary alternatives of the exchange-payment medium do exist and they urgently admit that money is a symbol of the mind (ideal) circulating in a form that changes institutionally (non-ideal). The argumentation is built on the fundamental foundations of the monetary theory. The explicit reference to some of the obviousities makes our definition of money reasonably justified. The ambition is to be provoked a constructive debate on the given definition which for both (to settle a definition and criticizing) is rarely common.*

**Key words:** *barter money, money, philosophy of money, behavior finance*

**JEL codes:** *E40, O35, G40*

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## За бартерните пари – по философски

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**Резюме:** В настоящето изложение е направен опит да се постави началото на едно изследване на парите от позициите на философско-прагматисткия подход<sup>1</sup>, като за обект е избрана метафората „бартерни пари“. Посредством анализа се прави още веднъж осветляване на връзката на парите с размяната като изначална за тяхното съществуване. Парите са представени като конститутивен обменен комплекс, обслужващ размяната, съставен от две неразделни в своето битие същности: еквивалент и форма. От тези позиции, образът на парите следва окончателно да се раздели с от отъждествяването му единствено като стока, което е само една възможна тяхна форма. Съвременните алтернативи на обменно - платежното средство настойчиво ни провокират да признаем, че на първо място парите са мисловен символ (идеални), циркулиращи във форма, която се изменя институционално (неидеални<sup>2</sup>). Аргументацията е построена върху фундаменталните основи на теорията на парите. Посочени са очевидности като логическа обосновка на възприемането ни за пари. Целта е да се провокира гравивна критика на даденото определение, като и двете (и даването на определения и критиката) по принцип напоследък се срещат рядко.

**Ключови думи:** бартерни пари, пари, философия на парите, поведенчески финанси

**JEL:** E40, O35, G40

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<sup>1</sup> По въпросите на прагматизма Вж. още Чарс Пърс (1839-1914)

<sup>2</sup> Понятието „неидеално“ се използва за да се избегне дискусията относно „реално“ и „нереално“, подобно на „реално“ и „действително“, което е част от дневния ред на съвременната философия и привържениците на всяка от различните позиции предлага солидни аргументи. За да не влизаме в подобни дебати, прибягваме към понятието „неидеално“ в смисъл на формално съществуващо в материална или нематериална форма.



## За бартера като за пари

Метафората „бартерни пари“ е обобщение на разнообразието от различните форми на обменно-платежни средства, използвани от организирани частни групи. Те се откриват под различни наименования, като например: комплементарни валути, социални пари, локални пари, свободни пари, банки за размяна на време, локални средства за размяна и др., Както и да бъдат наречени, те изпълняват главната роля „обслужване на размяната“. Образът вграден в теоретичния конструкт „бартерни пари“ се използва с цел временно да се прекъсне менталната връзка с обичайното схващане за пари (главно като стока) и валути (основно като парите на друга държава) и по този начин да стане видима проекцията на един често пренебрегван аспект от възприятието ни за парите - този като *конститутивен обменен комплекс, обслужващ размяната [на продуктите на труда], в конкретна ограничена социална среда*. На този образ отговарят всички познати до сега форми на парите.

Формалистките автори биха заявили, че „бартерни пари“ не съществуват. Безспорно е, че размяната съдържа „паричността“ в своята най-дълбока същност и не е логично бартерът и парите да се разграничават така категорично. И двете явления се основават на *обмен на ценности*. При бартера размяната е без пряка предметна употреба на суверенно, законно установено средство, наричано „пари“. Посредством парите в едната страна на разменното отношение откриваме представител /символ/, чиято „ценност“ е защитена чрез законова регламентация, поради което тя може да се гарантира и за по-дълъг срок<sup>3</sup>. Извън дискусията около субстанционалната теория за парите, няма съмнение, че те са явление, което обединява в себе си две неща: 1) *еквивалент*, установен със съгласието на социалната група, където се използва<sup>4</sup> и 2) конкретна *форма* на този еквивалент (пряка или опосредствана), позволяваща [преди всичко] размяна и плащане. Конкретната форма на парите е онова, което сме свикнали да разпознаваме като „средството за размяна и плащане“. Тя се олицетворява най-често с конкретен „паричен инструмент“.

Сред множеството автори и анализи на парите, чието изрично посочване няма да ни донесе допълнителни ползи, не срещнахме конкретни примери как точно възникват паричните форми. Не изключваме възможността в някои източници да се коментира кой, как и защо избира еквивалентния обект, който се използва като пари. Обикновено се приема, че това са хората, които свободно, [често хаотично и рядко преднамерено]

<sup>3</sup> Докато суверенът реши да я промени.

<sup>4</sup> Дали тази ценност е произлязла от някакви вътрешни съотношения или е наложена със закон (отвън), това в случая не е от определящо за изложението значение.

оформят своя колективен избор и постепенно този избор се конкретизира. В общия случай се разказва как книжно-паричната форма исторически замества металната, като първоначално се промъква в циркулация като търговски ценни книжа, а после постепенно измества златото (закона на Грешъм).<sup>5</sup>

Наблюдаваме и изключения като „синтетичните“ международни форми, с които работят различни обединения в съюзи на групи държави. Еврото, а преди него екюто, преводната рубла и др. са примери за подобна „измислена“ парична форма, чиито еквиваленти се въвеждат в употреба по силата на решението на държавите, където те се използват. Те нямат корени в размяната, но за да бъдат ефективно приложени е необходимо да се отнесат към съответните разменни и/или платежни сделки и съотношения. Следователно, в естествена среда, двете същностни характеристики на парите, еквивалент и форма **възникват едновременно** и образуват **единен комплекс**, който разпознаваме като „**обменен**“. Веднъж възникнал в културния си контекст, този комплекс непрекъснато се само/разпада и само/образува, което позволява да се мисли одобрително за мултипарична система, при която мярката, като идеал може да функционира отделно от циркулирането на средството като платежна форма.<sup>6</sup> Веднъж възникнал този обменен комплекс, започва да се развива и видово да се разнообразява, стига умишлено да не се приложат ограничения към него<sup>7</sup> [подобно на опитите да се ограничи разпространението на криптовалутите]. Примерите от историята показват, че еквивалентът на ценността се запазва относително за по-дълги периоди, докато формата се променя. Периодите на златния и златно-доларовия стандарт добре илюстрират това. Подобни са и примерите с циркулирането на няколко вида метални монети в един и същи период. Очевидно, в ценностния си компонент, валутите могат да бъдат обвързани с избран „обект – покритие“, без да е необходимо самият обект пряко да обслужва размяната. Циркулират представителите на ценността (символите), чрез които тя [ценността] се реализира. На това описание отговарят всички познати до сега парични инструменти.

В периодите на криза, когато стопанската активност по една или друга причина достига критично отдалечаване от парично-ценностния си мерител, обменният комплекс по необходимост се „препраща“, като се установяват нови ценностно-еквивалентни съотношения, в т.ч и бартерни връзки. Така обменният комплекс отново

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<sup>5</sup> И Шекспир дори е забелязал, че „интригата е в силата на слабия“.

<sup>6</sup> По темата има широка дискусия и част от авторите, които допринасят към нея са Н.Неновски, Л. Фантачи, К. Полани, Бр. Тере и др. Тази гледна точка има своите аргументи, но не е тук мястото да се коментира. Предстои публикация на тема Бартерни пари, където ще бъде направено това.

<sup>7</sup> Най-често външни от страна на управляващата група.

