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Main accent on the 1st Annual Conference conference was the monetary and financial regimes in the Balkan Region. Researchers and professional from more than 10 countries took part.

The present book consists papers in English and Bulgarian language.

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MACROECONOMIC IMBALANCES IN EURO- AND NON-EURO AREA MEMBER STATES

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Abstract: *The recent reforms in the European economic governance framework add to the Stability and Growth pact requirements for establishing a new macroeconomic surveillance mechanism for both euro area and non-euro area countries. The early identification and the prevention of imbalances are of vital importance in a monetary union due to the limitations they impose on the tools available to economic policymaking. This paper examines the macroeconomic imbalances in the euro area countries in comparison with the non-euro area countries based on the set of indicators in the Scoreboard that is part of the Macroeconomic Imbalance Procedure (MIP), introduced in 2011.*
While the aim of the new alert mechanism is to identify potential risks this study goes further in measuring the level of risks by the scope of the deviation from the established thresholds. For this purpose an Integral Macroeconomic Imbalance Indicator (IMII) is constructed. It serves for comparing the level of imbalances between the countries in pre- and post-crisis period. The composed IMII indicates a tangible reduction in the scale of imbalances as compared to the pre-crisis period but the divergence between the countries enlarges. The results undermine the assumptions that the euro area countries will exhibit fewer imbalances as compared to the countries outside of the monetary union. Based on the dynamics of IMII it could be assumed that maintaining the macroeconomic framework within the thresholds is necessary but not sufficient to prevent future crisis. The results further question the ability of the alert mechanism to identify the sources of a future crisis.

Key words: *Macroeconomic Imbalances, Macroeconomic Imbalances Procedure scoreboard, EU financial sector, Economic reforms, Six pack.*

JEL classification: *E61, E66, H12*

Introduction

The recent reforms in the European economic governance framework add to the Stability and Growth pact requirements for establishing a new macroeconomic surveillance mechanism for both euro area and non-euro area countries. Early identification and prevention of imbalances is important for both euro area and non-euro area countries although the sanctioning mechanism of Macroeconomic Imbalance Procedure (MIP) is applied only for euro area countries. The reform included a set of tools that the conventional theory had not invented. In this case the policy decision went ahead of the theory. Whether the new instruments are sufficient to correctly measure the imbalances and predict the crisis remains to be studied and now the theory should contribute to this fundamental goal.

This paper examines the set of indicators in the Scoreboard that is a part of the MIP. The Scoreboard shows which countries exceed the threshold of each indicator and in substance this is the warning for a macroeconomic imbalance. The purpose of this paper is to overcome one of the weaknesses of the Scoreboard that fails to measure how serious the imbalance is. That is why it is suggested to measure the scope of the deviation by constructing a new indicator. The new indicator is calculated for both euro area and non-euro area countries and the comparison produces some results that the Scoreboard does not show directly. To attain a precise measurement and to deepen the analysis of the macroeconomic imbalances may be a solid argument for the usage of the constructed new indicator.

MIP's alert mechanism

The scoreboard for the surveillance of macroeconomic imbalances under the MIP is part of the MIP's alert mechanism. It consists of a scoreboard with 14 headline indicators covering external and internal macroeconomic imbalances. The scoreboard includes both stock and flow indicators with indicative upper and lower alert thresholds which are differentiated for euro and non-euro area Member States. (*Figure 1*) Some authors, Csortos and Szalai (2013) call for different thresholds for euro area and non-euro area countries for all the indicators. They examine how the indicators perform in the case of ten new member states that joined the EU in 2004.

Figure 1: The MIP Scoreboard Indicators

Indicator	Threshold
Three-year backward moving average of the current account balance as percent of GDP	+6% of GDP and -4% of GDP
Net international investment position as percent of GDP	-35% of GDP
Five-year percentage change of export market shares measured in values	-6%
Three-year percentage change in nominal unit labour cost	+9% for euro area countries and +12% for non-euro area countries
Three-year percentage change of the real	-/+5% for euro area countries and -/+11% for

effective exchange rates based on HICP/CPI deflators, relative to 41 other industrial countries	non-euro area countries
Private sector debt (consolidated) in percent of GDP	133% of GDP
Private sector credit flow in percent of GDP	14 % of GDP
Year-on-year changes in house prices relative to a Eurostat consumption deflator	6 %
General government sector debt in percent of GDP	60 % of GDP
Three-year backward moving average of unemployment rate	10 %
Year-on-year changes in total financial sector liabilities	16.5 %
Three-year change in percentage points of the activity rate (in p.p.)	-0.2%
Three-year change in percentage points of the long-term unemployment rate (in p.p.)	-0.5 %
Three-year change in percentage points of the youth unemployment rate (in p.p.)	+2%

Note: Those are the indicators as of May 2016.

The reading of headline indicators is complemented by 25 auxiliary indicators such as economic growth, nominal and real convergence inside and outside the euro area, productivity developments, foreign and domestic investment, as well as sectorial developments, which affect GDP and current account performance. The initial screening of macroeconomic imbalances is mandated to the Alert Mechanism Report which identifies the Member States whose developments warrant further in-depth analysis to determine whether imbalances exist.

The nature of the imbalances and their gravity are subject to the follow-up in-depth analysis country by country. Another vague issue is the criteria according to which the Member States that incur imbalances are selected for the in-depth analysis. Still, it remains unclear which of the scoreboard indicators have the highest weight when the EU makes assessment with regard to whether a Member State experiences serious imbalances. Those uncertainties of the application of the scoreboard need further attention having in mind the importance of the scoreboard in shaping market perceptions and the EU economic governance framework. This fact begs the question of how strong the imbalances should be in order to activate the procedure and cast a shadow over the transparency of applying the MIP criteria. The literature suggests many attempts to measure the risk of a crisis based on a complex criteria (Borio C., Drehmann M., 2009).

The obvious difficulty in constructing such indicators for macroeconomic imbalances is how to identify in a reliable way the build-up of the imbalances as they develop. There is a very fine line between what is “far” and “too far” from the reference value of the indicators. Moreover, to be useful for policy, any indicator has to identify the risk of future financial

strains with a lead sufficient to allow the authorities to take remedial action (Borio and Lowe, 2002).

According to the current procedure the qualitative nature of the analysis gives a lot of flexibility in the interpretation of the EU authorities. In many cases the in-depth analysis goes far from the qualitative indicators that may risk the confidence in the entire mechanism. That is why some criticism from some EU member states was already expressed (Hickey, R. and Kane, L. 2014). Not surprisingly for such a policy tool that encompasses so many functions in the EU economic governance framework its main principles have faced criticism. The ECB has emphasized that the judgment element of the scoreboard, even if necessitated by the complexity of the economic imbalances and the difficulty to assess them only on the grounds of a matrix of indicators, creates uncertainty and room for broad interpretation.

A clear example of a misconnection between the Scoreboard and the in-depth conclusions was the recent case with Bulgaria. The starting point of the MIP is the Alert Mechanism Report which has to be based on the Scoreboard data. The report identifies countries for which a closer analysis (in-depth review) is deemed necessary. Although the Scoreboard showed diminishing macroeconomic imbalances for Bulgaria, including the fact that financial sector indicator value was within the limits, the country was included in the in-depth analysis and in the corrective arm of the excessive imbalances procedure. In order to strengthen the confidence in the MIP more quantitative and objective approaches are needed particularly in measuring the gravity of the imbalances.

As part of the communication role of the scoreboard, the EU announces a ranking of sorts for the countries according to the level of risks for their economies. This public message itself may fuel the negative market perceptions about those countries, warning investors about the risks in those contexts, thus further deteriorating their economic situation. Public communication on the MIP may also be a tool for putting pressure on national authorities and navigating their policy responses, which is beyond the mandate of the EU.

Further fine tuning of the Scoreboard and the whole procedure should aim at better assessment of the gravity of the imbalances based on quantitative indicators as much as possible. Also, a solid measurable construction is needed to be established between the Scoreboard and the in-depth review in order to avoid misinterpretations least in the following directions. The importance of the indicators for the accumulation of imbalances is different but the Scoreboard treats them equally. This weakness is partly compensated by the in-depth review but still there might be a way to rank them. The above possible changes would strengthen the credibility of the MIP.

Measuring the scope of the imbalances

Currently, the Scoreboard alerts in all cases when the threshold is exceeded. Though, there are many reasons to believe that not only the fact of but also the scope of deviation is important. That is why an indicator is constructed to estimate how large the deviations from the thresholds are. The assumption is that the larger the deviation the greater the risk is that the accumulation of imbalances will lead to a crisis: *Integral Macroeconomic Imbalance Index*

(IMII). Integral Macroeconomic Imbalance Index (IMII) is based on an approach which assesses the behavior of the two groups of variables:

- The first group describes the external imbalances and the competitiveness of the country and includes the following 5 variables: (1) Current Account Balance as % of GDP; (2) Net International Investment Position as % of GDP; (3) Real Effective Exchange Rate, year-on-year percentage change; (4) Year-on-year percentage change in export market Shares and (5) Nominal ULC, year-on-year percentage change.
- The second group describes the internal imbalances of the economy and includes 6 variables: (1) Private Sector Debt (consolidated) as a percentage of GDP; (2) Private Sector Credit Flow (consolidated) as % of GDP; (3) Year-on-year percentage change in Deflated House Price Index; (4) General Government Sector Debt as % of GDP; (5) Year-on-year percentage change in Total Financial Sector Liabilities and (6) Unemployment Rate[1].

An indicator variable relating to indicator *i* and country *j* is denoted by Y_i^j and the threshold for this indicator is denoted as T_i^j.

The first stage is to check if each variable remains within its threshold boundary or crosses the threshold. In the first situation, the indicator is zero, but if we are in the second situation, we need to compute the percentages that exceed the critical threshold (in absolute value). The formula is:

$$I_i^{j\,(\%)} = \begin{cases} \dfrac{\left|Y_i^j\right| - \left|T_i^j\right|}{\left|T_i^j\right|} 100 & \text{if } \left|Y_i^j\right| > \left|T_i^j\right| \\ 0 & \text{else} \end{cases}$$

where $I_i^{j\,(\%)}$ is the percentages that exceed the critical threshold, Y_i^j is the value of the related indicator and T_i^j is the threshold for this indicator.

The second stage is to eliminate the effect of the scale. This is required because the different variables are measured on different scales and the variables have to be normalized. For this purpose we use the following max transformation:

$N_i^j = \dfrac{I_i^{j\,(\%)}}{I_{\max}}$, where N_i^j is the normalized value and $I_{\max}$ is the maximum value of the variable.

IMII is calculated as an average of the individual indicators for every country.

The IMII is normalized between zero and one. If an economy is balanced, then the index will be equal to zero. If the economy is imbalanced, then the index will be close to one. The IMII

[1] The indicators for activity, youth and long-term unemployment rate will not lead to legal implications and flashes of the new employment indicators will not trigger further steps in the MIP. That is why we do not use them in constructing the Integral Macroeconomic Imbalance Index.

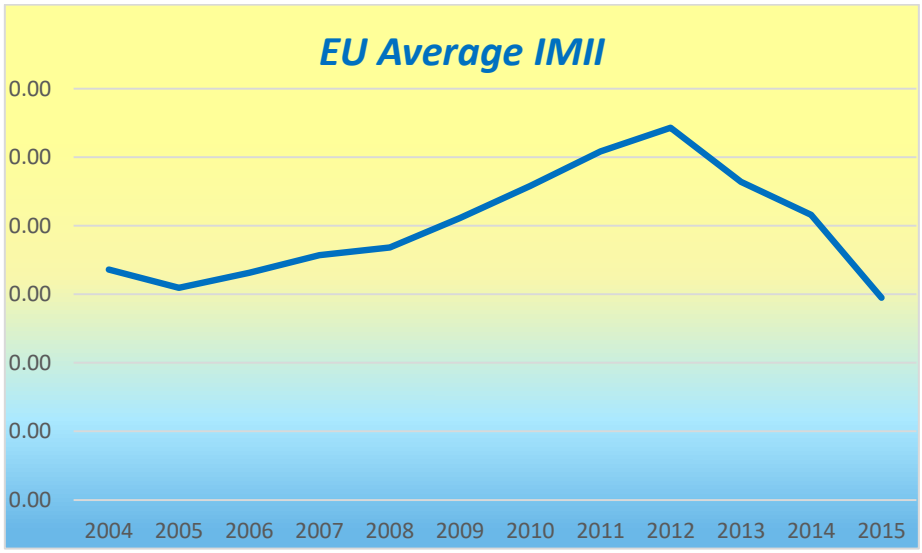
can be used in two situations: (1) for a comparison between different countries and (2) to compare different periods of development.

One of the advantages of the indicator is that it integrates 14 indicators in one. The limitations of the indicator are related with its integrative character. It limits the impact of a large deviation of one indicator on the total size of the indicator. It has to be used in combination with qualitative assessment. Also it inherits the weakness of the Scoreboard that all indicators have equal weights.

We use the indicator to assess the scope of imbalances in two aspects: (i) the scope of imbalances at country level in order to identify which ones are more and less balanced economies; (ii) the dynamics of the imbalances over the eleven year period in order to see how the macroeconomic framework was impacted by the crisis.

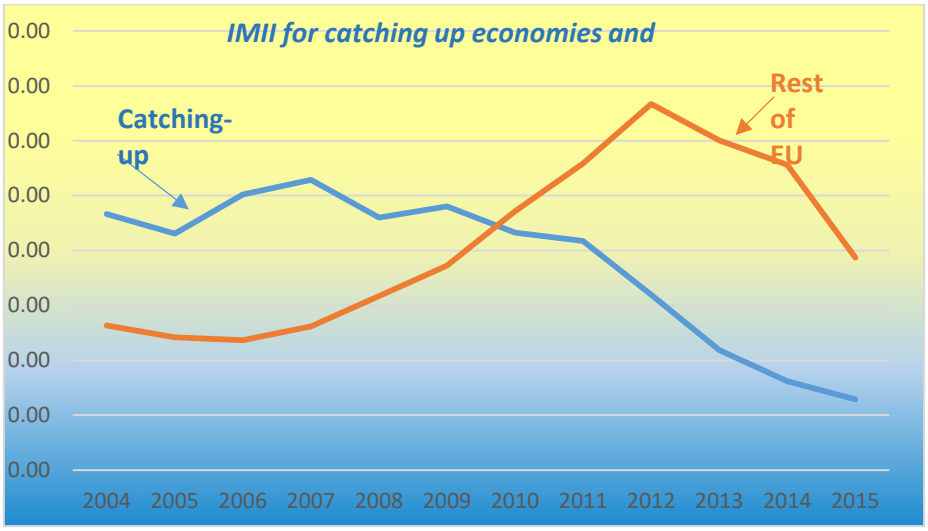
The crisis and imbalances

The calculations of the integrated indicator (IMII) show that for the whole eleven years period the imbalances in the EU were significant while large divergence between the countries was sought (Attachment 1). Also the imbalances vary in the three crisis-related periods, pre-crisis, crisis and post-crisis period. The IMII was 0.15 in 2005 indicating very low level of imbalances. The highest value was in 2012 when the indicator reached 0.27. In the post-crisis period the imbalances diminished rapidly and reached the pre-crisis levels in 2015.

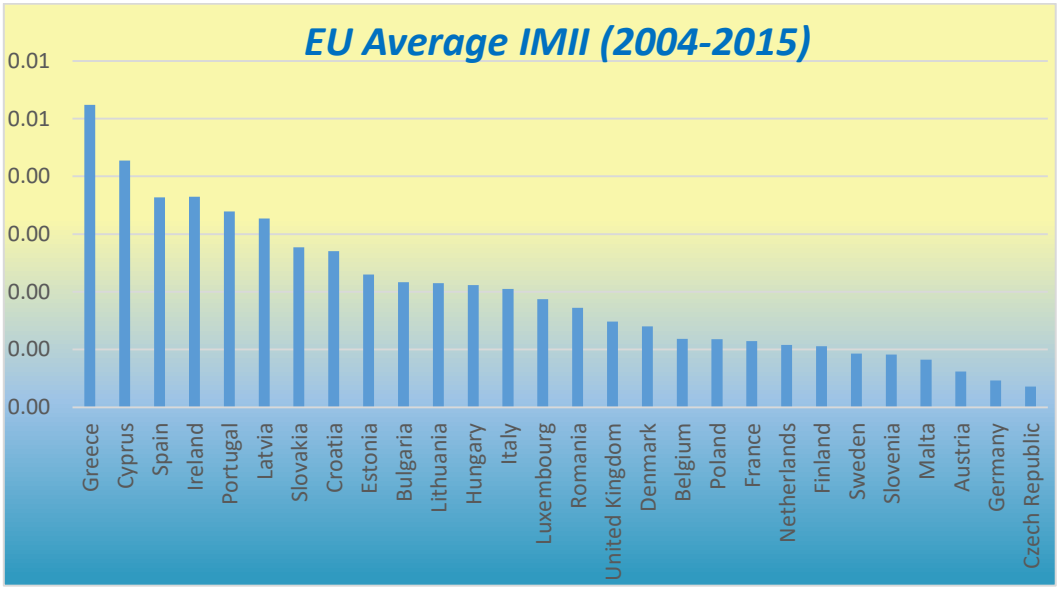


Decomposing the dynamics of all the EU member states into different groups of countries shows that a strong divergence is observed. Before the crisis the imbalances were larger in the EU catching-up economies as compared to the rest of the EU. The old EU member-states economies were significantly more balanced. The crisis helped the majority of the catching-up economies to reduce their imbalances while several euro area member states enlarged their imbalances and affected the entire euro area where the integral indicator jumped to the historically high levels.

IMII for catching up economies and the rest of EU (2004-2015)



The IMII indicates that catching-up economies suffered the largest imbalances before the crisis which is associated with the strong economic growth driven in some of the countries by high credit growth and booming real estate markets. The slowing down of the economic growth helped to diminish the imbalances.

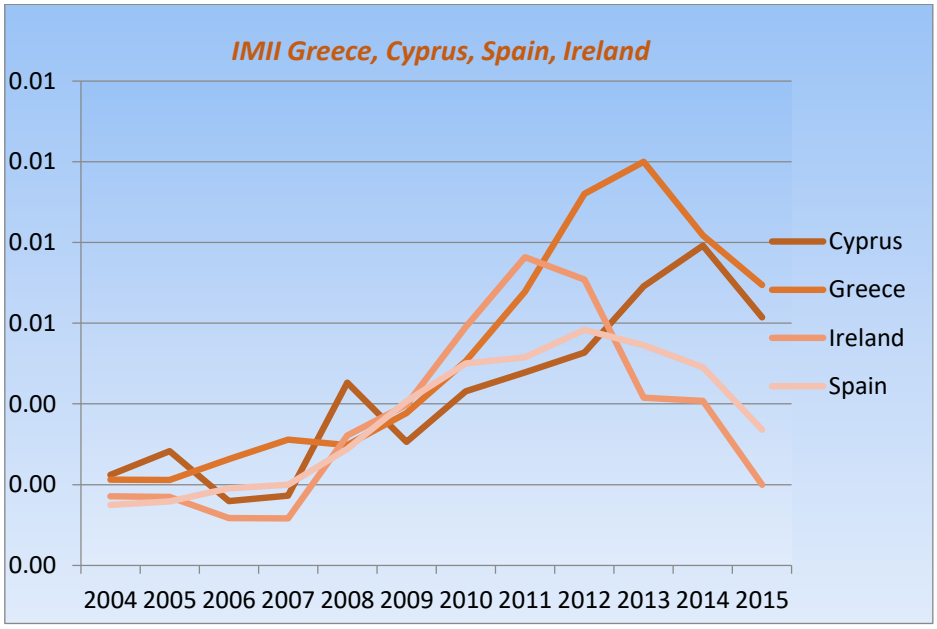


The best performers in terms of low imbalances for the entire EU were the Czech Republic, Germany, Austria, Malta, Sweden and Slovenia where the IMII was close to zero for the entire eleven years period and in average below 0.1. For those economies the crisis did not produce imbalances. For Estonia, Bulgaria, Romania, Slovakia and Poland the crisis helped winding up the imbalances while for Cyprus, Greece, Spain, Croatia the crisis strongly enlarged the imbalances.

The observed eleven year period includes the pre-crisis, crisis and post-crisis periods which create the opportunity to test the relevance of the selected set of indicators in the Scoreboard

for predicting the crisis. For many countries the crisis produced imbalances. This hypothesis may be tested analyzing the cases of the countries where the crisis was more severe and led to EU rescue measures. In spite of the different causes and implications of the crisis in each of those economies the macroeconomic imbalances followed very similar pattern: negligible imbalances from 2004 to 2008-2009 and rapid accumulation of imbalances after this period. It seems that after 2013 all those countries succeeded in diminishing their imbalances. There are some variations in this common pattern.

IMII Greece, Cyprus, Spain, Ireland (2004-2015)



The macroeconomic imbalances in Greece started increasing after 2010 when the IMII reached 0.5 while before that its values were between 0.21 and 0.38. Even if we do not use the composed indicator (IMII) the data for the scoreboard indicate that before 2010 most of the indicators were below the thresholds. The scoreboard as a complex of indicators failed to signal about the accumulation of imbalances that will cause such a deep crisis. Moreover, the IMF and the EU rescue packages were started in 2010 when the imbalances started enlarging. Even in 2015 Greece could not reach its pre-crisis levels of imbalances.

Ireland's scoreboard data suggests that during the pre-crisis period no substantial imbalances were accumulated. In 2010, however, the IMII reached 0.59. The largest imbalances occurred in 2011 when the IMII was 0.76 and the balances restored in 2014 and 2015 tending to reach the pre-crisis low levels of imbalances.

Cyprus's macroeconomic imbalances too accumulated during the crisis rather than before it. Once again in 2015 the imbalances were significant and the IMII was close to 0.40. The Spanish economy did not reached the levels of imbalances of Greece and Cyprus. The IMII suggests clear path to their reduction but vulnerabilities still exist.

The overall data as well as for the four countries suggests that the Scoreboard as a complex of indicators failed to predict the upcoming crisis. Looking at the set as a whole may be misleading and may hide the accumulation of a single imbalance that may call for a crisis.

This is one of the main problems of the Scoreboard: it assembles and gives equal weight to each indicator. It is more relevant to look at few stronger indicators than putting on an equal basis so many not well economically motivated indicators as an early warning system.

The scoreboard suggests that now the EU looks more balanced. This is also confirmed by the values of the IMII that reached in 2015 the lowest level since 2004. The concept of the Scoreboard is that a better economy is a more balanced economy – less exposed to risks of a crisis. But now being more balanced the EU economy is recovering too slowly and the slow growth is a major risk for vulnerability of the EU economy.

Conclusions

The composed IMII indicates a tangible reduction in the scale of imbalances as compared to the pre-crisis period in the non-euro area countries. An opposite pattern of imbalances is observed in most euro area countries where the imbalances increased since the beginning of the crisis. The best performers are the Czech Republic and Germany. The results undermine the assumptions that the euro area countries will exhibit fewer imbalances as compared to the countries outside of the monetary union. The divergence between the countries in the euro area enlarges. The most imbalanced countries before the crisis were Bulgaria and Estonia but no crisis occurred there and the imbalances quickly diminished. Surprisingly the imbalances in the countries where severe crisis occurred were less than those in Bulgaria and Estonia, namely Greece, Ireland and Spain. This undermines the strengths of the new mechanism to predict the crisis.

Attachment 1

IMII by countries (2004-2015)

Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Belgium	0,11	0,09	0,11	0,05	0,11	0,11	0,13	0,12	0,17	0,13	0,15	0,14
Bulgaria	0,39	0,22	0,15	0,15	0,17	0,31	0,30	0,33	0,22	0,17	0,11	0,08
Czech Republic	0,05	0,01	0,00	0,06	0,08	0,03	0,06	0,06	0,03	0,03	0,00	0,00
Denmark	0,05	0,13	0,15	0,06	0,07	0,11	0,17	0,22	0,24	0,21	0,20	0,07
Germany	0,05	0,04	0,02	0,01	0,01	0,02	0,04	0,05	0,14	0,08	0,05	0,04
Estonia	0,29	0,24	0,39	0,31	0,36	0,39	0,32	0,22	0,08	0,03	0,07	0,06
Ireland	0,17	0,17	0,12	0,12	0,32	0,40	0,59	0,76	0,71	0,42	0,41	0,20
Greece	0,21	0,21	0,26	0,31	0,30	0,38	0,51	0,68	0,92	1,00	0,82	0,69
Spain	0,15	0,16	0,19	0,20	0,29	0,41	0,50	0,52	0,58	0,55	0,49	0,34
France	0,16	0,08	0,11	0,10	0,11	0,09	0,13	0,13	0,17	0,11	0,12	0,08
Croatia	0,14	0,12	0,16	0,20	0,15	0,17	0,23	0,38	0,53	0,54	0,37	0,25
Italy	0,12	0,08	0,12	0,09	0,14	0,19	0,24	0,26	0,33	0,32	0,32	0,24
Cyprus	0,22	0,28	0,16	0,17	0,45	0,31	0,43	0,48	0,53	0,69	0,79	0,61
Latvia	0,14	0,27	0,54	0,56	0,57	0,51	0,42	0,41	0,21	0,11	0,09	0,09
Lithuania	0,09	0,24	0,37	0,35	0,26	0,33	0,34	0,31	0,15	0,06	0,04	0,04
Luxembourg	0,25	0,19	0,13	0,41	0,20	0,20	0,15	0,18	0,20	0,16	0,18	0,00
Hungary	0,21	0,25	0,21	0,18	0,20	0,26	0,23	0,22	0,26	0,23	0,17	0,13
Malta	0,13	0,18	0,16	0,16	0,03	0,05	0,03	0,04	0,05	0,02	0,10	0,03
Netherlands	0,12	0,09	0,07	0,07	0,06	0,08	0,08	0,13	0,19	0,16	0,17	0,08
Austria	0,05	0,04	0,01	0,01	0,01	0,04	0,04	0,08	0,15	0,12	0,11	0,08
Poland	0,29	0,15	0,15	0,14	0,11	0,06	0,08	0,12	0,11	0,08	0,06	0,05
Portugal	0,21	0,20	0,22	0,23	0,30	0,33	0,38	0,43	0,56	0,48	0,40	0,32
Romania	0,41	0,27	0,23	0,33	0,21	0,20	0,13	0,09	0,08	0,05	0,04	0,03
Slovenia	0,02	0,03	0,04	0,09	0,01	0,04	0,07	0,12	0,26	0,22	0,13	0,06
Slovakia	0,43	0,46	0,43	0,46	0,33	0,27	0,22	0,21	0,19	0,10	0,10	0,12
Finland	0,05	0,01	0,02	0,00	0,00	0,08	0,18	0,21	0,22	0,20	0,15	0,14
Sweden	0,07	0,06	0,06	0,07	0,08	0,15	0,12	0,09	0,14	0,12	0,08	0,08
United Kingdom	0,09	0,03	0,04	0,12	0,22	0,25	0,30	0,25	0,18	0,10	0,10	0,08

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BANKS' EFFICIENCY IN BULGARIA IN THE TWENTIES: FROM STABILISATION TO CRISIS

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Abstract: *The article uses a nontraditional method for the measurement of bank efficiency - parametric method "stochastic frontier analysis" (SFA). It studies the dynamics of bank efficiency in Bulgaria for two different years in the last century, in particular 1923 and 1928, related to the financial stabilization and financial crisis respectively. The SFA is more sophisticated method than the traditional accounting measurement of bank efficiency, overcoming traditional approach's disadvantages. The banks are classified on different sub-groups in order to capture the reaction of different bank groups in respect to the financial crisis and the financial stabilization. We have collected the date from the official bank balance sheets as well as the profit and loss statements of Bulgarian credit institutions, published in the State Gazette, in order to define the inputs and outputs of banks. This method has been applied in numerous studies of bank efficiency in a group of countries, but it is not used for the purpose of measuring the efficiency of the Bulgarian banking system for historical data (the only previous study is ours Nenovsky, Mihaylova and Ivanov, 2008/Bank of Greece).*

Key words: *Bulgarian monetary history; bank efficiency; SFA analysis*

JEL Classification*: N 24; D24; G21*

БАНКОВАТА ЕФЕКТИВНОСТ ПРЕЗ ДВАЙСЕТТЕ ГОДИНИ НА МИНАЛИЯ ВЕК: ОТ СТАБИЛИЗАЦИЯТА КЪМ КРИЗАТА[2]

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Резюме: *Изследването използва нетрадиционен метод за измерването на банковата ефективност, а именно параметричния метод „Анализ на стохастичната граница“. То цели да измери динамиката на банковата ефективност в България, като се направят изчисления за две години, а именно 1923 и 1928 г., които се свързват съответно с финансовата стабилизация и финансовата криза. Анализът на стохастичната граница е по-сложен метод за измерване на банковата ефективност в сравнение с традиционните финансови показатели. Той преодолява недостатъците на традиционните подходи към измерването на ефекитвонстта. Банките са класифицирани на подгрупи за целите на обхващането на реакцията на банките по отношение на финансовата криза и финансовата стабилизация. Използваме официалните баланси и информация за печалбите и загубите на банките, които са публикувани в Държавен вестник, за целите на определянето на входящите ресурси и изходящите продукти на банките. Този метод е прилаган в редица изследвания на банковата ефективност в група от страни, но не е използван за целите на измерването на ефективността на българската банкова система в исторически план (единственото изследване в тази област е Nenovsky, Mihaylova and Ivanov, 2008/Bank of Greece).*

Ключови думи: *Българска парична история, банкова ефективност, Анализ на стохастичната граница*

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I. Увод: задачи, цели и работни хипотези на изследването

В изследването се цели да се измери емпирично ефективността на банковата система през двайсетте години на миналия век, като се приложат по-сложни методи за ефективността, такива като параметричният метод „Анализ на стохастичната граница“. Насочваме се, към един период, който представлява важен отрязък от българската парична история, а именно от началото на паричната стабилизация, започнала през 1924 г., продължила с легалното фиксиране на лева през 1928 г. и приключила в навечерието на Голямата депресия.

В България след периоди на политически и финансови сътресения постепенно се възстановяват принципите на паричната ортодоксалност[3]. Постепенно през двайсетте години на миналия век се постига финансова стабилизация, подкрепена със съществен приток на финансови ресурси, предоставени на България под формата на два външни заема под гаранцията на Обществото на народите. През 1926 г. се отпуска т.нар. Бежански заем при лихвен процент от 7%, докато през 1926 г. се отпуска Стабилизационния заем при лихвен процент от 7.5%, предоставен от консорциум американски и британски банки[4]. През 1926 г. се разширяват пълномощията на централната банка, която да може да изпълнява все още много ограничен кръг надзорни функции[5].

Финансовата стабилизация допринася и за подобряването на макроикономическата стабилизация. Страната успява да привлече и повече частни финансови ресруси в резултат на по-високите лихвени равнища в страната в сравнение с чуждестранните нива. Навлизат чуждестранни финансови институции, такива като френската банка „Париба“ и немската банка „Дойче банк“. Увеличените ресурси допринясат за засилване на кредитната активност на банките, опериращи в страната, което от своя страна води до началото на кредитната инфлация, която впоследствие се отразява на постигнатата стабилност във финансовия сектор, настъпване на криза и фалит на много финансови институции. Така навлезлите финансови капитали в страната имат своя принос в постигането на финансова, а в последствие и на макроикономическа стабилизация, но липсата на достатъчно широк кръг от надзорни функции от страна на централната банка води до негативни последствия за икономиката[6]. Следва да се има предвид и фактът, че финансовият пазар е твърде сегментиран, оперират множество различни банки, конкуриращи помежду си и целящи да обслужват определени сегменти и сектори в икономиката.

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[3] За подробности виж Неновски, Иванов, Михайлова (2008)

[4] За подробности вж. Христофоров, 1946; Аврамов, 2007

[5] БНБ може да провежда годишни ревизии на частни финансови институти, които са кредитирани от нея, и да извършва рефинансиране чрез ресконтиране на техния портфейл.

[6] Не е случайно и това, че банките нямат стандартизирани финансови отчети, които да бъдат представяни и публикувани публично, което прави и трудно агрегирането на информация за кредитите, депозитите и различните видове разходи, извършвани от финансовите институции по това време.

С оглед на представените кратки исторически събития и икономическо развитие на България през двайсетте години на миналия век могат да се дефинират няколко изследователски хипотези. Първо, постигнатата финансова дисциплина и притока на финансови ресруси към страната води до повишаването на банковата ефективност. Второ, чуждестранните банки може да се очаква да имат по-висока ефективност от местните частни институции, поради това, че последните разполагат с по-ограничени финансови ресурси[7]. Трето, липсата на достатъчно надзорни фунции от страна на централната банка би имала негативно влияние върху банковата ефективност, въпреки че често през този период се наблюдава изкривяване на информацията в банковите баланси, което има по-скоро положителен принос в изменението на банковата ефективност.

За целите на емпиричното изследване на ефективността на банковта система в България се прилага един от най-модерните методи, основаващи се на подхода към дефинирането на производствени граници, а именно параметричният метод „ Анализ на стохастичната граница“, който позволява да се изчисли ефективността на всяка банка поотделно и да се сравни ефективността на отделни групи от банки, определени по специфичен критерии като форма на собственост, големина и др. Благодарение на този метод банките се разгледат като производствени единици, които използват входящите си ресурси – труд, катипал и привлечени финансови средства, за целите на производството на желаното ниво изходящи продукти. Изчисленията са направени за две години, а именно 1923 г. и 1928 г. с цел да се анализира каква е промяната в ефективността на банковата система.

Емпиричните резултати ни дават възможност и да докажем редица теоретични хипотези и твърдения. Първо, в изследването целим да анализираме дали банковата система е способна да изпълнява ролята на „заместваща институция“ по смисъла на Александър Гершенкрон и да дадем отговор на въпроса дали тя успява да мобилизира капитали, нужни за индустриализацията на страната. Гершенкрон твърди, че по време на индустриализацията изостаналите и бедни на капитал периферни страни с цел да намалят различията с развитите икономики имат нужда да осигурят заместващи институции такива като универсалните банки, държавата и дори идеологията (в случая на СССР)[8].

Второ, през анализирания период банковата система е до голяма степен сегментирана, при което се отличават различни видове банки като популярни банки, чуждестранни банки, частни банки, държавни банки и др. Различните видове банки може да се твърди, че са възникнали поради нуждата да се намерят всякакви начини за акумулиране на спестяванията в икономиката с оглед на преодобяването на асиметрията на информация[9].

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[7] Привлечените финансови ресурси под формата на банкови депозити от частните банки се увеличават само с 48% за периода 1921-1929 г., докато депозитите, привлечени от държавните банки и популярните банки се увеличават с 74% и 935% през същия период.

[8] Вж. за подробности Sylla and Toniolo (2001), Sylla (2005), Gershenkron (1962, 1952).

[9] Това многократно е било показвано в литературата, вж. Кърклисийски (1941), Туган-Барановский (1989, 1915), Verdier (2001).

Трето, избраният период на изследване ни позволява да видим и доколко банковата ефективност се повлиява от типа паричен режим (през 1924-1928 г. се осъществява стабилизацията на лева), притока на капитали под формата на отпуснати заеми, информационната непрозрачност и липсата на банково регулиране[10].

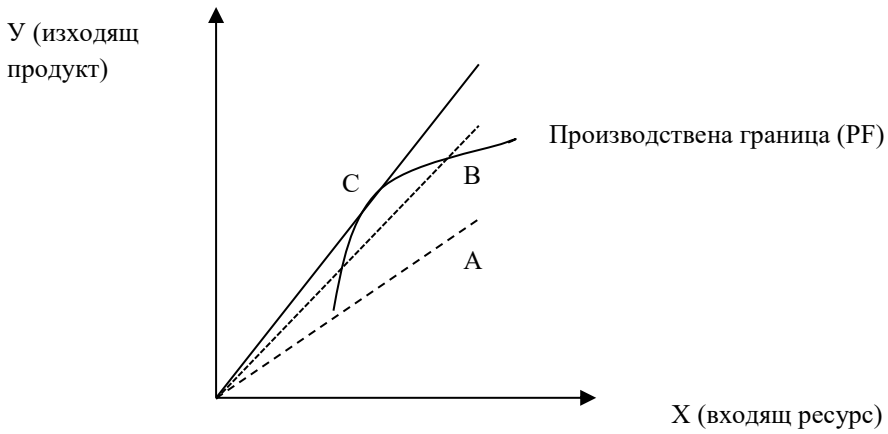
Изследването има своя принос в икономическата литература по две направления, а именно: методът "Анализ на стохастичната граница" не е прилаган за измерването на ефективността на банковата система, използвайки исторически данни; повечето изследвания на българската банкова ефективност са сравнителни изследвания на банковите системи за няколко страни, докато в настоящото изследване акцентът е само върху българската банкова система и то за минал период, а именно двайсетте години на миналия век.

Изследването е структурирано по следния начин. В следващата част е посветена на представянето на параметричния метод „Анализ на стохастичната граница", неговите предимства и недостатъци, както и на използваните данни и източници. В третата част се анализират получените емпирични резултати. В заключението се прави обобщение на получените резултати и са обсъдени възможни бъдещи изследвания.

II. Приложение на „Анализа на стохастичната граница" за целите на измерването на банковата ефективност

При прилагането на методите за измерването на ефективността, основани на производствената граница, се дава възможност за обхващане на множество услуги и дейности, които се предлагат от производствените единици – банките, за разлика от традиционните методи основани на възвръщаемостта на активите и на собствения капитал. Ако една производствена единица разполага с един производствен фактор за производството на един продукт, то тогава производствената й граница може да се представи графично по следния начин (Фигура 1).

Фигура 1. Производствена граница на единицата „А", използваща един производствен фактор



[10] Функцията кредитор от последнаинстанция, както и депозитното застраховане започват да функционира в началото на 30-те години след Голямата депресия.

Всички точки, осигуряващи комбинацията на максимално производство при определено количество от входящите ресурси, формират производствената граница PF. Когато производствената единица в случая банката използва такова количество входящ ресурс, така че да се осигури такова количество от изходящия продукт, което да лежи на производствената граница, е налице *техническа ефективност* (technical efficiency). Всички точки, които лежат под границата са технически неефективни, защото фирмата може да произведе по-голямо количество изходящ продукт с наличния входящ ресурс.

Методът „Анализ на стохастичната граница“ (SFA) е параметричен метод, оценяващ ефективността на производствените единици на основата на икономическа оптимизация при допускането за оптимална стохастична граница. Той е разработен от Aigner et all (1977) и Meeusen and van den Broeck (1977). Методът разделя всички отклонения от оценената ефективна граница на неефективност и „шум“ (noise) при допускането за определено разпределение на неефективността. Имено това допускане за разпределението на неефективността се счита за недостатък на метода. При този метод се изисква и да се определи вида на производствената функция (Коб-Дъгласова производствна функция или транслог прозводствена функция). Методът има различни модификации както по отношение на вида на производствената функция, така и по отношение на вида на разпределението на променливата.

При първоначалната си спецификация моделът е дефиниран по следния начин $Y_i = \beta * x_i + (V_i - U_i)$, където има n на брой производствени единици ($i = 1.....n$)[11].

Y_i - производството или логаритъм от производството на съответната производствена единица;

β - вектор от параметри, който предстои да се оцени;

x_i - входящите ресурси или логаритъм от стойността на входящите ресурси за съответната производствена единица;

V_i - случайни променливи, които са независими и идентично разпределени (iid) $N(0, \sigma_V^2)$ и независими от U_i

U_i - променливи, които не приемат отрицателна стойност, и се отнасят до техническата неефективност в производството и често се приема, че са независими и идентично разпределени (iid) $N(0, \sigma_U^2)$.

При прилагането на този метод са направени различни модификации на първоначалното му представяне по отношение на вида на разпределението на U_i - пресечено нормално разпределение (truncated normal distribution), гама разпределение (gamma distribution) или полу-нормално разпределение (half-normal distribution) и др.

[11] Дефинира се за един период при съвкупност от данни за определени производствени единици (cross-section data set).

Неговото предимство се изразява в това, че е приложим в извадки от производствени единици, които не са хомогенни. Основният недостатък, обаче, на този подход е, че се изисква дефиниране на формата на производствената функция. Този неодстатък се елиминира при прилагането на вече описания непараметричен метод за измерване на ефективността – DEA.

III. Използвани данни и резултати

1. Емпирични данни

Преди да се премине към изчисляването на ефективността на банките през двайсетте години на миналия век е необходимо да се определят входящите и изходящите ресурси и продукти. За определянето им съществуват няколко подхода, а именно подход на посредничеството, подход към активите, производствен подход, подход потребители-разходи и подход на добавената стойност (Andries, Cocris (2010), Pawlowska (2005)). В съществуващте икономически изследвания за ефективността се твърди, че подходът на посредничеството е най-подходящият за измерването на ефективността на банките поради това, че банките основно се занимават с привличането на депозити и предоставянето на кредити (Tomova (2005), Andries, Cocris (2010)). При метода на посредничеството се определят три входящи продукта – труд (заети лица), капитал (материални и нематериални активи) и привлечени депозити и един изходящ продукт, получен като сума от ценните книжа и общо кредитите[12].

За целите на измерването на труда няма налични данни за брой заети в отделните банки, които оперират към този момент. Това налага да се използва променлива, която може поне косвено да отрази използвания труд в отделната банкова единица. Така например общата стойност на активите на отделната банка могат да се използва като измерител на труда, тъй като големината на банката определя и количеството труд, което е необходимо за целите на функционирането на тази банка. Следва да се има предвид и фактът , че ако трудът на една банка е по-производителен от труда на друга банка, която е със същите размери в един първоначален момент, то в един следващ момент първата банка ще е акумулирала по-голям размер на активите. Възможно е и еднакви по размер банки да имат различен брой заети, ако при банката, разполагаща с по-малко човешки ресурси, е наложено изискването за по-голямо натоварване на наличните трудови ресурси. Въпреки посочените ограничения, свързани с този показател, поради липса на друг по-добър измерител на труда, той може да се използва за целите на изследването. В някои изследвания за ефективността на банковата система, дори и за настоящи периоди, се използват разходите за заплата на банката като измерител на труда, но в наличната статистическа информация за банките през анализирания период прави впечатление, че в административните разходи са включени и разходи за наеми, осветление и др.

[12] При прилагането на първичното представяне на метода „Анализ на стохастичната граница“ не е проблем да се осъществи сумиране на двата изходящи продукта, поради това, че не се включват екзогенни променливи, при което да възникнат проблеми с екзогенността. Следва да се има предвид, че ценните книжа представляват много малка част от общата сума на кредитите и ценните книжа (едва 1% през 1923 г.).

Отделянето на разходите по видове е невъзможно, което определя избора на общата стойност на активите като измерител на труда за целите на изчисляването на ефективността на банките през двайсетте години на миналия век.

Първичната статистическа информация, представена в балансите на банките за анализирания период, е обработена тай като по това време не е използвана стандартизирана отчетна форма за балансите на банките. Банките по това време публикуват балансите си в „Държавен вестник“. В Таблица 1 е представен баланс на банка, който обхваща почти всички позиции, които могат да се срещнат в балансите на отделните отчетни единици. В сметката “Печалби – загуби”, където се представят приходите и разходите, както и финансовия резултат на банковите единици, също се наблюдават различия в представянето. В най-общ вид сметката “Печалби – загуби” е представена в Таблица 2.

Таблица 1. Баланс на банка

Активи	**Пасиви**
Предприятия	Капитал
Каса и банкноти	Различни резервни фондове
Ценни книжа	(пенсионни фондове и др.)
Портфейл	Банкови депозити
Текущи дебиторни сметки	Текущи кредитни сметки
Стоки	Други пасиви
Недвижимо имущество	Загуба и печалба
Протестирани полици	
Полици за инкасо	
Мебели	
Други активи	

Таблица 2. Печалба и загуби

Загуба	**Печалба**
Разходи (заплати, наеми, отопление, осветление, амортизация, др.)	От лихви, комисионни, ценни книжа, стоки, др.
Печалба от текущата година	

Банковата ефективност е изчислена за 1923 и 1928 г. като се прилага метода „Анализ на стохастичната граница“ за всяка година поотделно. Следва да се има предвид, че не всички банки, които са функционирали по това време са публикували своите финансови отчети, тай като не е имало законово изискване за публично оповестяване. За да се обхване една достатъчно представителна извадка от банки са избрани петдесетте най-големи банки, които са функционирали и през двете години. Тези банки са групирани от гледна точка на собствеността и на това дали банките са се обединили или са фалирали като резултат от кризата с оглед на доказване на посочените хипотези. Поради тази причина разграничаваме: частни български банки,

частни чуждестранни банки, държавни банки, обединени банки и фалирали банки в резултат на кризата през 1929 г.

За целите на оценяването на стохастичната производствена граница е използвана програмата Frontier 4.1., позволяваща да се определи вида на производствената функция. Тествани са два модела за целите на определянето на вида на производствената функция – линейната спецификация на Коб-Дъгласовта производствена функция и трансцеденталната производствена функция.

2. Тестване на хипотезите

За целите на определянето на правилната спецификация на модела са направени няколко теста като се използва теста Likelihood ratio test[13]. Проверена е функционалната форма на производствената функция, а именно Коб-дъгласова производствена функция или трансцедентална логаритмична производствената функция[14]. Резултатите от приложения тест са представени в Таблица 3 за данните за банките през 1923 г. и в Таблица 4 за данните през 1928 г. Отхвърля се нулевата хипотеза при 5% степен на значимост и за двете години, че видът на производствената функция е Коб-Дъгласова производствена функция като се тества хипотезата, че $\beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8 = \beta_9 = 0$. Следователно функцията следва да бъде трансцедентална производствената функция[15].

Таблица 3. Тестване на нулевата хипотеза за 1923 г.

Нулева хипотеза	LL	LR	Критична стойност	Отхвърля ли се нулевата хипотеза?	Вид на тестваната хипотеза
1923 година					
beta4 до beta9=0	10,7	24,64	12,592***	Да	Тест за функционалната форма

[13] В изследването е тествана адекватността на избраната производствена функция като се използва Likelihood ratio test. Статистиката на теста се определя чрез формулата $LR = -2\{\ln(L(H_0)) - \ln(L(H_1))\}$. Нулевата хипотеза е тази, определена в Таблица 3. Ако стойността на на теста е по-голяма от критичната стойност при съответните степени на свобода, то тогава се отхвърля нулевата хипотеза.

[14] Използвана е следната транслог производствена функция:

$$\ln(Y_i) = \beta_0 + \beta_1 * \ln(K) + \beta_2 * \ln(L) + \beta_3 * \ln(F) + \beta_4 * \ln(K)^2 + \beta_5 * \ln(L)^2 + \beta_6 * \ln(F)^2 +$$

$$+ \beta_7 * \ln(K * L) + \beta_8 * \ln(L * F) + \beta_9 * \ln(K * F)$$, където L са стойността на общите активи като измерител на труда, К са са нематериалните и материалните активи и F са привлечените депозити.

[15] Оценената трансцедентална логаритмична производствената функция е с пресечено нормално разпределение на неефективността, като част от остатъците (U_i) в спецификацията на модела, разгледан по-рано.

Таблица 4. Тестване на нулевата хипотеза за 1928 г.

Нулева хипотеза	LL	LR	Критична стойност	Отхвърля ли се нулевата хипотеза?	Вид на тестваната хипотеза
1928 година					
beta4 до beta9=0	25,29	31,93	12.592***	Да	Тест за функционалната форма

3. Емпирични резултати

След като е проверена правилната спецификация на модела може да се пристъпи към интерпретиране на резултатите. В Таблица 5 са представени получените резултати от оценените уравнения. Привлечените депозити имат положително влияние в производствената функция на банките, което потвърждава посредническата роля на банките. Някои от коефициентите пред обясняващите променливи не са значими, но приложеният Likelihood ratio test потвърждава, че функцията е транслог производствена функция. В съществуващите изследвания за банковата ефективност, използващи метода „Анализ ан стохастичната граница“ се прилага именно тази производствена функция.

Таблица 5. Резултати от оценените модели

	1923	**1928**
Брой единици	**50**	**50**
Coeff (Коефициент)	1,20	0.208
	(0,125)	(0,689)
Beta1 (Материални и нематериални активи)	0,64	-0,817
	(0,001)***	(0,001)***
Beta2 (Общо активи)	-0,029	0,578
	(0.943)	(0,186)
Beta3 (Привлечени депозити)	0,19	0,933
	(0,405)	(0,391)**
Beta4 (Материални и нематериални активи* Материални и нематериални активи)	0,02	-0,054
	(0,342)	(0,000)***
Beta5 (Общо активи*Общо активи)	0,17	0,082
	(0,001)***	(0,294)
Beta6 (Привлечени депозити * Привлечени депозити)	-0,287	0,325
	(0,000)***	(0,000)***
Beta7 (Материални и нематериални активи * Общо активи)	-0,61	0,511
	(0,000)***	(0,001)***
Beta8 (Общо активи*Привлечени депозити)	0,227	-0,498
	(0,021)**	(0,002)***
Beta9 (Материални и нематериални активи * Привлечени депозити)	0,49	-0,339
	(0,000)***	(0.002)***
sigma-squared	0.46	0,134
	(0,001)***	(0,002)***

Mu	-1,36	-0,267
	(0,007)***	(0,052)***
gamma	0,99	0,99
	(0.000)***	(0,000)***
Log Likelihood Function	16,41	22,85
LR test	36,1	27,07

Забележка: * - при степен на значимост 10%, ** - при степен на значимост 5%, *** - при степен на значимост 1 %;

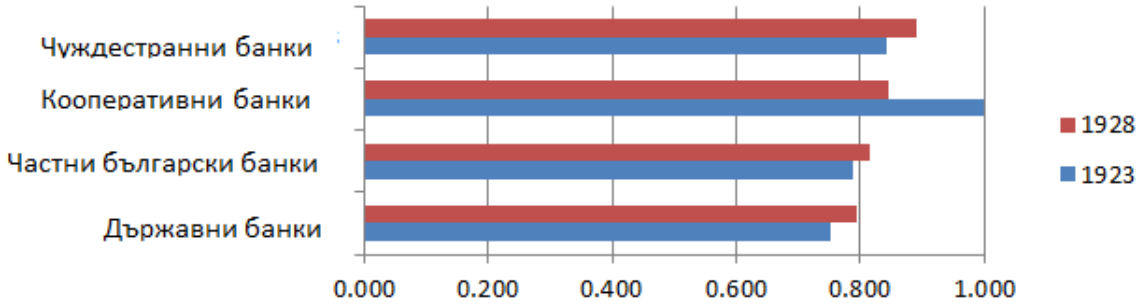
Агрегираните резултати за цялата група от банки показват, че има подобряване на ефективността за разглежданите години. Средната ефективност на банковата система възлиза на 0,794 през 1923 г.[16] и на 0,831 през 1928 г. Подобрената ефективност може да се обясни с преориентирането на банките към извършване основно на банкови дейности и изоставяне на неприсъщи функции за една банка, такива като стопанска дейност[17] (Таблица 6). Нарастващата конкуренция, за което свидетелства намалявящия коефициент на концентрация, измерен с дела на четирите най-големи банки в общата сума на активите, депозитите и кредитите, също има положително влияние върху подобряването на ефективността на банките. Така например коефициентът на концентрация по отношение на активите е съответно 79,3% и 75% през 1923 г. и 1928 г., докато коефициентът на концентрация по отношение на кредитите, предоставени на банкови клиенти е съответно 87,8% и 80,1% за двете години. Финансовата стабилизация също има своя положителен принос, поради достигната макроикономическа стабилизация и съществено разрастване на кредитите и депозитите в икономиката, което в последствие генерира и кредитната инфлация и началото на нестабилността през 1929 г.

Интересено от изследователска гледна точка е да се установи кои банки са допринесли за подобрената ефективност на цялата група от банки – държавните, частните български или частните чужди банки. Резултатите показват, че частните чуждестранни банки са най-ефективни, с което се потвърждава тестваната хипотеза (Фигура 2). Всъщност чуждестранните банки разполагат с високотехнологични ресурси и успяват по-добре да управляват наличните си расурси за тяхното производствено предназначение.

[16] Това показва, че банките използват ефективно само 79,4% от своите входящи ресурси за производството на изходящите си продукти.

[17] Следва да се отбележи, че през тези години много от банките не са извършвали само банкова дейност, но и например стопанска дейност.

Фигура 2. Ефективност на банките през 1923 г. и 1928 г.

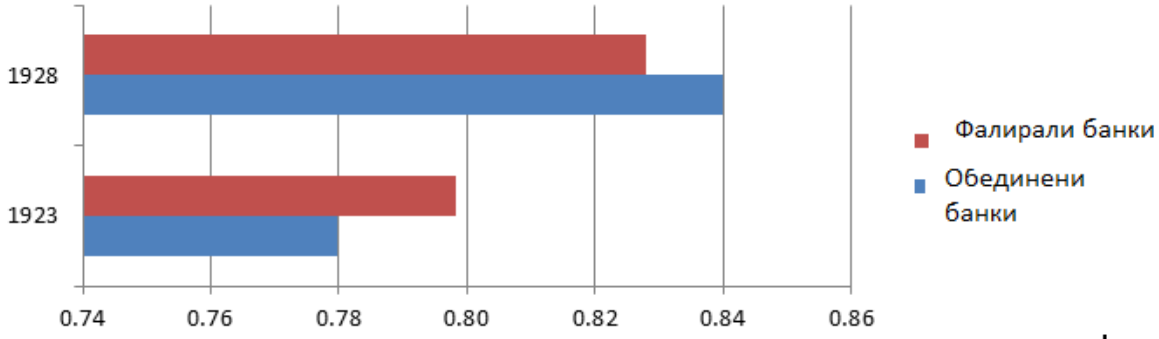


Държавните банки имат почти същата ефективност както и частните български банки. През анализирания период се наблюдава също съществено подобряване на ефективността им, въпреки че те остават с най-ниска ефективност. Тъй като Българска народна банка (БНБ) изпълнява ролята на търговска банка и в нея са акумулирани значителни ресурси, насочвани постепенно към все по-дългосрочни инвестиционни проектир БНБ е включена в държавните банки. Следва да се има предвид, че политиката на държавата за стимулиране на развитието на държавните банки изкривява конкуренцията в банковата система и съответно води до ефект и върху ефективността на държавните банки. Частните български банки имат по-ниска ефективност от частните чуждестранни банки заради по-ограничените ресурси, с които оперират.

При групирането на банките в зависимост от това дали са фалирали след Голямата депресия или са се обединили се забелязва подобряване на ефективността и на двете групи банки, но по-съществено е повишаването на ефективността при групата на обединилите се банки (Фигура 3). Прави впечатление, че има няколко банки (Българска централна кооперативна банка, Еврейска популярна банка, Индустриална банка), които при паричната стабилизация формират ефективната производствена граница, но в годините преди депресията отчитат съществено влошаване на ефективността си. Всички те са фалирали по време на Голямата депресия, което може да се дължи и на факта, че не са успели ефективно да управляват своите ресурси и са се оказали твърде уязвими по време на кризата. Вероятно тези банки са пропуснали възможността да се възползват от мащаба и да се обединят, с което да подобрят специализацията на труда си. Ползите от обединяването или разделянето на банките могат да се оценят след като се провери дали банките оперират при нарастваща или намаляваща възвръщаемост от мащаба, но тя не може да се оцени с помощта на „Анализа на стохастичната граница“, а чрез друг подход „Анализ на обвиване на данните“[18].

[18] За подробности виж Неновски, Иванов, Михайлова (2008)

Фигура 3. Ефективност на обединените и фалиралите банки



Върху ефективността на банките оказва влияние размера на кредитния портфейл, тъй като това е един от изходящите ресурси на банките. През двайсетте години на миналия век липсва банково регулиране, поради което много от банковите единици „раздуват“ кредитните си портфейли включване и на лошите кредити. Ефективността на тези банки се получава висока, но е нереалистична. Всъщност такива банки в последствие в годините на кризата фалират[19]. Получените резултати за ефективността на всяка банка поотделно са представени в Приложение № 1.

IV. Заключение

В изследването бе приложен успешно един твърде сложен метод за измерването на ефективността, който се отличава от традиционните методи с включването на множество входящи ресурси, необходими за производството на типичните за банките изходящи продукти, а именно „Анализът на стохастичната граница“. Благодарение на него са доказани формулираните емпирични и теоретични зависимости. Доказва се ролята на банките в периферните страни, както и ролята на паричната стабилизация за повишаването на ефективността на банките в България през двайсетте години на миналия век. Повишената ефективност на банките се дължи на частните чуждестранни банки, които навлизат все повече на пазара през изследваните години, разполагайки с по-добър опит и технологии. Въпреки, че БНБ е държавна банка тя показва висока ефективност, близка до максималната, което ни показва нарушаването на конкуренцията поради намесата на държавата и оперирането на банката като търговска най-вече през 1923 г. На по-късен етап вече централната банка започва да ограничава типичните функции за една търговска банка и да се насочва към регулативните, както се и случва след Голямата депресия.

Могат да се очертаят насоки за бъдеща работа при избрания подход на анализ на исторически данни с използване на съвременни подходи за оценяване на ефективностат

[19] За подробности виж. Неновски, Иванов, Михайлова (2008)

на банките. Така например може да се работи за оценяване на факторите, които въздействат върху динамиката на ефективността като се включат допълнителни променливи, макроикономически, променливи, характеризиращи дейността на банките като адекватност на капитала, ликвидност и др, в оценените модели. Това е възможно като се използват панелни данни т.е. данни за няколко години и като се използва спецификацията на Bettese и Coelli (1995), които оценяват стохастичната граница като оценените ефективностти на производствените единици се регресират със специфични за тези единици фактори[20]. В бъдеще е добре да се направят и сравнителни изследвания на ефективността в страните от Балканите в разглеждания период, за да се потвърди дали тези теоретични и емпирични зависимости са валидни и за другите съседни страни.

[20] За подробности виж Михайлова-Борисова (2015).

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Приложение №1 Коефициенти на ефективност на банките през 1923 г. и 1928 г.

	1923	1928	Статус
АД "Банка на тютюнопроизводителите"	0.856	0.742	Фалирала
Акционерна банка "Напредък"	0.776	0.762	Фалирала
Акционерна банка "Юнион"	0.859	0.976	Фалирала
Акционерто търговско индустриално дружествово "Зора"	0.657	0.681	Фалирала
Балканска банка	0.984	0.964	Обединена
Банка "Асбарез"	0.752	0.711	Фалирала
Банка "България"	0.626	0.991	Обединена
Банка "Отечество"	0.923	0.972	Фалирала
Банка за народен кредит	0.839	0.827	Обединена
Банка за търговия и кредит	0.895	0.865	Фалирала
Банка за търговия, индустрия и книжнина	0.897	0.974	Фалирала
Банка на съединените индустрии	0.227	0.700	Фалирала
Безимено акционерно дружество "Българска кредитна банка"	0.483	0.918	Фалирала
Безимено акционерно дружество "Търговски сговор"	0.974	0.832	Фалирала
БНБ	0.942	0.828	Фалирала
Бургаска банка	0.744	0.833	Фалирала
Българска банка "Съединение"	0.762	0.946	Фалирала
Българска банка АД	0.961	0.745	Обединена
Българска гаранционна банка	0.686	0.921	Фалирала
Българска генерална банка	0.628	0.917	Фалирала
Българска земеделска банка	0.846	0.989	Обединена
Българска сконтова банка	0.805	0.990	Фалирала
Българска спестовна банка	0.978	0.947	Фалирала
Българска стопанска банка	0.743	0.883	Фалирала
Българска търговска банка	0.999	0.993	Фалирала
Българска централна кооперативна банка	0.523	0.541	Обединена
Българско-американска банка	0.993	0.855	Фалирала
Българско-палестинска банка	0.729	0.860	Фалирала
Видинска банка безименно акционерно дружестнво	0.791	0.953	Фалирала
Горнооряховска банка АД	0.730	0.843	Фалирала
Дупнишка търговска кредитна банка	0.833	0.969	Фалирала
Еврейска популярна банка АД	0.999	0.845	Фалирала
Еленска търговска банка	0.344	0.479	Фалирала
Износно-вносна банка	0.747	0.513	Фалирала
Индустриална банка	0.999	0.775	Фалирала
Интернационална банка България	0.593	0.973	Обединена
Италианска и българска търговска банка	0.879	0.774	Фалирала
Кредитна банка	0.781	0.954	Обединена
Ловешка търговска акционерна банка	0.911	0.771	Фалирала
Оряховска търговска банка	0.580	0.746	Фалирала
Плевенска търговска банка	0.978	0.793	Фалирала
Селско-еснафска банка	0.933	0.840	Фалирала
Софийска банка	0.702	0.893	Фалирала

Строителна банка "Градиво"	0.792	0.466	Обединена
Тракийска банка	0.874	0.906	Фалирала
Търговско дружество "Земледелец"	0.883	0.751	Фалирала
Търговско кредитна банка	0.706	0.989	Фалирала
Тютюнева банка "Пловдив"	0.941	0.337	Фалирала
Франко-белгийска банка за България	0.706	0.884	Обединена
Франко-българска ипотекарна банка	0.927	0.906	Обединена

EXPLORING THE LINK BETWEEN THE EMERGENCE OF ALTERNATIVE FINANCE BUSINESS MODELS AND FINANCIAL INCLUSION

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Abstract: *The paper focuses on the most recent development in the field of alternative finance business models, called crowdfunding. Based on most recent data, it will be stressed the market size of this alternative finance segment and its growth prospects across European Union member states. An indirect outcome of the paper will consist in revealing the degree of financial exclusion from traditional banking products and services and whether it is linked with a higher incidence of transactions on crowdfunding platforms. The assumption to be further investigated relies on the hypothesis that unbanked people, which are excluded by conventional financial institutions, have a sound opportunity to raise money to fund their small-size investment projects or start-ups by relying on crowdfunding.*

Key words: *crowdfunding, regulation, risks, financial exclusion.*

Introduction

Reshaping traditional banking business models is a topic that gained wide interest across practitioners, regulatory bodies, academia and civil society. The last decade and particularly the period after the 2008 financial crisis have witnessed the emergence, development and consolidation of particular financial institutions' business models. These noteworthy models place at the core of their activity customer centricity, transparence of financial operations and values as trust and solidarity. Their spectrum is broad, comprising ethical banks, sustainable banks, microfinance institutions or the newest crowdfunding platforms.

The paper focuses on the most recent development, called crowdfunding. It is a mean of collecting households or companies' money, via online platforms, in order to finance small or medium sized projects and start-up businesses. The specificity of this business model, that connects investors and borrowers exclusively via online platforms, depicts advantages but also peculiar risks. Both European Commission and national regulatory bodies have begun to monitor the dynamics of this financial sector niche and to find ways to issue proper legislation and harmonize it across the EU member states where crowdfunding is active.

The paper aims at providing an exploratory insight into the features, advantages, drawbacks and specific risks depicted by crowdfunding, as well as its spread and dynamics across EU countries. Based on most recent data from European Commission and audit companies, it will be stressed the market size of this alternative finance segment, its growth prospects. Although data series related to financing provided through crowd-platforms are lacking, it will be performed a selection of the most active crowdfunding platforms in Europe, to comparatively assess the peculiarities of the financing provided, in terms of maturity, borrowed amounts and interest rates charged.

An indirect outcome of the paper will consist in revealing the degree of financial exclusion from traditional banking products and services. Financial exclusion is commonly defined as the failure of conventional financial institutions to adapt to the needs of different social groups, caused mainly by banks' selectivity and profit–orientation. The assumption to be further investigated in the paper relies on the hypothesis that unbanked people, which are excluded by conventional financial institutions, have a sound opportunity to raise money to fund their small-size investment projects or startups by relying on crowdfunding. In other words, they have to convince a crowd, by using an internet promotion and description of their

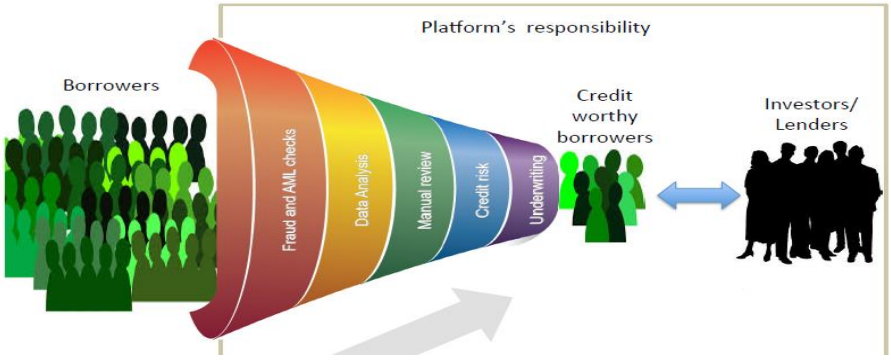
business idea. Thus, the link to be examined is whether countries recording a high volume of transactions via crowdfunding platforms depict also a high level of financial exclusion from traditional banks or, on the contrary customers depict a high degree of financial sophistication and wish to diversify the ways of investing or borrowing money by means of both conventional and alternative finance.

Crowdfunding: meaning, peculiarities and specific risks

According to European Commission's Guide on Crowdfunding, this specific business model is a viable alternative for raising money than traditional banking. The demand and supply of money meet on online platforms (websites), the fundamental purpose being that of chanelling financing to startups, small businesses and new projects. In its communication (2014c, p.2), the European Commission defines crowdfunding as a reliable, complementary source of finance, besides mainstream banking, and agrees that it is one of the newly emerging business models that "contribute to building a pluralistic and resilient social market economy".

The rationale of crowdfunding is to gather easily and safely small amounts of money from large groups of individuals or crowds instead of big amounts from few people. The crowdfunding platforms advertise first the projects to be financed; if fundraising campaigns are successful, those that have applied for financing will be charged a fee by the platform. The principle most platforms operate with is all-or-nothing funding, meaning that if the crowd provides money in a total amount that exceeds the pre-defined target the "borrower" will receive the money; otherwise, every individual will get his money back and the business or project won't be financed. Crowdplatforms use to perform an a priori screening of applicants for fundraising, based on several criteria, before promoting their business or project idea on the online platform. A brief scheme is presented in the figure below.

Figure 1. The screening process



Source: Ridler, 2014

The typology of crowdfunding business models is diverse. The European Commission's Guide on Crowdfunding has identified and defined seven types, namely:

- Peer-to-peer lending. The crowd lends money to a small business or individual and expects that the money will be repaid with interest. It is very similar to traditional borrowing from a bank, except that the amount is borrowed from many investors.
- Equity crowdfunding. It allows the sale of shares in a small or medium sized business, the holders expecting a return for their investment.
- Rewards-based crowdfunding. It implies donations to a project idea or business, by obtaining in exchange some kind of non-financial reward.
- Donation-based crowdfunding. It relies on voluntary donations made by individuals for specific projects, without expecting any reward or return, neither financial nor tangible.
- Profit-sharing crowdfunding. It is a promise that small businesses make in terms of sharing future profits with the individuals that provided them funding at present.
- Debt-securities crowdfunding. People invest money in debt securities, usually bonds, issued by small businesses.
- Hybrid models, which combine the features of several crowdfunding typologies.

A public consultation launched by European Commission (2014b) at end-2013, revealed that the most well-known forms of crowdfunding are donations and rewards (74% and respectively 69% of respondents), pre-sales, profit sharing and equity (50% to 60% of respondents), lending (45%), hybrid models (32%) and debt (25%). The benefits offered by crowdfunding, as they were perceived by respondents are: less dependence on traditional forms of financing (75%), highly beneficial for innovation (74%) and for SMEs and entrepreneurs (67%).

In terms of risks involved, there are several specificities outlined by the EC's Guide on Crowdfunding:

- the intellectual property on a project idea becomes public;
- underestimating crowdfunding costs, particularly in the case of equity crowdfunding;
- reputational damage due to project owners' errors or under-preparation when launching a project to be financed through online platforms;
- law-breaching EU or national regulation;
- fraudulent platforms;
- understanding the responsibilities a project owner has towards its contributors.

Other risks revealed by a consultation launched by EC (2014) are represented by the lack of trust among citizens and the lack of knowledge on this type of online fundraising.

Another public consultation launched by EC (2014b) provided a closer insigth into crowdfunding's added value and particular risks. The risk of insufficient intellectual property rights protection is perceived as being too high by only 22% of respondents who are in position of project owners. The risks of fraud and misleading advertising are ranked as acceptable by most stakeholders (50% and 47% respectively), while about one in four respondents consider these risks to be too high. 74% of respondents believe that a scandal could undermine contributors' future confidence in crowdfunding. Other major concerns relate to risk of fraud, lack of information, maintaining contributors privacy, risks of hackers attacks on platforms, money laundering.

Table 1 depicts comparatively a selection of the most active crowdlending platforms in Europe, to gain an insight into the peculiarities of these types of loans, in terms of maturity, amounts to be borrowed and interest rates charged.

Table 1. Peer-to-peer crowdfunding models – financial information

Name of the crowd lending platform	**Minimum amount to borrow**	**Maximum amount to borrow**	**Range of maturities**	**Interest rates charged**
Funding Circle, UK	£ 5,000	£ 1,000,000	6 - 60 months	up to 16%
Fundingknight, UK	£ 25,000	£ 150,000	1 - 5 years	8.8 - 12%
Zopa, UK	£ 1,000	£ 25,000	2 – 5 years	5.5%
Ratesetter, UK	£ 1,000	£ 25,000	6 - 60 months	8.9 – 28%
Isepankur, Estonia	€ 500	€ 10,000	3 – 60 months	26 - 38%
Kokos, Poland	zl 50	zl 25,000	2 – 36 months	up to 16%
Lainaaja, Finland	€ 200	€ 5,000	4 - 48 months	6 - 25%

Smartika, Italy	€ 1,000	€ 15,000	12 - 48 months	6.5 – 10.8%
Arboribus, Spain	€ 10,000	€ 150,000	up to 60 months	7.8%
Comunitae, Spain	€ 600	€ 6,000	6 – 24 months	6 – 12%
Smava, Germany	€ 1,000	€ 75,000	12 –120 months	2.75 – 5.95%
Auxmoney, Germany	€ 1,000	€ 25,000	12 - 60 months	2.9 - 15.25%
Bankless24, Germany	€ 1,000	€ 150,000	up to 60 months	up to 20%
Bettervest, Germany	€ 1,000	€ 200,000	up to 84 months	up to 15%
Babyloan, France	€ 200	€ 7,000	4 – 36 months	up to 27%
Prêt d'Union, France	€ 3,000	€ 40,000	24 - 60 months	7.7%
Cofunder, Ireland	£5,000	£100,000	3-5 years	Non available

Source: data has been collected by the author from several lending platforms' websites

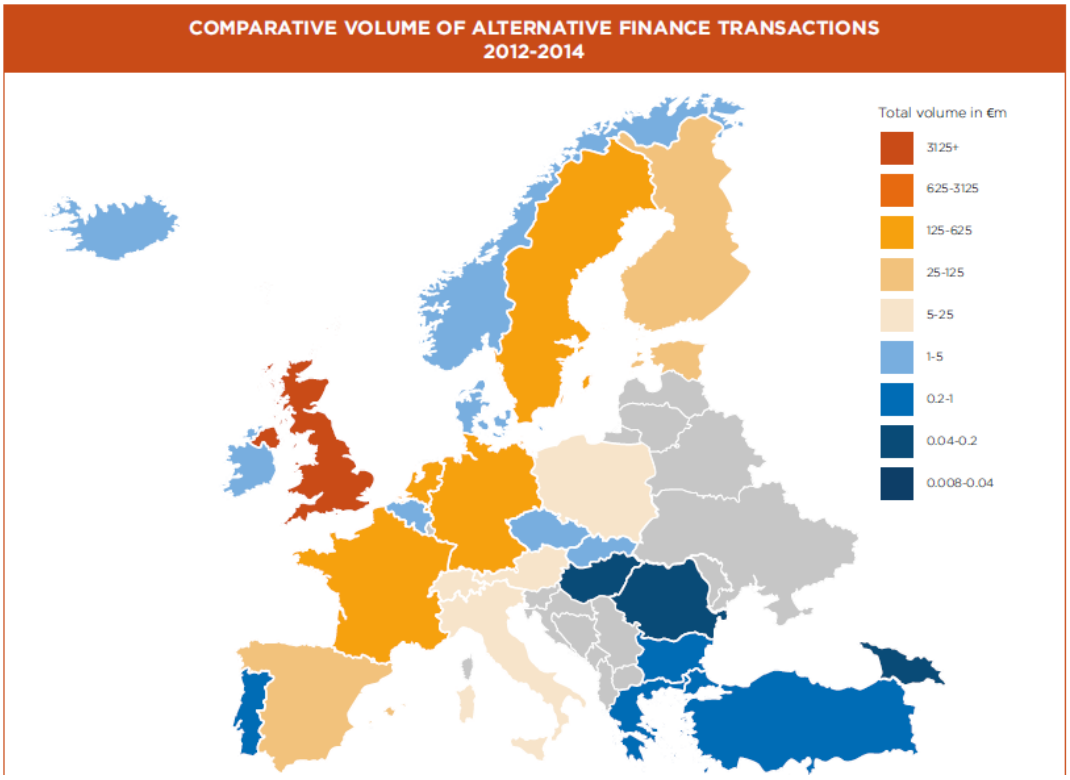
The selection of peer-to-peer platforms presented in table 1 show the presence of heterogeneity across all the variables considered. In terms of the maximum amount to be borrowed, UK provides the broadest range, with up to £1,000,000. It should be mentioned that UK holds the most developed, rapid pace expanding crowdfunding market, the four platforms in the table ranging among the top 10 European lending platforms as regards the amount of funds lended. Maturities also vary greatly across online platforms, from minimum 2 months in Poland up to maximum 120 months in Germany. The most striking discrepancies are related to the range of interest rates charged among lending platforms and countries. Some of them charge high effective interest rates, a fact that raised some controversies in the media related to the social nature of this type of funding (Boitan, Barbu 2015). The explanation for which interest rates practiced for loans granted are so high is provided by Babyloan (2014), a peer-

to-peer platform: a) lending to unbanked customers, who have been excluded by mainstream banking due to lack of collateral or low repayment capacity has to be compensated by a higher interest rate; b) to ensure the going concern of the business, to cover the operating costs of the platform, to prevent risks and provide a suitable financial compensation for lenders.

1. Crowdfunding market's dynamics across Europe

Wardrop et al. (2015) performed a wide-scale survey, by collecting data directly from 255 leading crowdfunding platforms in Europe, which represent around 85-90% of the European online alternative finance market. The results show that European alternative finance market, as a whole, increased by 144% in 2014. In respect of total volumes of financing raised through online platforms, UK is the leader followed by France, Germany, Sweden, Netherlands and Spain.

Figure 2. Volume of transactions operated through crowdfunding platforms

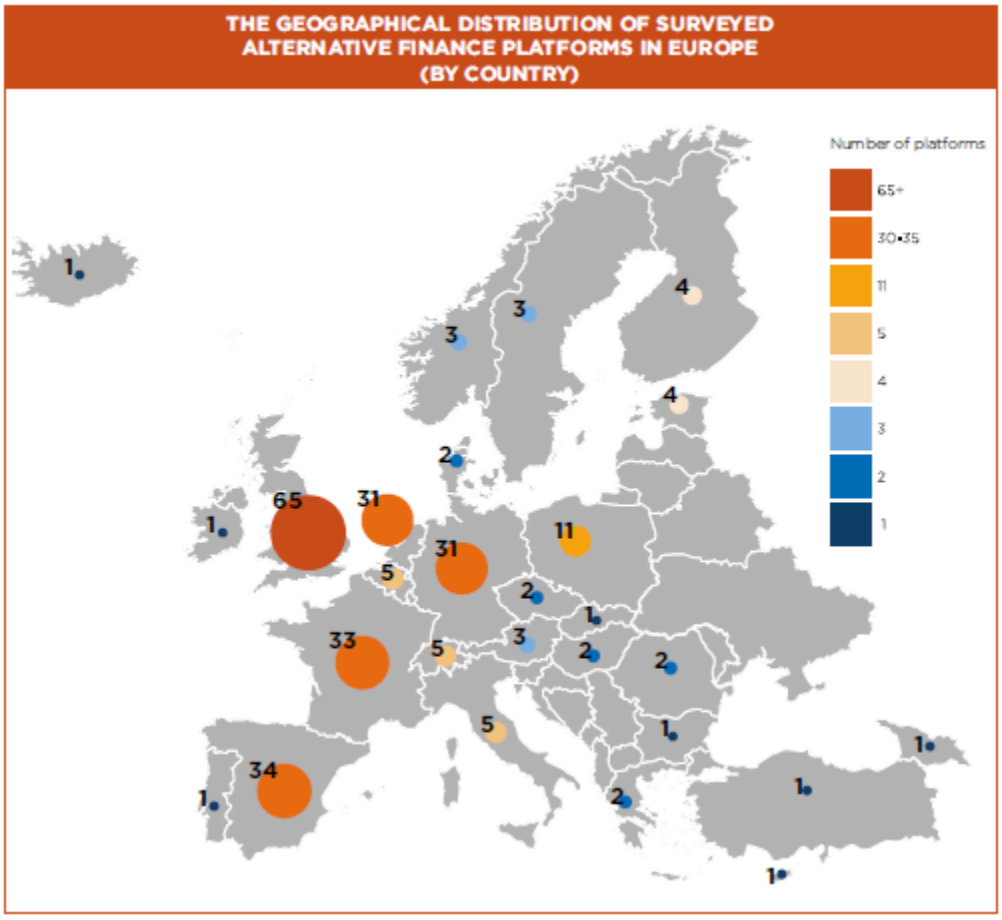


Source: Wardrop R., B. Zhang, R. Rau and M. Gray (2015), pag. 15

Taking a disaggregated look at the different typologies of crowdplatforms, the study revealed that "the average growth rates are high across Europe: peer-to-peer business lending

grew by 272% between 2012 and 2014, reward-based crowdfunding grew by 127%, equitybased crowdfunding grew by 116% and peer-to-peer consumer lending grew by 113% in the same period" (Wardrop et al. 2015, p.9).

Figure 3. Territorial spread of European crowdfunding platforms



Source: Wardrop R., B. Zhang, R. Rau and M. Gray (2015), pag. 14

By correlating the findings in figure 2 and 3, it could be noticed that UK holds the largest number of crowdfunding platforms (65) and by far the largest aggregated amount of funds lended (over 3,000 million euros). France, Germany and Netherlands occupy the second place in this hierarchy, with around 31-33 platforms and a financing between 125 – 625 million euro. Spain holds 34 platforms but the cumulated amount of financing is lower, ranging between 25-125 million euros. At the opposite is Sweden, with only 3 platforms but a larger amount of financing mediated by them (125 – 625 million euros). Bulgaria, Slovakia, Portugal and Ireland hold only one crowdfunding platform but perform slightly better in terms

of financing successfully provided than several countries with 2 platforms (it is the case of Romania and Hungary, with the smallest amount between 0, 04 and 0, 2 million euros).

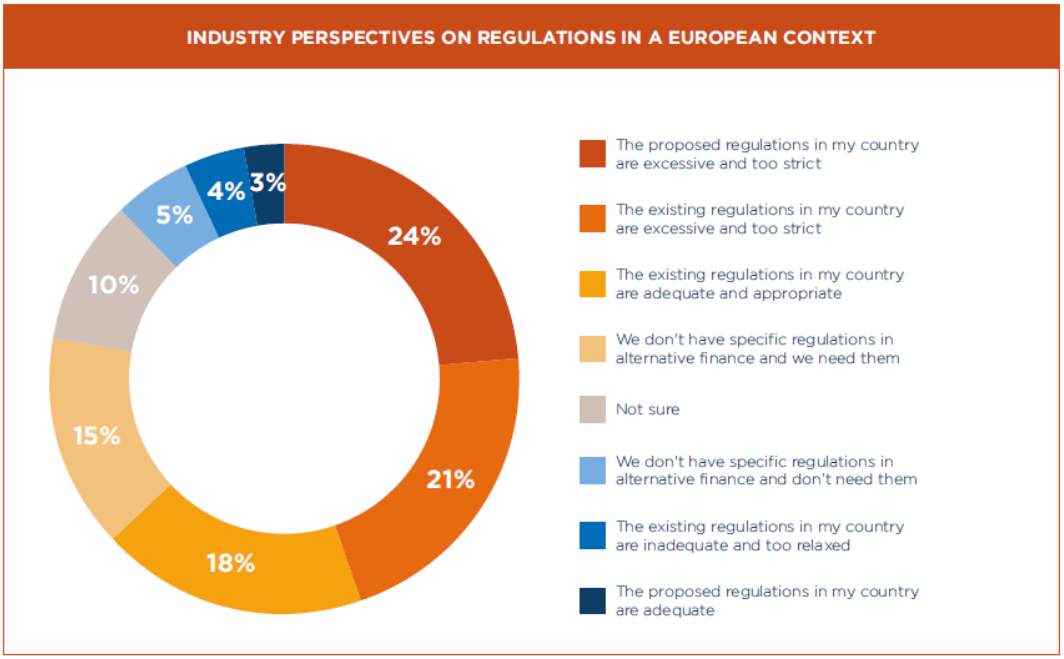
2. Regulatory challenges at European Union level

Currently, regulation of crowdfunding is characterized by heterogeneity, lack of coordinated actions at European level, fragmentation among individual jurisdictions. Although European Commission signals its intention to contribute to the harmonization, consolidation and unification of national regulations, progress is achieved in small steps and outlook suggest we are still far from a single European regulatory framework for crowdfunding.

The regulatory landscape of the European crowdfunding market is characterized by practitioners and regulators as being: i) fluid and multifaceted (Wardrop et al. 2015); ii) highly fragmented (European Crowdfunding Network 2014); iii) officially unsupportive regulatory environment (Gajda and Mason, 2013); iv) light regulation would be beneficial (Diacci and Pantani, 2014).

The figure below summarizes the perception of crowdfunding platforms on the specific regulation existing in the country of residence. It could be noticed that most respondents believe that national regulations are excessive and strict.

Figure 3. Results of the survey related to EU countries' crowdfunding regulation



Source: Wardrop R., B. Zhang, R. Rau and M. Gray (2015), pag. 24

At end-2013 the European Commission launched a consultation on issues related to assessing awareness and the existence of crowdfunding code of conduct, targeted to project owners, associations, online platforms, financial institutions, regulatory and supervisory bodies, academia and civil society. The results have indicated that awareness raising is important for all types of crowdfunding platforms, but especially for equity and lending models (49%). In terms of the code of conduct, it is not uniform across European platforms.

As mentioned in a previous paper (Boitan, Barbu 2015), traditional banks are facing a new, rapid pace evolving competitor, which operates with low administrative costs, provides simple products and has a different approach to the process of risk management. Therefore, debates are open regarding the impact and effects crowdfunding segment will exert on the whole financial industry.