преминава към фаза образуване. По повод на изложеното, може да се провери предположението, дали това е било възможно единствено ако вместо да се използват за целенасочено разпределение на богатства и доходи /парична политика/, на паричните средства им бъде позволено да изпълняват свободно [неконтролирано] основната си функция – опосредстване на размяната. При това положение, разпределението ще се извършва като резултат от образувалите се „естествени“ ценови съотношения. Подобни са интерпретациите и в класическия икономикс. Днес наблюденията показват точно обратното – основна задача на парите е да обслужват постигането на политически зададени ценности, а размяната е контролирана главно от поведението на частните банкови институти, които осигуряват средството за разплащане. Интернет обаче окончателно разчупва статуквото и съвременните комуникационни и софтуерни решения позволяват размяната да се извършва и без непосредственото участие на „законните“ пари (макар и в ограничен мащаб). Тази, но не само е главната причина да се образуват частни, допълващи локални платежни средства.

От казаното до тук, може да предложим понятие за пари като *„обменен комплекс, обслужващ размяната [на продуктите на труда] в дадена социална група“*. Спираме до тук в анализа на парите, защото продължението му трябва да включи кредита като тяхна еволюционна черта, което обаче няма да промени смисъла на достигнатото понятие, а само ще го допълни.<sup>8</sup> На нас ни е необходим този анализ само защото имаме намерение да обосновем съществуването на явлението „бартерни пари“, а то от своя страна е необходимият инструмент в анализа на съвременния бартер. Тъй като понятието „бартерни пари“ в практиката не се среща директно, следва преди всичко да преосмислим двете явленията- „пари“ и „бартер“, ведно с понятията, с които конституираме различното им значение и посредством които реферираме към тях самите.

Тенденцията е налице: образуват се частни групи за размяна, които „изработват“ свое средство за разплащане, което дори може да се каже, че от определена гледна точка е „фалшификация“ на законното платежно средство, защото не е емитирано от централната банка или правителството. То не претендира за „всеобщност“ и не заема мястото на законното средство, поради което не попада под ударите на закона. Това средство обаче, достатъчно добре обслужва размяната на равнището, на което циркулира и чрез нея – съпътстващите я социални, културни и стопански интереси.

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<sup>8</sup> За повече Вж. (Хърсев, 1991).

Тези интереси лесно остават блокирани<sup>9</sup> поради липсата на *свободен достъп* до разменно и платежно средство /частично финансово изключване/. Системите, които са *обединени от собствения си интерес /главно за размяна/, свободно договарят правилата помежду си и използват средство за разчитане на разменените между тях свои ценности (в т.ч и взаимно погасяване на платежи)*, могат да бъдат наречени *бартерни системи*. Наименованието бартерни идва първо, от основната проявена функция – *непряка, опосредствана размяна*<sup>10</sup>, и второ, защото бартерът е синоним на онази размяна, която се извършва без задължителното участие на изрично определеното за законно парично средство или т.нар. „legal tender“. В този смисъл, бартер има при всяка размяна, без изключение. Едва когато в едната страна на размяната застане предмет/запис/, с гарантирани от издателя си характеристики, който е *възприет или наложен за еквивалент*<sup>11</sup>, от размяната изобщо, се отделя размяна, наречена „парична“ и заради нея бартерът бива изваден като отделен вид – формална „непарична“ размяна. Това твърдение предполага друг въпрос, за който се приема, че има единомислие – еволюционната същност на парите. Няма безспорни доказателства дали парите еволюционно се развиват от бартера или *институционално го изместват*.<sup>12</sup> В този смисъл историческият подход е полезно допълнение, но в същото време е и ограничение. Холистичният пък позволява сравнително по-отворено разбиране, а то на свой ред е предпоставка за еволюция на редица идеи и възходящо развитие.

Горните аргументи провокират синтеза на понятието „*бартерни пари*“ в съвместна употреба с друг, подобен на него абстракт - „*бартерна система*“. Не защото те двете се различават по същността си от размяната и парите въобще, а защото именно на фона на познатата ни днес организация на преобладаващо парична икономика с тенденция към централизиране и универсализиране<sup>13</sup>, израстват коментираните частни групи от взаимодействащи си стопански единици, които водени главно от естествените си нужди и интереси, възстановяват базови основополагащи социално-икономически връзки, като *същевременно създават нови [по форма] обменни комплекси*. С изложеното до дук целта е да се покаже, че тяхното видово разнообразие е в зависимост

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<sup>9</sup> Различни форми на изолация, изключване, асиметрия и други разнообразни начини за ограничаване.

<sup>10</sup> По същата логика можем да ги наречем и разменни. Тук терминологията играе ролята единствено на средство за излъчване на послание, без претенция за нещо повече.

<sup>11</sup> Формално или неформално

<sup>12</sup> С последното изобщо не се отричат всички известни и доказани предимства на „паричната“ икономика.

<sup>13</sup> Процеси, които не се развиват на основата на определена социална или индустриална политика или идеология, а чрез провеждане на комплекс от мерки, свързани с конкретни парични политики.

от социалната и културна среда, в която се оформят, а не по отношение на тяхната природа. Практически, те се институционализират в различни наименования, но в същността си са обикновени разменни комплекси, отразяващи т.нар. „дух на времето“, което ще означава – жизнения контекст.<sup>14</sup> Както става ясно, в същността си „бартерните пари“ са вид паричен инструмент, но на този етап подобно популяризиране би било твърде радикално и едва ли би срещнало широка подкрепа. Ето защо се ограничаваме до постановката на понятията „бартерна система“ и „бартерни пари“, които взаимно се предпоставят и засега съществуват единствено заедно в своята собствена абстрактна форма като мисловен инструмент за анализ. Въпреки, че е избран подход за теоретично дефиниране на явленията, той не ограничава практическото им осъществяване и последващо генериране на полезност.

### Еквивалент и форма

Съобразно изразеното до тук разбиране, парите се възприемат като обменен комплекс, съставен от два неделими в своето битие компонента, еквивалент и форма. Настроените повече към идеационните културни системи биха се застъпили за парите като идея, т.е. главно като еквивалент (също като Маркс), докато почитателите на сензитивните културни системи биха настоявали, че парите са стока<sup>15</sup>. Но тъй като нито едната от двете идеални форми на системи не съществува в чист вид, то неизбежно и парите не би следвало да се обясняват само като еквивалент, или само като форма. За парите можем да мислим като за много неща (поради еквивалентността им природа), но всяко от тях би било колкото вярно, толкова и непълно, от което и не докрай истинно. За тяхната природа, съдим единствено от емпирията, която наблюдаваме, с което поддържаеме разбирането, че абстрактно обяснение може да се постигне само ако се изходи от наличния опит. От своя страна, полезността на подобно излизане от реалността е полезно единствено след като то се проектира обратно в конкретен житейски контекст. С това считаме, че сме предложили главния от аргументите за възприемането на парите като *единство на еквивалент и форма*.

За **еквивалентността** могат да се посочат няколко важни белези. На първо място, това е понятие със строго социален, а не природен произход. Това го определя преди всичко като *идея*, т.е. еквивалентът е *идеален*. Обсъждайки единствено

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<sup>14</sup> Възприето е мнението, че паричните форми са контекстуалното явление, докато Демостенов предлага теоретична възможност, че „парите са ни дадени“, Вж. (Демостенов, 1945). Независимо дали можем да обясним докрай същността и съдържанието на парите, те са успешно използвани от хората от древността до днес и продължават да са инструмент за разпределение на доходи и богатства.

<sup>15</sup> Повече по въпросите за културните системи вж. (Sorokin, 1937).

еквивалентността, то тя няма конкретна материално-веществено изражение и поради това е *нематериална*. Като изразител на нещо друго, към което се реферира, еквивалентността се определя като *символ*, заместващ субективното усещане [*за ценност*], позволяващ обективизиране в процеса на общуване. Условно можем да наречем това заместване *език*, защото позволява комуникация между ценностите на отделните субекти. И като всеки език, така и този на парите (в компонента конституиране на еквивалентност) репрезентира *индивидуалното*, превръщайки го в *социално*. Така главната функция на парите „мярка на ценността“ (мярка на стойността)<sup>16</sup> се позиционира в символното пространство. Но индивидуалната перцепция за еквивалентност се експонира в социална единствено ако е налице договор, в т.ч. и *доверие*. За това често парите се отъждествяват с доверие. Но дори и да липсва доверие към дадена валута (форма на парите), от страна на някои индивиди, те въпреки това биха могли да я използват принудително, ако в защита на тази валута се обяви суверен, чиято власт се разпростира върху поведението на индивида. И по този начин доверието не става явно разпознаваемо. Погледнато отвън, то може да е налице, но със същата вероятност, може да отсъства. Еквивалентността е и в основата на т. нар. „ендогенни“ пари, т.е. пари възникнали по силата на нуждата от конституиране на обменен комплекс.