In this regard, BBVA Research, in its Economic Outlook for 2013, points out the impredictibility of crowdfunding prospects for further development. The financial services consumers will continue to go to the bank to satisfy their demand of basic or more complex transactions that crowdfunding platforms do not offer. On the other hand, it is expected that crowdfunding platforms evolve toward becoming the main financial services provider for the young generation.

3. Financial inclusion: concept, indicators and pattern across EU countries

The second part of the paper addresses the issue of financial inclusion, in order to explore whether the high volume of transactions via crowdfunding platforms is partly determined by the presence of a high level of financial exclusion from traditional banking system.

Financial exclusion is a “process whereby people encounter difficulties in 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 their society” (European Commission, 2008).

Financial exclusion, through its two forms, namely the difficulty of accessing financial products and services (current accounts, savings accounts, credits, insurance) and the difficulty of using them is due primarily to the failure of financial institutions to adapt to the needs of different social groups, caused by banks' selectivity, lack of explicit information and transparency practiced by traditional banks.

Financial inclusion can be proxy by several indicators developed by the Global Partnership for Financial Inclusion, with the support of the World Bank. However, this database is unbalanced and lacks the timely reporting of indicators, the most recent data being available only for 2011 year. The most representative indicators related to access and usage of financial products chosen for the purposes of this analysis have been summarized in table 2 below.

Table 2. Financial inclusion indicators

Indicator	Explanation
Account at a formal financial institution (% age 15+)	percentage of respondents aged over 15, with an account at a bank, credit union, another financial institution (e.g., cooperative, microfinance institution), including respondents who reported having a debit card.
Loan from a financial institution in the past year (% age 15+)	percentage of respondents aged over 15 who report borrowing any money from a bank, credit union, microfinance institution, or another financial institution such as a cooperative in the past 12 months.
Getting credit: Distance to frontier	the distance of each economy to the "frontier," which represents the highest performance observed on the getting credit indicator across all economies included in Doing Business. An economy's distance to frontier is indicated on a scale from 0 to 100, where 0 represents the lowest performance and 100 the best-practices frontier.
Saved at a financial institution in the past year (% age 15+)	percentage of respondents aged over 15 who report saving or setting aside any money by using an account at a formal financial institution such as a bank, credit union, microfinance institution, or cooperative in the past 12 months.

Source: World Bank database, G20 Financial Inclusion Indicators

The raw values recorded by each financial inclusion indicator as well as the main descriptive statistics have been depicted in table 3. The cells filled with red color depict a value below average recorded by a given country for a given indicator. The smaller the value of a financial inclusion indicator, the lower is the degree of financial inclusion recorded by population in a country.

Table 3. Financial inclusion indicators (data available for 2011 year-end)

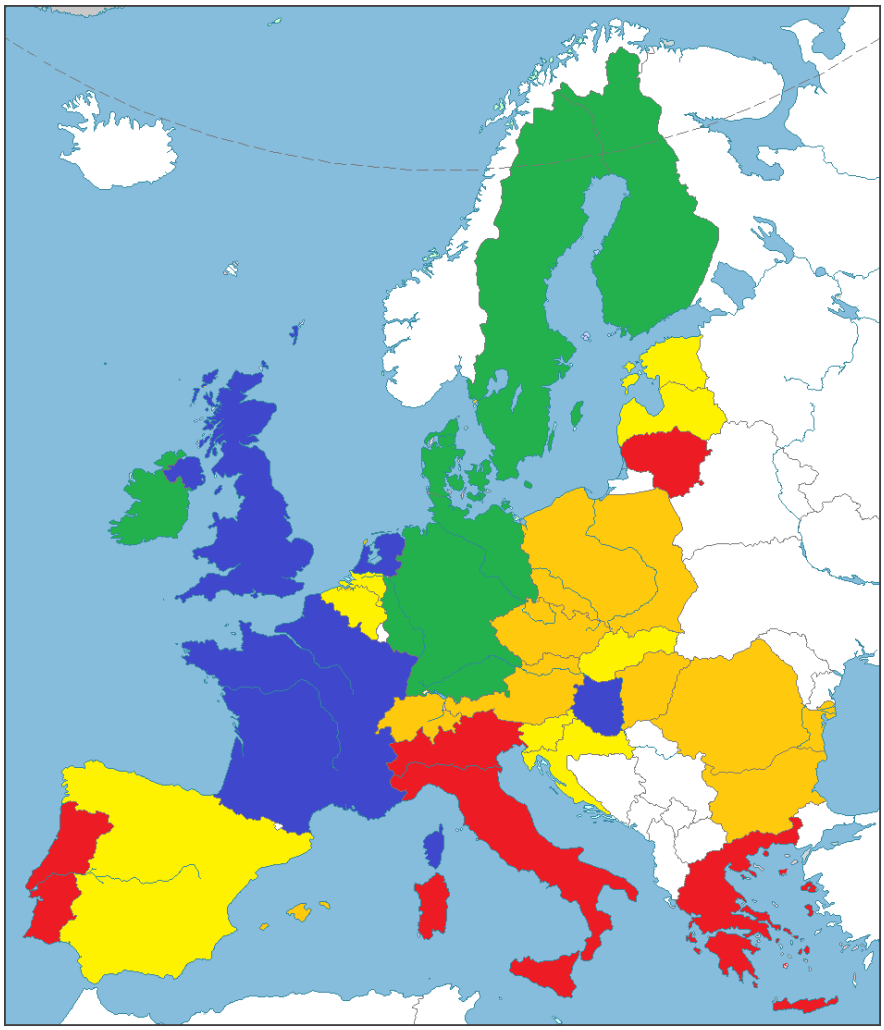
	Account at a formal financial institution (% age 15+)	Loan from a financial institution in the past year (% age 15+)	Getting credit: Distance to frontier	Saved at a financial institution in the past year (% age 15+)

Austria	97.08	8.25	81.30	51.59
Belgium	96.31	10.51	62.50	42.58
Bulgaria	52.82	7.81	87.50	4.80
Croatia	88.39	14.44	68.80	12.23
Cyprus	85.24	26.97	68.80	30.44
Czech Republic	80.65	9.47	68.80	35.48
Denmark	99.74	18.80	81.30	56.51
Estonia	96.82	7.68	75	28.87
Finland	99.65	23.88	75	56.14
France	96.98	18.65	68.80	49.52
Germany	98.13	12.55	81.30	55.90
Greece	77.94	7.93	56.30	19.87
Hungary	72.67	9.40	75	17.25
Ireland	93.89	15.72	87.50	51.26
Italy	71.01	4.59	50	15.48
Latvia	89.66	6.81	93.80	13.32
Lithuania	73.76	5.65	68.80	20.49
Luxembourg	94.59	17.44	31.30	52.01
Netherlands	98.66	12.56	68.80	57.81
Poland	70.19	9.61	93.80	17.99
Portugal	81.23	8.26	50	25.56
Romania	44.59	8.37	87.50	8.69
Slovakia	79.58	11.43	81.30	36.84
Slovenia	97.14	12.83	50	28.85
Spain	93.28	11.43	68.8	35.05
Sweden	98.99	23.40	75	63.58

United Kingdom	97.20	11.85	100	43.80
average	86.16	12.45	72.48	34.52
maximum	99.74	26.97	100.00	63.58
minimum	44.59	4.59	31.30	4.80
standard deviation	14.61	5.78	15.63	17.61

Source: author, based on data collected from World Bank database, http://datatopics.worldbank.org/g20fidata/

Figure 4. Visual representation of financial indicators' spread



Source: the author, based on data in table 3

Legend:

Color	Explanation
	4 indicators below average
	3 indicators below average
	2 indicators below average
	1 indicator below average
	4 indicators above average

The countries recording a good status of financial inclusion, with above the average values for all the four indicators are Denmark, Finland, Germany, Ireland and Sweden. At the opposite are Greece, Italy, Lithuania and Portugal with all the indicators below the average, signaling a poor status of financial inclusion. Low levels of financial inclusion indicators suggest that people don't have sound access to basic financial products. These countries are susceptible to witness a more rapid pace increase of crowdfunding presence and volume of projects financed.

However, by correlating this finding with crowdfunding platforms' data on territorial spread and amount of transactions, the conclusion is rather disappointing. Lithuania has no platform, Greece and Portugal hold one platform with transactions ranging between 0, 2 – 1 million euro while Italy is performing better, with 5 platforms and amount of transactions between 5 – 25 million euros. This pattern maintains also in the case of countries showing 3 out of 4 indicators below average (Bulgaria, Cyprus, Czech Republic, Hungary, Romania and Poland). These countries perform even worst in terms of volume of transactions operated through crowdfunding platforms, recording values ranging between 0, 04 and 1 million euro. Poland is an exception, with transactions amounting to over 5 million euros.

This might be the result of multiple factors, such as low financial literacy, lack of knowledge regarding alternative financial models, lack of trust in raising or lending money through online means and no direct, face-to-face connection.

The five countries exhibiting good levels of financial inclusion indicators also perform well in terms of amount of financing intermediated by crowdfunding platforms. Germany and Sweden have the largest market, ranging between 125 – 625 million euros,

followed by Finland with 25 – 125 million euros. This finding might be explained by investors' choice to diversify their investment portfolio, without necessarily hunting a high yield or return of their investment. It is a clue that investors are well informed, holding financial literacy and a degree of sophistication and social awareness in making their investment decisions.

Conclusions

In times of financial turmoil, when monetary policy becomes restrictive and the credit crunches as banks are reluctant in providing new loans, the real sector suffers most. SMEs need funding for maintaining the going concern of their business, while investment expenses are postponed. Individuals who wish to launch a start-up in order to become self-employed and escape the unemployment trap are witnessing difficulties in obtaining financing from banking system.

On this background, crowdfunding platforms developed and expanded rapidly across Europe, by acting as a meeting point between the increasing demand of money and the money supply. A peculiarity of this alternative finance business model is that financing is chanelled voluntarily by individual investors to those projects they deem to be the most successful ones in terms of economic and social/environmental impact.

The main finding of the paper is that crowdfunding is not acting as a substitute for basic banking products, as countries most exposed to financial exclusion threat do hold neither many platforms nor large amounts of financing mediated through these platforms. People are reluctant in borrowing or lending by using this new financial business model or lacks reliable, trustful information on its functioning. On the contrary, countries depicting many platforms and larger amounts of transactions also show a good status of financial inclusion. This might be explained by customers/investors with a higher degree of financial sophistication and knowledge, wishing to diversify the ways of investing or borrowing money by means of both conventional and alternative finance.

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CURRENCY SUBSTITUTION AND INSTABILITY IN THE ECONOMY: THE SOVIET EXPERIMENT OF THE 'CHERVONETS' IN THE TWENTIES

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"*The case of two forms of money is unique: they are substitutes without a rate of substitution"*

Irvin Fisher

INTRODUCTION

The realization of a double currency circulation in the Soviet Union at the beginning of the 1920s stands out as a most relevant episode from many points of view. As has been observed, "The complete turnaround in financial policy that the introduction of the chervonets signified compared to previous discussions about the abolition of money cannot be overemphasized." [21] The episode has deserved attention in Western literature for its peculiarities, which make the experiment an ominous case of 'bypaper standard – to use the term coined by A. Arnold – whose inherent characteristics have been evaluated in terms of specific assumptions.

The vast majority of the literature considers currency substitution in situations where substitutability usually implies a domestic money vs a foreign currency, and tends to analyse its implications in terms of exchange rate regimes and seigniorage policies [22]. The existence of two or more 'moneys' can result in instability in national money demand functions, and thus aggravate macroeconomic instability, and the policy aspect of the issue is often confined to the degree of tolerance of a double money regime on the part of national authorities. It is, therefore, a problem of policy response rather than one of policy action. In the Soviet Union, the double note circulation resulted from a deliberate policy choice, and the two moneys were both 'national', in that they were issued by different authorities (the State Bank and the Treasury) of the same state.

[21] Barnett, V. (2004), ch.4.

[22] See, among others, Mizen, P., Eric J. Pentecost, The Macroeconomics of International Currencies, 1996

The main goal of allowing currency substitution is supposed to be a reduction in high rates of inflation, or, as it was the case in the Soviet Union in those years, of hyperinflation.

In that context, it was assumed that with the segmentation of money circulation into two markets the one with a 'strong' currency would exhibit a lesser rate of depreciation, and that its movement towards equilibrium would represent an intermediate stage towards reduction of the overall rate of inflation.

We know that the attainment of this target with a double monetary standard depends on the degree of substitution between the two moneys: if there is little or no substitution between them, then the coexistence of a stable and a hyperinflating currency can help pursue an effective inflation policy. But if the two moneys in presence are perfect substitutes, and both perform only the function of medium of exchange, then the introduction of a stable currency (such as the Soviet 'chervonets') accelerates inflation of the depreciating currency (the rouble): therefore, the introduction of a secondary money proves an unsuccessful measure against inflation.

Since the well-known model proposed by Cagan [23] expectations of the exchange rate between the two moneys play an important role in determining a self-feeding depreciation of the 'bad' currency relative to the 'good' one, and this in its turn contributes to an increase in the overall rate of devaluation of monetary instruments. The coexistence of two currencies in this case does not solve the problem of self-feeding price inflation, but it actually exacerbates it.

The opposite is true if the two moneys are not perfect substitutes, i.e. if, for instance, one of the two is regarded as a store of value, or if the agents in the two markets are faced with different liquidity constraints. In this case, which can be likened to bimetallism, Gresham's law starts to operate ('bad money drives out good'), there is a decrease in real money holdings in the economy, and inflation can possibly be reduced. (Legal tender laws act as a form of price control of sorts.)

In many works devoted to currency substitution price instability, which is the effect of excesses in money emission, stands out as the main problem, and therefore reducing money issue and price rises become the sole and unique target of any possible measure of monetary policy, including the introduction of a double monetary standard.

[23] Cagan, P., (1956)

This paper argues, however, that there are systemic features of the Soviet economy that at the time militated for other goals being the main object of policy action. We refer especially to the need to 'monetize' the economy after the attempt to create a moneyless system with War Communism, so as to enable cash financing of the state budget. To this end, forfeiting the revenues from inflation 'as a method of taxation' (to quote Keynes), much as it was proclaimed a goal of the monetary policy pursued, in those years was hardly a real possibility for the Soviet policy makers, as it emerges rather clearly from the entire debate that preceded and accompanied the enactment of the double money standard. At the time, in fact, the necessity to find state capital to finance accumulation had become more and more a priority of the new political leadership, to the point that any form of intervention in the economy was subordinated to this goal. In this respect, an important change in climate occurred precisely during the years of the monetary reform that involved introduction of the 'chervonets', and this very fact makes it of special interest to look into the debate that preceded and accompanied it, and to examine the concept and the real effectiveness of the Soviet double currency circulation.

In our analysis we draw extensively on the work of Grigorii Ya. Sokolnikov, who at the time of the reform had just been appointed People's Commissar of Finance, and of Leonid N. Yurovskii, Chief of the Currency and Foreign Exchange Bureau in the Commissariat of Finance. The former was the main proponent of the double currency reform, while the latter was the 'practitioner' in charge of its enforcement. Being two of the most prominent Soviet economists of that period, they took part in the debate that preceded and followed the policy measure, and on many occasions expressed their assessment of the economic situation of the country in a way that appears remarkably free of prejudice and of external pressure.

BACKGROUND. MONETARY POLICY BEFORE NEP

All along the 1915-17 war the tsarist empire relegated money emission to a secondary role for the financing of military expenditures, preferring to rely on both foreign and domestic credit. Consequently, the increase in money was all in all rather limited. Also, all through the prerevolutionary phase increases in the quantity of money in circulation did not result in proportionate rates of inflation, thanks to a policy of support of the currency both at home and on foreign markets: monetary policy was based on currency restrictions for exporters and on massive foreign credit, while domestic purchasing power was protected through control of prices of final goods, forced requisitions and rationing of the main food items. Therefore,

throughout war time the purchasing power of the Soviet currency decreased at a rather limited rate: on January 1st, 1917, a pre-war rouble was worth 2.92 current roubles[24].

It was only from 1917 that a turnaround occurred: already during Kerensky's provisional government the increase in money outlays necessary to support the new regime, in a context of civil war, was such that the quantity of currency in circulation almost doubled, following a policy of accelerating creation of monetary base. The October Revolution, generalizing nationalizations and setting up a planned, 'redistributive' economic system, reverted to money emission as the main source of coverage of state outlays.

The disastrous experiment with 'war communism', and the attempt at creating a moneyless economy, of course did not improve the situation. The progressive devaluation of the national currency was a natural corollary to the isolation from world markets and to the systemic loss of efficiency of the Soviet economy. The spreading of barter and of dealings in kind gave the status of money to some goods (especially grain and oats) that became real 'numeraires' of specific markets. In other words the economy, which supposedly was managed in purely 'physical' terms, reacted producing various surrogates of money, in what Sokolnikov was to term a typical case of 'monetization of goods'. All this was compounded by the fact that, in the confused period of civil war and territorial expansion, various regions and territories (guberskie as well as uyezdnye cities) started to issue local moneys that had a status of more or less legal tender, but which were issued in an uncoordinated manner, without any sort of control.

In conclusion, in a way which is only seemingly paradoxical the most relevant fact of early Soviet monetary history is that a conspicuous increase in means of payment, both legal and illegal, occurred exactly at the same time as purportedly there was a reduction in the functions of 'money'.

As shown by the following table, between the breaking out of the Revolution and the beginning of NEP (1921) the nominal value of currency in circulation went up almost 120 times. Consequently, over the same period of time we observe a new, relevant fact: the deepening of inflationary tendencies, which cause a dramatic loss of purchasing power of the rouble. It was the beginning of hyperinflation.

[24] Den'gi i kredit, 8, 1989, p.23

Trends in the increase of currency circulation and in devaluation of the rouble are shown in the next table.

TIME PERIOD	CURRENCY IN CIRCULATION (millions of roubles)	INCREASE over 1/XI 1917	DEVALUATION RATE over 1/XI 1917
1/I 1918	27,650.2	1.4 fold	2 fold
1/I 1919	61,326.2	3.1 fold	16.1 fold
1/I 1920	225,015.2	11.5 fold	237.3 fold
1/I 1921	1,168.596.9	59.7 fold	1,647 fold
1/VII 1921	2,347.164.1	119.9 fold	7,912 fold

Sources: D.A.Loevetskii, Ten years of money circulation, in Vestnik Finansov n.11, p.104

Yurovskii, L.N. (1928), pp.27, 72.

As can be seen, over the abovementioned period of time the nominal value of currency in circulation grows 120 times, while prices shot up by around 8,000 times.

THE NEW ECONOMIC POLICY (NEP) AND THE DISCUSSION ON MONEY.

The policy known as NEP envisaged a new form of industrialization that was to be financed mostly by the state, but which was supposed to be facilitated by a diffuse liberalization of the economy. The new wave of industrialization was thought to have among its spillovers the rebirth of money and capital markets, in a situation, however, where the new demand coming from the private production sector was still by and large 'crowded out' by the financing needs of the state budget.

The launching of the new course took place at a stage when the economy was in a dismal state: in 1920 industrial production was but one fifth of the 1913 output, while overall employment was about one half of prewar. Only wheat production stood at values that were substantially above the 1909-1913 period. But the situation in the foodstuff market was soon to deteriorate: in 1921 there was a steep decrease in agricultural production, caused by a

severe draught in the eastern and southern parts of the country. Because of the terrible famine that followed, 1921 was, in the words of Alec Nove, 'a nightmare both for the Soviet people and for the government'.

Because of such a situation, NEP started off with a measure that concerned agriculture: in March, 1921 a decree made for the transition from 'prodrazverstka' (forced requisition of foodstuff) to 'prodnalog' (a tax in kind on agricultural produce).

One observation is in order here: with the abandonment of all forms of barter economy, of payment of wages in kind and in general of all the moneyless transactions which had characterized the economy during the period of War Communism, NEP was supposed to pave the way towards a progressive 'monetization' of the Soviet economy. On the other hand, the limits of the attempt are clearly evident from the very measure that marked the launching of the New Policy, the institution of a tax in kind. In fact, the 'levy on produce', or 'prodnalog' (it was only in 1924 that a 'unified' tax in money was levied on agricultural produce) by itself is testimony to the fact that for a long period of time the Soviet leaders intended to build a market economy leaving 'moneyless' important economic flows of payment.

The first measures of NEP – legalization of private trade, transfer of enterprises to a regime of 'economic accountancy' (khozraschet), concessions to private entrepreneurs, attempts at setting in place a normal tax system – were taken at the same time as there was a tremendous increase in the government outlays necessary to finance the gigantic economic complex in the hands of the Soviet leadership. With the resumption of an only partially money-based economic system, fulfillment of the state financial needs resulted thus in increasing imbalances, which eventually could only give way to hyperinflation. The rouble ceased to have any value as a unity of account, while money issue was becoming the main source of revenue for the state budget, The extremely high costs of supporting state industry and transfer payments were met in a situation of scarcity of money resources, mostly due to the paucity of tax revenues accruing from taxes not in kind.

The following table, based on data supplied by Sokolnikov [25], highlights the trend in money issue over the period:

[25] Sokolnikov, G.Ya., (1925), pp.150-151

DATE		MONEY ISSUE (billions current roubles)
August	1921	703
September		1,000
October		2,000
November		3,365
December		7,700
January	1922	12,300
February		18,800

In a context of total control by the state of the 'commanding heights' of the economy (primary sectors, infrastructure and all the large-scale industry) the public debt problem – for the first time in history – was one of financing an economic system that was almost a pure credit economy, since it was in large part 'nonmonetary'. Given the high share of taxes in kind, and the fact that many tariffs on services were often equal to zero, the Soviet economy in fact was for its most part a barter economy, and the lack of a universal numeraire brought about the emergence of a number of commodity-moneys which made payment flows viable.

Oddly enough, NEP made the problem more acute, because outgoing payment flows (mostly wages and salaries) began to be monetized, while incoming payments were made in cash only in a minimal part. So, at the beginning of 1922 per capita taxation was about one twentieth that of tsarist Russia, while budget outlays stood at about one half.

The shortage of capital made it especially difficult to replenish fixed capital – something that, according to the new legislation, could now be done by private firms.

As a result, and also because of the lack of efficient credit institutions, private entrepreneurship was already doomed to be relegated to the realm of trade, craftsmanship and petty production that had been the backbone of the unprotected economy of tsarist Russia. These sectors were the only ones that were price-makers, and therefore had the capacity to pass onto final prices the full cost of their activity. The 'new entrepreneurs' of NEP thus

ended up feeding an inflationary process that was due to local inefficiencies and to the high distribution costs of productions with a very low capital intensity.

In sum, the ways in which the process of 'monetization' of the Soviet economy developed had important effects on state finances, and this, in its turn, affected negatively the entire structure of payment flows. In the words of Sokolnikov, 'Some widening of the sphere of money circulation took place, and still continues to do so, following the transition to the new economic policy; this resulted, by the autumn of 1921 (at the harvest season) in short-term stabilization of the value of the rouble. The lack of equilibrium between cash revenues and outlays of the Soviet government destroyed this equilibrium' [26].

Another important witness of these processes, L.N.Yurovskii, notes that money issue acquired a lot more importance with the beginning of the new era, i.e. 'when "denaturalization" became rooted in the economy, and in all spheres of economic life people were keen on realizing the transition to the principle of payment in cash for goods and services'.[27]

The bulk of state expenditures was financed through the creation of new money, which at the beginning of 1922 was feeding up to 95% of all government outlays.

With the advent of NEP the problem of finding a 'strong unit of measure' (tverdyi izmeritel') became the key problem for the Soviet economic leadership, which started discussing possible alternatives to the state of chaos present in money markets. Two were the main lines of reasoning:

one advocated a comeback to some form of gold standard, while the other supported the issue of a 'commodity-rouble'. The powerful Narkomfin had put forward the first proposal, while the second approach was first surmised by the famous economist Stanislav G. Strumilin, and was later to be shared by Gosplan and VSNK, the Supreme Council for the Economy.

On the Soviet market gold had reached its minimal price – 16 prewar kopeks – in August, 1920, and had then kept a value which was only to a small extent related to the rate of inflation. On the other hand, the constant threat of hoarding or of an outflow of gold abroad militated against the adoption of a gold standard in order to stabilize the money market.

[26] Sokolnikov, G. Ya. (1925), p.135

[27] Yurovskii, L.N., (1928), p.67

The idea of a commodity-rouble, aimed at demonetizing gold, amounted to the proposal of issuing a new rouble, the value of which was fixed in terms of the change in its purchasing power relative to the prewar rouble. It would be, all things considered, an index-currency which had no material backing, and which, moreover, did not take into account the relative changes that had taken place in the composition of final output. [28]

As an alternative, Strumilin suggested to issue obligations on a loan on bread: the commodity backing could be guaranteed by the state being the sole producer and distributor of bread.

It was in those years (1921-22) that hyperinflation became rampant. Between October, 1921, and May, 1922, retail prices on foodstuffs and industrial goods rose 50 times, with the increase being even steeper for food items.

Worrying to the Soviet economists was also the staggering increase in money emission over the same period of time: the issue of money went up by 30 times in the six months ending in May, 1922, relative to the previous year. Wage indexation, which the new leadership by all means tried not to give up, resulted in a wage bill that absorbed almost one half of the new money creation

Hyperinflation had the effect of steering the discussion more decidedly towards new solutions to the problems arising in money markets. In the two preceding years for the first time someone (namely N.Kutler, a researcher of the People's Finance Commissariat) had put forward he idea of a parallel currency, to circulate alongside the rouble. The new currency would consist of gold coins, which for a period of time would coexist with the rouble, with no fixed exchange rate between the two. V. Tarnovskii, a well-known banker, made a slightly different proposal: his idea was to issue, together with roubles, new banknotes with a set rate of exchange for gold. [29]

Little by little, hyperinflation and, above all, the high rate of money emission, took centre stage in the discussion among the Soviet leaders: Kutler and Yurovskii became both staunch supporters of the idea of a parallel currency. In the meantime, over the years 1921-22 the

[28] We refer to the so-called Gershenkron Effect

[29] For a thorough account of the discussion see Goland, Yu., (1991)

quantity of money in circulation grew 1,070 times, while the national currency was devalued 'only' 595 times [30].

The draft of the 1922 Budget, for the first time, was made in prewar roubles – in relation to which the Soviet rouble had already been devalued 70.000 times.

With this, in Sokolnikov's words, a 'gigantic step forward' was made towards equilibrium in the money market; the same draft plan, however, forecast a budget deficit that amounted to roughly 50% of planned government outlays.

CONCEPT OF THE REFORM AND ITS MEANING IN THE SOVIET CONTEXT.

The relevance of the discussion that accompanied the new measure can be grasped looking at it against the backdrop of the evolution of NEP: the introduction of a double money standard took place at a time when there was still hope in a possible 'liberal' outcome of the new policy, and the debate that focused on the money market, and on the progressive 'monetization' of the economy, was characterized by total freedom of expression

When it was finally decided to pass a monetary reform which would not consist simply of a rouble devaluation (1922), the growing budget deficit was covered almost exclusively with money emission, and that generated rampant hyperinflation. The link between the state budget and the depreciation of the currency is stressed very clearly by Sokolnikov, then Finance Commissar:

'Our money loses its value because of its incessant new issue (increase in emission) to cover state expenses. Consequently, as long as our budget is unbalanced, we will not be able to achieve stabilization of the rouble rate'…'So, we must start a monetary reform liquidating the budget deficit.' [31]

As we can see, the need to spur some kind of state-directed economic growth was still felt only to a limited extent: the Soviet leadership was apparently willing to devote huge efforts to

[30] The relative performance of money issue and currency depreciation was considered of great interest by the Soviet economists of the time: one of them, Schmidt, invented a so-called 'mathematical law of paper money issue', which stated that 'if at the stage in which the rate of devaluation of money (B) is greater than the rate of money issue (A) antiinflationary measures are not taken, then A may rise with arithmetic progression and B with geometric progression'

[31] Sokolnikov, G.Ya., (1925), p.102

the stabilization of the currency, and bringing the budget in equilibrium was seen as a possibility and a prerequisite for an orderly monetary market.

In passing, it may be noted that such a position is reminiscent of the so-called 'Brussels Doctrine', dating back to the beginning of the century, according to which budget deficits are the cause of inflation. In fact, in the history of the hyperinflations that beset both Austria and Hungary in the early 1920s stabilization of the currency preceded budget equilibrium. (For an extensive treatment of the topic see League of Nations, 1946.)

In more general terms, in designing its 'monetary' strategy according to the views that made up the doctrine of NEP, the Soviet government was still attempting to take into consideration the needs of the newly born private productive sector: only later on its investment demand would be systematically sacrificed to the financial needs of the state budget.

In the end, a decision was made that involved acceptance of a proposal put forward by Sokolnikov himself, which constituted the backbone of the monetary reform.

So, a decree dated October 11, 1922, promulgated by the Soviet of the People's Commissars, at last authorized the recently created state bank to issue a new type of banknotes, and the reform was set in motion. The new currency, called 'chervonets' (the old name for the gold rouble) was issued in denominations ranging from 1 to 50, and one chervonets was equal in value to one pound sterling, or to 5 US dollars. The chervonets existed in paper form (for domestic circulation) and in gold coins (for international payments).

The two money markets were to be kept separate: the chervonets was to serve the payment needs of the productive sector, with special regard to large-scale industry, and all the transactions involving the state, while the 'Soviet notes' (roubles) were to be used mostly in trade and agriculture.

The stated goals of the reform were: 1. To increase the floating capital of the State Bank for commercial operations, without causing fiduciary inflation, and 2. To regulate money circulation in the country.

What was the concept that lay at the basis of the chervonets, and what were the alternative paths which were ruled out by the Soviet leadership?

Sokolnikov's idea was to issue a rouble that was 'guaranteed', but not fully by a metal base. There were several reasons for this, singled out very clearly by the economist himself: 'Of course, the simplest way to produce solid money consists of moving to a gold currency; but a whole host of conditions must be met to this effect, i.e. the resumption of private property of land and capital, capitulation at the Genova Conference, readiness to acknowledge international loans at any condition'. [32]

These are very telling words, which stress the relevance of the debate that accompanied the monetary reform: what was at stake was, on the one hand, the ideological background of the revolution itself, its main tenets in terms of economic and social policy, and, on the other, the state of international relations of the new Soviet nation.

The other option that was ruled out, in large part for considerations of international prestige, was to resort to a foreign currency.

The new chervonets did not operate in a pure paper system, even if its 'guarantee' was given in part by the volume of trade turnover and by precision in the calculation of the price changes which were embodied in the value of the new rouble. In other words, the new currency's value was to be based on the value of money measured in current Soviet roubles (sovznaki) divided by a coefficient of its devaluation relative to the pre-war rouble.

But the new monetary unit was 'secured' in a different and more important way: it had the same gold backing the currency had in pre-revolutionary Russia, where a chervonets was equal to 10 gold-backed roubles, i.e. to 1 zolotnik and 78.4 dolyas of fine gold.[33] Considering that a zolotnik is worth 4.266 grams, and that it contained 96 dolyas, a chervonets banknote was equivalent to 7.74 grams of pure gold. The declared gold convertibility, however, was never practiced.

So, the new currency was to be backed by precious metals for at least a quarter of the total value of cash in circulation, while the rest was guaranteed by 'easily marketable' goods and short-term securities .The chervonets was listed in such stock exchanges as those of Rome, Riga and Tallinn.

[32] Ibidem, p.144

[33] Arnold, A., (1937), p.148

According to those who supported the measure, the reform had on the one hand the advantage of supplying a backing to the new currency without having to resort to massive purchases of gold abroad, and, on the other hand, the fact that the new rouble was an index-currency would grant it price stability, since the new currency was, for the part that had no backing, 'stabilized within paper money circulation itself', as Sokolnikov declared..

The new currency, issued as credit money, was meant to accommodate the increased demand for means of payment that was coming from the production sectors, both state and private, of the economy. An increase in money holdings in different sectors of the economy was deemed to be the result of the ongoing process of its 'denaturalization'. Impermeability between the two money channels resulted from the partition of the expenditure flows financed by the two currencies: the 'unproductive' outlays of the state budget took place in the 'bad' money circuit, while transactions of the 'productive' circuit, i.e. transactions of the industrial sector, were to be carried out in the new currency, the chervonets. In no way the new currency should finance the public deficit.

It is here important to note, however, that the central bank was in a position to issue money to finance short-term loans to the People's Finance Commissariat, even though such credits had to have a 50% backing by precious metals.

While the two markets were to be 'insulated' from one another, the old rouble, issued by the Treasury, kept its status as legal tender (which the chervonets never had during the double standard) and retained an accounting value: in old roubles were calculated the state Budget, tax payments, prices of.state trusts' output, railway fares, wage payments. In order to secure separation of the two markets it was decided to adopt the upper denomination (10 roubles) of the new currency, which was to serve 'larger' expenditures; this fact had the effect of introducing rigidity in payment flows and at some point created the so-called 'small change famine'.

One important qualification is here in order: in the Soviet case, the simultaneous presence of two currencies in one national market had a characteristic which makes it unique in the history of monetary reforms for stabilization: throughout the period of time during which the system was in force, there was no fixed exchange rate between the two currencies. In fact, the rate of exchange between them was the 'market' rate that prevailed in the capital sections of the merchant stock exchanges of the country. The exchange rate thus differed in the various parts of Russia, and only a special decree, passed on October 17, 1923, made for a 'unique

price' for the new currency: this was the official price, valid for 24 hours, set in the capital section of the Moscow stock exchange. [34]

According to its principal designer, Sokolnikov, the reform had a double goal: to reduce money emission as the main form of finance of the state budget; to reduce the budget deficit itself. (Besides, a stable currency that was never fully redeemable allowed to keep at home gold reserves which would otherwise flow out of the country.) Minting a domestic currency would avoid the pitfalls of a money circuit based on a foreign currency.

The idea of a double currency was to encourage over time the use of the chervonets both as a means of exchange and as a unit of account. It was not ruled out, however, that the measure might even strengthen the Soviet rouble. The thought of a rapidly devaluing sovznak did not seem to bother much Sokolnikov or the other Soviet policy-makers, who maintained a rather optimistic view as to the possible future course of events: stabilization of the money market would entail a more favourable climate for investment spending and for a rapid upturn of the economy; in its turn, this process would result in a more satisfactory position of the public budget. In view of the persistent shortage of capital in the economic system, both developments in production and the evolution of financial markets would result in an increased demand for money on the part of the production sector, and therefore in a rise in total currency circulation in real terms.

As already said, the main proponent of the reform was Sokolnikov: what was his idea as to the effects of the new currency? As it appears from his many publications, the problem was essentially one of 'healing' money circulation, but without renouncing the idea of directing capital accumulation through a large sector of nationalized industry. But, as he and others still thought at the beginning of NEP, the process should be 'financially balanced'. Sound state finance, in other words, was not so much a target as a tool of economic policy.

In such a context, the choice of a correct monetary instrument was crucial, especially with respect to the fact that the budget deficit was by then, in the words of Sokolnikov, 'abysmal', having reached about 100 million roubles per month, and it could no longer be covered by paper money emission, 'since even in the most favourable months the issue of money produced a revenue of no more than 45 million' [35]. The revenue from seigniorage,

[34] Yurovskii, L.N., (1928), p.251

[35] Sokolnikov, G. Ya., (1925), p.123

particularly conspicuous soon after the establishment of the new Soviet regime, had in fact decreased dramatically with the inception of NEP, so much that a recent analysis[36] considers that the search for a 'stable' currency can be partly explained by the need to stem the loss of seigniorage to the Soviet government.

But a more general attitude is discussed here with respect to the debate that took place before and during the enactment of the double currency in Russia. Again, the words of the finance commissar Sokolnikov are very significant: 'The question of emission, he writes, which bears the strictest relation to the question of devaluation of paper money…..in the present economic condition has taken up a totally different meaning. To look at money emission like we did before 1921, that is, that emission is some kind of bad, unorganized tax – but still a tax, levied on workers and on private turnover and which had no influence on the Soviet economic setup, is no longer possible.'[37]

Obviously, the difference between the two economic conditions is given by the existence of the 'socialized' economy, and especially of state industry, the new economic reality that also stood to lose from the constant devaluation of the paper currency. In order to protect the economy, both public and private, from the operation of such and unfair 'tax' as seigniorage, people like Sokolnikov were actually willing to forfeit its revenues.

In this 'liberal' approach, a key element was the advocacy of a relationship between the state and the economy that would allow to improve the state budget situation via a monetization of what was accruing to it, so that as a result there would be more symmetry in incoming and outgoing payment flows. The development of a 'normal' tax system and of real financial markets were therefore regarded as key elements of the new course of the economy.

The state of monetary circulation was of paramount importance in the process, and steering it one way or another was crucial for a development path that with the inception of NEP had appeared to take on a different character.

[36] See Siklos, P., (1995)

[37] Sokolnikov, G. Ya., (1925), p.157

THE ACTUAL PERFORMANCE

The parallel money circulation in the Soviet Union lasted from December, 1922 to February, 1924. (The new central bank had been granted power to issue money on October, 1921.)

The introduction of the new note was rather gradual at the beginning, but it then increased in speed, with the mounting diffusion of the new currency.

The following table shows money circulation in Russia over the period of the double currency:

TOTAL MONEY IN CIRCULATION

(One rouble of the 1923 emission = 1,000,000 r. of earlier issues)

DATE	SOVIET MONEY (in millions of 1923 r.)	CHERVONTSY (in millions of gold r.)
January 1, 1923	1,994	3,562
February 1		8,545
March 1		16,039
April 1	4,482	25,667
May 1		37,542
June 1		47,483
July 1	9,032	70,001
August 1		111,204
September 1		165,180
October 1	22,702	207,350
November 1	53,592	224,782

December 1	98,839	226,047
January 1, 1924	178,510	237,159
February 1	333,018	259,683
March 1	866,594	286,954
April 1	768,101	294,506

Sources: Yurovskii, L.N., (1028) p.226 Goldenweiser, A., (1925) p.239

The simultaneous presence of two currencies, one of which was supported and kept a remarkable stability in real terms, while the other was devaluing at increasing rates, resulted in the end in a substantial growth of total note circulation in real terms, as seen when the increase in chervontsy is measured in prewar gold roubles.

How did the two currencies fare in relative terms? After meeting initially a reaction of rejection, mostly because of the high denomination, the chervonets started spreading as a means of payment, so much that its share in total currency circulation was around 75% by the end of 1923, and it reached 81% at the beginning of 1924 [38] .

With the exception of a brief lapse of time in the first part of 1923, the new currency kept its value both in terms of purchasing power and of its rate relative to foreign currencies. (Gosbank practiced an active intervention policy in currency exchanges so as to maintain gold parity.) There was an initial stage when it kept losing value, but its purchasing power, strangely enough, ceased to fall exactly when its issue was increased: such a trend bears evidence to the fact that the role as means of payment of the new currency was of secondary importance, over this phase, relative to that of store of value. That happened again more than once at later times.

What was the behaviour of prices in the process?

The following table shows the monthly average rate of % increase in goods prices over the years 1922-1923, before and after the introduction of the new currency:

[38] Societé des Nations, (1925), p.342

DATE	PRICE INCREASE	DATE	PRICE INCREASE
October 1922	57.5		
November	42.1		
December	29.2		
January 1923	30.4	July 1923	65.7
February	12.3	August	72.1
March	26.2	September	96.8
April	39.4	October	67
May	41.7	November	110.1
June	51.6	December	135.7

Sources: European Currency and Finance, 1925, serial 9, p.259
Yurovskii, L.N. (1928), p.258

As can be seen, the monthly rate of inflation sharply decelerated after the introduction of the chervonets, and the money market saw a period of relative stabilization: for just a few months, hyperinflation was somehow held in check.

But the peaceful coexistence of the two currencies did not last long: as it appears from the preceding table, already in March, 1923, the issue of 'sovznaki' (the roubles issued by the Trasury) started to grow at a tremendous pace, and it stood, in nominal terms, at twice as much that of February, and price inflation followed suit. By the end of 1923 the Soviet leaders decided to resort to much higher rates of issue of roubles. In January, 1924, the monthly rise in prices was to the tune of 213%.

What was the cause for this change in policy? An easy explanation of the phenomenon is to be found in the figures of the state budget, which was then planned on a monthly basis. In spite of a slight reduction in military expenditure, budget outlays started to grow significantly towards the end of 1922, both to meet the rising needs of the population but, in the first place, to support the nascent state industry, which was still operating at a loss.

In mid-April a critical moment arose in the process of improvement of money circulation that had started with NEP. Two options were open: either preparing the way to an immediate cessation of rouble emission and of its convertibility to chervontsy or, on the other hand, facilitating the use of credit and lowering the price of chervontsy in terms of a goods-index, i.e. basically changing the relationship between the rate of growth of prices of goods and that of the chervonets.

Of course, the first option would entail a reduction of the budget deficit, while the second favoured heavier government intervention in the economy, and the supporting of a rather inefficient state industry.

For the final decision between the two courses of action, of crucial importance was the 12th Party Congress, which was held in April 17-25. Trotzkii, speaking at the Congress, restated the Party position with respect to the path that the Soviet economy had to take, and stressed the need to support the preferential rise of state industry, in spite of its low efficiency. After that, the economic leadership of the country, until then divided, decided to lower the price of the chervonets relative to an index of goods by 20%, and to increase financing and crediting of large industry.[39]

On July 7, 1923, a law was passed that allowed to issue 'Soviet notes' (roubles) beyond the stated limits, so as to pay for bread procurements and to finance 'other credit operations'. [40]

It goes without saying that such a move favoured what was afterwards termed an 'unlimited issue' of roubles, and this in turn permitted continued financing of the nationalized industry and of a state-directed capital accumulation. In other words, the Soviet leaders took a decision that ran against 'economic rationality', but which favoured a political course of action. Fear of inflation was not the foremost preoccupation of the policy-makers, already keen on pursuing a strategy that would pave the way to unlimited financing of the state industry, no matter what were the sources of such financing. While in May the price in roubles of the new currency increased by 27%, the rise in wholesale prices was 45%, and the values for the month of June were, respectively, 31 and 54. [41] The inflation tax was obviously feeding the capital needs of the state industry, especially that of working capital.

On the whole, the performance of the economy in the first half of 1923 was rather satisfactory, the new currency started to gain diffusion and was accepted more readily as a means of payment. However, at that point a new fact occurred: the chervonets underwent a slow erosion in terms of purchasing power, albeit not commensurable with the rates of devaluation experienced by the Soviet money.

[39] Goland, Yu., (1991), p.59

[40] Yurovskii, L.N., (1928), p.265

[41] Goland, Yu., (1991), p.60

The following table gives an idea of the loss of value of the new currency over time, as measured against the retail price index of the Institut Kon'iunktury:

DATE	PURCHASING POWER OF CHERVONTSY
January 1, 1923	8r. 94k.
April 1	7r. 81k.
July 1	6r. 44k.
October 1	6r. 15k.
January 1, 1924	5r. 57k.
March 1	5r. 41k.

Source: Yurovskii, L.N., (1928), p.231

The depreciation of the chervonets clearly means that, at least over that period of time, it did not act as a store of value, and it reflects a change in the rate of substitution with the Soviet rouble.

On the other hand, it appears difficult to subscribe to the view, advanced at the time by some Soviet economists, that the reduction in the purchasing power of the new currency was somehow linked to the depreciation of gold on international markets (in 1923 the world price of gold lost around 35% of its value). The latter phenomenon simply facilitated intervention on the part of the monetary authorities, which carried it out mostly with gold coin.

The double note circulation ended with a decree on February 1924 that ordered the issue of a new paper currency, state Treasury notes in the denomination of 1, 3 and 5 gold roubles, which were granted the right of legal tender. A separate decree a month later ordered redemption of the sovznak. The rate of redemption was fixed at 50,000 roubles of the r. of the 1923 denomination, or 50,000,000 of the note of the pre1921 denomination.

With that the double-currency reform came formally to an end: even if the 'Soviet note', the rouble, was still circulating, since there was a fixed rate of exchange with new Treasury notes it actually could not be distinguished from the 'strong' new currency.

From July 1, 1924, the emission of paper money to cover the deficit of the state budget was ordered to cease, and with that one of the objectives of the chervonets reform was achieved, with a delay of 6 months on the date that had been promised.

CONCLUSION AND COMMENT

As we saw, in the case of the chervonets in the Soviet Union of the early twenties the double currency circulation was characterized by the fact that, at least over definite periods of time, the two moneys were not perfect substitutes: serving different purposes, they had different velocities of circulation, and the rate of exchange between them was set also by paying habits and by different 'needs of trade'. Besides, the agents in the two markets were facing different liquidity constraints, since state firms and dealings with the governments tended to get favorite treatment.

Currency substitution was therefore limited in scope, time and space, given the imperfect permeability of the two money markets. That, all things considered, tended to favour inflation, as indeed it did all through the existence of the double circulation, in spite of the relative stability of the 'good' money, the chervonets.

As previously stated, the goal pursued with the introduction of a parallel currency was a dual one: a) to reduce money emission as the main source of financing for the state budget, and (b) to reduce the amount of the deficit itself.

The first target was reached to a limited extent, the second was not. From the very beginning, we surmise, combating hyperinflation was not the primary objective of the country leadership, at least as it appears from the writings of the proponents of the reform: they were convinced that there was no direct relationship between the rate of currency issue and the rate of inflation, and the data partly support such a view.

So, was the policy measure a total failure?

As we know, with a double money standard and currency substitution overall inflation increases if the two currencies in circulation are good or perfect substitutes of each other, i.e. if the two moneys are both media of exchange and neither one performs the function of store of value. If that is the case, the introduction of a 'stable' currency accelerates inflation of the other, which is depreciating, and increases the need for money emission, thus producing an increase in state revenues.

In the Soviet case the coexistence of two currencies, exchangeable at a flexible exchange rate, was characterized by two facts: 1. the two moneys served different payment flows, and 2. over some periods of time one of them, the chervonets, fulfilled a store of value function. Thus, the two currencies were not always perfect substitutes, they were so only part of the

time, and this explains the fact that the all through the enforcement of the double monetary standard, with the exception of a few months, the country was plagued by hyperinflation.

Since most of the time the two moneys were not perfect substitutes, the chervonets operated as an addition to the total amount of money in circulation. Accordingly, in the end the introduction of a secondary currency resulted in an increase in money issue and in total real cash holdings - the latter outcome in line with the expectations of the Soviet economists -, while inflation was far from being stabilized. (A consistent reduction in inflation occurred only in the second quarter of 1924.)

We believe, however, that all in all the policy measure can be seen at least as a partial success from a different point of view, which amounts to the following: the double monetary standard was introduced at a time when the state of devastation of the economy had caused a very serious depletion of all types of capital, and the need for financial as well as physical capital was badly felt. As the Soviet leaders acknowledged, the quality and quantity of payment flows was in this context of paramount importance: the scant and partial monetization of the economy made for very limited amounts of revenues accruing to the state budget in the form of taxation, while outlays were constantly increasing because of the will of the leadership to keep control on capital accumulation, and also because of the rising needs of the population. Projects to boost the recently nationalized industry required increasing amounts of capital expenditure, and the government had very few tools at its disposal: the powerful state credit system that operated throughout the subsequent era of forced industrialization had not yet been created.

In such a situation, even increasing 'monetization' of the economy, through an expanded role of markets, and granting money its function as unit of account were no minor achievements.

Significantly, such a conclusion is reached by Yurovskii himself, when he lists the merits of the parallel money circulation: 'In the first place, it gave the economy a rather stable currency, without which the upturn that indeed took place during 1923 would have been unthinkable.'[42] Besides, 'it provided the possibility to raise the quantity of money in the

[42] Yurovskii, L.N., (1928), p.253

nation, because the market "accepted" a much larger sum of stable money than it would have accepted of the depreciating Soviet currency.' [43]

This, in its turn, allowed the state to grant more credit to the socialized sector of the economy, which in the minds of many Soviet leaders was becoming of utmost importance for the design of any kind of economic policy. All in all, one can thus say that the double-currency reform had a budgetary, more than a strictly monetary meaning, and that in this sense also it can be regarded as a success.

Later on, the task of reconstructing the economy in a way that assumed a strong direction of the state became the most compelling and all-encompassing policy objective. With the over-ambitious plans of the industrialization drive, monetary policy as such ceased to exist, and the ways chosen to finance the growth path of the Soviet economy became more and more devoid of any sense of economic equilibrium.

[43] ibidem

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MONETARY VELOCITY IN A SYSTEMIC PERSPECTIVE
(From Macroeconomics to Currency-Thinking)

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Abstract: *The concept of a velocity of money also called velocity of circulation of money is a part of the Quantity Theory of Money. One intention has been to connect price based equilibrium theories (where money is de facto cancelled out) back to money. The idea was a variable velocity, which describes how fast the existing money (thought in pieces of gold or in bills) would circulate. To question it allows an insight into the paradigmatic base in economic thinking and leads to a different approach of the flow of money, which might help to better shape the task of money in todays economy.*

The author tries to reconsider the "velocity-idea" by looking very carefully on the real money-flow-phenomena in a simple small-scale complementary currency. By changing from a market-centred-view to a money-centred-view it is the aim to focus on the construction of currency. The reciprocal quality of currency and the time bound qualities of payment are described and the money supply is defined. By a timeslice method the dynamic money-flow phenomena can be visualized. The results are then merged into the velocity-equation and discussed again.

This systemic approach allows a more accurate view on monetary flow phenomena of closed systems. Such a systemic approach could be elaborated and might open some new perspectives for the understanding or simulation of monetary-economies.

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1. Introduction

In our times we became used to the fact that one special type of currency[45], which I would call the *state based private bank money* or in short *the existing money-system (tems)*, has succeeded in becoming the absolutely dominant or *monopoly money*. Weather it is called Dollar, Pound, Yen Swiss Franc or Lev it is briefly of the same construction. The Euro might be slightly different because it is supranational, but the differences are very small and moreover seem not to be in its favour as a stable and wealth-preserving instrument. So most of the time we talk about money, we think in fact only of one type of currency, the actual monopoly money and the features it has. We rarely are aware that we do not reflect on its construction. In fact *tems* is a bundled type consisting of at least three components: Coins or minted money, bills and book money. Other distinctions are possible and have been already suggested by economists[46]. Most of them try to describe existing topics of money or currencies, but rarely do economists care about the *construction of currency* respectively *the design criteria of a currency* and maybe some would protest on an approach like this, which tries to highlight some crucial features of construction. Rather do most existing theories about money take the technical details of currencies as a somehow intangible or historically developed prerequisite and start with questions about the market. Then money appears in this market as a medium of exchange, a store of value and a unit of account. In this sense money becomes a very fascinating phenomena popping out of history. This mystery has inspired hundreds of highly valuable scientists to write about it, but until today it often remained a veal, something neutral or even inconsiderable in economics.

Another main reason for that inexplicability might be the giant dimensions of the money-system. Many millions of users and therefore many billions of transactions every year had to be registered in society already at the beginning of economic science in the 18th century. From this sheer quantity and without the initial possibility of highly developed computing like today, reductionist methods had to be developed to get at least get a glimpse of all what was happening in money system. Further reasons of ignoring the currency design might be the trade or market centred view of most economists and the strong metallism or believe in money as a commodity in the past which continues misleading not only scientists but especially politicians until today.

Nowadays the already highly developed money system became even bigger and more complicated and so the initial assumptions never had been reviewed successfully since. By reconsidering the above points the author tries to find out more about moneys background. Therefore the research was based on the following premises:

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[45] The terms *money* and *currency* were used sometimes quasi synonymously in this article. As far as possible or helpful the following distinction was made: The indication *money* was used as a more general or abstract description of the phenomenon. The term *currency* was used as a more specific technical or systemic description of practical forms of money.

[46] A compound-idea of the money system was suggested by Walter Eucken. He differed money as tangible goods (becoming coins later), delivery of goods (obligations) and credits by trusted authorities (banks, state) and saw todays money as a clipped compound, see Eucken, 1941, p.142-147

1. Reduce the size and complexity of the money-system to regain a better overview
2. Leave the market centred view and focus on currency-construction
3. Take a strictly nominal view of money

It happened that this had not to be a reductionist and abstract theoretical method but became already reality by the introduction of alternative money, also called complementary currency. By experiments made by practitians, many such currencies started as a greenfield development during the last decades without many preconceptions about money. In fact many of these experiments revealed some very interesting things about money exactly because they fill the above three points. To study such alternative currencies or to develop new models allows a much deeper insight in the basic ideas behind money. This was a starting point of the authors research about small monetary systems during the last years.

In this paper the author tries to reconsider the "velocity-idea" of money by looking very carefully to the real money-flow-phenomena in a small model-complementary-currency. To be successful in this, some maybe unorthodox basic steps in defining the systemic circumstances had to be taken. By that the article provides a scratch of a different view on money. It has not the claim to be fully developed and many important voices in the monetary discussion are not yet referenced. So its approach has to be developed further but still might be an impulse on how monetary theory could be improved with the help of studying small-scale currency-systems.

2. The velocity-idea

One task in the general approach of past economic science was the idea of kind of finding natural laws and mathematizing it in elementary formulas and terms. The idea was presumably strongly influenced by the very successful natural sciences, particularly physics. At the end of the nineteenth century the concept of a velocity of money, also called velocity of circulation of money was reintroduced by scholars. The idea was a variable velocity which should describe how fast the existing money (thought in pieces of gold or in bills) would circulate and which should serve as an indicator for fluctuating prices.

2.1 Preparatory steps

To prepare the further remarks we take first a look at the physical definitions of the velocity. The simplest form of velocity in physics, the rapidity of motion is more precisely called speed:

$$v = \frac{s}{t}$$

v speed in meter per seconds

s distance travelled in meter

t time used in seconds

Speed is a scalar quantity that refers to "how fast an object is moving." Velocity in contrast is a vector quantity that refers to "the rate at and the direction in which an object changes its position."

$$\vec{v} = \frac{\Delta \vec{s}}{\Delta t}$$

v velocity in meter per seconds (vector)

Δs displacement in meter (vector)

Δt time used in seconds

If we even take it more serious and get one step further to the instantaneous velocity:

We can express the instantaneous velocity of an object or a particle, at any particular time *t*, as the derivative of the position with respect to time:

$$v = \lim_{\Delta t \to 0} \frac{\Delta x}{\Delta t} = \frac{dx}{dt}$$

This is true if $v = f(x)$ is a function which is differentiable at every point. Just to remember that many functions are not differentiable:

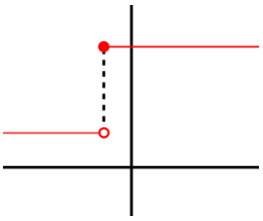

Figure 1: Jump Function[47]

The function in Figure 1,does not have a derivative at the marked point, as the function is not continuous there (it has a jump discontinuity). Later on we will reference differentiability in the case of moneys "velocity".

2.2 Quantity Theory of Money

Much of the first economists thinking was targeting markets, working and trade phenomena. Especially the price and value topics were carefully examined[48]. Money therefore was

[47] Graphics from Wikipedia, The Free Encyclopedia, https://en.wikipedia.org/w/index.php?title=Derivative&oldid=683407651 access at 09.10.15;22:00

considered as a neutral mirror of values. But out of that it was difficult to explain the purchasing power of money and effects like inflation, when an expansion of the volume of money influences prices. So there had to be found a connection between prices and money to connect price based equilibrium theories (where money is de facto cancelled out) back to money. The first ideas of a quantity theory of money (QTM) were already discussed by Davanzati,(1588) and later Locke, Hume and Cantillon. All their findings were developed further in the 20th century by economists like Schumpeter and others and became todays "canonical form"[49] by Irving Fisher 1911[50]:

$$MV_T = PT$$

It is also called Fisher identity, because Fisher already mentioned that the equation might better be seen as an identity[51]

M total nominal account of money in circulation (money supply) in currency units

V_T velocity of money for all transaction in a given timeframe

P the price level

T the volume of transactions of goods and services

The velocity then comes out by transforming the equation as follows:

$$V_T = \frac{PT}{M}$$

The equation looks very simple but integrates some quite fancy considerations:

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[48] e.G. by Adam Smith, 2007, p.26: *In order to investigate the principles which regulate the exchangeable value of commodities, I shall endeavour to show, First, what is the real measure of this exchangeable value; or, wherein consists the real price of all commodities, Secondly, what are the different parts of which this real price is com- posed or made up*.

[49] see Paul, Axel T., 2012, p.114

[50] Fisher, Irving, 1912, p.24

[51] John Munro, Prof. at the Department of Economics, University of Toronto remarks: **This is more of an identity () or tautology than it is a causal equation**: it simply states that total spending, in terms of the money stock multiplied by the rate of its turnover or circulation, necessarily equals total spending in terms of the total volume of monetary transactions multiplied by the current price index. The two values on each side of the sign are necessarily identical https://www.economics.utoronto.ca/wwwfiles/archives/munro5/QUANTHR2.htm

The price level P for example is an enormously abstract value which had to be filtered out of the total amount of all transactions by dividing by something like an artificial “number of pieces sold” (T) which might become especially difficult when mixed product prices, service hours or packet-prices, etc. So it was obviously necessary to take the whole turnaround or the total nominal amount of transactions in currency units per period instead, e.g. the BIP of the country. This transforms the equation into:

Velocity of Circulation = Total Spending in a given timeframe (S_T) divided by Amount of Money in circulation (M)

$$V_T = \frac{S_T}{M}$$

This seems a meaningful equation but it has already lost its link to prices and therefore to values of goods and services. Instead we see S_T the aggregated transactions in money-units per time.

So the velocity V_T becomes a measure for the *intensity of the use of money* or *use rate of money* instead, but remain a kind of fuzzy and indirect parameter because “the use of money” itself is not really defined but points back to the price and purchasing problem without really solving something.

So we arrive at a point where many other economists already had been and reflected on the inherent problems of the concepts of the quantity theory of money and the velocity of money. Here we will not go back further into the long history of the discussion but prepare for a different approach which will allow us to question the money supply and the velocity of this equation.

2.3 Taking a currency-centred view

As already mentioned: Usually economists take a market- or price-centred view to describe the economy and money and its role therein. The equilibrium theory e.g. tries to give an understanding of the whole economy using a "bottom-up" approach, starting with individual markets and agents.

If we like to understand the functioning of money these approaches are not very useful because it always brings in the topic of value by the price. At that point money has to be preconsidered to realize this prize, otherwise it would not be a real price. By realizing the price, money and value unite in a short moment. As interesting this might be, it is distracting from the construction of money behind. Value is a strongly fluctuating thing, tightly bound to human needs, thoughts or guesses. To avoid this difficult area a money-centred (or better

currency-centred) view is proposed here. In fact, this is nothing new and since Adam Smith such a distinction was proposed as he remarked:

When, by any particular sum of money, we mean not only to express the amount of the metal pieces of which it is composed, but to include in its signification some obscure reference to the goods which can be had in exchange for them, the wealth or revenue which it in this case denotes is equal only to one of the two values which are thus intimated somewhat ambiguously by the same word, and to the latter more properly than to the former, to money's worth more properly than to the money.[52]

If we take Smith's words seriously and distinguish money (counting side) from money's value or purchasing power (value side), the following model is suggested:

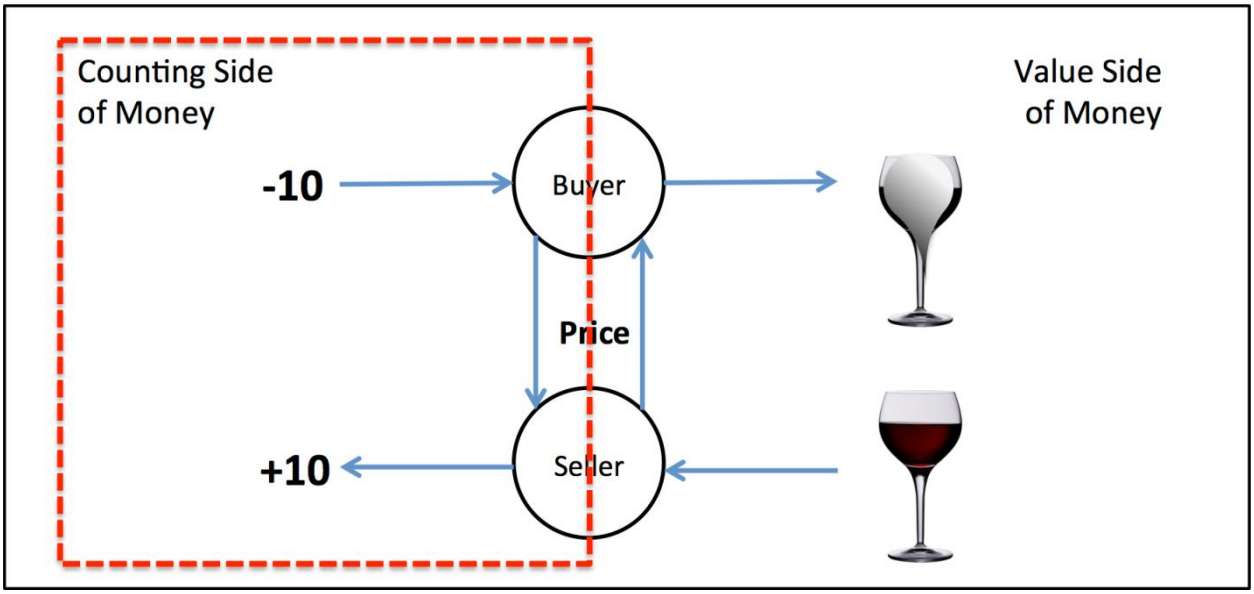

Figure 2: Counting side of money as separate system to be handled

A look to the value side is not the aim of this article. Instead we will investigate on the counting side, the "mechanical part" of money, which seems to be very simple at first sight, but is maybe not. This side seems to be only rigid and boring accounting but strangely enough it is not well recognized to be an optimal starting area to study money and its basic principles. The "independence" of this system is not yet further discussed, but is usually taken for granted by all accountants. How the two sides exactly are connected and which interconnecting operations exist, must be the topic of further research.

There has been such an approach of The Stock-Flow consistent model (SFC) of Copeland/Tobin that is very interesting and the idea discussed here comes close to it. The

[52] Smith, Adam, 2007, p.224

main difference is that SFC remains in the approach to explain the whole economy (value side) and use the counting side only as image of *tems*, without first question or discuss the rules of the currency used.

3. A Systemic approach

The advantage of a complementary currency concept is to be able to demonstrate the really systemic side of a currency because it can be defined from the bottom and it is very small compared to the real economies *tems*. By focusing on the construction of the system and by being aware that it might be better first to understand and adapt the characteristics of the system, we have a reversed view on economics: Currency therefore is seen as an operating system of economy. It has to be designed optimally to serve the economic processes and therefore should be stable, bug-free and tested as to use a analogy from the IT-world.

3.1 Currency as a closed system

If we could demonstrate that a specific complementary currency scheme could be seen as a closed system, the determination of such a thing as "velocity" must be much easier to do.

Centralized models make it easier to state the unity or closeness of a currency-model but in fact it would be a interesting question if a non closed currency ever was intended and what it would look like.

To make it easy we start with a simple LETS[53]-model. LETS is usually a pure book money. There is a central instance ("bank") which is doing the bookkeeping but has not to be involved any further. The basic rules are:

- Every participant has exactly one account
- At the beginning everybody is starting at zero, with the possibility to overdraw to a certain credit-limit.
- In the most basic version, the credit-limit shall be the same for each account
- Every payment has to be registered or booked to become valid
- The sum of all accounts is always zero
- At the beginning there are no taxes or fees for payments

Such a system is closed. If a first payment comes, the sum is drawn from the buyers account and added to the sellers account. The buyer now is as much in the negative as the seller in the positive.

In a 12 participants economy based on a LETS scheme such a payment of 100 units from A (buyer) to G (seller) looks like the following:

[53] LETS: Local Exchange Trading System, developed by Michael Linton 1983 in Canada, see Wikipedia https://en.wikipedia.org/wiki/Local_exchange_trading_system, 05.10.15

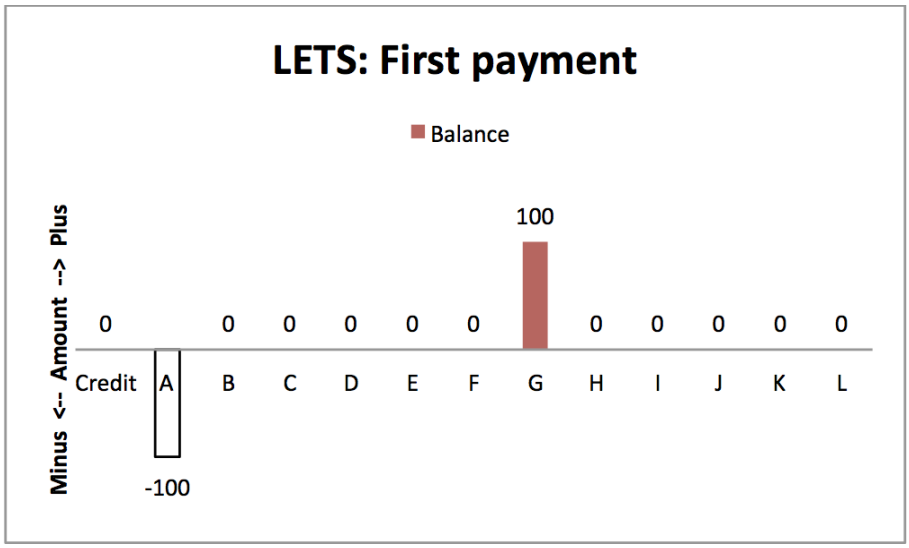

Figure 3: First payment in a 12 members LETS system

The simple accounting presented is really meant to be technically as in information technology (IT) the handling of bits and bytes. This is not fully in accordance with usual accounting structures[54] because it does not (yet) consider the value side of currency.

3.2 Reciprocal quality of currency

The "money" in above system appears as a symmetrical, reciprocal operation and in fact this is one basic feature of a currency, but is seldom recognized. It is true for every type of currency or money for the moment of a payment but also further like in debts and wealth. Here we confine ourselves to the payments only:

- One side has to give the money, meaning it is subtracted from its wallet, account, wealth or maybe future (in case of a cheque or bill)
- The other side has to receive the money, meaning is added to its wallet, account, wealth or store

3.3 Time bound quality of payments

Another very important feature of money as a payment is time. The transfer of the payment from one to the other account in the LETS example will be quasi-simultaneous, only restricted by the computing velocity of the used PC. Subtraction at one account and addition at the other account are therefore assumed as instant (quasi timeless)[55] validation. The second important notion is: the time *when* this operation is done is crucial and has to be identified.

The immediate transfer is the ideal and systemically optimal version. In such a case of a closed system the total money supply is stable and remains constant. As soon as there would be time-gaps between payment and receive of payment (or vice versa in case of some types of

[54] see Hughton Budd, Christopher, 2015, p.6

[55] This was also set as a definition of cash flow by Stuetzel, see „Gleichzeitigkeit von Buchung und Gegenbuchung", Stuetzel, W., 1978, p.57f.

credits), this would change the system and it would have to be examined if it could be still taken as a closed system.

To conclude it as a system principle:

Currency in a closed system appears in a strictly reciprocal operation between two parties when at a given time a certain number of units is subtracted at one side and added to the other side.

3.4 Currency supply (Money Supply)

Now we have a look at the currency supply of such a LETS-system where we have accounts with overdraw facility down to a specified credit limit. The maximum potential (i.e. money supply) of such a LETS model-system could be calculated easily by:

$$M_{\max} = \sum_{i=1}^{n} (A_B + C_L)_i$$

M_{max}: maximum possible money supply (units)

A_B: Account Balance (units)

C_L: Credit-Limit (units)

$A_B + C_L$ could also be seen as the *capacity* of the certain account

In our 12 member-system with a given credit limit of 100 units for all accounts, the calculation for the initial situation (all accounts starting at zero) would be as follows:

$$M_{\max} = \sum_{i=1}^{12} (0 + 100)_i = 1'200 units$$

This maximum money supply equals the maximum potential of the system for money transfer at a given time. This means the potential of transfer of the maximum sum of units (payment) per account, i.e. every owner of an account would spend the maximum amount he is allowed at the same time. If executed it might look like this:

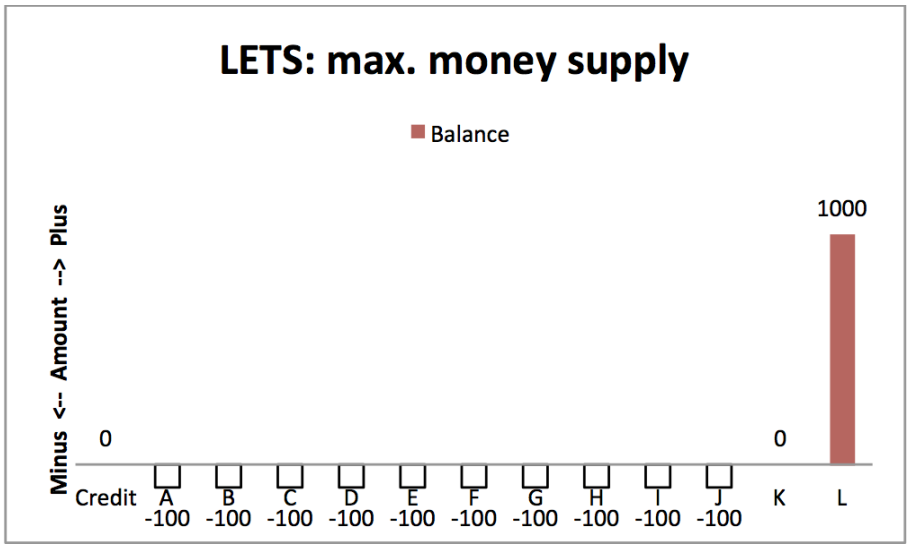

Figure 4: Example of maximum money supply executed in a 12 members LETS system

The maximum money supply could also be seen as *the maximum imbalance* of the system.

As we already defined payment as an operation which simultaneously and reciprocally subtracts a certain number of units from one account (buyer) and adds it to another account (seller), the operation *payment* could be formalized as follows:

$$p_i : (a_i : k_m \text{ Þ } k_n)_{T_x}$$

p_i: defined payment (operation-identifier)

a_i: amount of transfer (number of units)

k_i: accounts between which the reciprocal operation is done

=>: Direction of transfer (buyer=>seller)

T_x: Time of execution of the payment

In the example shown in Figure 4, the array of operations for the execution at the given time T_x looks like the following:

p_i	a_i	k_m	k_n
1	100	A	L
2	100	B	L
3	100	C	L
4	100	D	L
5	100	E	L
6	100	F	L
7	100	G	L
8	100	H	L
9	100	I	L
10	100	J	L
11	100	K	L
12	100	L	K

Table 1: Example of maximum payments at a time in a 12 members LETS system

This was a look at the situation in a closed money-system at a certain time. At such a time it is possible to calculate a maximum money supply. It is not yet possible to talk about velocity, because this needs an on-going time. But it is possible to see that the real amount of units used to pay at any time has to be lower than the maximum money supply at the same time:

$$(A)_{T_x} = \sum_{i=1}^{n} (a_i)_{T_x} \leq (M_{\max})_{T_x}$$

4. Dynamic money-flow phenomena

To talk about money-flow and maybe get our velocity out somewhere, we have to enhance the simple model. Until now we did not really consider that the payments take place at different times. Let's first take a simple version, when the payments are made one after another.

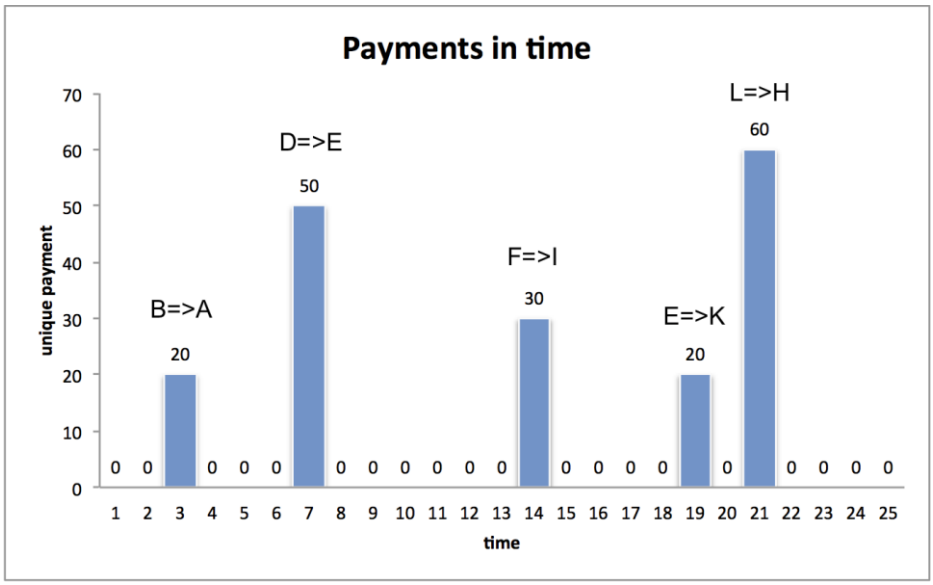

Figure 5: Example of 5 Payments in time in a 12 members LETS system

Obviously each payment is done at a certain time and needs a certain slice of time[56]. If two were at the same time, additional rules had to be set how the paying would be processed[57].

An important point is, that the validation of the payment shall be separated from the execution. The validation means the point where the buyer looses its ownership of the amount and the seller gains his. The method that is inherently present and is mostly used to guarantee the uniqueness of an amount of (especially electronic) money is basically the time-step or slice of time method. Usually we are used to a sequential, one after another payment like at the supermarkets cashier, but as more complex distributed systems like the clearing of banks or especially high frequency trade systems show, it needs a clocking to be able to determine valid bookings.

To demonstrate this, the payments of Figure 5 are taken first into a 5'clocks slice of time grid. The second additional feature is to show the accounts and their real changes. Every payment needs an oppositional operation on the two involved accounts. The plus at the sellers and the minus at the buyers, of the same amount of course.

[56] *Precision regarding time: A model of short-run determination of macro-economic activity necessarily refers to a slice of time. It is one step of a dynamic sequence, not a repetitive equilibrium into which the economy settles.* Tobin, J., 1981, p.13

[57] Take a situation where at the same time A has 100 credit and shall pay 150 to B and B has also 100 credit and shall pay 50 to A. Sequentially processed it would only work if first B pays, then A. Done by a *clearing* process only one booking oft he difference is made. So it is dependent on the rules (configuration) of the system, what will happen.

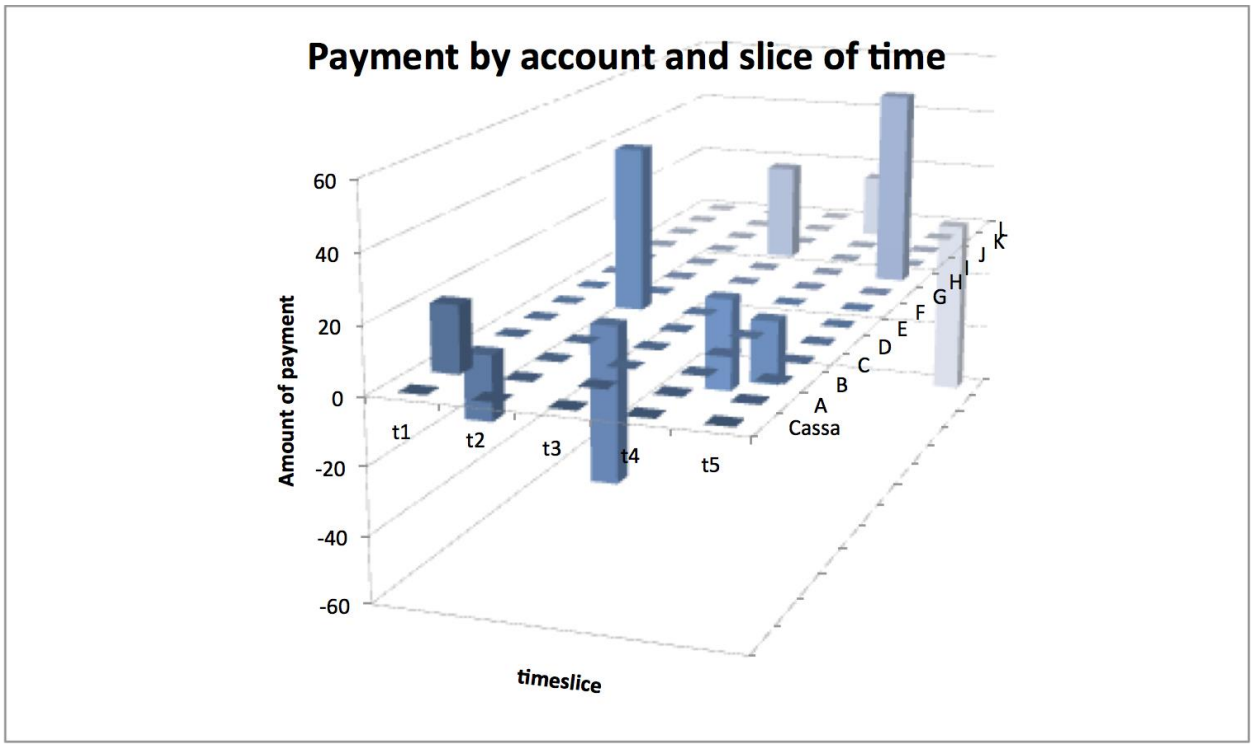

Figure 6: Payment by account and slice of time in a 12 members LETS system

Now we have a real picture of "the money-flow" and see that is not a flow at all but a sequence of impulse-like happenings in a matrix[58].

In the picture with the full balance of the accounts for each slice of time it is much more difficult to see the same changements even if all balances start at zero.

[58] The blockchain technology uses such an approach to register all payments.

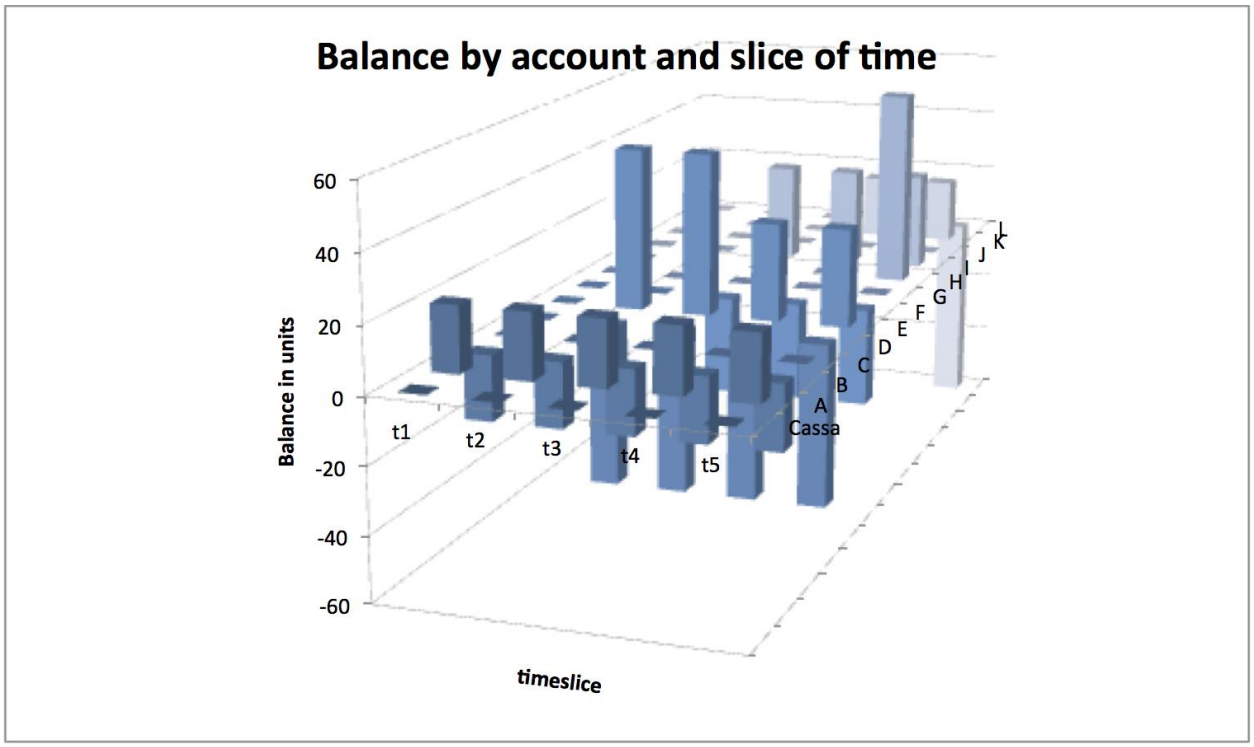

Figure 7: Balance by account and slice of time in a 12 members LETS system

As we can clearly see in Figure 6 the payments occur as time bound "jumping" events. One certain payment is limited by the boundaries of the "buyers"-account. All payments of the same slice of time are limited by the "maximum money supply" of the same slice of time. If we would like to calculate the "monetary velocity" the same way it is done in QTM but respecting the slice of time, then we would have:

$$V_T = \frac{S_T}{M} = \sum_{T_x=1}^{T} \frac{(A)_{T_x}}{(M_{\max})_{T_x}}$$

5. Discussion

What about the "monetary velocity" after these steps? Isn't it still the same? The result might look the same at the end but two mayor differences were pointed out:

1. We demonstrated that we not have a continuous mathematical function of the payments that would be differentiable at every point, but we have a disruptive function which is not differentiable at any point.
2. We demonstrated that payments are timebound and could only be processed in certain time steps.
3. We demonstrated that payments are dependent on the buyers actual account balance.

It could be shown that the velocity does not resemble really to physical velocity and the variable V_T should better be called *intensity of use* or *use rate of money*.

Additionally we defined the maximum money supply as the potential of how much spending would be possible at a certain time. This comes close to the definition of M1 of the most central/national banks[59] but is much more basic and seems to be more accurate in its logic. This is true if not only our example complementary currency but also todays *tems*-money would be a closed system. Further it could be shown that there must be a connection between actual liquidity of money and the payments to calculate a meaningful "monetary velocity". That indicates that the use of M2 or even M3 is, against common use[60], not very advisable.

Questions which arise now:

- Are these findings really applicable to our existing money-system (*tems*)
- Is the *tems* a closed system and if not, how does this come together with the rules of bookkeeping and basic mathematics?
- The main focus of the treatise was on payments, but what about savings?
- What about the interaction to the effectively traded goods and services connected with the payments?