За **формата** на парите изложението е по-скоро *предметно*, а не идеално. Т.е. формата е *неидеална*. Умишлено избягваме да използваме назоваването „реално“, защото и идеята е също толкова реална, колкото и предметите в заобикалящия ни свят, но за да стане една идея предмет на общуване, тя изисква наличието на подходящ материален носител (като например този текст). Формата е *осезаема*, стока, запис, код и др. Формата на парите е *средство за плащане*, което влиза в употреба като платежен инструмент. Тя *опосредства* размяната и така оформя други две от главните функции на парите: средство за размяна и средство за плащане. Формата, позволяваща обмяна сред широк диапазон от социални структури (домакинства, стопанства, държави) създава качеството *ликвидност*, което придава на парите повече или по-малко охота за употреба. Извън техническото обяснение като бързина на обмяната, ликвидността има значение и на одобрение, приемане, респ. отхвърляне (acceptance, preference<sup>17</sup>). Беше споменато за суверенността на властта, налагаща паричния инструмент като причина за създаване на доверие. От тези позиции, подходящата форма на парите успешно се

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<sup>16</sup> За дискусиата относно значението и смесването на тези две понятия вж. (Тончева, 2014)

<sup>17</sup> В теорията си Кейнс, не поставя на анализ ликвидността, а предпочитанието към ликвидност, т.е. субективните оценки, изразени в съответстващо им поведение. (Keynes, 1931)

използва за да се поддържа стабилност при т.нар. „екзогенни“ пари. По отношение на еквивалентността, формата винаги е екзогенна, докато по отношение на формата, еквивалентността би могла да бъде и двете, както ендогенна (златото), така и екзогенна (крипто-валутите). В еквивалентността откриваме *относителните* цени, а във формата – *абсолютните* величини. В еквивалентността срещаме *диапазон* от оценки, докато във формата – *конкретни* стойности. Когато се изразяваме за дадено нещо като за пари, ние не можем да назоваваме единствено формата, без да реферираме към еквивалента, докато с понятието валута, смисълът ни отвежда преди всичко към формата, зад която еквивалентността остава скрита. Ето защо парите са единен комплекс, *мислим* като еквивалент и *употребяван* като форма.

Посочените съставни елементи на паричния комплекс и неговите характеристики не са окончателни, нито могат да обхванат всички възможни разграничения на еквивалента от формата, но са достатъчно показателни, за да послужат като отправна точка за по-цялостно възприятие на парите. Функционалистското обяснение на същността на парите никога не е било достатъчно, както и определянето на парите като стока е само част от истината. Ето защо в теорията всеки изследовател, изкушил се да проникне в същността на парите, стига до трудността да даде окончателна дефиниция, която да се приеме в задоволителна степен. От позициите на това, че явлението е социално, а не природно, окончателно определение не би могло и да се направи. Но поне можем да надграждаме значения и смисли, съответстващи на динамиката на развитие на обществата, а не да се тръгва всеки път от „Сътворението“, като контекстуално въвеждаме противостоящи си езикови структури, или смисли, както и нови разбирания като цяло.<sup>18</sup>

В заключение ще добавим, че нашето съвремие извършва значителни корекции на традициите, които корекции се задават от параметрите на „Индустрия 4.0“, където физическият свят се слива с виртуалния. Видно е, че трябва да очакваме смяна на парадигмите, което неизбежно ще се отрази и в смяна на съзнанието<sup>19</sup>. Вече се доказва, че човешкият мозък е с ограничени „байтове“ памет, а му се налага да борави с непоносим обем от данни, което връща в ценностния профил на модерния човек мисленето. Следва да признаем, че новите явления изискват и нови понятия, които могат да останат в родословието на предците си, но без да ги заместват. Известно е, че с

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<sup>18</sup> Успехът на Маркс за постигане дълбочина на анализа не идва само от неговия безспорен гений, но и от предхождащите го цялостни творби на Хегел, Рикардо, Смит, Мил и пр. към които той достопочтенно добавя своя принос. Вж. Още (Маркс, 1975)

<sup>19</sup> Макар и постъпателно, а не изведнъж

нарастване на познанието, дефинициите се менят. Относно понятието ни за парите, може да се очаква обогатяване, предизвикано от алтернативните им форми, които тепърва ще доказват своята полезност.

Парите са като езикът. И двете явления, символно репрезентирани нещо друго, са незаменими институции в битието на съвременния човек. И двете имат силата да конституират съзнание, да разпределят ресурси и да управляват поведение. Ето защо, понятието ни за пари е от жизнена важност за оцеляване в динамичния информационен свят. А философският подход при решаване на социални проблеми, и в частност финансови, спомага да се игнорират флукуациите на псевдознания и заблуди, и да се докоснат идентичните характеристики на явленията.

### **Библиография:**

1. Keynes, J. M. (1931). *Essays in Persuasion*. Macmillan and Co.
2. Sorokin, P. A. (1937). *Social and Cultural Dynamics*. American Book Company.
3. Демостенов, С. (1945). Очерки по теория на парите. Субстанционализъмът и антисубсанционализъмът в теорията на парите. София: Университетска печатница.
4. Маркс, К. (1975). *Капиталът* (Том т.1). София: Партиздат.
5. Пърс, Ч. С. (н.д.). Как да направим идеите си ясни? Свалено от [http://philosophy-bg.info/index\\_files/peirce.pdf](http://philosophy-bg.info/index_files/peirce.pdf)
6. Тончева, Р. (2014). Бартерни пари – актуално предизвикателство пред теорията, бизнеса и държавното управление. „*Икономически и социални предизвикателства пред държавното управление и бизнеса*. 6, стр. 153-166. София: УНСС.
7. Хърсев, Е. (1991). Еволюция на парите. София: АРГЕС и Наука и изкуство.



# The Bank for International Settlements and the dark history of finance during World War II

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**Abstract:** *During the 1930s came the world's oldest international financial institution – the Bank for International Settlements. Yet now, 88 years from its creation, both the academic community, not to mention the general public, know so little about it. On the basis of the bank's dark history, the goal of this paper is to reveal the dangerous and hidden aspects behind the globalization of finance which started during the interwar and war period.*

**Keywords:** *Bank for International Settlements, Central bank cooperation, Nazi gold*

**JEL Codes:** *N2, N24, N4, N44*

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**Introduction:** The issues related to the activity, history and future development of international relations and institutions have always been at the center of the public and academic debate. In this sense, it is puzzled that the history of the Bank for International Settlements, the oldest international financial institution, the institution responsible for shaping much of the inter-war and post-war financial order, is so poorly known. Actually it is not surprising, giving the fact that in its 88 years of existence only one serious investigative research into the bank's shadow history was done.<sup>1</sup> The fundamental connection of this issue to the understanding of the political and economic problems related to the inter-war and the war period, as well as to the aspects of the global financial integration after the Second World War, necessitates its consideration in this paper.