Final remarks:

- By a systemic view of a closed currency system the "velocity of money" could be examined much deeper and a more accurate view on monetary flow phenomena appears on a micro level.
- Such a systemic approach could be further elaborated and might open some new perspectives for the understanding or simulation of monetary-economies.

[59] e.g. Swiss National Bank; M1: *Defined as currency in circulation (bank notes/coins), sight deposits at banks, postal accounts and transaction accounts of non-banks*, from http://snbchf.com/monetary-fiscal-policy/snb-definitions-of-money-supply/ at 12.10.2015,15:30

[60] comp. De La Rosa, J.L., Stodder, J., 2015, p.116

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A PROPOSAL FOR HARMONISING CURRENT DISPARATE (SCIENTIFIC AND LEGAL) DEFINITIONS OF MONEY TOWARDS GREATER DECIDABILITY IN THE PROVISION OF JUSTICE ACCORDING TO UNIVERSAL PRINCIPLES OF CONTRACT LAW

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Abstract: *Historically, the notion of 'money' has been inherited in what appears to be an ad hoc adoption of a conflation of mostly rhetorical metaphors arriving to the current definition published by most Central Banks where money is said to be all of a "store of value, medium of exchange and a unit of account" without any particular specialisation or qualification of the terms "store", "medium" and "unit of account" nor any formal technical rationale supporting such a contention. Similarly in law, there is no explicit unequivocal logical universal definition of money.*

Moreover, on the basis of formal mathematical analyses, relatively recent academic literature shows that even at expert levels, not only is no rationale been offered to support the current published definition but no consensus on the true nature and function of money or the "how of money", has been arrived at. However, without formally redefining money itself, recent academic and industry peer reviewed research, forwards mathematical analyses and proofs that demonstrate that the current definition of money is empty of meaning. Yet the same analyses, prove that money's technological function is that of a rudimentary mnemonic or social memory, that adds no value nor in any way facilitates the transfer of resources in ways that cannot otherwise be achieved without money.

In this paper, we show that unlike other fields of cultural import and significance, little if any evolution in the conceptual framework underlying money has taken place in history. Nor has any theorem been enunciated, illustrating exactly how money actually performs the functions attributed to it. Only descriptions are offered, as if speculating over an unknown phenomenon. This in spite of Aristotle's affirmation that"...it (money) exists not by nature but by law (nomos) and it is in our power to change it...", that undoubtedly is true to this day.

Confirming that money is essentially a mnemonic and constitutes a peculiar rudimentary information system, we realise an exhaustive formal semantic analysis for decidability of both, the literal current definition as well as the de facto definition everyday users can be reasonably expected to assume and related ontology. Further to the semantic analysis we propose a set of formal requirements for system stability as defined in dynamic systems theory applied to money systems.

Next, we inform current legal practices about the immediate consequences of not elucidating the true formal semantics of a common definition of money and the resultant scope of decidability, particularly the threat to general principles of contract law as well as fundamental rights and freedoms.

Finally, we propose the harmonisation between technical/scientific and legal semantics with the aim of establishing an unequivocal standard definition of money comprehensible to most in the fairest and most equitable application of general principles of international law.

Brief Review of the History of Money's Definition:

The purpose of this section is to illustrate how definitions of money have been founded on the quest to measure a generic "value" in a standard and universal fashion and how those attempts share a common ontological flaw that has persisted to this day.

Essentially and over millennia, the same notion of money's technological function has persisted as if on faith, without at any point in time having rationally or scientifically determined it according to any clear logical proposal, as for example is commonly the case with information technology solutions developed today. This may be understandable for early history, however one would expect as with the history of science, to be able to map a concrete progression in reasoning and proofs as for example was the case with the motion of bodies from Aristotle to Newton, each interim step illuminating the path to the next, such as Galileo's observation of the uniform motion of gravity put to rest Aristotle's view based on the "nature of objects" and thus lead to Newton's formulation which has remained useful to this day.

Throughout most recorded history, notions of money have all revolved around a single intuitive association of countable units in the form of coins and sometimes also in terms of quantities of standard commodities.

In Ancient Babylon, "money" (shekel) was a measure of quantities of barley and silver. According to "The Code of Hammurabi"[1] "payment" was to be made according to both "money" and "grain"/"corn" depending on the type of transaction. In this light, it would seem that the underlying link to a generic notion of value was to both food staples ("grain"/"corn") and "money" (coins). As the vast majority were not literate, and therefore were unable to either maintain or produce written records, the use of coins also most certainly served as a rudimentary counting device for a minimal notion of record keeping.

In ancient Greece, money also took the form of measures of silver and gold minted into coins by city states but without the parallel formal reference to any other measure or staple production. With regards to money, Aristotle wrote:

"There must, then, be a unit, and that fixed by agreement (for which reason it is called money); for it is this that makes all things commensurate, since all things are measured by money. Let A be a house, B ten minae, C a bed. A is half of B, if the house is worth five minae or equal to them; the bed, C, is a tenth of B; it is plain, then, how many beds are equal to a house, viz. five. That exchange took place thus before there was money is plain; for it makes no difference whether it is five beds that exchange for a house, or the money value of five beds." [2]

Here and absent the use of less exclusive staple commodities as a parallel reference of value as was the case in Babylon, the proposition was to represent ***"the value of all things"*** in terms of coins of a standard measure of value and as a rudimentary accounting mechanism. Similarly, in the Indo-Greek Kingdom, China and later in Rome, coins were used as a common reference of generic value.

At the time of Adam Smith's Wealth of Nations (1776), the nature of money was not re-defined and it is to be assumed that historic notions were simply intuitively subsumed. It is worth noting that, Adam Smith [3], refers to labour as the underlying value of all things that money ***"more or less"*** attempts to represent.

Thus and irrespective of the question of an exact definition or the format of money, the motivation is to achieve a fair representation (measure) of a common universal notion of value in the form of ***"human labour"***. Yet, still no formal mathematical or other logical proof of how money, without loss of generality and however manifested, can rationally represent that generic or universal value. All Smith provides is a speculation that silver appears to maintain a constant ratio with respect to other things and that all things in the market are due to an investment in labour the "original purchase-money".

Similarly with David Ricardo[4] the motivation is that of seeking a true measure of value in terms of the value of labour but extended and modified by the value of a community of the land owners, providers of stock or capital and labourers, all of which according to Adam Smith, reduce to the common denominator of labour. But again, Ricardo does not question how this universal value can have its proper and indeed equitable representation in the form of money.

William Stanley Jevons [5] defined money as all of four distinct functions a "store of value", a "medium of exchange", a "standard of value" and a "common measure of value".

This definition *minus* the mention of "standard of value" and modifying "measure of value" to "unit of account" is what has become today's *de facto* definition. But, once again, no formal or logical proof is provided as a rationale for exactly how money whether commodity based or fiat actually performs these functions, nor are any logical and temporal dependencies between the different objects and functions defined and no *sine-qua-non* proof of how money represents any universal notion of value without loss of generality is provided.

Similarly with Karl Marx, Keynes, Fisher, Samuelson and so on, with regards to both money as a commodity (gold and silver) or fiat money, apparently none establish any objective proof of how money is purported to be. In all cases, Money's definition as a universal representation of value is never formally proven but is determined by appeal to circumstance such as with Fisher's note [6].

"Any commodity to be called "money" must be generally acceptable in exchange, and any commodity generally acceptable in exchange should be called money."

This says nothing about how and on what basis money performs its functions, but simply affirms that it must be a commodity to do so.

According to Keynes [7], Money cannot be "produced by labour" but, if it could be manufactured depressions would be avoided. This is a powerful testament attesting to the notion that money does not represent the value of other things but rather is itself some sort of pseudo commodity vying for its own independent demand like any other commodity.

He later rather sarcastically writes:

"Unemployment develops, that is to say, because people want the moon;—men cannot be employed when the object of desire (i.e. money) is something which cannot be produced and the demand for which cannot be readily choked off. There is no remedy but to persuade the public that green cheese is practically the same thing and to have a green cheese factory (i.e. a central bank) under public control."

From all the above, it is evident that, throughout history, money has been intuitively defined and apparently *a posteriori* to its use. That is, there is no point where money's function has been rationally determined on the basis of any provable axioms and *a priori* to its use.

The singular recurrent claim, documented throughout history and to this very day, is that Money is somehow simultaneously both a unit of measure of some universal value common to all things, as well as a tradeable artefact of independent value. Yet, nowhere in history has this notion been proven to be rational irrespective of it having been adopted over and over again.

However, what history does show, without dispute, is that money in all its forms has been a medium not so much of value, but of information about value and a very imperfect one at that, as explained by Narayana Kocherlakota [8], in querying the technological role of money:

"My argument demonstrates the vacuity of the three standard explanations of the role of fiat money in an economy: money acts as a store of value, a medium of exchange, and a unit of account. From a technological point of view, we can see that none of these functions really require money. Money does not represent a new way for society to accumulate wealth. Money does not reduce the costs of transferring resources from one person to another.

There is no immediate technological reason that money should be a better numeraire than other goods. The traditional explanations for the presence of money in an economy are more descriptive of its functions than explanatory. The true explanation for money's presence is that money is a record-keeping device."

He then concludes:

"Monetary economics has traditionally been dominated by the question of how the quantity of money, or the growth rate of that quantity, affects prices and quantities of goods. My reasoning here suggests that this focus is misplaced. Money is a record-keeping device; hence, monetary policy should be designed so that record-keeping is performed in the most efficient way possible. How do we do that? Currently, we do not know. But searching for the answers should lead to a more satisfactory (and robust) understanding of optimal monetary policy."

So, at least in formal mathematical terms, Kocherlakota makes it clear that the only certain and persistent purpose and function is to record/measure consumption, i.e. it is information about value in so much as what is consumed can be considered "value".

How to Define Money? An exercise in First Order Logic and Decidability

"I reject the contention that an important theoretical difference exists between formal and natural language". Richard Montague [9]

Information science is concerned with organising and operating on data to provide useful i.e. meaningful information, which in turn requires the use of Formal Semantic analysis to unambiguously define a given domain of discourse. The most common type of Formal Semantics requires the mapping of terms to a concrete universe of individuals and mapping of propositions to the truth values "true" and "false". Some basic notions follow:

A **"class"** defines a set of individual objects or concepts ALL of which share ALL of a distinct set of one or more properties. Therefore, one class cannot be an **"individual"** of another because it itself is a collection of individuals; however, providing its individuals possess ALL the properties of the first class, it can be a **sub-class**. Thus, other classes that do not share ALL "**Parent Class"** properties cannot be sub-classes of that class.

"Properties" are distinct features or attributes that define both a class and its individuals, and therefore cannot themselves be individuals of the class. For example, you can say that a car has the property of "having wheel", but that fact doesn't imply that "wheel" is an individual of the class "car" i.e. an instance of "wheel" has none of the properties of the class "car". So, while "having wheel" is a property of "car", "wheel" cannot be classified as a type of "car".

The same basic notions must apply to the definition of "Money" and then at a deeper level, we must ask, what logically forces any conflation in the first place? If as Kocherlakota contends, money in reality is only a mnemonic device, do we need to conflate the notions of "store", "medium" and "unit of account"? Particularly considering that while money so defined, ***"does not reduce the costs of transferring resources"*** as Kocherlakota asserts, it certainly does increase them!

Dissection of the current definition of money as all of a "store of value", a "medium of exchange" and a "unit of account".

The first question is whether or not "money" is a class in its own right or a subclass of something else. From the definition it seems to be a subclass of three different classes, so right from the start, we have a serious ontological question that implies profound consequences on how money can be rationally interpreted and used.

If we say that money defines a class of its own, then we have the problem of what is called horizontal or "multiple inheritance", that is money would have to inherit properties from "store", "medium", "unit", "account" etc., without being either an individual nor a subclass of either of these. In this case, all the inherited properties would require specialising existing

property subclasses or introduce completely new property classes in the parent. It is for this reason that multiple inheritance has always proven problematic when not outright excluded.

The use of the key terms "store", "medium", "unit", "account" in defining money is intensional as opposed to extensional[61] i.e. it is connotative of money, not an enumerated list of examples of what has been used as money e.g. notes, metals, shells, grain... As such, we approach our analysis of the validity of the current definition, by defining the underlying terms, i.e. what are the minimum and sufficient properties of "store of value", "medium of exchange", "unit of account".

From Oxford Dictionaries [10]:

"**Store of Value**":

> **Store**$_1$: "A quantity or supply of something kept for use as needed."
>
> **Value**$_1$: "The regard that something is held to deserve; the importance, worth, or usefulness of something"
>
> **Value**$_3$: "The numerical amount denoted by an algebraic term; a magnitude, quantity, or number.
>
> **Quantity**$_1$: The amount or number of a material or abstract thing not usually estimated by spatial measurement.

Interpretations, money is either;

> **Case a.** A quantity of the regard of importance, worth or usefulness of something";
>
> **Case b.** A quantity of a quantity or number.

"Medium of Exchange":

> **Medium**$_1$: An agency or means of doing something:
>
> > **Agency**$_{3.1}$: A thing or person that acts to produce a particular result.
> > **Means**$_1$: An action or system by which a result is achieved; a method.
>
> **Exchange**$_1$: An act of giving one thing and receiving another (especially of the same kind) in return.

Interpretation: Money is: a means of exchanging things.

"**Unit of Account**":

> **Unit**$_1$: An individual thing or person regarded as single and complete but which can also form an individual component of a larger or more complex whole:
>
> **Unit**$_3$: A quantity chosen as a standard in terms of which other quantities may be expressed (measure).
>
> **Account**$_2$: A record or statement of financial expenditure and receipts relating to a particular period or purpose:

Interpretation (Unit of Account): Money is:

[61] In logic, "intension" not to be confused with "intensional" refers to the content of concepts as opposed to the extension which refers to the range of a term or concept as measured by the objects that it denotes or contains.

Case c. A standard quantity of a record or statement.

Case d. A single and complete component (unit) of a record or statement.

Therefore, the standard definition of money can be interpreted as either of:

A. Quantity of the regard of importance, worth or usefulness of something" (store of value $_{\textbf{Case a}}$), standard quantity of record or statement (unit of account $_{\textbf{Case c}}$) and a "means or method" of exchange of things" (medium).

Simplified: **A quantity of the regard of importance worth or usefulness of something, standard quantity of record or statement, a means of exchange of things.**

B. Quantity of the regard of importance, worth or usefulness of something" (store of value $_{\textbf{Case a}}$), single complete component of a record or statement, (unit of account $_{\textbf{Case d}}$) and a "means or method" of exchange of things" (medium).

*Simplified***: A quantity of the regard of importance, worth or usefulness of something, single component of a record or statement, a means of exchange of things.**

C. Quantity of a quantity (store of value $_{\textbf{case b}}$), standard quantity of record or statement (unit of account $_{\textbf{Case c}}$) and a "means or method" of exchange of things" (medium).

*Simplified***: A quantity of a quantity, standard quantity of record or statement, a means of exchange of things.**

D. Quantity of a quantity ("store of value "$_{\textbf{Case b}}$), single complete component of a record or statement, (unit of account $_{\textbf{Case d}}$) and a "means or method" of exchange of things" (medium).

*Simplified***: A quantity of a quantity, single component of a record or statement, a means of exchange of things.**

We can safely eliminate both C and D as "Quantity of a quantity" is redundant, which leaves us with only:

A. A quantity of the regard of importance, worth or usefulness of something, standard quantity of a record or statement, a means of exchange of things.

B. A quantity of the regard of importance, worth or usefulness of something, single component of a record or statement, a means of exchange of things.

The only difference being whether or not "**unit**" of "**unit of account**" refers to "**standard quantity"** or **"single component of a record or statement".**

But! In both cases "**store of value**" stipulates a "**quantity**" for which "**standard"** would serve to qualify "**quantity"**, given that in financial statements the key components of these are sums of "**standard**" units of one or other "currency" or "money" denomination, the qualification proves wholly consistent. While "**single component of a record or statement"** introduces ambiguity as to which of any of the components that make up a financial statement such as Account Number, Account Holder, Date, Debit and Credit Column...etc is to be

considered. Thus, this last case is inconclusive, for which it must be discarded. This then leaves us with only one viable option of the four possibilities:

A quantity of regard of importance, worth or usefulness of something, standard quantity of a record or statement, a means of exchange of things.

Simplifying further by replacing the equivalence "or" statements with statements containing only "**usefulness**" and "**record**" and taking "**standard quantity"** as a qualifier of "**quantity**" in the definition of "**store of value**", we get:

A standard quantity of the regard of usefulness of something, a standard quantity of a record, a means of exchange of things.

Note, in this case money is not a physical object, then a record is the only means of "**storing**" it, which implies that in this case, "**store**" and "**record**" are synonyms! So we can substitute "**store**" for "**record**":

A record of the regard of usefulness of something, a standard quantity of a record, a means of exchange of things.

Substituting "**the regard of usefulness of something"** with its label **"value"** we get:

A record of value, a standard quantity of a record, a means of exchange of things.

Now, a "**standard quantity**" by definition is "**a measure**" once again from oxford dictionaries we have:

Measure: A standard unit used to express the size, amount (quantity), or degree of something.

Therefore we can safely re-write the definition as:

A record of value, a measure, a means of exchange of things.

We have thus harmonised the notion "**store**" and "**unit of account**" ("**record**" of "**units**") synonymous with "**store**" by virtue of the fact that fiat money can only be "**stored**" as a "**record**". The only other possibility is that "**store**" is not a "**standard quantity**" of "**units**" of "**value**" in which case neither can "**unit of account"** be a "**standard quantity**" which introduces a contradiction in the definition.

The final question is money a "**means of exchange**"? For such a proposition to be true, money must perform actions and according to the definition, money is a mere "**record**" not an apparatus or system in and of itself as required by the definition of "**means**"! Therefore, it is inanimate and at most only a component of a "**means of exchange**" without constituting such

on its own. Thus, the only wholly consistent interpretation of the definition that can be derived is:

Money: A record of a measure of value.

That is, money is a record of a specialisation of the class "**Measure**" and therefore must inherit all the properties of its parent class.

Money, a record of a measure of value vs a commodity and Stability

If money is generated by transactions as a record (annotation) OF the value of goods/services being transacted as described by the Bank of England [11] [12], then that record cannot be assigned INDEPENDENT value in and of itself. This can be shown by an elementary proof illustrating that no matter the independent value of an annotation, that value cannot be considered if the purpose is to represent the value of other things:

Definitions

Let $A \geq 0$ (annotated value of goods/services transacted)
Let $B \geq 0$ (independent value attributed to the record of value i.e. "money")
Let $C = A+B$ (Total value of any record)

Proof

If $A > 0$ and $B > 0$, then $A+B \neq A$ and $C \neq A$.
If $B = A$ then $A+B = A$ if and only if $A = 0$ and $B = 0$.
Therefore for any A, $C = A$ if and only if $B = 0$!

End of Proof.

In colloquial terms, the value of any annotation C of the value of some object or thing A cannot have attributed any independent value B other than zero, because otherwise, the annotation C would no longer be of A but rather of A+B. That is to say that money cannot both represent the value of goods and services as well as having ascribed any independent value of its own.[26]

Unit Cost and Destabilization:

Another approach is to consider how any systematic unit cost or value attributed to money explicit or implicit (e.g. any direct or indirect cost per unit such as a lag between unit access and realisation of transactions) will necessarily destabilise the value of the unit of account as follows:

Let $\boldsymbol{a}$ be the initial value of any good or service $\boldsymbol{G}$ and $\boldsymbol{h}$ be the cost (in currency) of each currency unit used to represent $\boldsymbol{a}$, in subsequent $\boldsymbol{T_i}$ transfers of $\boldsymbol{G}$, then,

$$\boldsymbol{v}_i = a\,(1+\boldsymbol{h})^i,\ \boldsymbol{v}_{i-1} = a\,(1+\boldsymbol{h})^{i-1} \text{ and } \boldsymbol{v}_i > \boldsymbol{v}_{i-1} \text{ for any } \boldsymbol{h} > 0 \quad [26]$$

Therefore,

Since increase in value attributed to *G* requires the arbitrary summation of units independent or exogenous of the measure of value of *G*, then it can be affirmed that any such exogenous "interference" is the sole cause of instability of value measure in the system because in the absence of such interference, the system is stable [27][28]29] by default!

We know that in today's world and in all instances, money consists of mere annotations of multiples of monetary symbols (€, $, £, ¥, etc.) and ALL Euros are issued as such against either public debt or private patrimony as collateral, the latter traditionally representing the vast majority of money in "circulation". All such "money" is created through loan contracts and all bear some or other interest charges proportional to both the initial sums and time i.e., all subsume the notion of money as a commercial object of trade. However, as shown above, money is in reality nothing more than a record of the measure of value, this logically precludes that it itself be subject to any change in value in terms of itself. Similarly, money as a measure of value is not susceptible to any limit of supply, as being a measure of the value of goods and services transacted, it necessarily must be *a posteriori* to these and must arise as abundantly and readily as do any quantity of goods and services that are required to be transacted.

Therefore and as a measure, there can be no so called variable "Time Value of Money" as money must be the constant against which all other value is measured. So that:

Potential consumption cannot logically be limited by availability of units of value measure, but only by availability of goods and services themselves. Moreover, neither can money be the object of lending; at most it can only record the value of the goods and services that are themselves the only true objects of loans and payment and indeed of value in the system.

A legal Proposal for judicial correction of public and private money contracts as a matter of legal first impression.

It is odd to see, how in spite of our technological prowess and advances in information technology, money has escaped rigorous formal logical definition.

Thus, it is imperative that the issue of determining the true logical nature and definition of money be raised in the context of public and private contracts, for which we must ask the following questions, particularly with regards to the chronic failure of "Constitutional

Contract" i.e. Fundamental Rights and Freedoms[62] dictated by monetary criteria but in the absence of any unequivocal standard technical and legal definition of money:

a. Does the absence of a definition somehow limit the application of principles of law or provide otherwise unwarranted credence to "customary practices"?

b. Pursuant to the principle of validity "***quae ab initio non valent, ex post facto convalescere non possunt***" (What is invalid at the beginning cannot be made valid by subsequent acts) and in the case current assumptions as to what money is are proven invalid or mutually exclusive, are current contracts rendered impossible?

Thus, we cannot afford that logical inconsistencies become the basis of righteous rules of law, nor can we permit to wittingly or unwittingly become accomplices of a psychological conditioning that constitutes a veritable Psychological Operation as has been coined in "The Money PSYOP".[13] We believe that none of this is necessary and that an orderly resolution can be arrived at on the basis of weighing the tremendous advantages of resolving this issue outside of partisan dogma and beliefs in terms of immediate relief from the unfounded instability inherent in current common practices.

The only place that a definition of money is implied is in Portuguese and other European legislations[63] and upon defining loan agreements for transactions of "fungible objects" as indicated by Article 1142 of the Portuguese Civil Code that reads:

"Mútuo é o contrato pelo qual uma das partes empresta à outra dinheiro ou outra coisa fungível, ficando a segunda obrigada a restituir outro tanto do mesmo género e qualidade." (*Through mutual agreement whereby one of the parties gives the other money or some other fungible thing, obliges or requires that the second restore a quantity to the lender of the same species and quality.*)

However and under the current paradigm, money cannot be considered a fungible object due to the fact that its purported "exchange value" the only attribute that confers any notion of "quality" to money is, under current assumptions, a variable as opposed to a constant, as attested by the existence of inflation and sometimes deflation, that is well documented in absolute terms not just relative to foreign exchange.

In so far as general principles of international and national law require the drafting of contracts on the basis of valid premises, the lack of a clear, unequivocal and universal legal definition of money, clearly indicates that money as one of the key elements of the legal scope of such contracts, renders these contracts at best indeterminable and at worst legally impossible. In any case, they are contrary to the principles and values expressed in the most important treaties of international law and according to article 280.º of the Portuguese Civil

[62] For example the right to work and the right to job security provided in the articles 53 and 58 of the Portuguese Constitution. The first one says that it is guaranteed to the workers stability in their jobs and it is forbidden the unfair dismissal due to political or ideological reasons. The second expresses the idea that everybody has the right to have a job.

[63] Similarly and in a Comparative Law perspective, the definition of loan agreement versed in the article 1753.º of the Spanish Civil Code says the same thing.

Code and article 1272.º of the Spanish Civil Code, not to mention articles 2 to 10 of the Lisbon Treaty, should be rendered null and void.

Therefore all current public and private contracts should be object of judicial correction pursuant the general principle of validity in law "***Quae ab initio non valent, ex post facto convalescere non possunt"*** and the legal foundations to invoke such a principle, lie in recognising how the absence of a consistent definition of money demonstrably results in unfounded notions that as shown above result in an unstable money system that fuels greater and greater systematic overall inequality and social injustice.

The assumption of the existence of a practical definition of money on the part of society and in the eyes of the judiciary supports only a belief in the existence of a valid raison d´être of current public and private financial contracts not any demonstrable principle.

As long as this belief remains unchallenged by society, judges can legitimately act under the assumption that somewhere and somehow, there exists a definition of money that is indeed sound. However, should this assumption be questioned in light of the inconsistencies brought forward here, then the judiciary can no longer continue under the *prima facie* assumption of validity. The judiciary is thus required to provide for a resolution of all inconsistencies as on the one hand, it cannot permit either an irrational definition nor one that contravenes demonstrable natural law and on the other hand, it cannot accept to have its own credibility undermined by acquiescing to an ambiguous industry *de facto* definition.

According to article 281, paragraph n.º1 of the Portuguese Constitution, the Portuguese Constitutional Court has the competence to evaluate and declare, with binding force:

a. The unconstitutionality of any standards;

b. The illegality of any requirements of legislative acts on grounds of infringement of laws including foundational law. According to paragraph n.º 2 of the referred article, the European or Member State Ombudsman is required to represent causes of public interest to the Portuguese Constitutional Court, the European Court of Justice or the European Court of Human Rights. Thus the Ombudsman can with binding force, challenge the legality and constitutionality of article 101 "Financial System" of the Portuguese Constitution and Articles 119 to 132 of the Lisbon Treaty[64] "Monetary and Economic Policy" can be challenged in their current form by raising the issue of the absence of an unequivocal legal definition of Money, in light of the demonstrable inability to guarantee full application of Constitutional and fundamental Rights and general principles of law in a question of legal first impression[65].

[64] We would like to emphasize the content of Article 126 of the Lisbon Treaty, which clearly takes the inevitability of budget deficits, affirming that the "Member States shall avoid excessive government deficits".

[65] A case in which a question of interpretation of law is presented which has never arisen before in any reported case. Sometimes, it is only of first impression in the particular state or jurisdiction, so decisions from other states or the federal courts may be examined as a guideline. http://dictionary.law.com/Default.aspx?selected=149

Portuguese author Nuno Manuel Pinto de Oliveira *et. al.* contends that the problem of admissibility or inadmissibility of contracts, arises when the content of contracts confuses, or at least confronts the principles that prevent the application of unfair laws. The control of the imbalance and unfairness of money contracts directly corresponds to the lack of application of particular rules of law via the non application of general rules of law as stipulated by article 406 of the Portuguese Civil Code.

The criteria for resolving the eternal problem of unfair application of the law is the so called Radbruch Formula: "*Whenever the application of positive law, results in such a high degree of injustice as to put into question its legality, then there can be no doubt that the unfairness of the positive law must yield to a higher justice*." [14] Nuno Pinto de Oliveira says that the non application criteria of unfair laws as described by Radbruch must be adapted to Contract Law, but only limited to the judicial control of the correctness or incorrectness of the content of contracts in the case of disproportions or imbalances – more succinctly: in cases where injustice is evident and blatant. [15] Similarly, James Gordley advocates judicial correction of all contracts in which one party is enriched at the expense of another. The judicial control over the content of contracts corresponds, in first instance, to the application of legal rational and reasonable criteria preferred by the law and only in the last instance to the criteria as agreed by the contracting parties. [16]

Our response is based on the continued relevance of Irving Fisher´s admonition in "The Money Illusion" where he concludes: "*In this and the previous chapter we have seen that unstable money robs sometimes one class and sometimes another; that it upsets all sorts of calculations and economic relationships and adjustments; that it causes harmful fluctuations in trade and employment, and produces discontent, labor troubles, class hatred and violence; and that in the end it represents a general economic loss. These evils of unstable money may be reduced to three: social injustice, social discontent and social inefficiency*." [17]

It is the instability of such a system without proper rigorous definition of its key component i.e. money, that is at the heart of most if not all the problems the Eurozone is facing right now, i.e. the European depression and the measures emerging from a financial advisory class that is adversely affecting all aspects of society today.

Thus:

The current monetary and financial system operates on the following false premises:

1. **That there exists a valid common definition of money that can be expressed in valid formal objective logic, obeys natural law that is wholly consistent with the assumptions, terms and conditions of current money contracts;**
2. **That the parties to current money contracts are fully aware of all aspects such a formal definition;**
3. **That the validity of the contracts is determined solely by mutual agreement of the parties.[30]**

The Constitutions of European Member States cede to their respective Constitutional Courts, European Court of Justice and European Court of Human Rights, the unique prerogative to amend their terms and effects, in order to guarantee the enforcement of the principle of separation of powers and ultimately of democratic rule of law. However, only for issues of legal certainty, equity, or public interest of exceptional importance [18] and in accordance with Article 282, paragraph 4 of the Portuguese Constitution when justified.

In this sense, all that needs to be ascertained, before or during any legal action, is whether or not there exists a logically valid common definition of money that is both universally recognized and understood by all parties to all financial and money contracts. It is clear that absence of such is proof of the invalidity of current contracts. Similarly, if any such definition does not support the logical assumptions, terms and conditions of current contracts and common practices, the contracts would also prove to be invalid. Thus, if ever there was, this is a matter of exceptional and urgent public interest.

Are the parties capable of immediately providing or accessing such formal and logically valid definitions of money? Will all or the majority of proposed definitions be both logically sound and equivalent?

Recently, the European Court of Human Rights has included the notion of substantive equality in determining Justice. This, in contrast to simply formalising equality, the Court adopts a substantive conception that takes into account all facets relevant to how rights are violated. The central question in the case at hand, is not whether the law makes distinctions, nor whether or not the state is motivated by prejudice, but whether or not the effect of the law takes into account the substantive organic effect of an ill defined and unstable money system, showing how that instability translates into systematic effects that perpetuate inequality, disadvantage, discrimination, exclusion, involuntary unemployment, etc., impeding the optimal exercise of fundamental rights. [19] It is for this reason that this issue warrants being presented to the Judiciary on a first impression basis.

Concretely and as an example of a matter of first impression, on June 16th 2015, the Grand Chamber of the European Court of Human Rights (ECHR) issued its final decision regarding the liability of a news portal for offensive comments made by its users. In the case Delfi AS v. Estonia (application no. 64569/09, the "Case"), [20] the ECHR decided that holding an internet news portal liable for comments made by a third-party commentator to the portal's site, is not in breach of the portal's freedom to impart information. A brief background of the case follows:

In January 2006, the applicant Delfi AS, the owner of one of the biggest commercial internet news portals in Estonia, published an article on its webpage about a local ferry company. Thereafter, some of the site's users wrote highly offensive and threatening comments about the ferry company and its owner. While Delfi AS deleted the comments about 6 weeks after publishing the article, the owner of the ferry company nevertheless successfully sued the news portal. The Estonian Courts decided that the limitation of liability for service providers for the distributed content by third parties (stipulated in Directive 2000/31/EC transposed to internal national law) was not applicable in this case. Therefore, they found Delfi AS liable for the

comments and awarded compensation to the owner of the ferry company in the amount of approx. €320 for non – pecuniary damages.

In 2009, Delfi AS filed an application to the ECHR, complaining that it had been found liable for comments made by third parties. With its judgement of the 10th of October 2013, the Chamber of the ECHR decided that there had been no violation of article 10 (freedom of expression) of the European Convention of Human Rights. In response, at the beginning of 2014, Delfi AS requested the case be reviewed by the Grand Chamber of the ECHR.

The Grand Chamber of the ECHR narrowed its assessment to determining the duties and responsibilities, under Article 10 § 2 of the European Convention of Human Rights, of commercially run internet news portals that provide users the option of generating comments on published content where those comments could include unlawful speech. Finding that there had not been unjustified and disproportional restriction on Delfi AS´s freedom of expression, the decisive jury considered the following main aspects of the case:

a) Although Delfi AS had not been the actual writer of the unlawful comments, it had full control over its internet platform;

b) Delfi AS had not ensured a realistic possibility for any affected party to hold the actual authors of the unlawful comments liable;

c) Delfi AS´s efforts in preventing and removing the unlawful comments without delay had been insufficient.

d) The awarded compensation (approx. EUR 320) was not only not excessive, but actually modest.

Similarly, and referring to the above quote of Fisher from "The Money Illusion" [17], and the current severe impact of unfounded standard beliefs and notions about money, the question of broad social and third party liability as a question of first impression needs to be brought forward. That is to say, the fact that the financial system has not taken all necessary and possible positive econometric, scientific or legal measures to guarantee full compliance of the European Constitutional Contract and the Universal Declaration of Human Rights, makes them particularly liable for all consequences.

The duty to clarify the definition of money producing a univocal, technical and legal definition of money is directly related to the obligation to mediate unequivocal communication between all direct or indirect participants of public and private contracts. This is a fundamental principle of procedural equality and transparency with respect to determining the true will of all parties to the contract as well as to other affected parties.

Once again we invoke the wise lessons of Nuno Manuel Pinto de Oliveira [21] regarding the duty to clarify according to the following *sine-qua-non* presumptions: symmetry of information; relevance of information; and, finally, full disclosure.

Asymmetric information is a common problem in legal transactions in the way that at least one of the contractual parties – whether public or private – knows or should know determined circumstances that the target group or co-contractor does not or cannot know. Thus, it is imperative that all parties to money contracts use a valid common definition of money not

only in order to guarantee the principles of symmetry, relevance and full disclosure of information, but also to determine the validity and scope of the contracts. This is particularly essential when any lack of information significantly benefits certain parties to the detriment of other parties.

Full disclosure of information regarding the exact nature of money is vital with regards to the correct formation, execution and interpretation of current public and private contracts, in order to determine accurate and equitable consideration of all circumstances.

At the same time, the duty of the parties to cooperate in obtaining symmetry of information is a pre-contractual obligation that all parties must assume in order to safeguard just common human ends inherent to contracts.

Finally, the violation of – either - symmetry, relevance or full disclosure is sufficient to render a contract invalid. The same is true with regard to the duty of information in the cases where contract parties don´t furnish fundamental dates to the just evaluation of the contract's ends or legal scope. Therefore, the mere lack of a clear, unambiguous definition of money is sufficient to render all current contracts null and void.

The importance of a universal and Constitutional definition of money to fundamental human rights

It is worth repeating the wise words of Narayana R. Kocherlakota[8]:

"***Monetary economics has traditionally been dominated by the question of how the quantity of money, or the growth rate of that quantity, affects prices and quantities of goods. My reasoning here suggests that this focus is misplaced. Money is a record-keeping device; hence, monetary policy should be designed so that record-keeping is performed in the most efficient way possible. How do we do that?***"

All citizens should have the right to see enshrined in the European Constitution or in the Universal Declaration of Human Rights, in a clear and unambiguous manner, a logically consistent legal definition of money. Otherwise, we run the risk of perpetuating unsound economic principles that undermine the Democratic Rule of Law and a dubious tax and legal system. [22]

Establishing a clear, unequivocal legal definition of money in so far as currently, money represents a universal requirement for the effective and equitable exercise of all other rights, particularly the right to self determination, is indeed of the highest order to be cited in the Universal Declaration of Human Rights in order to promote optimal conditions for stability and well-being, peaceful and amicable relations among all nations and maximum respect for the dignity of all citizens. It is also the first minimum and necessary step towards resolving many economic, social, legal, cultural, educational and health problems affecting the globe as required by Article 55 of the United Nations Charter that strives towards universal respect and observance of all fundamental human rights and freedoms.

Currently, access to money is not in tandem with the ability for people to mutually reciprocate goods and services but, rather access is dominated by what are called "financial" assets ($600T) vs. true assets ("accumulated tangible and non tangible assets" i.e. real goods and

services ($210T)[23], such that currently, money predominately represents its own value beyond representing the value of goods and services that are the true foundation of the economy.

Therefore, we need to redefine a new ethic in money by adopting Kelsen´s lesson: "*A standard of justice prescribes a certain conduct of men in the face of other men. This conduct may consist in drawing standards. To the extent that a standard of justice with regard to positive law postulates a determined affection to the contents of its rules; prescribes the ruling standards with certain content. This, however, means that it is directed to the creation of positive law. The conduct which prescribes the object are acts through which are implemented the standards. These acts can match the standard of justice or contradict it. Corresponds to the idea of standard of justice when the rule prescribes that idea; contradicts the idea of standard of justice the regulations that have an opposite content.*"[24]

The Kelsen vision does not state that (in)valid standards of positive law may be subject to the standards of justice, but recognizes that these standards of justice determine the conduct of those – e.g. legislators, administrators, entrepreneurs, bankers – whose acts create the need for Law. And those acts are naturally subject to the rule of justice and to the values and general principles of international law.

The fact that in the present financial, monetary and legal system, money discharges social and economic power requires that fairness in terms of money be safeguarded. However, the adoption a clear objective common understanding of the true nature of money, liberates all to act in direct consequence of that understanding, thus supporting the independence of the Judiciary and therefore the principle of separation of powers.

When it becomes clear that currency has never had intrinsic value - but such as with Law, defined as a tool, to better organizing human activity - we will then be able to look with greater certainty towards restructuring the poorest nations and overcoming challenges without the need to resort to international disputes and conflicts that in any case do not successfully resolve such issues. This, in light of Recent studies that demonstrate, that for the first time in history, it is possible to eradicate poverty globally.[25]

Thus, we propose a new financial system that recognises the fact that for there to be Justice in public and private financial matters, a sound "measure of value" is *sine-qua-non* and precludes that the unit of measure be itself a commodity of variable and negotiable value, built on the idea of money as nothing more than a record – keeping device as Kocherlakota suggests. Moreover, this proposal should be communicated to and overseen by, the public at large.

Discussion and Conclusion

We have established that to date and throughout history there exists no formal logically valid definition or theorem defining money, although it is made evident that the attempt has always been to seek a universal representation of value. We show via formal semantic analysis how, in order to be consistent with itself, the current de facto intensional definition of money as a "store of value", "medium of exchange" and "unit of account", must reduce to:

Money: A record of a measure of value.

In as much as the notion of a record of a measure of value is consistent with the notion of "mnemonic tool", this finding corroborates Kocherlakota's results regarding money's technological function as "social memory", with the distinction of requiring measure explicitly while in Kocherlakota's findings, such is only implicit i.e. there can only be "memory of transactions" if and only if there is measure. In any case, both findings serve to dismiss the validity of the currently commonly assumed definition of money.

We then show that if money is generated by transactions as a record (annotation) OF the value of goods/services being transacted as described by the Bank of England [11] [12], then that record cannot be assigned INDEPENDENT value in and of itself. We also demonstrate for the transaction of any good or service ***G***:

Since increase in value attributed to *G* requires the arbitrary summation of units independent or exogenous of the measure of value of *G*, then it can be affirmed that any such exogenous "interference" is the sole cause of instability of value measure in the system, as in the absence of such interference the system is stable by default.

This further discredits the notion that money be more than a measure of value because any independent value of money necessarily becomes exogenous to the value measure function. Finally, we conclude on the basis of all the above that:

Potential consumption cannot logically be limited by availability of units of value measure, but only by availability of goods and services themselves. Moreover, neither can money be the object of lending; at most it can only record the value of the goods and services that are themselves the only true objects of loans and payment and indeed of value in the system.

Having established technically through various means that the common notion of money is logically inconsistent in its own definition as well as in practice. We proceed to show that the current definition is also inconsistent in terms of the legal requirement for money to be fungible. Again, this is consistent with money as a unit of measure, but inconsistent with the notion of money having a variable value as documented by the existence of inflation and at times deflation, in that division of a variable unit is not interchangeable over time.

On the basis of the principle of validity in law ***"Quae ab initio no valent, ex post facto convalescere non possunt"***, we establish that the inherent validity of contracts supersedes traditional practice such that once the doubt is raised as to the validity of the definition of money, the Judiciary is required as a matter of first impression to resolve all inconsistencies or declare all money contracts as at best indeterminable or at worst null and void.

We demonstrate that this anomalous situation has severe systemic impact on society and the viable exercise of fundamental rights and we establish the responsibility for safeguarding the

principles that are fundamental to contract law, particularly symmetry of information, relevance of information and full disclosure between parties.

Having identified the legal imperative to deal with the issue of lack of definition, we identify how through the concept of substantive equality where all aspects of cases are evaluated to guaranty that the application of particular rules of law must include the application of general rules of law.

All this establishes a firm case for dealing with the incongruence between money contracts and what we denote as the three fundamental false assumptions currently underlying money contracts:

The current monetary and financial system operates on the following false premises:

1. **That there exists a valid common definition of money that can be expressed in valid formal objective logic, obeys natural law that is wholly consistent with the assumptions, terms and conditions of current money contracts;**
2. **That the parties to current money contracts are fully aware of all aspects of such a formal definition;**
3. **That the validity of the contracts is determined solely by mutual agreement of the parties.**

Finally, we review the constitutional importance and indeed urgency of this issue and point out that both, the incongruence in definition of money and the manifest technical instability of money's function, stem from the same conceptual or ontological flaw of defining money as both an article of commercial value as well as unit of measure. As we clearly establish that the function of measure is sine-qua-non to the application of justice in such matters, we suggest bringing this issue to the public at large in support of a constitutionally based judicial review leading to the establishment of a universal formal logical definition of money as a stable unit of value measure.