The Bank for International Settlements (hereinafter referred to as BIS) is undoubtedly one of the most important international institutions that as we have already mentioned most people have not heard of at all. The reason for this, according to one of its longest-serving employees, the chief manager of BIS for the period 1938-1958 Roger Auboin, is not hiding in something secret or mysterious about her activities, but in the fact that they are purely technocratic, complex and incomprehensible (Auboin 1955: p.1). With this article, the author aims to enable the readers to judge for themselves, whether the only reason lies solely in that. In this sense, the author aims to prove that the poorly known institution owes its shadowy history to the politically inconvenient specifics of its activities during the Second World War. Activities which supported illegal and immoral capital and raw material transfer between financial and industrial circles during WWII, revealing the dangerous aspects of war and post-war financial globalization.

**Discussion:** The founding of BIS is usually associated with the problems caused by Germany's military reparations related to her involvement in World War I. Reaching an agreement on the issue of German obligations was a slow, complicated and politically difficult process, not only in terms of their astronomical proportions. World War I, had already internationalized the military conflict to unprecedented degree, in similar fashion the financial problems that followed had been globalized. The underdeveloped international financial system at that time was not designed to cope with the complex challenges posed by the war and post war global conflict. Where would Germany find the money to pay? What would be the mechanisms

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<sup>1</sup> Adam LeBor's "Tower of Basel: The Shadowy History of the Secret Bank that Runs the World" is the first serious investigative research into the bank's shadow history.

by which it would do so? Who would oversee and regulate the reparations payments? It was these confidential discussions that shaped the role, structure, and privileged legal status of the future BIS (LeBor 2013:p.18).

In 1919, as in 1945, two ideological groups formed among the victors of the war: the punishers and the rebuilders. Intoxicated by the victory France and individual UK officials, lead the group of the punishers. The founders of the future BIS, who included most of Wall Street were leading the rebuilders. The last ones represented the corporate interests of the largest financial and industrial companies in the United States, United Kingdom and Germany. This was also the group with far more strategic and pragmatic ideas - the recovery of Europe and, in particular, the promising German economy in order to strengthen their own positions in the processes of economic globalization (LeBor 2013:p.19). The main representatives of this group in the future Bank were: from British side - Montagu Norman, Governor of the Central Bank of England, through the first chairman of the BIS board of directors Sir Otto Niemeyer. From Germany: Hjalmar Schacht, member of the board of BIS, Governor of the Central Bank of Germany and Minister of Economy during the Nazi party's rule. From America, the interests of the major businessman and banker J.P. Morgan and his associate Thomas Lamont were indirectly backed by Wall Street's strongest law firm Sullivan & Cromwell, by its prominent associate and US intelligence representative in Switzerland Alan Dulles (the future first director of CIA) and directly by the second BIS governor since 1940, the American lawyer Thomas McKittrick (LeBor 2013:p.28). It is the combination of the ideas and interests of these two political and economic circles that prepared the ground and even supported the repetition of the 1914 catastrophe in the period between 1939-1945 (Sutton A, 1976).

Until 1924, the mechanism of servicing the debts of the states who lost the war were governed by the ideas and representatives of the so-called “punishing group”. The effect of the overwhelming reparations on the German economy logically materialized in a catastrophic way. Degrading and disintegrating social relations, rising unemployment, hyperinflation, and the intensification of the influence of far-right and left-wing groups led to the total insolvency of the debtor, and later to the Nazi party's coming to power. The growing European political and economic crisis, arising from the unresolved pre-war and post-war conflicts, created the right conditions for the intervention of the second ideological group. Leading position was taken by its American representatives through the head of the new reparations committee in 1924 - the

American banker Charles Dawes. According to the so-called “Dawes Plan” Germany would receive a huge stabilization loan and its debt payments would be sharply reduced till a future recovery of its economy. Unlike Europe, World War I caused an economic boom and a drastic increase in US capital, allowing its banking system to support aggressive investments by US companies in the German industry (LeBor 2013:p.19) .

Between 1924 and 1928 Germany received each year 600 million \$ in loans, half of which came from American banks. Much of it returned from where it had come. The loans revolved and eventually returned to the US, serving both Germany's repayment obligations to England and France, and theirs to US. Secondly, although the loans were officially given to Germany to ensure the payment of reparations, in reality, they were designed to restore the country's military-industrial potential. In fact, the Germans paid off the loans with shares of German companies, allowing American capital to actively integrate itself into the German economy. The total amount of foreign investment in German industry from 1924-1929 amounted to nearly 63 billion gold marks (the loans accounted for 30 billion of this), and 10 billion in reparations was paid off. American bankers - primarily J.P. Morgan, provided Seventy percent of the Germany's financial income. As a result, as early as 1929, Germany's industry was second in the world, but to a large extent it was in the hands of America's leading financial-industrial groups (Ahamed L. 2010: p.216; Sutton A, 1976).

Thus, I.G. Farben, the company that became the German war machine's key component, was under the control of Rockefeller's Standard Oil at the time it funded 45 percent of Hitler's election campaign in 1930. In the pearl of Germany's chemical industry have invested even leading politicians from opposing countries such as the UK Prime Minister from the period 1937-1940 - Neville Chamberlain (Sutton A, 1976).

Through General Electric, J.P. Morgan controlled the German radio and electrical industry in the form of AEG and Siemens (by 1933, General Electric owned a 30 percent stake in AEG). Through telecom company ITT, he controlled 40 percent of Germany's telephone network and 30 percent of aircraft manufacturer Focke-Wulf. Opel was taken over by the Dupont family's General Motors. Henry Ford held a 100 percent stake in Volkswagen. In 1926, with the participation of Rockefeller bank, Dillon Reed and Co., the second largest industrial monopoly emerged – metallurgical firm Vereinigte Stahlwerke (Unified Steel Trusts) of Thyssen, Flick, Wolf, Fegler, etc (Sutton A, 1976).

American cooperation with Germany's military-industrial complex became so intense and pervasive that, by 1933, American capital had reached key sectors of German industry and even major banks like Deutsche Bank, Dresdner Bank, Donat Bank, etc. (Sutton A, 1976).

The resulting financial expansion ended at the end of 1929 with the outbreak of an economic bubble in the US stock market, a tide in investment and a global economic crisis. Once again, Germany was threatened by an economic catastrophe. The answer to the seemingly endless problems with the German reparations was of course, a new conference and a new committee. The initiative continued to be in the hands of the American lobby and this time headed by the industrialist, banker and diplomat Owen Young. The financial plan in his own name served as a pretext for the establishment of the Bank for International Settlements.

In Economics textbooks, more attention is usually paid to the new conditions, parameters and financial benefits associated with the Young Plan, but not to the unique banking institution specially designed to administer them. The main ideologist of this new financial institution was Helmär Schacht, Governor of the Central Bank of Germany, who even allowed himself to call the BIS "my bank" (LeBor 2013:p.12; Schacht 1956). Documents from the Central Bank of England show that Schacht's close friend and Bank of England's Governor Montagu Norman, proposed the creation of such a bank to US Central Bank Governor Benjamin Strong as early as 1925 (LeBor 2013:p.18). During the debates with the creditors in 1930 Hjalmar Schacht explained that the scheme by which Germany has so far serviced its debt, namely by borrowing from other countries, is unacceptable and will no longer be fulfilled. If creditors really want Germany to continue with her obligations, they must invest the repayment instalments in Germany or finance the purchase of German goods from third countries. It is with the main purpose of serving this process that Schacht offered the creation of the Bank for International Settlements (Schacht, 1956).