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WHY EVERY BALKAN COUNTRY SHOULD HAVE ITS OWN CURRENCY PLAN B

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Abstract: *Europe's policymakers and crisis stewards persistently refuse to recognise the kernel of the persistent, anaemic European financial crisis; the unacceptable business practices of bailed out but insolvent banks. One example of how post crisis accounting rule changes have facilitated, rather than addressed, the falsification of profits and capital is set out. Bankers' lust for personal earnings based on loss-hiding transactions and a host of other rapacious practices will ensure that QE funds are misappropriated until radical reform is effected. Sadly, almost all mainstream media believe the story that banks have been reformed, have emerged from a routine cyclical recession, and are on the road to recovery. This belief has led to the re-emergence of support for Milton Friedman's quantitative theory of money, justifying QE. This thinking merely reinforces the circularity of QE funds flowing to bankers. Policymakers refuse to countenance radical reform and are only interested in "nudges and tweaks", hence the present stagnation. But this will lead to continued pressure on the existence of the euro itself. What does this mean for Balkan countries? They should recognise the need for a Currency Plan B. The least indebted countries have the most to lose from the mounting problems afflicting the euro.*

Key Words: *Unreformed banking, stress tests, credit derivatives, euro, monetary policy Balkans*

Introduction

This paper is in four sections. It starts by summarising a presentation to an accounting conference in 2013. The topic was the manipulation of mark-to-market accounting rules enabling banks to hide true losses and inflate reported capital and profits based on post crisis rule changes. This explains how the true condition of banking is far worse than suggested by official central bank stress testing. Section 2 explains how banking has managed to stave off calls for radical reform. Section 3; given the gravity of these points and the relative unique position being explained by Cobden Partners and a tiny group of other commentators, I set out my credentials. The inescapable conclusion (Section 4) is policy stagnation, leading to the necessity for every country, particularly those in the Balkans, to prepare a Currency Plan B. This coincides with revived support for Friedman's monetarist theories, justifying now unlimited European QE, which will fix nothing in banking but lead to continuing debasement of the euro.

Section 1

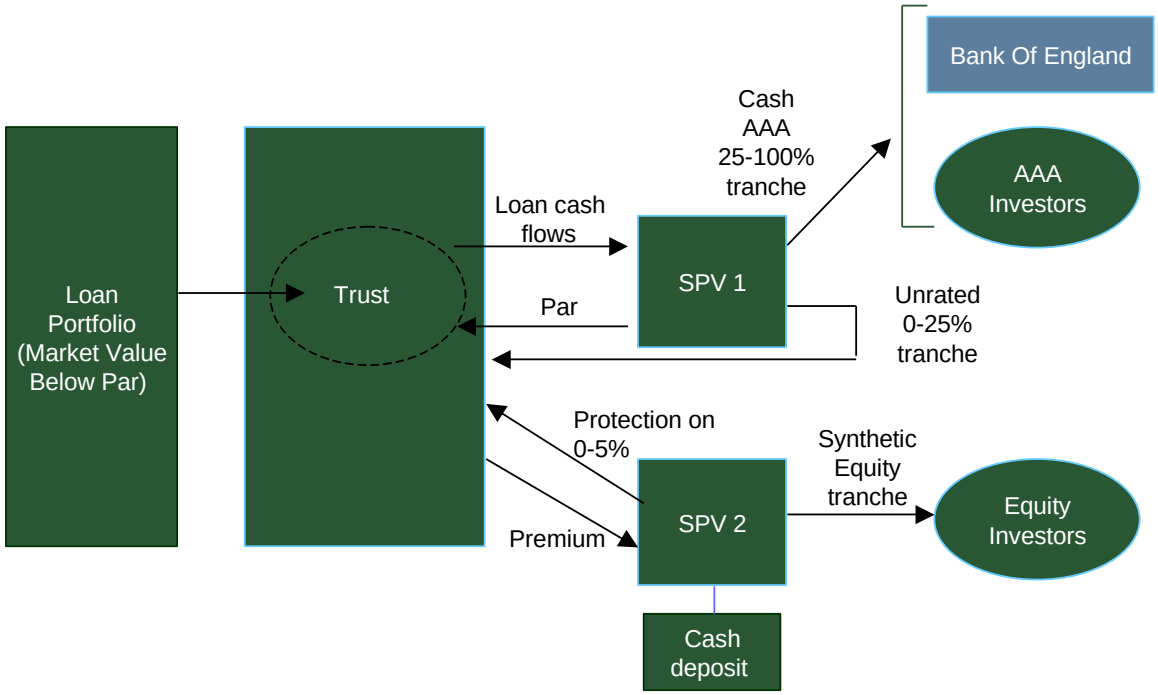
Reluctance to Understand Banking.

The silence that greeted my May 2013 exposure, at the European Parliament, of the latest twist in profit falsification was deafening. To an audience comprising 140 of Europe's most senior accountants, and using only two simple slides (see Diagram) I set out the nuts and bolts of a transaction designed in 2010 to enable a large British bailed out bank to falsify £1 billion of profits and invent £340 million of equity capital. Causing £1bn of mark-to-market losses to disappear created the profits. New post crisis central bank repo rules were easily gamed to achieve this. These rules govern central bank lending to banks against supposedly high quality collateral. I further explained how a little booster was added to the structure to produce an additional sweetener. New Core Equity Tier 1 (CET1) appeared, as if by magic, from nowhere[66]. Since equity capital is always in short supply in the European banking industry in general, let alone among overtly insolvent banks, this feature was rather appealing to the managers of this particular bank. It was also simple. An economically pointless SPV was introduced to the structure purely to 'write protection' in the form of a credit default swap (CDS) on the most risky, 'first loss' 5% slice of the bank's underwater £10 bn loan portfolio[67].

[66] This technique for creating fake Basel capital was hardly innovative, merely an updated variant of the structure I co-designed when at Abbey National in 1999, see Kerr, "How to Destroy the British Banking System; Regulatory Arbitrage via 'Pig on Pork' Derivatives. http://www.cobdencentre.org/2010/01/how-to-destroy-the-british-banking-system/

[67] "Underwater" is a term for assets that have lost value. In this case, if marked to market, these assets would have been accounted for as worth only 90% of historic, par value.

UK Bailed Bank Social Housing Portfolio



Notes:

•2 Separate transactions

•AAA tranche pledged to central bank to fund 75% of portfolio

•Credit Derivative hedge of 0 – 5% via the second transaction reduces capital consumption (Basel 2 or 3) from 4% to about 0.5%, creating the false impression of £340mm of new bank capital on this £10bn portfolio

•Banks try hard not to sell below par loans, or losses will have to be booked, even under IFRS and Basel

The consequent risk weighting to be applied to these assets, under the Basel rules, was adjusted downwards automatically creating £340 million of CET1 for the bank. Forgive the repetition; the transaction was almost entirely circular and the economic exposure of the bank to the assets was virtually unchanged. Thus an additional benefit was created by manipulating accounting and Basel capital rules which the bank had not even dreamed of requesting. The bank had only wished to hide the portfolio's mark-to-market losses.

The primary purpose of the structure was to exploit the Basel rules. The trick was to transact protection within the structure; save for an optional arrangement with an external hedge fund set up to assist an array of banks with these types of structure, and which would take very little risk, no protection existed for the sorts of ordinary mark-to-market losses which were in this way being masked. No third party would offer protection on such losses at anywhere near the transacted price, but accountants and regulators appear either incapable, or unwilling to figure this out.

This second SPV was initially a vacant shell, but ordinary loan portfolio cashflows would be directed for a period of time until its obligations were fully cash collateralised, such that its obligations would then achieve AAA ratings. At this point the CET1 would be triggered. But the structure was circular and could not properly be described as insurance. The cash collateral was being provided by funds that would otherwise just have flowed straight into the bank itself.

The audience was smart enough to realise that I had just demonstrated that the accounting and regulatory capital rules, all of which had been supposedly tightened up since the 2008 systemic collapse, were achieving the opposite of their stated objective. Managers of insolvent banks now found it easier to arrange loss hiding transactions that in turn artificially boost profits and reserves of their banks. In any legal system with which I am acquainted, such conduct is classified as fraud. But not in the parallel legal universe of banking.

Section 2.

How has the Banking Industry Avoided Radical Reform?

Why is there so little enthusiasm among highly qualified professionals working very closely with banks to accept that flaws in the way IFRS standards are interpreted and applied are so pervasive that the numbers produced are essentially meaningless? The answer is the self-interest of all the actors whose primary aim has always been to protect their positions and reputations.

Culture and governance are regularly mentioned as matters that need to be addressed in banking. I disagree. Such statements are a regulatory cop-out. All that needs to be addressed in banking is the absence of any simple framework of rules ensuring probity, integrity and accountability. Cultures will change very quickly after the introduction of such rules.

Culture and governance are merely polite excuses for banker fraud and regulatory incompetence. The focus on culture and governance should target not banking but the businesses of regulators and other banking scrutineers – accountants, ratings agencies and lawyers. As integrity in banking has declined this triumvirate of professional service industries have played their role as willing accomplices.

Incomes of all have rocketed. All three have exploited the crisis to ensconce their positions in the architecture of bank supervision even more firmly. They receive further fee earning supervisory mandates under every fresh iteration of global banking rules.

Taxpayers and ordinary folks uneducated in the black arts of banking forlornly hope that new rules and regulations such as the 2013 "Leverage Ratio" and "Volcker Rule"[68], will stem the flow of taxpayer bailout funds. Neither will have any such effect. I urge nobody to hope that the global rulemaker, the Financial Stability Board (FSB), will enact any rule that will provide effective scrutiny. To do so is like hoping that foxes will care for, feed and nurture chickens. The FSB is comprised of representatives from national central banks. The Bank of England (B of E), as one example, only seeks "nudges and tweaks", not radical reform.[69] In fact it appears to be so concerned as to the true weak financial condition of British banks that it gamed the FSB's rules when it stress tested our banks in December 2014. It gamed the rules by setting a pass mark, a level of minimum CET1 to be demonstrated by each bank under its economic stress scenario, way below the pass mark the rules required the B of E to apply. It further gamed its own regulatory timetable by rushing out the results before its planned February 2015 announcement of the additional capital requirements to be demonstrated by the 4 British banks that it would designate as "systemically important financial institutions (SIFI)". It is not credible to assert that the B of E's thinking about a) which banks to designate as SIFIs, and b) how much extra CET1 for Basel purposes should be added to each

[68] See IREF Newsletter February 2015, reproduced here: http://cobdenpartners.co.uk/news (scroll to 16 February entry).

[69] Personal meetings with a senior BofE official.

bank's core minimum, only germinated in January 2015. Invaluable research to this effect has recently been published by Cobden Partners' Kevin Dowd.[70]

How can banking be in truth in such poor shape, and yet have succeeded in bluffing everyone with the recovery story? The media seem very naive. Naturally politicians regulators and of course bank CEOs have embraced the recovery narrative with glee, and the nagging but accurate scrutiny of the few astute academics is sidelined.[71]

Those whose reputations are tied to the decisions to bail out failed banks in the past have little interest in seeking to understand this poor condition of banking. Official enquiries seem pointless (such as the UK's *Vickers Commission* which reported December 2013). Politicians prefer to upbraid the banks for not lending enough to their chosen targets, ignoring the obvious explanation that the continued production of solvent looking accounts under IFRS accounting and Basel capital rules merely encourages loss making banks, short of CET1 to carefully manage cash positions and, in particular, avoid making loans to small and medium sized businesses[72]. Such loans entail the highest level of regulatory capital, consuming disproportionately the benefits of the £340 million which magically appeared on the balance sheet of the UK bank in the example above.

Despite increasing evidence of the collapse of banking integrity, the 'misselling' of consumer 'insurance' products, collusive manipulation of global pricing benchmarks such as Libor and FX fixes, and even the plundering of dormant accounts[73], official scrutineers show little interest in understanding the true, dystopian condition of banking. Moreover, bankers have succeeded even in downgrading their culpability for fraud. The term "fraud" is never now used. Fraud has been retermed as "misselling"[74].

Such is the scale of the problem, so powerful and successful has the cartelised banking industry lobby become, that very few policymakers who understand the veracity of the points herein are willing to confront the industry.[75] Unless banking is radically reformed soon, it will surely at some point lead to social unrest.

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[70] See Dowd, June 2015. *"No Stress"* Adam Smith Institute, London. http://www.adamsmith.org/wp-content/uploads/2015/06/No-Stress-ONLINE1.pdf

[71] See Anat Admati & Martin Hellwig 2013 "*The Bankers' New Clothes"*, Princeton University Press.

[72] The effect of this is being felt throughout Europe, hampering economic growth in particular in former soviet protectorate countries in the Balkans.

[73] http://www.thisismoney.co.uk/money/experts/article-1707782/Has-RBS-pinched-my-dormant-cash.html

[74] see Kerr 2014 *"The Case for Systemic Bank Reform"* Institute for Research in Economic and Fiscal Issues, Paris. http://de.irefeurope.org/article963,a0963

[75] One notable exception is UK Member of Parliament Steve Baker, who presented two legislative proposals for banking reform in the British Parliament 2010-15. See http://www.stevebaker.info/campaigns/the-financial-system/ and http://www.cobdencentre.org/author/sjbaker/

Section 3.

Author's Credentials.

I am not a professional economist, but a banker with about 30 years experience in debt capital markets and derivatives.

Having attempted in 2003 to explain to the Bank of England[76] that certain transactions which I had co-designed and executed, combining credit default swaps with bulk portfolios of AAA rated securitised loans, were likely to destabilise banking, I wrongly assumed in 2008 that public anger at the recapitalisation costs would lead to decent analysis of the true condition of banking. This would in turn lead to radical reform. I felt uncomfortable, as a British citizen, at the 2.5% increase in the regressive UK VAT (tax), specifically to fund part of the £800 bn cost[77] of the bailouts. In 2009 I resolved to do something, and as a typical lazy banker I was perfectly happy to respond to an invitation to join a small, Mayfair based capital markets brokerage business with a specific brief of pitching banking crisis solutions to sovereign governments.

But no sooner had I achieved some positive response from the Icelandic government to my June 2010 pitch that radical banking reforms were required than I was asked to resign from the firm. They were enjoying decent profits from selling variants of the capital falsification structures I have described above, and to continue to employ me as a seller of banking solutions to governments would, they argued, undermine their credentials in the business of accounting and regulatory capital "optimisation".

In 2010 I founded Cobden Partners, a small and fiercely independent consultancy offering professional advice to nations seeking to reform their banking systems, recognise unrepayable levels of sovereign debt, and / or prepare an alternative currency – a "Plan B". Working with currency experts such as Professor Kevin Dowd, banking and asset management experts such as John Butler, we are finally gaining some traction and receiving more attention from countries recognising the intractability of some of the points set out above. We are prophets of hope.

Section 4. Conclusion.

Consequences of The Chain of Events; Changes in Macroeconomic Thinking, Debasement of Euro. Advantages of Balkan Countries preparing own Currency Plan B.

The summer of 2015 is experiencing a Milton Friedman mini- revival. Friedman, (1912 – 2006) is a leading light in the economic school who emphasise the importance of money supply. This "Quantitative Theory" school have observed a strong correlation between the supply of broad money and recorded GDP growth numbers. In other words, pushing narrow

[76] At the time this particular limb was technically separate from the BofE but has now been merged. In reality it was soft reporting to the BofE.

[77] UK Exchequer figures

money, M0, will not drive growth. This line of thinking rather naturally leads to the endorsement of quantitative easing.

The counter argument is that this 2015 re-emergence to prominence of Quantitative Theory is blind to the true condition, as set out above, of banking. Proponents of money supply remedies[78] believe that banking is simply undergoing a routine cyclical recession and recovery. Most believe that banking is very much today in the recovery phase.

It therefore follows that, if radical reform of banking is ruled out as unnecessary, the policy response is to boost the supply of broad money in order to drive economic growth. But this is the wrong response. The supply of broad money is not an exogenous driver of growth. Central banks cannot effectively influence, let alone control, broad money. Their toolkit consists only of a small set of levers, the primary tool being interest rate setting. This only influences base money, not broad money.

For these reasons the experiment into uncharted waters of QE will fail. It has to date merely masked the insolvent condition of Europe's largest banks. We at Cobden Partners have spent 5 years explaining these points to policymakers throughout Europe. None of them disagree, but all appear to be unable to articulate these points in public. I am therefore grateful to this conference for the opportunity to explain this fundamental message.

The problems are quietly but steadily affecting the suitability of the euro for Balkan countries, whether full euro users such as Croatia, hard linked such as Bulgaria, or loosely linked such as Macedonia. For each of these and the other major Balkan economies the question upon which they should be focussed now, in the Autumn of 2015, is whether it is in their best interests to remain linked to a currency which seems likely either to be substantially restructured or to suffer chronic debasement if the hard core force their political decisions (eg refugees) on the reluctant periphery. Further, there has been a silent sea change of thinking, with Germany clearly reluctant to countenance any further enlargement of the Eurozone.

Although it might sound a daunting prospect, introducing an alternative currency is not particularly difficult as long as the fundamentals of currency design are understood by its architects, and it is professionally planned in advance. The perennial observations about the euro's continuing effects of disincentivising structural reforms, inconsistency with the concept of national economic management, and the circuitous debates about eurobonds and fiscal transfers bear testimony to the euro architects' abject failure to satisfy either condition. The problem for Greece and other countries is that currency design is a skill which the troika are actively seeking to have every nation "unlearn", in Orwellian speak. The personal careers of too many senior individuals depend upon no one of the 19 nations breaking away and thriving, rather than collapsing.

Having spent four years pitching currency design alternatives to an array of governments, central banks, and leading opposition parties we are happy to set out the basic steps. The

[78] See Hanke, Globe Asia August 29015, reproduced by Cato Institute here: http://www.cato.org/publications/commentary/imf-experts-flunk-again

domestic banking and payments systems must be made sufficiently flexible to switch from one unit of account to another. Either physical cash, or some form of electronic cash, such as debit or credit cards, must be printed or produced in advance, with a robust distribution plan. These logistical considerations are no different in principle than a new product roll-out for a major corporation in a major industry.

What is different, and requires due consideration, is how a new national currency will be credible in the eyes of the public which will be expected to use it. Any currency thought to be at risk of a major devaluation and inflation will struggle to gain sufficient credibility. However, if the currency is introduced at an already credibly devalued rate--one which would reset Greek unit labour costs to a level competitive with the euro-area average for example--and the national debt burden is also redenominated in a fait accompli vis-à-vis creditors, greatly reducing its value in real if not nominal terms, then the new currency's value will indeed be credible and will be able to support commerce and business as usual. Additional credibility-boosting actions could include the build-up of foreign reserves, say by selling off certain specified state assets.

Yes, this devaluation implies a wave of inflation as the domestic price level adjusts to the new national unit of account, but this will also serve to devalue government pensions and other public obligations that, at present, are simply unserviceable in any case. Sudden, large devaluations are common in European history and, while there is no 'free lunch' in economics, they have, from time to time, facilitated major currency reforms and, subject to sufficient political will, led to major structural reforms helping to restore and sustain economic competitiveness longer-term. France is a textbook case of a country which, following a major devaluation in the early 1980s, set about this course, with some success, only to slip back into poor fiscal and regulatory habits again following the introduction of the euro in 1999. More recent examples are provided in Eastern Europe, when in 2008 multiple small regional economies suffered major devaluations but maintained fiscal discipline and, in a short time, enjoyed strong economic recoveries.

The lesson for a future Greek government, or any present or future euro-area government is clear: If you want to restructure your sovereign debt or restore sovereignty over fiscal policy, you simply cannot negotiate without a credible plan to re-introduce a national currency. Recent statements by the governments of Poland, Bulgaria and the Czech Republic that they are in no hurry to join the euro, if ever, indicate that this message is not lost on these increasingly successful, competitive economies. Present euro-area members take note: Failing to prepare an alternative currency Plan B is preparing to fail in future negotiations. The time to plan is now, before the probably inevitable arrival of the next euro sovereign debt crisis.

PUBLIC CURRENCIES TO ENHANCE WELFARE STATES: TWO DRAFT PLANS

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Abstract : *(Theoretical framework, methodology, results etc.) The fact that most money (97.4% in case of Sterling Pound) is created by private banks as bank credit poses a series of questions, including for the public finance. Currently most revenue for national governments come either from taxes (such as income tax, corporate tax and VAT) and/or by issuing national bonds, but both raises ethical and financial concerns: the money to pay the former has to come directly or indirectly from bank loans, it means the tax payment has to indebt somebody who has to repay not only the principal but also the compound interest, while the latter forces the State itself to repay the compound interest, thus redistributing the national wealth for its creditors at the cost of most taxpayers.*

The State Money, advocated by Chicago Plan and Positive Money, among others, has emerged as an alternative to the current monetary system as it will help us overcome what is at stake with the status quo (too much money is poured into the economy for speculative purposes during the boom while the money creation is blocked once the recession begins, stifling the whole economy). The possibility to create money without indebting = enslaving anybody will be a fundamental step towards the creation of a fairer economic system. The countries which have adopted euro, however, find it hard to restore their monetary sovereignty, as this official tender is completely controlled by the European Central Bank (ECB), requiring them to come up with other complementary means of exchange if they are to alleviate the current economic crisis.

This paper will begin with focusing on the issues arising from the public sector's dependency on privately created money. Then two proposals will be depicted as draft plans to change this situation even under the yoke of ECB, i.e.: basic income for child-raising guardians and partial payment of pension in parallel currency. The first one will adopt the demurrage system to make this complementary currency work not only to give an additional income to families with children but also to provide national economies with another means of exchange which is ensured to circulate incessantly, with the aim that this currency will end up with benefitting the whole population ranging from the superrich to the most marginalised. The second one will be circulated and accepted all over the country as every citizen's obligation for social contribution will work as collateral. Debates will be followed to show pros and cons of each proposal, paving the way for further discussions towards the implementation of such public currencies.

1. Introduction

Currently most of money in circulation is created and put into circulation in the form of bank credit, placing the whole economy at the mercy of the commercial financial institutions who provide liquidity only when they find it profitable to do so, i.e. to give credits and later to ask debtors to repay not only the principal but also the interest rate. This monetary system based on debt and compound interest rate has triggered a series of other problems, such as the pro-cyclical influx of money supply and exponential growth, among others. The built-in unsustainability of our money system calls for a fundamental change in its design so it should serve for the whole populace's prosperity without causing disruptions.

This article begins with mentioning different issues of our money system today, focusing on the fact that most money is created by commercial banks which makes the whole economy, including the public sector, up to the banks' will to create money. Then Chicago Plan and similar proposals are studied to show how they will work once they are introduced. My two proposals with specific uses will be presented as measures to surpass the contradiction that the money needed for people's welfare should be created by commercial banks. And last but not least, different problems will be referred to which need to be solved for the smooth implementation of such parallel currency systems.

2. What is at stake with the current monetary system – from the public sector's viewpoint

Nowadays the growing public debt is turning into a huge headache for any political leader worldwide as any government is forced to service its debts before providing any public service to its own people. Austerity is rather a common norm for everywhere than an emergency measure for only crisis-ridden countries and the public sector has seen more restrictions on its free hand since less and less money is available.

Lietaer et al (2012) points out five features of our current monetary system which are against the sustainable development: "*the pro-cyclical character of the money creation process which amplifies both the upturns and downturns of the business cycle*", "*the systematic encouragement of short-termism because the interest feature of the money system programs 'rational' investors to discount the future*", "*compulsory growth due to the mechanism of compound interest*", "*concentration of wealth" and "a devaluation of social capita*l." Among others, the first feature deals with the monetary creation, which will be examined furthermore on this article.

The current monetary system per se is liable for this misery, as money itself is provided to the economy from commercial banks as bank credit = debt (Werner: 2014a), creating a "*debt economy*" and "*economic relationship which… involves a modernisation and a control of subjectivity*" (Lazzarato: 2011), i.e. "*a virtual economic serfdom in which debtors, struggling to avoid default, are forced into an unhealthy competition with one another*" (Greco: 1990). McLeay et al (2014a, 2014b) prove that 97.4% of Sterling Pound is created from commercial

banks instead of the Bank of England. Would it not be paradoxical, if not contradictory, that governments' revenue, which should be spent for non-profit purposes and for the welfare of the whole populace, derives from commercial banks' profit-seeking process and is now up to the benevolence of the Troika in case of some countries?

The whole nation's dependency on money creation by commercial banks leads to another factor against its stable economic performance, as they offer credits = issue money as a moneymaking business and they do it only when profits are expected. Credits are unbelievably ubiquitous during economic booms, especially during a bubble, as banks are eager to leverage this opportunity to make profits while they turn to be reluctant to finance for new projects once this financial party is over and the whole economy gets into a slump because such financial institutions try to avoid increasing bad loans. This means more money is available for the whole economy during the boom, including for the public sector, because of the increased money supply while the access to money is harder during the recession. On top of that, their only criteria is profitability, so this economy's priorities are "*investments in market goods over public goods, regardless of the relative rates of return to human well-being*," (Farley et al.: 2012).

Another serious problem arises when governments issue bonds, as they are obliged to repay not only the principal but also the compound interest rate to creditors, thus transferring the public fund, which should be spent for the public welfare, to enrich them at the cost of the majority of the population. The rule used to be somewhat different, though, for instance the French government could ask the Bank of France for interest-free loans up to 1973, and had this system not been abolished, France's public debt in 2009 would amount only to 8.6% instead of 78% of GDP (Lietaer et al.: 2012). Kennedy (1995) condemns this picture as something "*illegal*" which is against the "eq*ual access by every individual to government services*", guaranteed by the constitution.

It is essential to remember, nonetheless, that money "*does not exist by nature but by law*" (Aristotle). Lietaer (2001) examines this character furthermore, defining it as "*an agreement within a community to use something as a means of exchange*."

3. Chicago Plan's proposal

Chicago Plan is a monetary reform which dates back to 1930s. Its key ideas are expressed in Soddy (1933) as 1) to allow the State to issue an enough amount of money to cancel all the private debts and 2) to force Banks to have 100% reserve in cash. Banks would be still permitted to do their business as moneylender, but they would be deprived of their traditional power to create money. Zarlenga (2002)'s proposal for United States consists of nationalising the Federal Reserve, defining it as Fourth Power (on top of the Legislative, Executive and Judicial ones) and taking anti-deflationary policies on top of the above-mentioned ones.

Jackson and Dyson (2012) proposes the foundation of the Money Creation Committee to be in charge of injecting liquidity by "*(i)ncreasing government spending*", "*(c)utting taxes*" (keeping more money into circulation without withdrawing), "*(m)aking direct payments to citizens*" (similar to basic income) and "*(p)aying down the national debt*", and of withdrawing it by "*removing money … from the government's account*", "*by selling securities… and*

removing the money received from circulations", "*choosing not to roll over loans to the banking system*" and "*by not recirculating some of the 'Convention Liability' to the government*". Werner (2014b) suggests to simply change a few rules which currently allow commercial banks to create that much money, for instance altering CASS 7, 1.4.6 and 7.1.8 of Client Money Rules in case of United Kingdom, as such a policy will strip banks of their power to create money. Sigurjonsson (2015) endorses such plans, explaining the coexistence of two different types of bank accounts (Transaction Account at the Central Bank of Iceland to spend and receive money in the real economy and 100% risk-free and Investment Account at each commercial bank for investments but subject to risks) to be used.

There is another economic school with a similar proposal under a different name of "modern monetary theory", or so-called chartalists. Their basic idea is to get rid of the get rid of the gold / silver standard which limits the money supply to the amount of these precious metals, giving the Central Bank its power to create money (Mitchell Innes: 1914 and Knapp: 1924).

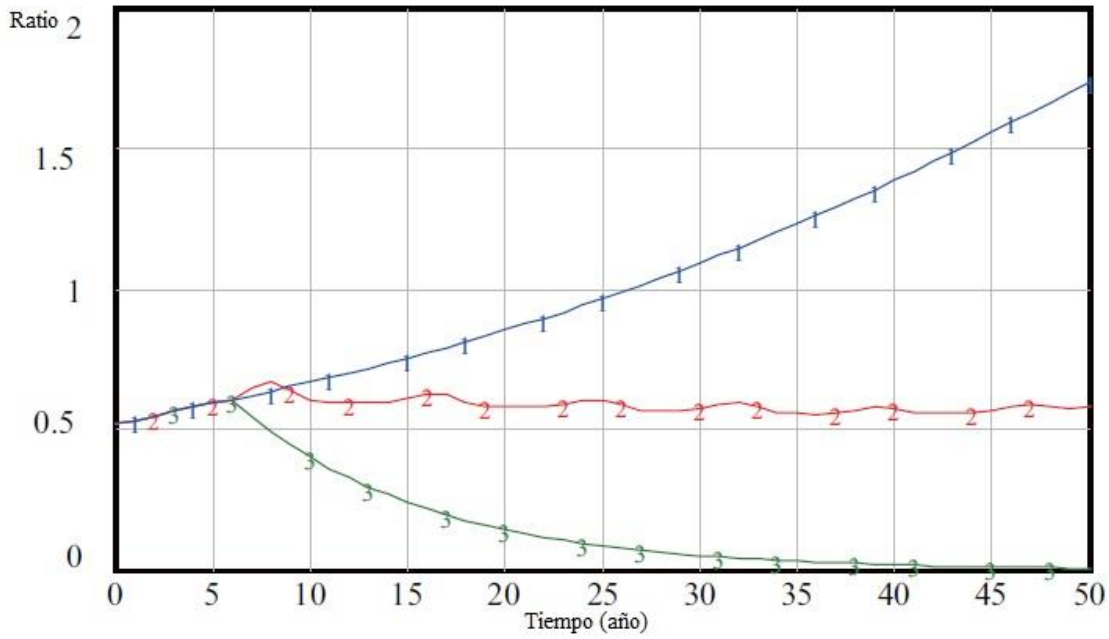
But actually the money-issuing authority, according to these proposals, is not the State itself or the Ministry of Finance as part of it, but the independent Statistical Office (Soddy: 1934), the Money Creation Committee (Jackson and Dyson: 2012) or the Central Bank itself (Sigurjonsson: 2015), to prevent the public sector from abusing this power (the hyperinflation in Zimbabwe up to 2009 is a typical example to be avoided). Its role is to buy private mortgages and public bonds to set them free from their obligation to service the debt.

As for benefits for this monetary reform, Benes and Kumhof (2013) points out the following four advantages on the basis of Fisher (1936):

- **much better control of credit cycles, by preventing financial institutions from creating their own funds during credit booms, and then destroying those funds during subsequent contractions**
- **Complete elimination of bank runs**
- **Reduction in the interest burden of government financing and a dramatic reduction of (net) government debt**
- **a dramatic reduction not only of private debt**

Stiglitz (2003) advices the Japanese government to issue its State currency as an effective way to combat the deflationary trend in Japan. Benes and Kumhof (2013) highlights this monetary reform's another advantage to stimulate the bank credit for productive purposes while discouraging the influx of money into speculations. Also, Yamaguchi (2013) shows that the amount of public debt will decrease and eventually disappear with the introduction of "public money" proposed by himself (See Graphic 1).

Graphic 1: Public debt and GDP[79]



1 (blue): balance, 2 (red): 90% of the primary balance,
3 (green): Introduction of the 100% reserve in the Year 5

On one hand, the money issued under the Chicago Plan is regarded as seigniorage, defined as "*the income one obtains from being able to induce market participants to employ one's liabilities as a money*" (Greenspan: 1996). It is put into circulation when the Government spends it without having collected it as tax etc. beforehand, and it is true that its expenditure is not based on its revenue. On another hand, it is also right to say that the fact that every tax is payable in this currency is the other side of the same coin which sees that this is backed with the possibility to do every taxpayer's duty. From this viewpoint we can say that this currency works as far as the Government is committed to accept tax payment = retrieval of its own liability. Tymoigne and Randall Wray (2013) consider the public debt = seigniorage and the private sector's surplus as two faces of the same coin.

However, there is an important fact to be taken into account on applying this proposal for the Eurozone where 19 sovereign states have already conceded its central bank operation to the European Central Bank while their former central banks (such as Bundesbank and Banque de France) have turned into this international monetary institution's national branch *de facto*. The reform of this regional currency affects all these countries, each one of them has its own socioeconomic circumstances and different monetary needs which are usually ignored from the centralised power in Frankfurt, and national leaders are not equipped with the power to control their official currency system any more. A friend of mine in Spain says that Mariano Rajoy, who as Home Office Minister signed the law to submit the country's monetary sovereignty, now deplores, as the country's PM, the lack of its sovereignty.

[79] Source: Yamaguchi (2013)

The following two proposals are my humble trials to implement a parallel currency, adapting the theoretical background of Chicago Plan and Positive Money into this specific context of the Eurozone countries.

4. Proposal 1: Basic income for child-raising families

The first draft plan is the adapted version of the two proposals by Gesell (1916), namely: basic income for child-raising families and with demurrage. This German entrepreneur who self-taught economics was against unearned incomes, i.e. rent for landowners and interest rate for moneylenders, as none of them makes any contribution at all except charging fees on the use of their possession, and he suggested the nationalisation of the whole land in a country and the implementation of a demurrage-based national currency whose face value decreases gradually over time.

The complete nationalisation would require everybody and every business to pay rent to the government for land use while this new landowner would redistribute this income among mothers with kids since they contribute to the national economy by raising children = future workforce and consumers. In other words, Gesell tried to make the whole society, instead of each family, in charge of nurturing future generations.

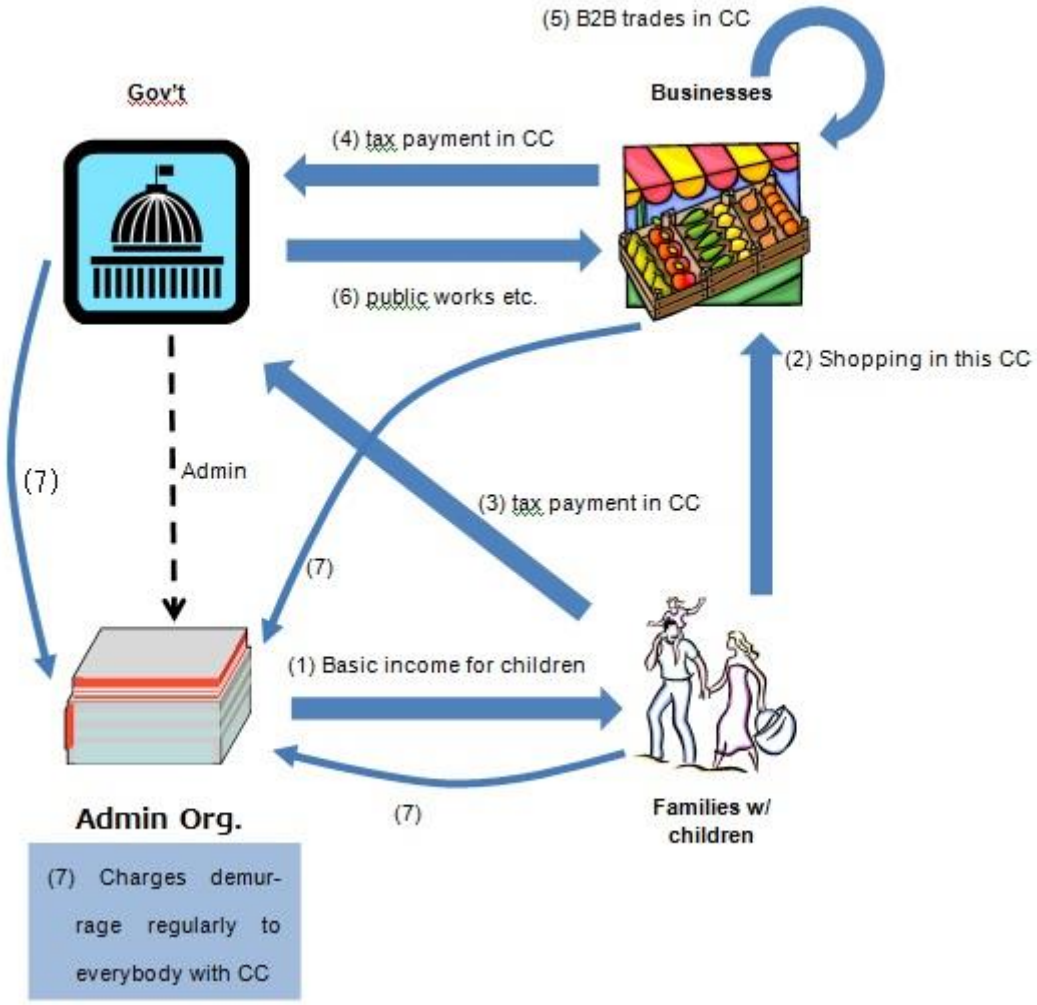
While the end of private land ownership sounds like a communistic idea, this is achieved in Hong Kong, one of the world's most capitalist places, where during the colonial rule the whole territory belonged to the British monarch in order to bring wealth into the metropole. The handover of sovereignty to China kept this picture intact, only changing the owner from the British Crown to the Hong Kong Special Administration Region government. This income amounts to HK$ 70 billion (about € 8.08 billion) in the budget year 2015 – 2016[80], 14.7% of the Government's whole budget, and each family would receive HK$ 88,540 (about € 10,216) per year and child up to 14 years if this policy were to be implemented there.

Demurrage is a design to make money perish bit by bit by charging holders of money a certain amount of hoarding fee. While Gesell's original idea is to issue a stamp scrip which requires holders to buy a stamp and paste it on the bill on a regular basis to keep this money valid, our current IT will simplify this process significantly when such a demurrage currency is introduced as an electronic currency.

So let's get into the proposal itself, explaining how this system will work (Graphic 2):

[80] Source: http://www.budget.gov.hk/2015/eng/pdf/e_budgetspeech2015-16.pdf (Visited on: 29th August 2015)

Graphic 2: How the basic income for child-raising families will work



1. On every Monday morning (for instance, 6am) the Administration Office will pay 0.1% of GDP per capita in electronic currency for any family having a child of under 15. Parents or guardians (in case of adoption) will receive this basic income in accordance with the number of children that they have.

2. Parents or guardians spend this electronic currency at shops.

3. It is also possible for parents or guardians to pay tax (for instance income tax) in this electronic currency.

4. Businesses too can pay tax in this electronic currency.

5. Businesses can pay for other businesses in this electronic currency too.

6. The government can pay in this electronic currency for public works and/or other expenditures.

7. On every Monday morning (for instance, 5am) the 2%/week demurrage rate is levied from any electronic account back to the Administration Office, preventing excessive

money supply and making sure that the whole society repays the basic income (there is no free lunch).

This very quick demurrage rate (2% per week) is designed to allow this currency to be issued and put into circulation without forcing the government to increase tax revenue. Its money supply will remain stable when it reaches 50 times more of the weekly supply, because the exceeding amount will be levied as demurrage over time. Table 1 shows the projection for some countries:

Table 1: amount of money supply for child-raising

Country	GDP (millions of US$)[81]	GDP per capita (US$)[82]	Basic income per child / week (US$)	Under 15 years population[83]	Maximum money supply (millions of US$)
Bulgaria	55,837	7,753	7.75	1,044,193	405
China	10,380,380	7,589	7.59	233,556,402	88,635
France	2,846,889	44,538	44.54	12,416,415	27,651
Germany	3,859,547	47,590	47.59	10,414,157	24,780
Greece	238,023	21,653	21.65	1,509,784	1,634
Spain	1,406,855	30,278	30.28	7,438,462	11,262
UK	2,945,146	45,653	45.65	11,131,525	25,408
US	17,418,925	54,597	54.60	61,017,336	166,577

The number of under-15 population is used here because of the easiness to get data. The maximum money supply is calculated as GDP x 0.05 x under-15 population percentage and is less than 1% of GDP for all the countries which have been studied here, but some countries with high birth rate will have more than 1% (1.04% for India and 2.15% for Nigeria). This humble amount is very important because, should this system be suspended, most governments will be still capable of redeeming these points into official currency.

This policy is expected to raise the birth rate, as this additional income will stimulate couples to have more kids. Most developed countries' Total Fertility Rate (the average number of children a woman has) is less than 2 (and quite often below 1.5), showing that they will face with the shortage of young workforce in the near future. The sound demography is

[81] Source: IMF, 2014.

[82] Source: Ibid.

[83] Source: CIA World Factbook, 2015 estimated.

an important factor to achieve a sustainable development and the increase of birth rate is an essential element for any country, especially those which do not consider accepting immigrants as an option to make up for the lacking workforce.

The impact of this new system is not limited to this additional income for child-raising families: this new purchasing power will be immediately spent at the national market, boosting different industries within the country. Obviously the first ones to benefit are those who produce goods and/or services needed by those parents or guardians (such as food and clothes), but those who receive this currency are always obliged to spent it as soon as possible to avoid the loss triggered by the demurrage, and this is how all the industries in the country will eventually enjoy a better economy. The whole population will see their individual income increased as this money circulates more quickly, boosting the national economy. Table 2 shows how much economic effect can be expected from this proposal on supposing that each currency unit is traded once a week (52 times a year).