On 20 January 1930 the governments of Great Britain, France, Germany, Belgium, Italy, Japan and Switzerland signed one of the most unusual legal documents in modern history. The Bank of International Settlements, established through the said act is fully immune to national and international law. Article 10 of the BIS Constituent Charter noted: "The Bank, its property and assets and all deposits and other funds entrusted to it shall be immune in time of peace and in time of war from any measure such as expropriation, requisition, seizure, confiscation,

prohibition or restriction of gold or currency export or import, and any other similar measures.”  
(LeBor 2013:p.27)

By exploiting the chaos of German reparations, international circles actually succeeded in establishing the most privileged and legally protected financial institution in history - an institution far beyond the goals initially proposed and set by its creators. The new Institution had the legal status of an international organization and a bank working for the profit of its shareholders at the same time. The shareholders were supposed to be only Central Banks, except for the Federal Reserve, which until the 1950s was represented by three private banks - JP Morgan, the First National Bank of New York and the First National Bank of Chicago. The governors of the founding central banks were ex officio members of the board of directors. Each could appoint a second director of the same nationality. The second director did not have to be a central banker. He could be drawn from finance, industry, or commerce - a provision that would later prove crucial in ensuring Nazi influence over the BIS. (LeBor 2013:p.28)

The initial capital of the bank was 500 million gold Swiss francs, the authorized activities being: management of the repayment instalments under the Young Plan, trading in gold for its own account or at the expense of its shareholders, trading in securities except shares, acceptance of deposits and maintaining central bank accounts, entering agreements to act as a trustee or agent in connection with international settlements. With the idea of attracting future shareholders and customers from all central banks, especially those in smaller countries, BIS offered specific services under better conditions than those by any central bank. For example, if the Bank of Greece held gold at the Bank of France and wanted to buy another currency, it first had to buy francs from the Bank of France. The Bank of Greece then converted the francs to the second currency, with all the usual losses of exchange rates and commissions. However, if the Bank of Greece held gold at the Bank of France in the name of the BIS, the BIS could “give the Bank of Greece any currency it desires at any time and can fix an agreed rate without going through the actual exchange operation.” And, the BIS did not charge any commission. (LeBor 2013:p.29).

But as we will see, the relationships between the central banks of small countries with BIS can hide not only advantages but also catastrophic disadvantages.

When it came to the conditions for the employees of the bank alone, there were only positives. It doesn't come as a surprise that thirteen thousand people applied for a job at BIS until the end of 1930s. Of these, only 95 were appointed. It is interesting to note that only a few were

bankers. Most of them were either lawyers (including the bank's second governor in the critical period from 1940-1945), economists, members of the League of Nations or the Dawes committee. Their wages were high and exempt from taxes. The lowest wage for an employee was \$15,000 bearing an average US salary of \$2,000 prior taxing (LeBor 2013:p.30).

As a full contrast to the working conditions in the bank, the political environment in Germany evolved. Only two years after its founding, BIS lost its main intended purpose for existence - to facilitate the reparations imposed on Germany by the Treaty of Versailles after World War I, and to act as a trustee for the German Government's Young Loan. After the moratorium and the Lausanne Conference of 1932, reparation payments were suspended, and shortly thereafter, followed the cancellation of payments for the Dawes and Young Plan. For a "final" Hitler arrived in Germany. The possibility of a new war was emerging more evidently and it was once again one between the governments of the major shareholders in BIS. The unique financial institution, contrary to expectations, did not cease its activity - that would completely contradict the spirit of its corporate culture.

During World War II, the manager of the board was an American - Thomas McKittrick. While General Manager, Roger Abuin, was Frenchman, his deputy Paul Heckler - German (member of the Nazi party), Secretary-General Rafael Pilotti - Italian, and the Bank's chief economic advisors were Swedes and Britons (LeBor 2013:p.30). The relations between BIS employees and shareholders remained professional and cooperative prior, during and after the end of the war. Their nationalities did not matter, they were all technocrats who had given their loyalty to the religion of opportunism and international finance. And in this religion there is a completely different moral code, one in which the highest value is to sustain the financial channels open. Survival, adaptation and achievement of results at every opportunity were guaranteed. And opportunities, especially in times of global conflicts, are never absent. Contrary, this is the period in which the financial oligarchy and her serving staff found their highest and most destructive form of expression.

Such expression first arose in 1938 after the annexation by Germany of the Sudetenland in Czechoslovakia. The National Bank of Czechoslovakia had providently transferred most of its gold reserves beyond the Channel. The gold had been deposited on two accounts - one at the Central Bank of England, the other - again back there, but rather on a BIS account, whose agent in the United Kingdom was, indeed again, the Bank of England. The security of the young Czech

Republic's gold reserves was much more than a monetary problem - they were a material expression of a national sovereignty. The head of the National Bank of Czechoslovakia, Josef Malik , believed that regardless whether the Germans would take an entire possession of his homeland, if the gold reserves remain safe, the potential for future independence of the country would survive (LeBor 2013:p.54). It turned out, however, that he was deeply wrong. His trust in BIS and the leadership of the Central Bank of England remained, to put it mildly, unjustified. Only three days after the Germans invaded Prague, under the threat of death, German officials ordered the leadership of the National Bank of Czechoslovakia to demand the transfer of gold reserves from its two accounts to Reichsbank's London account in BIS. Without notifying the British government (although he was instructed to do so), Bank of England's manager Montagu Norman quickly transferred the gold from the BIS Czech's account to Reichsbank's (LeBor, 2013)

The operation on the other account was delayed due to fears of a political and public scandal, but one was still accomplished. George Strauss, Labor MP, speaking in the House of Commons described the situation like this: "The Bank for International Settlements is the bank which sanctions the most notorious outrage of this generation—the rape of Czechoslovakia." (Elston P., 1998)

Subsequently accounts in BIS of all the forcibly occupied by Germany European countries were seamlessly transferred to Reichsbank without hindrance. For the honorary titled "Grand Officer of the Order of the Crown", Baron Montagu Norman there were no real legal or moral consequences. The consequences were left only for the London's regular citizens and the millions of front-line soldiers, on whose heads the bombs materialised by the transferred assets were poured.

In this way the all too valued by Montagu Norman independence of the entrusted Central Bank and its special clients, was bought at a very high price.

Only two years later - in 1940, Russia occupied Lithuania, Latvia and Estonia. The Soviet authorities similarly ordered the governors of the three central banks to instruct BIS in transferring their gold reserves into the account of the Russian Central Bank. The parallel with the Czech's gold was more than obvious, but the result was radically opposite. The new bank manager, the American lawyer Thomas McKittrick, not only refused to execute the transaction but was also legally justified, citing the important Article 10 of the BIS statute. An article which forbids



coercive measures against bank clients under the influence of political interests and institutions. (LeBor 2013:p.65)

The real scale, specificity and nature of the Bank's activity in the period 1939-1945 was gradually revealed only a few decades after the end of the Second World War. According to collected data, it turns out that the management's announcement of cessation in activity and compliance with neutrality were a high form of criminal manipulation and cynicism. In this period BIS acted as the only real international branch of the German Reichsbank with its ability to perform necessary mediation in payments to external suppliers of strategic raw materials. In order to keep the necessary financial channels open, Germany continued to serve strictly its financial obligations to BIS, thus transferring some of its monetary resources to the British government (against which it lead military action simultaneously). Virtually, 82% of the bank's income came only from the interest payments for assets invested in the German economy (Toniolo and Clement 2007; Interrogation reports May 29 1945; Higham 1983; LeBor 1997).

Thanks to the research by historian Piet Clement (who was also a BIS employee at that time), we know that 21.5 metric tons of gold were physically transferred from Germany into the BIS account (located in Swiss Central Bank's treasury) for payments to its shareholders. It was found that most of the gold with which Germany continued to pay its liabilities was indeed the BIS-retained reserves from Germany's occupied countries, as well as assets of individuals sent to concentration camps (including gold from dental seals worth \$ 3 million) (Toniolo and Clement, 2007; Interrogation reports, May 29 1945).

A much more interesting question was left unanswered. What amount of gold had been transferred to the Reichsbank Swiss account through which the Hitler government payed out its strategic external suppliers and even more importantly, concealed military profits. Regardless of Hitler's attempts and great desire to achieve an autarky (a self-sufficient economic system where trade relations with the outside world are very limited or non-existent), during the war, Germany needed large amounts of strategically imported raw materials. These were, for example, lubricants and US petroleum products, Swedish steel, Romanian oil, Portuguese tungsten, South American meat, all of which had to be paid in stable currency (gold). It is for this reason that the Nazis and their business partners desperately needed well-functioning financial channels at the bordering neutral country. This is one of the main reasons why Switzerland had never been occupied. After the war, it turned out that despite the huge material and human destruction,

German industrial companies had managed to maintain and reinvest their huge profits, Germany's capital stock its productive equipment, buildings, infrastructure, and other assets was actually greater in 1948 than in 1936( Higham 1983; LeBor 1997; Sutton 1976 ).

Archives and memoirs of US Treasury officials reveal that the BIS activities were subject to serious criticism and investigation by senior officials from the President Roosevelt's administration. The main opposition to BIS and its US director, Thomas McKittrick, emerged from the Finance Minister, Henry Morgenthau, and his deputy, the prominent economist - Harry Dexter White (Henry Morgenthau diaries, 1944). Harry White saw the BIS clearest, the bank's emphasis on its supposed neutrality was an alibi for its future role in reconstructing Europe, he argued:

“They hope to be a moderating influence in the treatment of Germany during the peace conference. That is why Germany has treated it with the greatest of care. She has permitted her to pay dividends; she has let the people in BIS come and go across enemy territory; she has been extremely careful and well-disposed to the BIS, because she nursed that baby along in the hope that that would be a useful agency that would protect her interests beyond those that any other institution around the peace table would.” (Henry Morgenthau diaries 1944, p.193)

During the 1944 international conference in Bretton Woods, on which the post-war financial issues had been discussed, Morgenthau, Dexter White and the representative of the Norwegian delegation strongly urged for the bank's closure. At first, no one spoke publicly, but after Morgenthau had submitted a draft resolution stating that no country can participate in the future International Monetary Fund without ending its participation in the BIS, there was a strong reaction from the British delegation. It's most prominent member, the British economist John Maynard Keynes actually acted as a representative of the most influential financial circles and furiously opposed. With other prominent US and British financiers behind him, the resolution had been rejected (Keynes to Morgenthau, July 19 1944).

Consequently after the death of President Roosevelt, the professional careers of Henry Morgenthau and Harry Dexter White, the main critics of the BIS were destroyed. The career of BIS's wartime director Thomas McKittrick developed in the opposite direction. He returned to America, to be appointed vice president of Chase National Bank and manager of their foreign loans department. No one ever compelled him to testify about the activity of the unique and shadow institution he was managing during the Second World War. Instead, he was invited to

Brussels and decorated with the royal Order of the Crown of Belgium, as ironic as it may sound, the honor, noted a press release, was “in recognition of his friendly attitude to Belgium and his services as President of the Bank for International Settlements during World War II.” (LeBor 2013:p.93;137) McKittrick retired in 1954, and only five years after the end of the War, he welcomed a dear guest in New York – his close friend former Reichsbank vice president, BIS director and member of the Nazi party, Emil Puhl. (LeBor 2013:p.126) Puhl had received a minimal conviction from the Nuremberg trials, similar was the fate of the bank's main ideologist, former Reichsbank's Governor Helmar Shacht. After a minimum stay in a labour camp, Shacht began a highly successful career as an investment consultant for developing countries and even founded his own private bank called Schacht & Co (LeBor 2013:p.112).

**Conclusion:** The Bank for International Settlements managed to survive and maintain its key role in coordinating global financial relations. Like a number of its leading figures, BIS displayed a remarkable ability to adapt and overcome the challenges of its complex and shadow history. Using its unique contacts and legal position during the Second World War, BIS proved to be the indispensable institution, supporting the so-called capital and raw material transfer between the financial and industrial circles of the warring states. A rarely illuminated activity without which the machine of global and regional conflict in a globalizing world would have inevitably and very quickly collapsed. Of course, the more conservative academic and financial circles would like BIS to be remembered solely by its post-war role in the preparation and implementation of the European Monetary Union, the introduction of the euro, the coordination of central bank policies and banking supervision.

## References:

1. Auboin, Roger (1955), *The Bank for International Settlements, 1930-1955, Essays in International Finance*, Princeton University.
2. Elston Paul, "Banking with Hitler," BBC Timewatch documentary, 1998. Accessed online at <http://www.youtube.com/watch?v=YauM5dHLn1s>.
3. Henry Morgenthau diaries, FDRML. July 19, 1944, Book 755, Reel 216.
4. Higham Charles (1983) "Trading with the Enemy: An Exposé of The Nazi-American Money-Plot 1933-1949".
5. Hjalmar Schacht (1956), *Confessions of the Old Wizard* ,NY: Houghton Mifflin
6. Interrogation reports, Devisenschutzkommando, May 29, 1945. United Kingdom National Archives, London. FO 1046/763, German Loot.
7. Keynes to Morgenthau, July 19, 1944, FRDML.
8. LeBor Adam (2013), "Tower of Basel: The Shadowy History of the Secret Bank that Runs the World".
9. LeBor Adam (1997), *Hitler's Secret Bankers: The Myth of Swiss Neutrality During the Holocaust*, Citadel Press.
10. Liaquat Ahamed (2010), *Lords of Finance* (London: Windmill Books, 2010).
11. Sutton A. (1976), *Wall Street and the Rise of Hitler*, Arlington House.
12. Toniolo Gianni , Clement Piet (2007), "Central Bank Cooperation at the Bank for International Settlements 1930-1973".

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*ECONOMIC LESSONS, PERSPECTIVES AND  
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 SOFIA, 13-14 OCTOBER 2016

**THIS CONFERENCE PROGRAMME IS PRELIMINARY.  
 SOME INFORMATION AND SCHEDULES CAN BE CHANGED**

<b>Wednesday - October 12<sup>th</sup></b>		
<b>Afternoon</b>	Arrival and accommodation	
18:40 pm	Meeting in the lobby of Vitosha Park Hotel for dinner in a traditional Bulgarian restaurant. (Borimechkata- Students Town) <sup>1</sup>	
<b>Thursday - October 13<sup>th</sup></b>		
8:30-9:00am	<b>Participants registration</b>	Registration
09:00 – 9:30 am	<b>Welcome speeches</b> <i>Opening /Large conference hall/</i>	<b>Statty STATTEV</b> , Rector, UNWE, Sofia, Bulgaria <b>Pencho PENCHEV</b> , UNWE, MRC, Sofia, Bulgaria <b>Valentin GOEV</b> , Vice-Rector, UNWE, MRC, Sofia, Bulgaria <b>Nikolay NENOVSKY</b> , University of Picardie Jules Verne; UNWE, MRC, Sofia, Bulgaria <b>Petar CHOBANOV</b> , MP, Former Minister of Finance, UNWE, MRC Sofia, Bulgaria <b>Ivailo KALFIN</b> , Former Minister and Vice-Prime minister <b>Plamen ORESHARSKI</b> , Former Prime Minister and Minister of Finance (to be confirmed)
09:30 – 10:30 am	<b>Opening plenary (1)</b> <i>/Large conference hall/</i>	<b>Chair: Nikolay NENOVSKY</b> , University of Picardie Jules Verne; UNWE, MRC <b>Speakers:</b> (1) Keynote speaker: <b>Bruno THERET</b> , Université Paris Dauphine, France ( <i>The Euro as common money, not a single currency. A plea for a European monetary federalism</i> ) Discussion

<sup>1</sup> \*Dinner is self paid (Approx. 20 euro per person). It will be held in a traditional Bulgarian restaurant in Students town. The distance is approximately 15 min. by foot from Park Hotel Vitosha [/map/](#) and 5 min from Suite Hotel [/map/](#).