Table 2: Expected economic impact of this new currency

Country	Maximum monetary supply (millions of US$)	Estimated economic effect /year (millions of US$)	GDP (millions of US$)	Percentage on GDP
Bulgaria	405	21,060	55,837	37.7
China	88,635	4,609,020	10,380,380	44.4
France	27,651	1,437,852	2,846,889	50.5
Germany	24,780	1,288,560	3,859,547	33.4
Greece	1,634	84,986	238,023	35.7
Spain	11,262	585,624	1,406,855	41.6
UK	25,408	1,321,216	2,945,146	44.9
US	166,577	8,662,004	17,418,925	49.7

It is expected that this child-raising fund will not only help child-raising families but also boost the whole economy in general. As this currency is only good for spending immediately and not for storing values, every economic player will try to find a way to get away with it, for instance: paying bonus to employees, spending more for food (buying organic food instead of cheap one), repaying pending debts etc., increasing the GDP. Even the government itself will benefit from this system as the economic growth means the increase of revenue base.

5. Proposal 2: partial payment of pension in demurrage-based currency

The second proposal is based on the question about the types of currencies to be used. Polanyi (1977) defined four functions of money as "*means of payment*", "*standard of value*", "*store of wealth*" and "*medium of exchange*", distinguishing between the first one (something to be spent when somebody "*under an obligation*" is "*settling the obligation*", such as tax, fines and insurance fee, without receiving nothing particular) and the fourth one (something to be spent to get goods and/or services in exchange). The pension is a system to guarantee the elderly's economic life after having worked for decades, so we can easily assume that most of the amount they receive will be spent while little, if any, is saved.

This viewpoint highlights some contradictions between the function of money and the way it is created in terms of the pension system: while it pretends to provide the retired with the financial means of subsistence, therefore "*means of exchange*", the very fund comes from people's contribution ("*means of payment*") in the very currency created by financial institutions for commercial purposes. In other words, the availability of money that workers must pay to support elder ones is at the mercy of the bankers' capitalistic logic of putting money into circulation only when it is profitable to do so. It is therefore necessary to introduce changes to achieve a consistency between how money is issued and what it does.

There is an important point to consider, which could be as novel as an egg of Colombus but also as confusing as the chicken and the egg question: To reverse its income and expenditure structure. Currently what is needed to start a pension system is to charge fees from workers to have enough fund to redistribute among pensioners, and the system has to be always in the black, in other words the system first collects money and then pays it back to the populace. However, based on the fact that everybody within a country is obliged to pay social security, it is possible for the system to begin with paying before collecting it, since this currency has the collateral to be spent for the citizenship to comply with its duty to contribute for social security. In this case, the pension system is always in the red, but the money issued in this way is always guaranteed to be good as "*means of payment*" to the government.

Therefore, the National Committee for Public Liquidity (NCPL) will be founded as the authority in charge of the parallel currency to be depicted below. Similar to the Money Creation Committee (Jackson and Dyson: 2012), it will be an independent organization free from any interference from the national government or the banking sector, although it is accountable for the parliament for its performance. Its main role is to control the money supply of this parallel currency in order to avoid inflation (deflation is more unlikely to happen as far as there is plenty of official tender in circulation). NCPL, however, will do its own surveys to tell the government how its parallel currency should be spent, with the aim of ensuring that money should be spent for those purposes which are incompatible from the capitalist logic of money creation. Typical purposes include, for instance: education, welfare, benefits for the unemployed and allowances for refugees, among many others.

Once NCPL is established, it issues the amount of parallel currency that it considers adequate for certain purposes, and the partial payment of pension in it is the first step towards the independence of the public sector from the money created by commercial banks for profit-

seeking purposes. Although there are different possibilities to introduce this parallel currency, some observations on the technical aspects will be highly useful.

- **Support medium**: Either printed scripts (paper / polymer etc.) or electronic media (including mobile phone support), or combining both of them is possible. The printed scripts, such as "labour certificate" in Wörgl, Austria between 1932 and 1933 and "*quasimonedas*" in Argentina issued by different provinces as regional vouchers between 2001 and 2002, are quite easy for people to accept thanks to their physical similarity to official tenders while they need to be meticulously designed and fabricated not to allow counterfeit pieces to be circulated, on top of posing difficulties if demurrage is applied. Electronic media, on the other hand, are quite effective in solving these issues raised in printed scripts, on top of facilitating the accounting system, but at the same time enough attention to be paid to those who are not good at handling electronic devices (such as e-banking, smartphone applications and/or smartcards), especially among the elderly who are more reluctant to use such devices.
- **Collateral**: Although theoretically it is possible to issue this parallel currency with collateral in official currency to enable bearers to redeem in case of liquidation (= to force NCPL to have enough amount of reserve), it is not necessary to do so, because of its very character to be accepted as means of payment for social contribution (and tax etc. if the government chooses to do so.)
- **Demurrage**: This system is always effective on discouraging the hoarding of money and on stimulating its seamless flow. It is to be taken into account, though, that in this case the demurrage rate need not be as high as in the Proposal 1, as this currency will be anyway withdrawn from the circulation when people pay social contribution. The constant issue of this parallel currency is necessary not to exhaust the money supply, which also means that NCPL needs to study all the relevant economic indicators (especially consumer price index in general and for a series of essential goods and services) to see if this parallel currency is achieving its multiplier effects without raising prices.

One advantage of this system is that the money supply in this currency is quite stable without being affected from economic ups and downs. Banks create more money during the boom while they are unwilling to do so once it ends, making it harder to pay social securities during the economic recession, but NCPL guarantees the influx of a certain amount of monetary influx into the national economy. On top of that, this currency is valid only within the national border and can be exchanged neither with the country's legal tender nor with foreign currencies, forcing its bearers to spend it at the domestic market and boosting this country's economy, stimulating the import substitution.

The next step to be taken into account is that, once this system is well accepted in the whole population in this specific field of the pension system, the national government can enhance the use of this parallel currency for other purposes, provided that this means of payment is good for paying tax and/or other fees due to the government, such as university tuitions, highway tolls and postal services, among many others. Its general acceptance for a wide variety of services from the State is for sure a good collateral for the whole range of economic players in the country. Obviously NCPL should pay special attentions to avoid putting too

much amount of money into circulation, because it could trigger an inflation, lowering this currency's value. It is indispensable that the monetary authority in charge of controlling this parallel currency should keep an eye on the move of prices to detect the slightest sign of gap between it and the legal tender, trying to inject an appropriate amount of money supply to stabilise the prices.

6. What is at stake

The author is to admit that these proposals are far from perfect, but it is also true that the goal of this study is not to show flawless solutions which can be introduced universally to any country, but to depict draft plans to be modified later to adapt them to each country's own socioeconomic circumstances. On top of a number of potential legal hurdles, which are so specific to each country's legislative system that they are out of this study's scope, the following six issues can be nominated and discussed.

i.) How to deal with international trades?

Nowadays no country is self-sufficient and is in fact more and more dependent on imports and exports. Obviously the portion of international trade varies a lot from one country to another and in general smaller countries, especially city states (like Singapore and Hong Kong, although the latter is not an independent state), will find it difficult for its basic needs to be satisfied domestically, as most food is currently imported and because of the lack of available farm within the territory. Some modifications in this system will be required to enable bearers of this currency to satisfy their own needs.

ii.) Inability to repay existing debts in this parallel currency

One of the most important reasons for every economic player in any country to try to make money is to comply with their financial obligation to repay debts, but the very characters of this parallel currency, such as demurrage and invalidity abroad, make itself little attractive to creditors. Commercial banks, the main creators of official currency nowadays, refuse to accept it when loantakers try to service their debts because of the different natures. Let us see furthermore what it means.

When the commercial bank gives a loan of 10,000 € to Adam (in this case we provide that this loan is interest-free to make the picture as simple as possible) and he spends this money to buy a car from Becky, she keeps the right to withdraw this amount of official tender from this bank. Adam achieves to get equivalent of 10,000 € in this parallel currency from somewhere and tries to repay it to the bank. Now the bank has the active of 10,000 € in parallel currency and owns 10,000 € in legal tender, but Becky is likely to refuse this parallel currency due to some characteristics that are not compatible with her interests.

The solution would be to allow banks to provide loans in this parallel currency, allowing those with too much amount in parallel currency to reduce their loss in demurrage while providing low or zero interest-rate loans to those in need of liquidity. For example, if the demurrage rate is 5.2% per annum (0.1% per week), it is much better for Charlotte, who has 10,000 € in such a currency, to deposit it at a bank and will retrieve 9.740 € in a year (after deducing the fee of 260 € to be charged from the bank) than to keep it at hand and lose 520 €. The borrower takes 10,000 € and pays back exactly the same amount in this currency on the

due date, and the bank takes the difference of 260 € in parallel currency, to spend for its employee and/or pay for other costs (tax, social security, utilities…) but not to redistribute to its stockholders.

iii.) How will NCPL's members be nominated?

It is OK for NCPL to be independent from any existing public structure, but there should be an open process to choose people in charge. The ideal way would be the elections, but it is crucial to raise enough awareness all over the population so they be eager to demand this procedure which is essential on achieving the democratic management of the monetary system.

iv.) How to create more economic impact in the least developed economies?

This challenge is especially related with the Proposal 1. While 5.2% of GDP per capita is a significant amount for developed countries (such as $ 2,839.20 per year in the US and $ 1,574.56 per year in Spain), parents in less developed ones will receive much less subsidy (such as $ 403.00 per year in Bulgaria, $ 171.6 per year in Egypt and $ 84.76 in India) and it is doubtful if this small benefit is enough to help child-raising parents and/or to boost each country's national economy. Lower prices in such countries will diminish the economic gap and we could get another picture closer to the reality on choosing to use GDP per capita from Purchasing Power Parity (PPP) instead of the GDP nominal which is used in this study, but the impact on the economy is still far from enough to really cover the costs which are currently born by parents.

v.) What sorts of public expenditure are adequate to be paid in this parallel currency?

The public sector spends its money for a variety of reasons, ranging from social welfare (pension, benefits…) to infrastructure (roads, hospitals, schools…) and even military logistics, on top of paying official's salaries. Some goods and services are provided exclusively by foreign companies and/or other businesses that are unlikely to accept this means of payment while others find it more useful because of the versatility. It will be NCPL's one of the most important tasks to study which sectors are more appropriate for the use of this currency and to order the government to spend it for such purposes.

vi.) Is it feasible to introduce this parallel currency completely as an electronic currency?

Electronic currencies are quite effective, especially on introducing it with demurrage as it will make it much easier to deal with the cumbersome operations, but at the same time it poses the question that such a system is not necessarily friendly for everybody, above all in case of the Proposal 2 whereby beneficiaries will be the elderly who sometimes find it very complicated, if not impossible, to learn new technologies. Special attention should be paid to figure out if this support medium is socially, economically and culturally feasible in a given country, another traditional medium (like paper scrips and coins) is better or it is worth considering the combination of both.

Conclusions

Our money system has different built-in issues, such as its pro-cyclical character, short-termism, compulsory growth forced by compound interest, concentration of wealth and degradation of social capital, but the most important one is the fact that most of money creation is done by commercial banks, as the public sector's income is up to the amount of money created by these profit-seeking financial institutions.

Different proposals have been done since early times in the 20th Century to let governments recover its power to issue money, such as chartalists, Chicago Plan, Jackson and Dyson (2012) and Yamaguchi (2013) and Benes and Kumhof (2013). These proposals are unanimous in seeing the feasibility of a new system managed by the government and it is worth paying attention to such arguments.

Proposal 1 deals with the basic income for child-raising families. 0.1% of GDP per capita will be paid to parents of each child every week (5.2% of GDP per year) in this parallel currency with 2% of weekly demurrage. On supposing that this currency is spent once a week, Bulgaria, China, France, Greece and UK will see their GDP increased between 35.7 to 50.5%, on top of helping child-raising families financially.

Proposal 2 requires a paradigm shift in the sense that the pension system, currently based on people's previous contribution, will work based on the people's obligation to pay social securities at a later stage. The National Committee for Public Liquidity (NCPL) will be created to inject money constantly in certain fields to enhance the public welfare.

There are some issues to solve, though, such as international trades (as these parallel currencies are only valid within the national border), repayment of existing debts (which is only possible in traditional legal tender) and how to nominate those who control this parallel money system, among others. These proposals' advantages are worth being examined and further studies will be necessary to do more feasibility studies.

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VARIETIES OF CAPITALISM AND EUROPEAN MONETARY INTEGRATION : WHAT LESSONS FOR THE WESTERN BALKAN COUNTRIES ?

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Abstract: *As an unified monetary space, European Union has the unique characteristics of gathering countries with different market economy models, which show equivalent performances despite their institutional differences. According to the approach of the "diversities of capitalism" of Hall and Soskice (2001) and Amable (2003), these economies can be ranked in four categories, liberal, social-democratic, continental Europe and Mediterranean market economy models. The integration of Central and Eastern Europe Countries (CEEC) doesn't question this clustering, although the last both (Continental and Mediterranean) models has been weakened by the general move towards more liberalized economies. Although the newcomers in UE adopted generally a mix of the characteristics of each of theses models, they can anyway be classified in the category of Continental and Mediterranean models. While these countries still present large disparities in their relative performances, they are on the way of a catch up process that is also implemented by non UE members East countries – including West Balkan countries. West Balkan countries should find their own way in designing their market economy model, in developing institutional complementarities between market organization and implementing their own corporate governance model.*

Key words: *Economics of innovation, Economics of knowledge, Technological Diffusion, Convergence and catch-up process.*

JEL Classification: *O140 O47*

Over the last thirty years, European Union has been confronted to a double challenge. On one hand the Union had to challenge the others most advanced economies, USA and Japan, on the economic frontier of knowledge and innovation. On the other hand it had to integrate in the same time a wider range of newcomers, at first from Southern Europe, and after from Central and Oriental Europe, with a lot of economic, social, and political disparities. This challenge has been moreover sharpened by the fact that European economic space was composed of countries with countries of very different social, political and economic backgrounds. At a first glance this political challenge has been solved by creating a unified market for goods and in promoting liberal policies, which in a way contribute to criticisms against its political project. But this liberalization of European Economies didn't entail their variety, especially in the working of their factors markets (labour and capital).

European Union has still the unique property of gathering a great number of countries characterized by various organization models, which differs from the homogeneity of the American and Japanese Economies. These characteristics have been largely documented by the approach of the "varieties of capitalism" (Hall and Soskice, 200&), from the early book of M. Albert to the synthethis of B. Amable (2003), which proved that despite increasing integration European countries continued over the last twenty years to present very different differences over a large range of indicators. According to this approach, European countries can be clustered into four models, the liberal (or anglo-saxon), social democrat, continental Europe and Mediterranean models that differ in their market organization and institutional complementarities.

The aim of this paper is to address on one hand the question of the resilience of this European model to the integration of Central and Oriental Europe, and on another the question of the specificity of the model of newcomers in the European Union. These countries, as catch up countries, gave up a state-owned economy to adopt a free market economy, but show specificities that are far from the anglosaxon model that was often given as an example. Do they create a specific model, or should they be deemed to integrate the model of more advanced countries? It is generally accepted that these countries adopt a mix of Continental European and Mediterranean economy models.

One of the problem that meet these countries during their transition was that they adopted free market institution without creating institutional complementarities, creating distorsions in the resources allocation and massive wealth transfers thanks to the rents created by their liberalization. The third object of this paper will be to discuss of the lessons that could be drawn from this experience to the Western Balkanic countries on their way to economic integration. This question is worthwhile as these countries experienced some varieties of state-owned economy, which will help them to find their way to their economic integration.

In order to address these questions, we will in a first point detail the approach of diversity of capitalism, then we will point out some stylized facts concerning this approach, and after we will discuss of the PECO integration during the last years. At last we will discuss of the lessons West Balkan countries can learn from this historical experience.

I The approach of varieties of Capitalism: A reminder

The approach of variety of capitalism takes its roots in the book of Michel Albert, *Capitalisme contre capitalisme* (1991), which opposed two models of capitalism, the "Rhenan Capitalism", and the "Anglosaxon capitalism". Some farther sources of this approach can be found in the comparative approach of A. Shonfield, which detailed the institutional, economic and social differences in each national advanced economy. But the main interest of the Albert approach was to create a simple typology, which helps to understand the difference in the economic organisation of advanced economies. While the first (e.g. the Rhenan model) is ruled by collective negociation on the labour market and a corporate governance linking the different stakeholders of companies (union, shareholders, banks and financial intermediate), the second is more deeply grounded on market mechanisms, with decentralized negociations for workers and a corporate governance controlled by shareholders and the financial market. The main idea of Albert was to explain that these two models didn't converge over time, mainly because each of them exhibits equivalent economic performance. Or in another words, it means that both models can reach the same level of performance without confirming the superiority of another on another, and that the anglo-saxon model was not the ultimate reference of an efficient market economy.

The seminal idea of M. Albert knew an academic revival in 2001, when Hall and Soskice (2001) linked this dichotomy to the notion of "varieties of capitalism": then the Rhenan Capitalism became Coordinated Market Economy (CME), while Anglo Saxon Capitalism became "Liberal Market Economy" (LME). Hall and Soskice created furthermore a third category, as "Mixed Market Economies", which shared some of the characteristics of both first categories, and that includes most of the continental European economies. As one can check on the following table, while all northern Europe countries (including Germany) belong to the CME category, France and the South Europe countries belong to the MME category.

Table 1: Country division

LMEs	CMEs	MMEs
Australia	Austria	France
Canada	Belgium	Greece
Ireland	Denmark	Italy
New Zealand	Finland	Portugal
United Kingdom	Germany	Spain
United States	Iceland	Turkey
	Japan	
	Netherlands	
	Norway	
	Sweden	
	Switzerland	

Source: Hall and Soskice (2001)

As said before, this approach lies mainly on the comparison of the working of factor markets, mainly on Labour and Capital markets, which reveals important differences in the firm

organization and in their corporate governance. More important, it emphasizes the institutional complementarities that link the working of these different markets. A further step in this approach has been made by the works of B. Amable, (B. Amable, 2005, 2011). His basic idea was to test the robustness of the variety of capitalism typology by using a statistical data analysis (a principal component analysis) over 24 variables on 21 countries, on data concerning 5 institutional fields, e.g.:

- Competition on Product market
- Labour market institutions and wage determination
- Financial intermediation and corporate governance
- Social protection
- Education system

Principal Component Analysis permits to define an automatic classification of countries that gathers countries with the same characteristics over these 24 variables.

This new analysis leads to a more refined typology, with no more than 5 different kinds of market economies:

- Liberal (or anglo-saxon) economies (USA, UK, New Zealand, Ireland),
- Continental European Model (France, Germany)
- Mediterranean Model (Portugal, Spain, Greece)
- Social Democrat model (Scandinavian Countries, Nederland)
- Asian Model (Japan, Korea).

While the first model suits with the LME Economy, the following two suits with MME Economies and the last two suit a bit more with a CME economy.

Complementarities between these variables can help to explain the different group of countries created by data analysis. For example in the anglo-saxon economies (for liberal market economies), high competition on product market requires a high flexibility of company management and a high capital mobilization capacity on financial markets. This market provides to economic agents a wide range of tools in order to diversify theirs assets and limit the consequences of risk and of the weakness of Social protection. On the contrary in the Social Democrat model (Sweden, Finland, Danemark) while enterprises are also submitted to a fierce competition, they adapt their strategy by different mechanisms, grounded on a high labour flexibility, a strong social protection and an active education and training policy that allows a constant adaptation to the permanent technological change (flexsecurity). Firms are also provided with stable financial resources that help them to avoid the pressure of financial markets. The continental (France, Germany) and mediterraneean European models (Spain, Portugal, Greece, Italia) differ on all these criteria, mainly on the level of competition on market products, and on labour and social protection.

One of the main questions raised by this approach has been that of the adaptation of the European continental model to globalization and the enlargement of European Union: both phenomena entail an increase of competition on the product markets and a rising pressure for the liberalization of their labour and financial markets. This change can be in contradiction with the systems of social protection and their labour market organization. These systems are therefore weakened: their cost is increasing, while they loose a lot of their efficiency. But the answer to this threteaning could not been found in the adoption of the anglosaxon model: on the contrary, the experience of Scandinavian countries learn that this

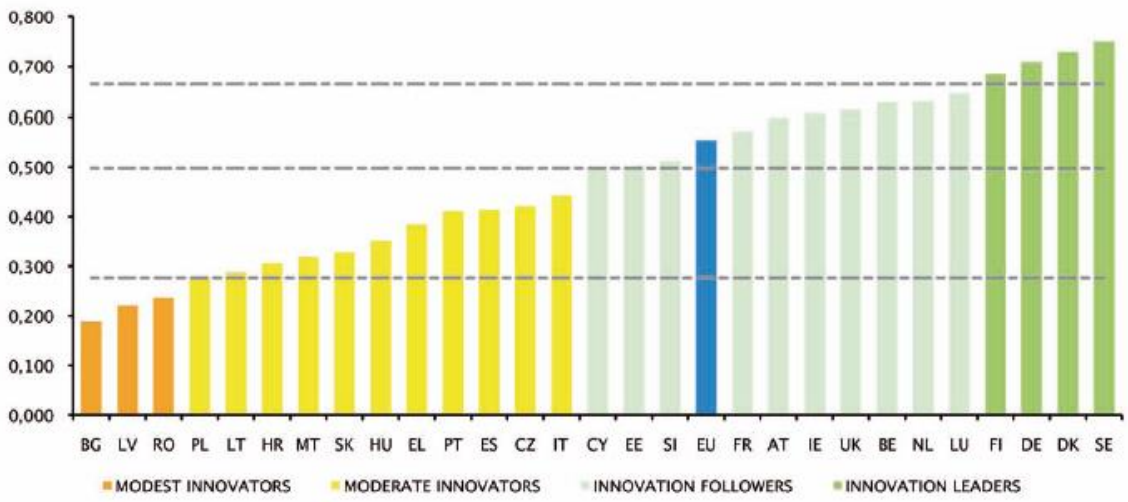
answer can be found in strengthening social protection, workforce training, and in a massive investment in the education system.

Since the publications of the books of Hall and Soskice (2001), and Amable (2003, 2005), the robustness of this approach has been tested and discussed in a FP7 project, the ICATSEM (for Institutional Changes and trajectories of socio-economic models), which ends in 2012. Its aim was to study both evolution of the european models and of the effect of European enlargement on these model. We will detail further its results.

II Some Stylized Facts on Varieties of Capitalism

One of the main discussions related to the variety of capitalism approach is linked to the compared performances of each market economy model. Most papers converge on the fact that the economic performance of each model didn't present a lot of differences between countries, except for Mediterraean countries. On the contrary on a lot of criteria, continental European economies and social democrat economies present high level performances, which in some case can exceed the performance of anglo-saxon countries. The most prominent proof of this assertion can be found in the comparison of the R&D intensity of each economy, or on their innovative performance according to the Innovation survey European survey. The Innovation European Survey ranks the European Countries in four categories, "innovation leaders", "Innovation followers", "moderate Innovators" and 'modest Innovators" shows social democrats economies are heading this survey.

Figure 1: EU Member States' innovation performance



Worldwide comparison of Innovation performance is not easy to realize, as the European Union performance aggregate very disparate results. South Korea, which belongs to the model of Asian Economy, obtained the top result, a Coordinated Market Economy, gets the best

results, ahead USA and Japan. More generally, these international comparisons show the emergence of Asian countries, which belong to the category of Coordinated Market Economies, and catch up the innovative performance of the most advanced countries in a very quick and impressive way.

Figure 25: Global innovation performance

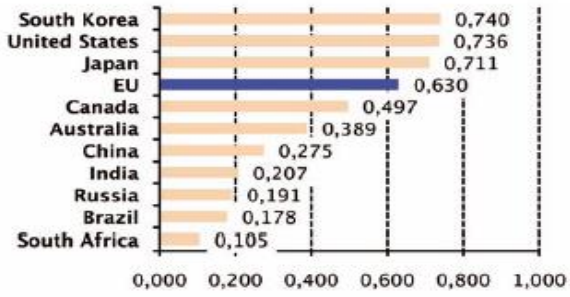
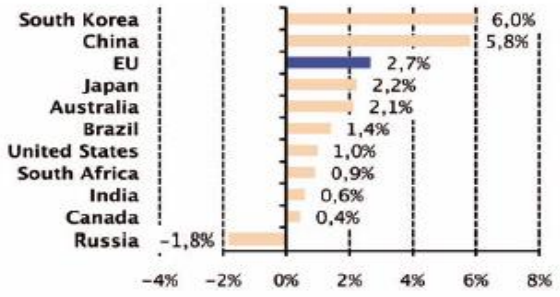


Figure 26: Global innovation growth rates



More detailed results has been found using the comparison of R&D intensity (the ratio of R&D to GDP), they confirm these results, as the following figures proved.: Social democratic and continental Europe economies shows on average higher R&D intensities than the liberal economies.

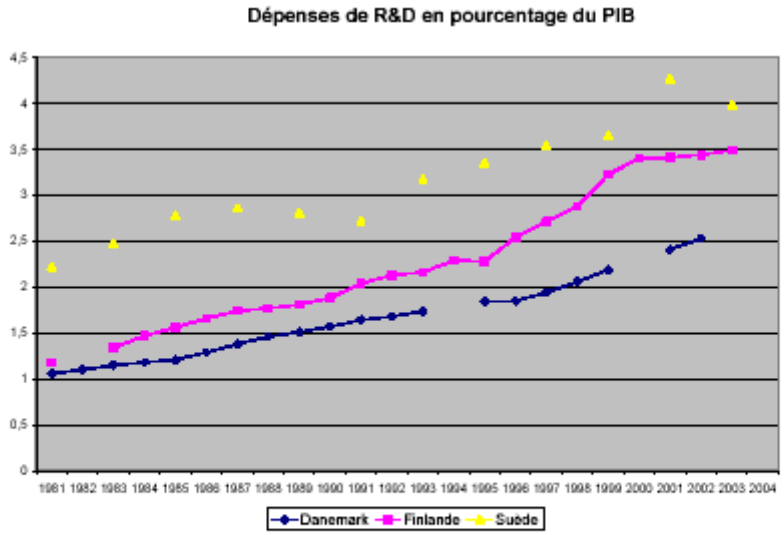


Figure 4. Dépenses de R&D en pourcentage du PIB, pays du modèle social-démocrate. Source des données : OCDE.

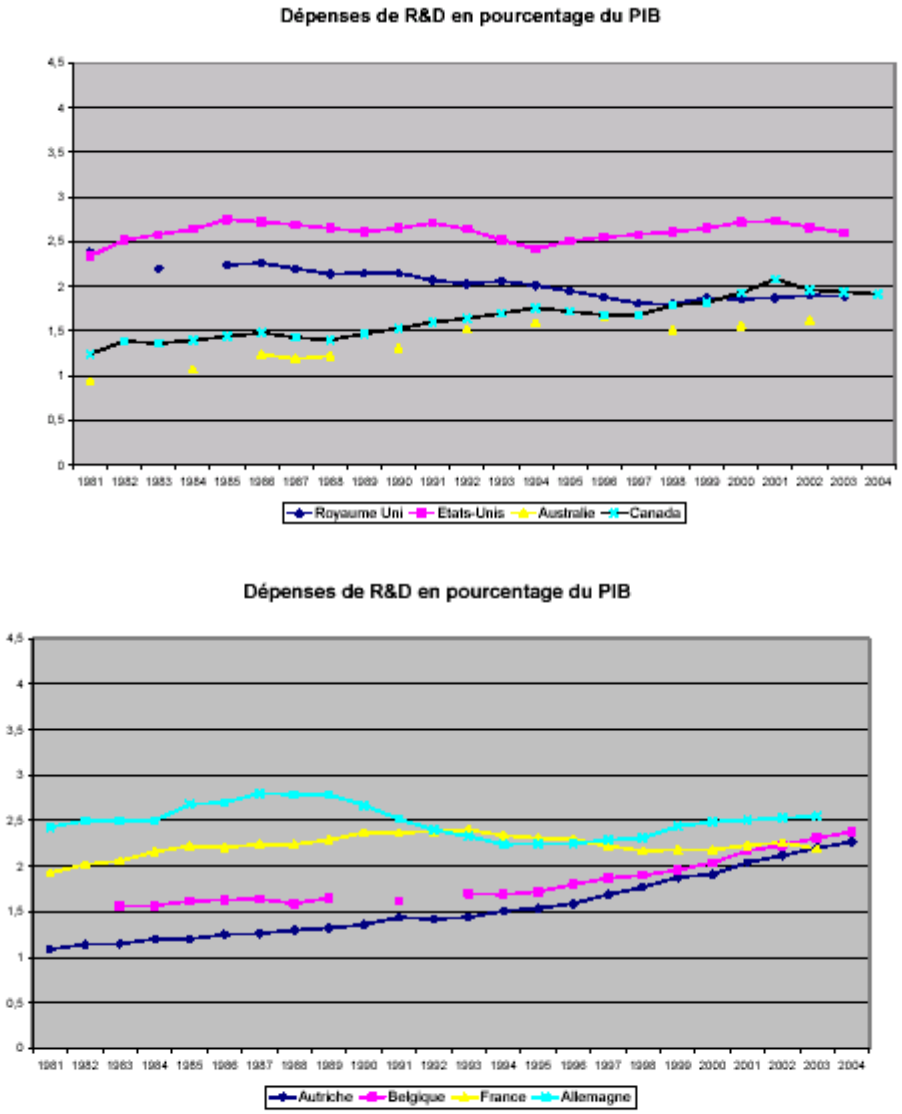


Figure 5. Dépenses de R&D en pourcentage du PIB, pays du modèle continental européen. Source des données : OCDE.

This result has been confirmed by an original study (Akkermans , Castaldi et Los, 2006) which tried to determinate whether the liberal market economies innovate "more radically" than the coordinated market economies. Using patent data, they measured over 20 sectors the origin country of patents ranked over three indicators of the radical character of patents: a first criterion is the number of "measure of citation received" (NCIT), a second is a measure of generality (GEN) and a third a "measure of originality" (ORI)). Then they determine whether Liberal Market Economies (L) or coordinated market economies (C) head this ranking. One can check that results are mixed, according to different activity sectors. : while LME countries dominate the CME countries on the Originality criterion (27 Sectors on 29), results are quite different on the Generality of patents (equality for both categories) and on the Number of citation index (14 for CME and 9 for LME). So it is quiet difficult to give a clear-cut result from this study, depending on activity sectors each category of economy can innovate more radically than the other.

Table 6: Differences in Radicality between LMEs and CMEs (by Industry)

		NCIT	GEN	ORI			NCIT	GEN	ORI
1	Food	L***		L***	22	Special industry mach.	C***		L***
2	Textiles		L**	L***	23	General industrial mach.	C***	C**	L***
3	Inorg. chemistry			L***	24	Refrigeration mach.			
4	Org. chemistry	L***	L***	L***	25	Misc. non-elec. mach.	C***		
5	Plastics			L***	26	Elect. transmiss. mach.			L***
6	Agr. chemicals	L***	L***	L***	27	Electrical industrial app.	C***		L***
7	Soaps	L***			28	Household appliances		L***	L***
8	Paints			L***	29	Electrical lighting	C***		
9	Misc. chemicals		C**		30	Misc. elect. machinery	L***	L***	L**
10	Drugs	L***	L***	L***	31	Radios and TVs		L***	L***
11	Oil and gas		C***		32	Electr. components	C**	L***	L***
12	Rubber			L***	33	Motor vehicles	C***	C***	
13	Stone and glass		C*	L***	34	Missiles			
14	Primary ferrous prod.				35	Ships and boats			
15	Non-ferrous metals	L**		L***	36	Railroad equipment			
16	Fabr. metal prod.	C**	C***		37	Cycles and motors	C***	C***	C*
17	Engines	C***		L***	38	Misc. transport equipm.	C***	C***	
18	Farm machinery		C***	C***	39	Ordinance	L***	L***	L***
19	Construction mach.		C***		40	Aircraft	C***	C**	L***
20	Metal working mach.	C***		L***	41	Instruments	C*	L***	L***
21	Office mach.	L***	L***	L***	42	Miscellaneous			L***

Blank cells indicate no significant difference in radicality between LMEs and CMEs. *: significant at 10%, **: significant at 5%, ***: significant at 1%.

Source : Akkermans, Castaldi, Los, 2006

Others results has been obtained using model studying the link between this approach and the proximity of economies with the technological frontier. More precisely, each system differs by their production factor market organization, which is linked to their level of product market regulation. Papers proved in this field that the proximity of this technological frontier was not linked with the level of liberalization of the product market. (Amable, Ledezma, Robin (2014), Amable, Demmou, Ledezma (2010). The main reason underlying this result is linked to the controversial effect of Competition over Innovation: in some case a high market power can improve innovation, while in another the converse is true, competition may also encourage innovation.

III Did Central and Eastern Europe Countries Economies create a new model?

Since the first papers and books in this field, which were written in the early 2000s, attempts have been made in order to study the evolution of European varieties of capitalism, and on the resilience of these variety towards the arrival of newcomer over this period.

A first paper (Berrou and Carrinzaux, 2005) studied the characteristics of 3 newcomers (Czech Republic, Poland, Hungary) and of Turkey using the same data analysis. Not surprisingly, they found the first three could be affiliated to the Continental Model, despite the weakness of their financial markets and of their education system, and welfare state, while the third will belong to the mediterranean group. Some differences appeared between these countries, especially concerning the intensity of market product competition, higher in Hungary than in the other member of the group. By this time the authors question the opportunity to create a new group including this transition economies (see following table),

but as available data were concerning the period of the immediate accession of this countries to European Union, it was worthwhile that this category will be rather unstable and would adopt other models during this integration.

This point has been further documented in the framework of the FP7 ICATSEM project (for Institutional Change and Trajectories of Socio-Economic Models, ICATSEM, 2012), which has been made later and takes account of the effect of European integration on the Central and Oriental countries. The idea was to retrieve the Amable Data Analysis over a panel of 16 european countries, using 91 variables on 16 Europeans countries, including 4 newcomers (Czech Republic, Hungary, Poland and Slovak Republic) over 3 base years (2000,2004,2008). The main results obtained by the FP7 project have been to prove that two evolutions have appeared over the first 10 year of the 2000'.

Tableau 3 Institutional Characteristics of the different form of Capitalism

Les formes de capitalismes	Marché des produits	Marché du travail	Systèmes financiers	Protection sociale	Education
Modèle européen continental	Réglementation des activités entrepreneuriales	Politique de l'emploi très active	Intermédiation bancaire	Système public de protection sociale relativement développé, notamment dans le domaine de la santé	Système éducatif public légèrement orienté vers le secondaire et aux "performances" moyennes
Modèle méditerranéen	Concurrence extrêmement réglementée notamment au niveau de l'activité entrepreneuriale	Marché du travail protégé par une législation très stricte	Marchés financiers peu développée	Protection sociale limitée	Système éducatif orienté vers le secondaire et peu "performant"
Modèle social-démocrate	Marché des produits assez déréglementés avec notamment de faibles charges administratives pour les entreprises	Intervention publique et présence syndicale forte	Intermédiation bancaire	Système public de protection sociale très développé	Système éducatif public très "performant"
Modèle libéral de marché	Concurrence libre et non réglementée	Marché du travail extrêmement flexible	Système financier de marché	Protection sociale très peu développée	Système éducatif tertiaire privé
Modèle asiatique	Existence de charges administratives limitant l'activité entrepreneuriale	Réglementation existante mais libertés syndicales limitées	Economie d'endettement	Protection sociale peu développée	Système éducatif tertiaire privé
Modèle d'Europe centrale et de l'est ?	Intervention publique forte et protection vis-à-vis de la concurrence extérieure	Marché du travail assez flexible	Système financier atypique et marchés financiers très peu développés	Protection sociale faible	Système éducatif peu "développé"

Source: Berrou and Carrinzeaux, 2005.

First, undoubtedly European markets evolved over this period toward a more liberalized organization, whatever their model (excepting some Mediterranean countries, mainly Greece). This liberalization concerned not only labour and financial markets, but also the product market, the main example being that of Germany. But in the meantime, social protection systems have been reinforced, and welfare state systems keep on improving. This double evolution doesn't question the partition of countries between these categories, but in a way they mean that Continental European and Mediterranean economies have ben weakened during this period. Put in another words, that means European Economies are now converging to two opposite types, Liberal Economies on one side, and Social Democrat economies on the other, that appears as two stable poles in the typology of market economy models. On the contrary Mediterrannean and Continental Economies know dramatic changes over the last years. We can check on the following table that the change in statistical distance between model concerns first of all the Mediterannean model, which became closer to The European Continental and Social Democratic models, while the Continental model become itself closer to the liberal model. It means that the Continental model lost a part of its specificities and of its coherence, because of the arrival of newcomers of different characteristics, and because of the weakening of their labour and financial markets specificities. Central and Oriental Europe Countries shows more and more characteristics of Liberal Economies, even if the working of their financial market is far from that of an anglo-saxon economy. On the other hand, mediterranean countries (except Greece) evolved towards the continental Europe model.

Table 4

Relative change in statistical distances (2000-2008)				
	Continental	**Liberal**	**Social Democratic**	**Mediterranean**
Continental	0%	-16%	-6%	-38%
Liberal	-16%	0%	-17%	-14%
Social Democratic	-6%	-17%	0%	-22%
Mediterranean	-38%	-14%	-22%	0%

Source: Berrou and Carrinzeaux, 2005.

According to the paper of Berrou and Carrincazeaux (2005), Central and Oriental Europe countries, newcomers in the Europeans Union, suits quiet well with this typology. Globaly they still belong to the european continental model, with some characteristics of the anglosaxon and mediterannean models. This situation should not be permanent: it means that these countries won't be a part of a new model and that they will adopt one of the models of the leading European countries.

The main difficulty that encounter Central and Eastern Europe countries during their transition are linked to the asymmetry of market liberalization: CEEC experience learns that if it has been easy to liberalize all markets (Labour, Financial, Goods), it has been far more difficult to improve effectively competition on these new markets. While competition rises sharply on labour market, it hasn't be the case on good and capital markets. As Financial market won't have the same maturity and openness of the other markets, it could lead to a rise of inequality and corruption, and by the end to a misallocation of resources. In a way the affiliation of these countries to the Continental Europe model is a bit far-fetched, as these countries doesn't present the same complementarities in the working of their different markets and institutions. Creating institutional complementarities would help these countries to improve their overall performance, mainly by adopting a specific corporate governance model. From this point of view Balkan countries have a chance to develop their own model, thanks to their former historical experience.

IV European Integration and Economic performance of newcomers

As catch up countries, is it quiet evident that CEEC Countries doesn't present the same performance than the economies of more advanced economies, especially in the field of Innovation. As we saw on the European Innovation Scoreboard, Central and Oriental countries belong to the category of" modest innovators", with very low R&D intensity (below 1% of GDP). Another study on the South, Central and Eastern Europe proves that the investment in the knowledge industries is weaker than in Western Europe, even when the sectoral structure of these countries is taken into account. (J. Meriküll, R. Eamets, U. Varblane, (2009).

A few studies have been made in this field on other eastern countries. The most prominent study has been made by R. Veugelers (2010). Using a large panel data over 24 countries from Central and Eastern Europe, the Caucasus and Central Asia (CEECCA) countries, including Balkan countries, this study tried to test their ability to develop a knowledge based growth path or to have the potential to develop it in the near future. More precisely, this study clustered the CEECCA Countries according to their ability to "buy", or to "make" new technologies: it can be checked that Balkan countries mostly belong to the bottom category of "Innovation weak" countries, except Croatia which belongs to the category of "Innovation active" economies. It is important to point out that newcomers in the UE belongs already to the latter category, except Bulgaria and Romania, which for a lot of point of view have the same characteristics than the Western Balkan countries.

Table 5 Ranking of the CEECCA Countries by Innovation Activities

				GDPpc2003	GDPpc 2007
Innovation Weak	I1	Little BUY-No MAKE	Tajikistan, Kyrgyzstan, Serbia, Bosnia, Macedonia	20.7	21.6
	I2	Some BUY-No MAKE	Azerbaijan, Mongolia, Moldova, Kazakhstan, Romania, Armenia, Bulgaria	22.7	27.4
Innovation Active	I3	Mostly BUY-Little MAKE	Latvia, Poland	53.6	62.1
	I4	BUY-MAKE	Slovakia, Lithuania, Hungary, Estonia, Turkey, Croatia, Ukraine, Russia	53.2	58.6
	I5	BUY-MORE MAKE	Slovenia, Czech Republic	92.2	94.5

Note: GDPpc is expressed as gap relative to maximum GDPpc in the CEECCA group, ie Slovenia. Values are subgroup unweighted averages.

Source: R. Veugelers, Assessing the potential for knowledge-based development in transition countries, Bruegel Working Paper 2010/01

From this point of view the integration to the European Union could help the western Balkan countries to adopt a kind of hybrid economic model. The following table summarize the main shortcomings that affect these countries. It details the main characteristics of advanced (USA, UE, Japan), emergent countries (India, Brasil, China) and of the CEECCA countries, in the field of Financial market sophistication, Labour and good market efficiency, Market size and intensity of competition,

Proclivity of trade, Prevalence of FDI, and Day to start Business.

All of these countries shows low scores on each of these criteria, its lowest concerns the “Market size”, then the “labour and goods market efficiencies” and “proclivity to trade”. It is important to point out that the size of market shows also the highest standard deviation with “proclivity to trade” and “Day to start business”. On the contrary, the indicators of “Prevalence of FDI” and of “Day to start business” are quiet high, higher for the first than that of Brasil and China, and than of all other emergent economies. Even if these results aggregate

very different countries performance, they show that European Integration will give an insightful leverage in order to improve their performance. Balkan countries, tough not isolated in this study, share undoubtedly these characteristics, mainly because of their isolation and space fragmentation, and will take a considerable advantage from this integration.