10:30 – 11:00 am	<b>Coffee Break (at UNWE Canteen)</b>
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11:00-13:00 am	<b>Presentation Session (1)</b> <b>Scientific Articles and</b> <b>Experience Reports</b> <b>(simultaneous)</b>	<p><b>Parallel session 1: Banking and Monetary policy - <i>Large conference hall</i></b>  <b>Moderator: Petar CHOBANOV</b>, MP, Former Minister of Finance, UNWE, MRC Sofia, Bulgaria  <b>Speakers:</b>  <b>Gregory LEVIEUGE</b>, Yannick LUCOTTE, University of Orleans – LEO; Paris School of Business, France (<i>Central banks' preferences and banking sector vulnerability</i>)  <b>Konstantinos LOIZOS</b>, University of Athens, Greece (<i>Alternative monetary and financial regimes and development banks in Greece 1963-2002: What have we learned?</i>)  <b>Gordon KERR</b>, Cobden Partners, London, United Kingdom (<i>Fintech applications in bank record keeping – Is there a need for a new cryptocurrency?</i>)  <b>Dina ELOITRI</b>, University Mohamed 5, Morocco (<i>The challenges in liquidity management within Moroccan banks</i>)  <b>Dimitar CHOBANOV</b>, UNWE, Sofia, Bulgaria (<i>Nominal GDP Targeting - An Alternative Monetary Policy Regime</i>)  <b>Hicham HACHEM</b>, Universite de Picardie Jules Verne, France (<i>How moderate was the great moderation and how destabilizing is secular stagnation? Fiscal and monetary policy implications based on evidence from US macro data</i>)</p> <hr/> <p><b>Parallel session 2: EU challenges and other financial issues - <i>Small conference hall</i></b>  <b>Moderator: Nikolay NENOVSKY</b>, University of Picardie Jules Verne; UNWE, MRC, Sofia, Bulgaria  <b>Speakers:</b>  <b>Claudiu ALBULESCU</b>, University of Timisoara, Romania (<i>The loss of interest for the euro in Romania</i>)  <b>Tatyana HOUBENOVA</b>, Economic Research Institute of Bulgarian Academy of Sciences, Sofia (<i>The decentralization of local public finances in Bulgaria in the context of EU integration: problems and prospects</i>)  <b>Jovan ZAFIROSKI</b>, Faculty of law "Iustinianus Primus", UKIM, Skopje, Macedonia (<i>The new approach in the integration of the financial markets. The case of the Balkan countries</i>)  <b>Albuene KASTRATI</b>, AAB College, Kosovo (<i>The relationship between output gap and excess liquidity in European transition economies</i>)  <b>Emil KALCHEV</b>, New Bulgarian University, Sofia, Bulgaria (<i>Key trends in the Bulgarian monetary sector</i>)</p>
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13:00 – 14:00 pm	<b>Lunch (at UNWE Canteen)</b>
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14:00-15:00 pm	<b>Plenary session (2)</b> <i>/Large conference hall/</i>	<p>Chair: Kiril TOCHKOV, Texas University, USA          (2) Keynote speaker:  <b>Jean Paul POLLIN</b>, Université d'Orleans, France (<i>New questions on the finance and growth nexus</i>)          Discussion</p>
15:00-15:15 pm	<b>Coffee Break (at UNWE Canteen)</b>	
15:15–17:00 pm	<b>Presentation Session (2)</b> <b>Scientific Articles and Experience Reports (simultaneous)</b>	<p><u>Parallel session 1: Capital markets - Large conference hall</u>  <b>Moderator: Tatiana HOUBENOVA</b>, Economic Research Institute of BAS, Sofia, Bulgaria  <b>Speakers:</b>  <b>Sorin IULIAN CIOACA</b>, Bucharest University of Economic Studies, Romania (<i>Assessing the contagion effect on the CEE capital markets</i>)  <b>Dimiter NENKOV</b>, UNWE, Sofia, Bulgaria (<i>Relative valuation and stock-market bubbles</i>)  <b>Kiril TOCHKOV</b>, Texas University, USA (<i>Convergence of government bonds yields in the EU: evidence from Central and Eastern Europe</i>)  <b>Anna KALICIAK</b>, City University London, UK (<i>Socio-Economic Determinants of lottery-Linked savings. Evidence from the UK premium bonds market</i>)  <b>Saikak MOULAYDRISS</b>, Mohammed V University, Rabat, Morocco (<i>Estimation of the term structure of interest rates for Moroccan financial market using Vasicek model</i>)  <b>Galia MANCHEVA</b>, UNWE, Sofia, Bulgaria (<i>Political factor identification model on FOREX market</i>)  <b>Gergana MIHAILOVA</b>, UNWE, Sofia, Bulgaria (<i>Monetary policy of Central and East Europe</i>)</p> <hr/> <p><u>Parallel session 2: Monetary theory and banking – Small conference hall</u>  <b>Moderator: Rossitsa TONCHEVA</b>, UNWE, MRC, Sofia, Bulgaria  <b>Speakers:</b>  <b>Jens MARTIGNONI</b>, FleXibles Zurich and University of Cologne, Switzerland (<i>Development and status of social and ethical banks in Switzerland</i>)  <b>Miguel HYROTA</b>, University of Valencia, Spain (<i>Reshuffling the monetary and financial system: lessons from the social and solidarity economy</i>)  <b>Melloul ANASS, Chaik Saif EDDINE</b>, University of economic Mohamed V; FSJES SALE Rabat, Morocco (<i>The contributions of Islamic banks on economic growth: using panel model</i>)  <b>Marc GAUVIN</b>, ACSC, Spain (<i>Money System's transparency alliance (MSTA) from idea to world forum proposal</i>)  <b>Petar CHOBANOV, Nikolay NENOVSKY, Diyana MITEVA, Ivayla DIMITROVA</b>, UNWE, MRC, Sofia, Bulgaria (<i>Financial sustainability in CEE - preliminary notes</i>)  <b>Sylvia TRIFONOVA</b>, UNWE, Sofia Bulgaria (<i>Importance of Technological Risks Management for the Banking Stability</i>)  <b>Rossitsa TONCHEVA</b>, UNWE, MRC, Sofia, Bulgaria (<i>Barter Money – Advantages and challenges</i>)</p>



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15:15–17:00 pm	<b>Presentation Session (2) Scientific Articles and Experience Reports (simultaneous)</b>	<p><b>Parallel session 3:</b> International Monetary regimes /French – English/ - <i>Hall 2028A</i></p> <p><b>Moderator:</b> Gancho GANCHEV, South-West University, Blagoevgrad, Bulgaria</p> <p><b>Speakers:</b></p> <p><b>Marc RAFFINOT</b>, Université Paris Dauphine, France (<i>Bretton Woods Institutions’ lending to low income countries, over-indebtedness and debt relief: a contribution to the design of a new international financial architecture</i>)</p> <p><b>Jaime MARQUES PEREIRA</b>, University of Picardie Jules Verne (UPJV), France (<i>The current power of the Brazilian Central Bank in a financialized economy: an institutionalist macro-analysis based on the Foucault’s concept of ‘governmentality’</i>)</p> <p><b>Jean-Paul GUICHARD</b>, University of Nice, CEMAFI, "Jean Monnet Chair" (<i>Les Balkans à l’heure de l’Europe Allemande</i>)</p> <p><b>Stephan LONGUET</b>, University of Picardie Jules Verne (UPJV), France (<i>Schumpeter et la politique économique entre les institutions et la cognition</i>)</p>
20:00 – 23:00 pm	<p><b>Welcome dinner at Restaurant Castello di San Marino (<a href="#">Sofia, Boyana, ul. Karamfil 22</a>)</b></p> <p>19:40 Meeting point for international participants Park Hotel Vitosha</p>	



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**Friday - October 14<sup>th</sup>**

<p>09:30 – 10:30 am</p>	<p><b>Plenary session (3)</b>  <i>/Large conference hall/</i></p>	<p><b>Chair: Yorgos RIZOPOULOS</b>, Paris Diderot University, France          (3) Keynote speaker:  <b>Xavier RICHEL</b>, University Sorbonne Nouvelle, France (<i>After Brexit: which consequences on integration and further enlargement in South East Europe and Western Balkans</i>)          Discussion</p>
<p>10:30 -10: 45 am</p>	<p><b>Coffee Break (at UNWE Canteen)</b></p>	
<p>11:00-13:00 pm</p>	<p><b>Presentation Session (3)</b>  <b>Scientific Articles and          Experience Reports          (simultaneous)</b></p>	<p><b>Parallel session 1: Economic and Social history</b> <i>Large conference hall</i>  <b>Moderator: Pencho PENCHEV</b>, UNWE, MRC, Sofia, Bulgaria  <b>Speakers:</b>  <b>Tsvetelina MARINOVA</b>, New Bulgarian University, Sofia, Bulgaria (<i>Popular banks in Bulgaria during the interwar period (1919-1938): key socio institutions for economic development</i>)  <b>Sylvain CELLE</b>, CLERSE, CRIISEA, Institut Godin, France (<i>A historical detour from cooperative spirit during the interwar period in France (1920-1939)</i>)  <b>Hristiyan ATANASOV</b>, University of Library Studies and Information Technologies (ULSIT, Sofia, Bulgaria (<i>The state and agricultural credit cooperatives: the ottoman case (60s-70s of the XIX century)</i>)  <b>Peter STOYANOV</b>, UNWE, Bulgaria (<i>The Babylonian culture – the genesis of the primal debt and high finance</i>)  <b>Irene SOTIROPOULOU</b>, Coventry University, UK (<i>Byzantine yperpera and Venetian ducats: missing pieces in the puzzle of monetary theory</i>)</p>



11:00-13:00 pm	<b>Presentation Session (3)          Scientific Articles and          Experience Reports          (simultaneous)</b>	<p><b>Parallel session 2: Economic history and history of economics <i>Small conference hall</i></b>  <b>Moderator:</b> Vesselin MINTCHEV, Economic Research Institute of BAS, Sofia, Bulgaria  <b>Speakers:</b>  <b>Giovanni PAVANELLI</b>, University of Turin, Italy (<i>The German translation of De Viti de Marco's Principili dell'economia finanziari</i>)  <b>Tanya GALCHEVA</b>, savedarchives.net, Sofia, Bulgaria (<i>The personal collection of Semen Demosthenov (1866-1968) Collective memory versus ideological control</i>)  <b>Nikolay NENOVSKY</b>, University of Picardie Jules Verne; UNWE, MRC (<i>The Soviets monetary experience (1917 - 1924) and its lessons for the present day problems</i>)  <b>Eric MAGNIN, Nikolay NENOVSKY</b>, University Paris Diderot, France; University of Picardie Jules Verne, UNWE, MRC (<i>Dependent monetary regimes in the Balkans : Enlarging the varieties of capitalism " hypothesis</i>)  <b>Nikolay BOGATZKY</b>, Independent Researcher, Rome, Italy (<i>Socialist industrialization and Infant industry argument</i>)</p> <hr/> <p><b>Parallel session 3: Technological and geopolitical issues – <i>Hall 2032A</i></b>  <b>Moderator:</b> Yanko HRISTOZOV, UNWE, MRC, Sofia, Bulgaria  <b>Speakers:</b>  <b>Xavier GALIEGUE</b>, University of Orleans, France (<i>Which business model for mitigation technologies? The case of CCS in the Central and Eastern Europe</i>)  <b>Nino PAPASHVILI</b>, Tbilisi State University, Georgia (<i>The Easter partnership countries: comparison of economic aspects of democratic state building</i>)  <b>Petya KORALOVA</b>, Todor Kableshev Higher School Of Transport, Sofia, Bulgaria (<i>Human resources management at Bulgarian sea ports – problems and perspectives for development</i>)  <b>Shteryo NOZHAROV</b>, UNWE, Sofia, Bulgaria (<i>Social costs of the inefficient management if the EU funds for Bulgaria</i>)  <b>Ivan IVANOV</b>, University of Food Technology, Plovdiv, Bulgaria (<i>Effectivity estimate of short-term assets running in food industry/ An approach for analyzing and assessing the informal economy in the food industry</i>)  <b>Elizabeth YONEVA</b>, UNWE, Sofia, Bulgaria (<i>Regionalism in the Black Sea Area: Historical context and current state of the economic development in a peripheral maritime region of Europe</i>)  <b>Maria-Cristiana MUNTHIU</b>, Conservatoire National des Arts et des Metiers, Institut des Cadres Superieurs de la Vente, France, (<i>Perception of e-service quality dimensions and their impact on satisfaction model: the case of educational services in the virtual environment</i>) <b>PRESENTATION VIA SKYPE</b></p>
13:00 – 14:00 pm	<b>Lunch (at UNWE Canteen)</b>	

14:00-15:30 pm	<b>Presentation Session (4)</b> <b>Scientific Articles and</b> <b>Experience Reports</b> <b>(simultaneous)</b>	<p><b>Parallel session 1:</b> - Russian/Bulgarian session <i>Large conference hall</i>  <b>Moderator:</b> Georgi NAIDENOV, UNWE, Sofia, Bulgaria  <b>Speakers:</b>  <b>Elena PONOMARENKO</b>, RUDN University, Russia (<i>Сравнение развития финансовых рынков и позиций мировых /Financial markets and global financial centers in international rankings</i>)  <b>Alexander BYSTRIAKOV</b>, RUDN University, Russia (<i>Состояние и перспективы развития банковской системы России /The state and prospects of the development of bank system of Russia</i>)  <b>Metodi HRISTOV</b>, VUZF, MRC, Sofia, Bulgaria (<i>Паричните потоци и националните сметки/Monetary flows and national accounts</i>)  <b>Georgi NAYDENOV</b>, UNWE, Sofia, Bulgaria (<i>Сегашният период в движението на Запад на центъра на световната търговия и трагичната съдба на Русия за трети път да е арбитър в битката между стария център и новия претендент/Russia as a new global arbiter</i>)  <b>Teodora TODOROVA, Iliya GARALIEV</b>, Ministry of labour and social policy, Bulgaria (<i>Възможности за финансиране на социалното предприемачество в България/Financing social entrepreneurship in Bulgaria</i>)</p> <hr/> <p><b>Parallel session 2:</b> PHD Session <i>Small conference hall</i>  <b>Moderator:</b> Rossitsa TONCHEVA  <b>Speakers:</b>  <b>Sophia KASSIDOVA</b>, UNWE, Sofia, Bulgaria (<i>The impact of postcrises banking regulation on banks' business</i>)  <b>Souleymane NDAO</b>, Université de Picardie Jules Verne, Amiens, France (<i>Une evaluation empirique du cout de la detention des reserves dans les economies de la zone CFA</i>)  <b>Hassan Abakari HASSAN</b>, Université de Picardie Jules Verne, Amiens, France (<i>Rueff, dans les coulisses du processus de stabilisation : l'effet des discours sur l'action</i>)  <b>Quang NGUYEN</b>, Université de Picardie Jules Verne, Amiens, France (<i>L'évolution de la politique monétaire au Vietnam</i>)</p>
15:30 -16:00 pm	<b>Closing remarks</b>	<b>Nikolay NENOVSKY, Director of MRC</b>



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19:00 – 20:30	National Opera and Ballet	Ballet show (Sofia Opera, <a href="#">Vrabcha Str. 2</a> )
20:30-23:00	Dinner	At Restaurant Corso ( <a href="#">10 Tsar Osvoboditel Blvd. (In front of the Russian Orthodox Church)</a> )
<b>Saturday - October 15<sup>th</sup></b>		
8:00-21:00	One day excursion. <i>Bus leaves from Park Hotel Vitosha</i>	Visiting the Veliko Tarnovo – the old Bulgarian Capital. For additional information visit the website of the conference. <a href="http://www.conference.mrcenter.info">www.conference.mrcenter.info</a>