Table 6 Markets prerequisite for knowledge-based growth: Internationally benchmarking CEECCA

	US	Jap	Bra	CN	India	EU15	CEECCA	*CEE CCA Sd*	*CEE CCA-gap*
Financial market sophistication	5.61	4.75	4.36	3.64	4.98	5.19	4.13	*0.47*	*0.74*
Labour market efficiency	5.79	5.09	4.15	4.49	4.16	4.51	4.44	*0.30*	*0.77*
Goods market efficiency	5.32	5.13	3.90	4.48	4.52	5.01	4.09	*0.39*	*0.77*
Market size	6.91	6.15	5.54	6.58	5.96	4.93	3.54	*0.96*	*0.51*
Intensity of Local Competition	6.10	5.90	5.30	5.60	5.90	5.69	4.77	*0.63*	*0.78*
Proclivity to trade	5.68	5.78	3.96	4.82	3.76	5.73	4.37	*0.89*	*0.76*
Prevalence of FDI	5.4	4.7	4.6	4.4	5.2	5.75	4.82	*0.76*	*0.84*
Days-to-start-business	6.88	5.81	1.00	5.06	5.19	6.21	5.65	*0.84*	*0.82*

Source: Veugelers, 2010.

First of all, as the perspective of European Union integration will become closer, the arrival of FDI will increase with time, and will exerts spillover on the whole economies. The future integration to the European union market will furthermore increase the size of the market of these economies unions. Lastly, the proclivity of trade and Day to Start Business will help these countries to boost their growth. On the contrary, it should be important to design the both liberalizations of their goods and labour market in order to create fruitful complementarities.

CONCLUSION

The integration of CEEC countries to European Union experience will help the West Balkan countries to build up a strategy, which will be landed on their own experience and characteristics. This integration will increase FDI investment and flow trade, which will offset their small market size and their isolation. But they should also adopt their own model of market economy and corporate governance, without copying one or another. In a way they should choose between the two opposite European model (liberal or social-democrat),, even if in a first step they will probably be affiliated to a mix of both, as Mediterranean and Continental Europe models.

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Annexe 1 Typology of European Economic Models: Characteristics and complementarities

Source: ICATSEM report, 2012.

Table 4-1: Mediterranean model – Characteristics (Year 2000 – 10% threshold) Spain, Greece, Italy, Portugal, *Czech Republic, Hungary, Poland, Slovak Republic*		
–		+
Licenses and permits system	*Strongly regulated product markets*	Administrative burdens for corporation Administrative burdens for sole proprietor firms Sector specific administrative burdens Barrier to entry in network sectors Explicit barriers to trade and investment Barriers to FDI Scope of public enterprise sector Direct control over business enterprise Involvement in business operation State control Product market regulation
Flexible hours regulation Long term unemployment benefits Trade Union density	*High employment protection, very few active labour market policies, job stability*	Notice and severance pay for no-fault individual dismissal Right to strike in government sector Restrictions on the use of fixed-term contracts Restrictions on the use of temporary workers Unemployment rate Average job tenure
Bank bonds (% end year balance sheet) Flexible credit market regulation International debt issues Merger activity Private bond market capitalization to GDP Share of private credit to households Venture Capital - Total (% GDP) Venture Capital - High Tech (% GDP)	*Low sophistication of financial markets, static, long term relationships*	Bank capital and reserves (% end year balance sheet) Concentrated ownership
Share of family-related expenditure in TGE and GDP Share of incapacity-related benefits in TGE and GDP Share of expenditure on LMP in TGE and GDP	*Basic level of social protection*	Share of old age benefits in TGE and GDP
Public expenditure on education as % of GDP – tertiary Public expenditure on education as % of GDP – all levels Annual expenditure per student – tertiary level Employment rate among the 25-64 with ISCED 34 and 56 Share of labour force with tertiary education Share of population with tertiary education Vocational enrolment in secondary level Expected years of education Gross enrolment rate in all levels, esp. secondary level Average PISA score in mathematics and sciences	*Primary-oriented educational system, short term education, weak vocational training, poor participation*	Expenditure ratio secondary to tertiary Annual expenditure per student – primary level Share of labour force with primary education Share of tertiary graduates in social sciences and business

Table 4-2: Mediterranean model - Complementarities (Year 2000)					
	Product markets	*Labour markets*	*Financial Systems*	*Social protection*	*Educational Systems*
Product markets		A weakly competitive environment permits job stability	A weakly competitive environment permits long-term relationships between banks and industries		
Labour markets	Strong employment protection induces inertia for companies		Strong employment protection does not call for diversity of risk protection	Stability of employment reduces the need for social protection	Stability of employment reduces the sought of improved competences
Financial Systems	A low sophistication of financial products hinders the dynamics of product markets	Inter-temporal risk-smoothing allows stable employment			
Social protection					Poor social protection means that specific skills are less worth investing in
Educational Systems	A low level of competences implies low level of specialization	A low level of competences means unskilled workers		A low level of competences requires less protection	

Table 4-3: Continental model - Characteristic Variables (Year 2000 – 10% threshold) Austria, Belgium, Germany, France, Netherlands		
–		+
Flexible hours regulations Right to strike in the government sector	*Regulated markets, centralized level of wage bargaining, active labour market policies.*	Procedural inconveniences on regular dismissal Public expenditure on active LMP (Job creation) Public expenditure on active LMP (Unemployment)
Bank capital and reserves (% end year balance sheet) Number of listed companies Investors' protection	*Universal banking system.*	Bank bonds (% end year balance sheet) Bank securities (% end year balance sheet) International debt issues
	High level of social protection, taxation system.	Tax revenues from social security – % GDP Tax revenues from social security – % taxation Share of survivors' benefits in TGE and GDP Share of health expenditure in GDP Share of total social public expenditure in TGE and GDP Employees' contribution to tax revenues - % GDP and % taxation
Expenditure ratio primary to secondary Employment rate among the 25-64 with ISCED 012	*Vocational enrolment and focus on higher education and specialisation*	Share of private expenditure on secondary education Vocational enrolment in secondary level Average PISA score in mathematics

Table 4-4: Continental model - Complementarities (Year 2000)					
	Product markets	*Labour markets*	*Financial Systems*	*Social protection*	*Educational Systems*
Product markets		average competitive markets = rigid labour policies combined with incentives	average competitive markets = traditional financing of firms by banks	average competitive markets = redistribution on workers' protection	Competition = need for high skilled workers
Labour markets	employment protection hinders dynamics of products markets		employment protection = long term perspective (no need for short term financial products)	centralised bargaining system = redistributive scheme	active LMP, centralized system = incentives for higher skills level
Financial Systems	Financing by both banks and market			Traditional banking activities affects protection against risks = need for social protection	Traditional banking activities permits private access to higher education
Social protection	High level of social protection based on a taxation system	High level of social protection linked to employment	High level of social protection lowers the need for financial products		High level of social protection facilitates longer duration of studies
Educational Systems	Higher education, vocational = specialisation on product markets	Higher education, vocational = high skilled workers	Relative importance of private funding = need for credit		Poor employment of low skilled workers = need for social protection

Table 4-5: Social Democratic model - Characteristic Variables (Year 2000 – 10% threshold) Denmark, Norway, Sweden, Finland		
–		+
Administrative burdens for corporation Administrative burdens for sole proprietor firms Sector specific administrative burdens Barrier to entry in network sectors Involvement in business operation Administrative burdens on start ups State control	*Little administrative constraints, moderately competitive environment*	
Restriction on the use of temporary workers Existence of a minimum wage	*Strong State implication, strong unionization, no minimum wage and relatively centralized level of wage bargaining.*	Public expenditure on active LMP (Training) Public expenditure on active LMP (Employment incentives) Trade Union Density Long term and short term unemployment benefits
	High degree of bank concentration, relative financial activity combined with traditional banking	Bank concentration Flexible credit market regulation Number of listed companies Merger activity Share of private credit to households
Tax revenues from social security – % taxation Employees' contribution to tax revenues - % GDP and % taxation Share of health expenditure in TGE Share of survivors' benefits in TGE and GDP	*Integral protection system.*	Share of family-related expenditure in TGE and GDP Share of incapacity-related benefits in TGE and GDP Share of expenditure on LMP in TGE and GDP Share of total social public expenditure in GDP Share of unemployment benefits in GDP
Share of private expenditure on secondary education Share of private expenditure on tertiary education Share of labour force with primary education Share of tertiary graduates in social sciences and business	*Publicly funded for all levels of education, importance of health and welfare graduates, strong participation at all levels.*	Expenditure ratio primary to secondary Public expenditure on education as % of GDP – tertiary Public expenditure on education as % of GDP – all levels Employment rate among the 25-64 with ISCED 012 - 34 Share of labour force with tertiary education Gross enrolment rate in all levels, secondary and tertiary Share of tertiary graduates in health and welfare

Table 4-6: Social Democratic model – Complementarities (Year 2000)					
	Product markets	*Labour markets*	*Financial Systems*	*Social protection*	*Educational Systems*
Product markets		Competition requires flexibility of the labour force Absence of state implication on the product markets side transfers on the labour market side.	Moderate competition = little need for short term products albeit dynamic financial places	Workers' protection is required in the presence of competitive product markets	Competition requires a skilled workforce
Labour markets	Strong unionization induces firms' coordination.		Flexibility requires social protection, state involvement translate in little taxation levels		Flexibility calls for constant formation and high skilled workers
Financial Systems	Financing either on a short term and long term view?				
Social protection		High level of social protection permits flexible employment	High level of public social protection lowers the demand for private protection		High level of social protection allows for long-term studies
Educational Systems		Highly educated labour force			

Table 4-7: Liberal model - Characteristic Variables (Year 2000 – 10% threshold) Switzerland, UK, Ireland		
–		+
Communication and simplification of rules and procedures Sector specific administrative burdens Barriers to entry in services Barriers to FDI Scope of public enterprise sector Direct control over business enterprise Product market regulation State control	*Highly flexible product markets*	
Public expenditure on LMP (Total) Public expenditure on active LMP (Training) Procedural inconveniences on regular dismissal Difficulty of dismissal Restrictions on the use of fixed-term contracts Restrictions on the use of temporary workers Short term unemployment benefits Unemployment rates Average job tenure	*Highly flexible and dynamic labour markets*	Individual level of wage bargaining Freedom in hiring and firing decisions Flexible hours regulation
	Very active financial markets, low bank concentration	Financial assets of pension funds (% GDP) Financial assets of investment funds (% GDP) Stock market capitalization to GDP Investors' protection Diffused ownership
Tax revenues from social security – % GDP and % taxation Employer's contribution to tax revenues - % GDP and % taxation Share of old age benefits in TGE and GDP Share of health expenditure in GDP Share of survivors' benefits in GDP Share of expenditure on LMP in GDP Share of total social public expenditure in GDP Ratio public to public and mandatory private social expenditure	*Limited welfare systems*	Share of health expenditure in TGE
Expenditure ratio secondary to tertiary Annual expenditure per student – primary level Gross enrolment rate – tertiary level Share of tertiary graduates in health and welfare	*Strong tertiary orientation, long duration, little specialisation*	Employment rate among the 25-64 with ISCED 56

Table 4-8: Liberal model - Complementarities (Year 2000)					
	Product markets	*Labour markets*	*Financial Systems*	*Social protection*	*Educational Systems*
Product markets		PM flexibility requires LM flexibility	PM flexibility requires short-term products and dynamic financial markets		PM flexibility calls for high skilled workers with a large spectrum of competences and pushes for competitive educational systems.
Labour markets	Individual bargaining facilitates PM flexibility, so do low levels of EP		Flexible labour force (in absence of SP) calls for diverse assets	Flexibility can only afford basic social protection (health)	Flexibility implies higher employment rates of high skilled workers
Financial Systems	Dynamic financial markets associated with short-term profits and need for diversification, and create dynamic product markets. Diffused ownership goes with rapid changes.			High diversification of risks lowers the need for social protection.	
Social protection		Low level of social protection eases flexibility	Low levels of public social protection imply a demand for private protection		
Educational Systems		dynamic insertion on product markets	Importance of private funding (linked to competition), need for financial investments		

MARKET POWER, PROFITABILITY AND RISING CONSOLIDATION OF THE BANKING INDUSTRY IN BULGARIA

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Abstract: *Studying strategies of individual banks often take the backseat in aggregate monetary policies and macro prudential supervision that focus on inflation, output, systematic risks and system-wide distress. In recent years, Bulgarian authorities have been opening up local banking system to foreign competition with the expectation of making it efficient, stable and resilient to shocks. The contemporary academic researches on foreign banks' right to ingress in developing economies do not provide a consensus set on positive results. This study aims to identify the factors that may influence the choices between market power and profitability for both local and foreign banks operating in Bulgaria. The empirical analysis was performed for the period 2004–2014. The results show that stagnation gradually replaced the good for banks earlier period, when it was strong combination between growth in both profitability and market power. Only top two banks were able to sustain the absolute numbers of their profit, this make them contribute from 71% to 63% of the entire profit in the system from 2012 till 2014. Such fact implies market power causes higher and sustainable profitability! Inevitable profit aspirations by other banking groups may fuel further increase in bank consolidation, still more influenced by the forthcoming banking supervision reforms and the banks' asset quality reviews. The research addresses different policies implemented by banks under local use and control, compared to banks having roots in continental Europe and the Greek banks. For a period of six years prior and during the financial crisis of 2007–08, market power and bank profit were more correlated, compared to the next four years. The findings reveal substantial time lag between global and local periods of crisis. The banking shock related to the collapse of the fourth biggest bank in Bulgaria, occurred in 2014 seems to be due to immature political culture, missing internal control, weak supervision performed by the central bank and lacking coherence among governmental authorities, including public prosecution. World Bank, 2015 detailed assessment of Bulgarian observance to Basel core principles for effective banking supervision, confirmed that despite the crisis related to Corporate Commercial Bank it was no breach of existing legal acts, neither default on regulatory requirements and procedures. This should offer one more challenge to the European supra-national institutions to discuss on top political levels positive or negative trends towards bank consolidations, to balance domestic versus international power in bank ownerships, so to enhance integrity, to build cohesive and unified bank supervision, to support financial stability and values of shared destiny for our common good.*

Key words: *banks profit, market power, financial regulation, monetary policy*

JEL Classification: *G01 G20 O57*

1/. INTRODUCTION

The recent global financial crisis evidences that the behavior of financial institutions is critical for the stability of the macroeconomic system, Ryoo (2013). Although deregulations, technological developments and globalization increase competition in the sector, the final outcome is establishment of oligopolistic banking markets in all economically developed countries. Despite relatively small number of top players, Davis (2004) admits difficulties to predict success or failure of a bank. This raises the questions not only on what are the optimal strategies for banks to consider, but also what should be the policies in regulating this industry. The article analyzes correlation between market power and profit generated by banks under local use and control, compared to banks having roots in continental Europe and Greek banks present on the Bulgarian market for ten years period between 2004 and 2014. Current trend towards establishment of a Single Supervisory Mechanism, standardized stress tests, unified rules on managerial practices and remunerations brings more control over the banking industry. It is important to study consequences these new regulatory constraints bring to the market. The article offers authors' viewpoint over contemporary dynamics by discussing strategies of the major banking sub-groups to adapt to uncertain economics, geopolitical turbulences and regulations.

Empirical evidence suggests that regulatory actions taken in resolution of bank failures may vary significantly between territories and cultures. When faced with individual bank failures, most frequently bank supervisors and governmental authorities enforce a private-sector resolution, including policies of "assisted mergers". During systemic bank failures, it was almost certain, that liquidity support based on blanked government guarantees should be granted. However, the literature has not yet investigated determinants of the role of governmental and central bank activities having none common understanding, neither formulated, nor executable bailout policies on place.

Some discussion addresses measures taken by the Bulgarian National Bank and governmental authorities in response to the occurrence of a problematic situation arose with depleted liquidity of the Corporate Commercial Bank AD (CCB) in June 2014. Local conservatorship period lasting for six months, most likely is the longest conservatorship period in the modern banking history! The importance of such a research corresponds to the last issued European Commission staff working document, Country Report Bulgaria 2015 and the World Bank, 2015 detailed assessment of Bulgarian observance to Basel core principles for effective banking supervision. Both documents confirmed that despite the crisis related to the fourth biggest bank in the country, it was no breach of existing legal acts, neither default on regulatory requirements and procedures. It is all about enhanced level of competences experts must have in purpose to understand, discuss and timely prepare reasonable advices when aiming prevention and correction of country local imbalances.

Although discussing politically sensitive phenomenon, this article keeps a strictly neutral position. It avoids to accuse and/or to judge. Ultimately, this paper poses a pivotal and timely question: How is the perception of bank excellency construed within the existing regulatory-administrative framework, and how should it be construed in order to maximize utility for the

society? We propose a rethink of the current output of the industry centered on intellectual transformations and crossdisciplinary integration.

2/. LITERATURE REVIEW

Ryoo (2013) analyzes banks' profit-seeking behavior to clarify the mechanism leading to monetary instability and cyclicality. The key mechanism works through the effect on credit supply. Bank profitability levels reveal the energy banks have in selling credits. In addition bank leverage is important, because it affects the rate of return on the bank capital. When bank leverage and profitability increase, it leads to a further expansion of credit. Banks are competing to gain more and more borrowers, so to distribute more and more loans. As a consequence borrowers' debt ratio increases, so it tends towards a self-reinforcing dynamics. A debt-driven long boom of this kind will inevitably concede itself to a financial contraction. Both profitability and capital mechanisms make such a contraction inevitable, but also unpredictable! When analyzing mechanisms of profitability it seems obvious that the long boom in credit expansion result in borrowers pay more for loans. Production, service and trade companies have limited and frequently uncertain profit levels. Falling profit–to–interest ratios gains more force. When non-financial businesses repeatedly report downtrend in efficiency and increase in losses, banks run to call loans repayment. The massive actions aiming for loans repayment shorten period till market contraction. Dynamics of the bank capital still more underline possible collapse. Rising bank capital during the expansionary phase tends to erode both firms' profitability — via its negative effect on aggregate demand — and bank profitability. Period of relative stagnation follows the credit expansions euphoria. As the economy passes through its critical barrier, the selfreinforcing debt dynamics works. A decline in firms' leverage decreases bank leverage and profitability, thereby leading to a further fall in firms' leverage. Then a reputable banker makes a statement: "We are willing to provide loans, but we cannot find creditworthy borrowers!" If Noam Chomsky would listen, most likely he would reply: "The debt is a social and ideological construct, not a simple economic fact. Furthermore, as understood long ago, liberalization of capital flow serves as a powerful weapon against social justice and democracy. Recent policy decisions are choices by the powerful, based on perceived self-interest, not mysterious "economic laws." Technical devices to alleviate their worst effects were proposed years ago, but have been dismissed by powerful interests that benefit. And the institutions that design the national and global systems are no more exempt from the need to demonstrate their legitimacy than predecessors that have thankfully been dismantled."(Chomsky, "Jubilee 2000").

The analysis of correlations between profitability and the market power has been regular topic in the academic studies on banking. Davis (1985) and Davis (2004) revealed that profit objectives were one of the main characteristics forming an excellent bank. According to Davis, bank excellence did not depend on organizational structure, managerial style and business-environmental factors, such as regulatory constraints, market structure and local competition. Davis noted that open culture, strong shared values among the managerial staff, customer-driven orientation, willingness to innovate, matrix-based management information

system and strong credit process are the key elements to distinguish excellent banks. In contrary to Davis the market power hypothesis provides arguments that environmental factors and especially the high level of market concentration facilitates banks making profit by setting higher prices to customers (Hackethal, Koetter, and Vins 2012).

3/. DATA AND METHODOLOGY

This article employ research methodology approximating the one initially introduced by Stiroh and all (2003) when chronologically describes and analyzes deregulation effects on banks' strategy. Authors explore banks' strategic choices in four segments. Correlations between bank profitability and subsequent change in market share helps to interpret the causal factor, indicative for the studied competitive forces.

The empirical analysis was performed on Bulgarian banks over the period 2004–2014. It separates banks in four groups to better understand influences of their home country into their strategic action into the host country. The core discussion unveils different policies implemented by banks linked to local use and control, compared to banks having roots in continental Europe and Greek banks present on the Bulgarian market. Special attention is given to the top two market leaders. Information related to banks' ownership and numerical data are derived from publicly available reports in Bulgarian National Bank and processed by the authors. Real beneficiary owner, related domestic business endeavors of the beneficiary, strategic values, control and coordination in bank-to-bank relations formed particular sub-groups and dynamics in group-to-group transition matrix. This article uses values of banks' total assets as a measure to derive market share and to assess market power, when profit actually means net result as reported on respective year-end. Possible transfer of domestic assets, including loans from a bank to another entity, positioned outside the country has not been considered as materially important.

4/. EMPIRICAL RESULTS

Foreign bank intention to penetrate Bulgarian market lasted until end of 2007 when UniCredit Bulbank merged with Biochim bank and Hebros bank. The same year KBC Group acquired 75% from the local Economic and Investments Bank. Only two years later, Bank Leumi Le-Israel Ltd decision to exit Bulgaria in July 2009 became a symbol that the trend has reversed and gradually several foreign banks commenced implementing their exit strategies. Israel's biggest bank expanded in Romania and Bulgaria in 2006 to make up from regulatory limits on domestic growth, plus to utilize the large number of Israeli businesses active in the local markets. However deteriorating real estate market, lack of political vision and local market imperfections, make bank to change its strategy. Soon after that MKB Group, Allied Irish Bank, Crédit Agricole, NLB dd. and Tokushukai announced their divestment programs. Contrary to the previous years, the only buyers were Bulgarian banking, financial or entrepreneurial groups.

MARKET SHARE (%)	Prior crisis				Crisis		Shock
	TA 2004	TA 2006	TA 2008	TA 2010	TA 2012	TA 2013	TA 2014
Top two banks	28	24	28	27	26	25	29
… without top two	26	27	22	19	18	15	16
Total Continental Europe	54	51	50	46	44	40	45
Greek ownership	17	24	29	27	23	23	23
Other banks	3	2	2	5	4	4	5
Banks with use and control linked to Bulgaria	26	23	19	22	30	33	27
TOTAL	100	100	100	100	100	100	100

Table 1. Dynamics in relationship between bank ownership and market share

The dynamics in the relationship between bank ownership and market share are presented in Table 1. Crisis period is determined to 2012/2014 as negative results reported in two segments (Table 2). Due to extraordinary situation related to crisis with the fourth biggest bank in Bulgaria, 2014 is entitled as a year of shock.

SHARE IN PROFIT (%)	Prior crisis				Crisis		Shock
	NR 2004	NR 2006	NR 2008	NR 2010	NR 2012	NR 2013	NR 2014
Top two banks	38	33	40	47	71	68	63
… without top two	22	23	18	11	11	-2	18
Total Continental Europe	59	56	58	59	82	66	81
Greek ownership	22	26	24	12	-8	8	7
Other banks	4	5	5	1	5	3	3
Banks with use and control linked to Bulgaria	14	13	13	28	21	23	8
TOTAL	100	100	100	100	100	100	100

Table 2. Dynamics in relationship between bank ownership and net result

Decline in both market share and profit of Greek banks and banks from continental Europe in two years period following the world crisis, implies for high influence derived of external political and economic factors. Top two market leaders are the only who keeps predictable performance and stability.

Net Profit Margin (%)	Prior crisis				Crisis		Shock	Average
	2004	2006	2008	2010	2012	2013	2014	
Top two banks	2.36	2.57	2.82	1.46	1.89	1.83	1.90	2.12
Continental Europe without top two banks	1.45	1.62	1.64	0.49	0.41	-0.08	0.97	0.93
Banks with Greek ownership	2.26	2.08	1.70	0.34	-0.24	0.23	0.28	0.95
Use and control linked to Bulgaria	0.94	1.11	1.33	1.05	0.50	0.47	0.26	0.81
TOTAL	1.74	1.90	1.99	0.82	0.69	0.68	0.88	1.24

Table 3. Dynamics in relationship between bank ownership and net profit margin

Although banks are equally regulated and follow unified accounting standards, Table 3 exhibits that the banks linked to Bulgarian use and control have lowest net profit margin. In this sense, they pay the lowest proportion of taxes to authorities of their home country.

Net Results to Total Assets correlations for specific periods	Prior the crisis 2004 - 2010	Crisis 2012 - 2014	Total period 2004 - 2014
Top two banks	0.75	0.99	0.79
Continental Europe without top two banks	0.45	0.49	0.14
Greek ownership	0.33	0.99	- 0.11
Banks with use and control linked to Bulgaria	0.99	0.81	0.14
TOTAL Banking System	0.55	0.43	0.15

Table 4. Correlation between Net Results (NR) and Total Assets (TA) for selected periods (when over 0.5)

Authors entitled particular periods as “prior the crisis” and “crisis”, based on empirical maximum derived from the highest correlations between effectiveness and market share for presented groups. Two groups with lowest correlations for the first period are in banks with Greek ownership and the one with roots in continental Europe. Actually these groups had strongest correlation for the period 2004 – 2008; however the maximum for the total universe was for 2004 – 2010. Results from Table 4 imply that the financial statements of banks in Bulgaria echo the global financial crisis with three years delay (around 2010)! It is once more to prove that Bulgaria stays distant from the global financial markets, when Greece and Continental Europe are much more integrated. Similar conclusions have been presented by Archinkov (2015).

5/. DISCUSSION

First and foremost we positioned studied phenomenon in the context of the developments of a banking industry viewed from the deviation in behaviors of the top level bank management, but also as risks of judiciary, prosecution and/or political interventions. The mainstream economists see only competition as fundamental of the market economics. It is obvious that as business organizations fight for profit, the competitive paradigm determines winners and losers. Strong performers should gain market share from under-performer. This is the reason to study correlations between profit and market power. The highest the correlation between effectiveness and market share stands for more sustainable business status of the organizations. When comparing correlations levels for different time periods authors confirm that decelerated economic growth in home country leads to decelerating loan supply in the host country. This is exhibited by the decline in both market share and profit of Greek banks and banks from continental Europe during the period 2012 – 2014. The empirical outcome supports the conclusion that the ownership does not influence bank performance only at the level of top two market leaders.

Despite market share and power, biggest banks may be subject of reputational risks and unpredictable political interventions (King 2009 and Sanderson 2015). Some researchers

report that the bigger is the power of the foreign banks, the more severe crisis it will produce into the host country, in comparison with countries that had a smaller presence of foreign banks (Cull and Martínez-Peria 2007). Also Stiglitz (2002) are questioning the role of foreign banks as providers of financial stability for smaller economics. This should be included into the political debate in Bulgaria, as country should decide to join the Single Supervisory Mechanism or to stay aside and gain benefits only by hosting European banks, subject to upper level of supervision. Whatever decision would be taken, country needs primarily to enhance banks' internal control mechanisms, prudent supervision and the maturity of the political class.

Within studied period the ongoing wave of consolidations, especially in retail banking and consumer finance, has predominantly prevailed within European borders. During the period 1995–2000, the number of European, domestic mergers and acquisitions accounted for more than 80 percent of total mergers, whilst cross-border mergers and acquisitions were mainly with third countries lying outside the Euro Area (Kapopoulos, Siokis 2005). Cross-borders mergers and acquisitions in Bulgaria ended in 2007, when pure domestic transformations in bank ownership started in 2011. The role of the central bank, having power to "suggest" and "assist" for mergers will determine whether the ongoing process of consolidation in the industry will be rationalized on the basis of the benefits of economies of scale and scope or by using market power or collusion practices to extract rents. Faced with the combined pressures of declining domestic business and increased regulations, banks are devising strategies to do business in this new environment. Consolidation and balance sheet restructuring may also attract entrepreneurs outside banking to invest in banks. Depending on the policy of the central bank, the number of bank institutions could decline; potentially domestic access to finance may decline, while the average bank size would be increasing. By refusing new investments into the banking business, hypothetically bargaining power and importance of the domestic regulators would be diminishing. In this context any decision issued by the central bank to approve or reject for a bank acquisition will bring long-lasting consequences as related to the price and access to credit in Bulgaria.

Table 3 exhibits that the banks with Bulgarian use and control has lowest net profit margin compared to the foreign banks. One interpretation is that any of the domestically-owned banks are not the only endeavor of their owners. Most likely other priorities blunted competitive forces in these banks, so weakened the link between performance and growth. The chronology in formation, growth and deficiencies as related to the Corporate Commercial Bank (CCB) to some extent illustrates the uniqueness of the market situation, political risks and constraints. It could be a coincidence, but development of the CCB echoes formation of the current Bulgarian economic and banking elite. The majority of the leaders in the top ten banks in the country remain on executive management positions since 2000, excluding one Greek bank were the top management stays sound and stable since 1990. Authors strongly believe in Bulgarian National Bank profound statement that the case with CCB is an insulated case and Bulgarian banking system remains sound and stable. However the future of Commercial Bank Victoria (CBV), acquired by CCB one week prior the collapse and managed directly by the central bank for more than 16 months, would determine level of

competences, expertise and abilities in the central bank itself. Possible liquidation of CBV would question skills, knowledge and abilities of the management in the central bank to handle operations even in the smallest local bank!

6/. CONCLUSION

Still unanswered question is whether the regulated banking industry offers more stable business playground than other industries. Globalization provides banks with more opportunities to enter or exit particular market, not only by following customers and wealth-skimming, but also exploiting regulatory arbitrage. Potentially biggest banks could have more power to exercise regulatory capture. The transmission of domestically reported profit to foreign owners needs more attention, especially having tax differences into the European context. Strategic choices executed by the top two market leaders need further attention, as it seems they are the real winners out of the local crisis in 2014.

Banks usually devote vast resources to ensure compliance with all regulations and yet repeatedly they are sanctioned for not doing enough. Notwithstanding the serious regulatory efforts for supervising banks on the European level, little considered thought has been given to the quality of local bank supervision. Possibility a central bank to adopt disruptive strategy rather than bailout a bank are sometimes less obvious. From a central bank point of view, getting the balance right in executing the power, but still sharing the responsibility to protect stability is neither easy nor uncontroversial. The article seeks to address this deficit in a practical and informed manner in comparing tangible responses given by different market players to profit versus market power. The findings reveal that problems in the bank industry are mostly due to immature political culture, missing internal control, weak supervision performed by the central bank and lacking coherence among governmental authorities, including public prosecution. Studied phenomenon could further enhance understanding on variations in legal system and practices, in purpose to enhance European identity, to build cohesive and unified bank supervision, so to support prosperity, stability and values of shared destiny for our common good.

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BULGARIANS ARE ON THE WAY TO MODERN BARTER EXCHANGE SYSTEM (MBES)

An Expert Survey

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Abstract: *This paper presents the results from an expert survey on the possibility of a modern barter exchange system (MBES) to be implemented in Bulgaria. MBES is an abstract theoretical construction which helps uncover the reasons why such schemes are successful in a number of countries with different social and cultural characteristics, while in Bulgaria this phenomenon is not popular. Sadly, the results show that there is no readiness for participation in MBES. It is seen mainly as a social structure but the expectations are that it would work as a business entity. The research has found that the idea behind MBES is inapplicable under certain conditions, such as those in Bulgaria with its typical characteristics of today. Even though the MBES models are usually successful in other countries, this is probably due to the fact that those are mostly socially mature (homogenous) societies in countries with a well-developed economic infrastructure.*

Key words: *modern exchance barter system, social currency design, Bulgaria*

Implementation of a Modern Barter Exchange System in Bulgaria

The current exposition is a logical continuation of research concluding that *the nature of modern-day barter has a monetary basis* (Toncheva 2014). In this research every exchange is interpreted as containing a monetary relation due to the fact that it involves *a transfer of value*.

The modern barter exchange systems (MBES) usually start at a local level and have a limited implementation as a substitute for the official currency. They combine the possibilities of exchange within a small circle of participants at first but under certain conditions of their design and particular social conditions they have the potential to evolve into a means of payment accepted by a wider circle of economic agents.

In the practice around the world we can find many examples of **voluntarily organized, freely negotiated, community-based, non-cash exchange systems** herein covered by the common term **modern barter exchange system**.

Some comments on this topic can also be observed in Bulgaria. A similar system was organized in 2010, and later (in 2014) it was transformed into a closed barter club. Due to reasons of confidentiality, the information about it is not available. There is also information about the establishment of another two systems but they were not successful. The first one did not start operating, the second one closed because it didn't receive enough support.

The overall lack of information on barter exchange systems in Bulgaria (and at the same time, their accelerated development in other countries) has inspired the scientific research project we are implementing, including the related expert survey.

Hypotheses

MBES practice has been evolving and covering an ever bigger part of the geographical map of Europe, which provides an objective reason for the need for making an experiment also in Bulgaria. The current survey seeks to establish the objective possibility for making this experiment and has been provoked by the main question, namely: **What are the reasons that make modern barter exchange systems be successful in a number of countries with different social and cultural characteristics while in Bulgaria this phenomenon is not popular?** To answer this question there have been many assumptions. One part of those is based on connections and dependencies derived from the world scientific fund and academic theorems, another part is based on experience verified empirically by various researchers, and

a third part, though small, is based on intuitive assumptions resulting from reflections on the topic.

The following hypotheses have been checked:

1. The respondents with better education, both men and women, express different level of support for setting-up and operating of MBES in Bulgaria. This hypothesis is confirmed by the results but without statistical significance.
2. Those who are ready to participate should rather be the respondents with better education and those who have stated that they are better informed about the MBES phenomenon and barter money. This hypothesis has not been confirmed.
3. Those who are better informed about the topic of the research and have better education should rate the advantages of MBES higher. This hypothesis has been confirmed but again without the necessary level of significance. Its validity remains true only of the group of respondents.

Goals

1. To establish the conditions under which the modern barter exchange system would function successfully in Bulgaria;

2. To assess the possibilities of implementing this system in Bulgaria.

Expected results

1. Identifying the attitude of Bulgarian researchers, practitioners, banking experts, state officials and students regarding the implementation of modern barter exchange systems in Bulgaria.

2. Making an overview of the opinions of the respondents regarding the implementation of MBES in Bulgaria.

3. Disseminating the idea of the creation of MBES among leading banking experts, state officials, entrepreneurs and researchers.

Specific questions to be addressed

1. **To what extent is MBES accepted in Bulgaria?**
2. **What are the attitudes towards participation in MBES?**
3. **What is the idea of the preferred** MBES **design for the respective professional groups?**
4. **What value system corresponds to the preferred MBS model in Bulgaria?**

Structure of the questionnaire

Part A. Profile of the experts

Part B. Opinion overview of the implementation of MBES in Bulgaria

B1. Level of acceptance of MBES

B2. Attitude toward participation in MBES, including:

1. Reasons for supporting and participating in MBES
2. Reasons for rejecting the possibility for the respondents to support and participate in a private modern system of exchange without an official means of payment issued by the central bank.

B3. Vision of the MBES design.

The idea is ascertained through a survey of the conditions that would satisfy the participants. Those are the desired characteristics of a probable model that would be negotiated.

B4. Prerequisite values for the creation of MBES.

The focus is on the experience of the respondents as a basis for an assessment of the leading values in the modern Bulgarian society that influence the creation and evolution of MBES. There are two aspects of this assessment: current and desired condition. This group of questions aims at providing guidelines for modeling a possible future MSEB.

Survey methodology

This is an expert survey, not a sociological one. The choice was made based mainly on the fact that the phenomenon at hand is not popular among the Bulgarian economic agents. Therefore, the formulation of the questions is an important part of the survey (Nikova 2011). Our ambition was to provide a description of the advantages, disadvantages and the characteristics of systems that are working successfully in other counties. All questions are weighed equally, which makes the survey relatively objective.

The expert survey allows for obtaining relatively reliable results with the help of a considerably small number of respondents. We have invited leading experts in the respective fields who have proven that they are capable of making and implementing policies; of disseminating and organizing changes. Each of them has experience in managing some structure within the state administration and most have managed their own businesses. Even though each expert has been invited personally, the survey is anonymous.

The questionnaire consists of two parts.

The first part (Part A) is methodologically necessary. It contains a total of 10 questions with 18 components. It assesses the level of expertize of the respondents; their professional qualities: education, **experience**, level of responsibility, and engagement with the issues related to a possible future monetary system. The distinction in terms of sex is a usual practice. It allows for making conclusions about the distribution of opinions from a behavioral point of view (Ariely 2012, Hofstede 2001, Minkov 2007, Franova 2015)[84].

Question No. 9 aims at providing information on whether the respondents are situated in circumstances whi**c**h are most commonly defined as reasons for the creation of an alternative currency (barter money) and for participation in a private exchange system (barter exchange system). These are mainly lack of cash and high level of mutual indebtedness,. The answers to this question will be examined together with those related to the support of MBES to see if there is a significant relation between them.

The second part (Part B) is the substantial part of the research. It is made up of four groups of questions intended to survey the following:

1. To what extent is the idea of the MBES phenomenon accepted in Bulgaria? (B1: question No. 11 with 16 components).
2. What is the assessment of a predefined set of advantages and disadvantages of MBES? (B2: question No. 12 with 12 components offering ideas of the expected advantages of MBES, and question No. 14 with 30 components offering ideas of the expected disadvantages). Questions No. 13 and 15 are open-ended and are aimed at obtaining additional information about advantages and disadvantages that were not taken into account when making the questionnaire.
3. What would be the key components of a successful system in Bulgaria? This is assessed in Part B3 through questions No. 16 with 37 components and No. 17 – an open-ended question. The components are suggestions of existing characteristics of various models implemented in other countries. They have been classified and proposed in the questionnaire in order to assess to what extent the social and cultural traditions in Bulgaria support or reject each of them.
4. What value environment is prerequisite for the success of MBES? (B4 containing two questions No. 18 & 19, each having 30 components). The two questions in this section have the same components but differ in that the first surveys the opinion of the respondent regarding their assessment of the social and cultural environment in its

[84] Experts in psychology claim that masculine behavior obeys the deeply rooted in the psyche rule of fight or flee, while feminine behavior is associated with support, empathy, mutual help.

currents state, and the second – in a desired state. The respondents have been asked to assign grades from 1 to 10 to the suggestions, 1 being the lowest level of importance, and 10 – the highest. The choice of this scale allows for an estimation of averages for each indicator and thus for making a classification of the indicators. For example, there is no highest value. A whole group of indicators are considered to be highly desirable, one of them being "To establish and develop variety as a whole" - 8.5. "To acquire scientific knowledge" and "To communicate" have been rated the same. On the other hand, "To manipulate" has the lowest rating – 4,4 (See details in Tables 4 and 5)

The questions in this part are going to be used for designing a possible new barter exchange system. The results from these questions show, on the one hand, which values are the most important ones, and, on the other hand, where the biggest **potential for change** is as per the difference between the current and the desired state of the environment.

The structure of the questionnaire allows for a repetition of the survey in particular professional groups by adding questions related to their specific issues. There is a will for that and the questionnaire will be made available to branch organizations such as the Association of Municipalities in Bulgaria, the Bulgarian Industrial Association, the Bulgarian Association of Business Clusters, trade unions, student councils, etc.

The data have been processed with the specialized program product SPSS which allows for a quick and easy verification and interpretation of the given hypotheses.

The data are mostly non-parametrical and even where they are in figures, due to the small number of responses we have used non-parametrical methods.

Expert survey procedure

1. Formulating hypotheses to answer the following: what could be the reasons for the lack of MBES in Bulgaria, and what are the conditions under which a MBES would be successful?
2. Formulating survey questions based on the hypotheses.
3. Making a questionnaire.
4. Choosing respondents. Choice criteria:

a) To guarantee a formally defined level of expertise and financial competence we have set the requirement for at least a Bachelor's Degree.

b) We have sought out respondents at expert or at least middle management position, that is, people who are capable of taking managerial decisions related to certain policies. Our

assumption is that it is people with exactly such social and professional qualities who can introduce and impose changes and new models of behavior in a relatively natural way, without using special PR campaigns but solely from the position of their personal authority. The responding experts enjoy public confidence and we assume that if they support such an idea, a significant part of the society will follow them.

c) The better parts of the respondents have at least once taken up a high-level administrative post in a state or another public organization. In this way they have chosen in what position to give their answers.

d) The choice of prominent specialists also guarantees a middle or higher social and material status.

e) Our goal was to obtain a relatively even distribution in terms of sex, but we hardly achieved 34%.

5. Holding the interview.

a) Making contacts.

b) Presenting the project.

c) Discussing the benefits.

d) Sending and filling out the questionnaire.

6. Processing of the data for SPSS.

7. Developing statistical hypotheses for verification.

8. Verifying of the hypotheses.

9. Analyzing the results.

10. Conclusions and formulating topics of discussion.

Overview of the results of the expert survey

1. To establish **the level of acceptance of MBES in Bulgaria** we have analyzed the answers to question No. 11 with 16 components. The separate sub-questions follow the logical framework of the survey and consistently check if and how well the respondents know the phenomena of: barter, money, exchange, private cash, barter money and barter systems (see Table 1).

Table 1. Level of acceptance of MBES in Bulgaria - Positive Attitudes to MBES

Descriptive Statistics				
level of acceptance of MBES in Bulgaria	N	(Mean)		(Std. Deviation)
	Statistic	Value (Statistic)	(Std. Error)	Statistic
I know the phenomenon of Barter	23	7,30	,501	2,401
I know the phenomenon of Money	23	9,09	,208	,996
I know the phenomenon of Exchange	23	8,39	,325	1,559
I know the phenomenon of Private Money	22	7,55	,504	2,365
I know the phenomenon of Barter Money	23	6,83	,558	2,674
I know the phenomenon of Barter Systems	23	6,70	,516	2,476
I'm informed about the existence of MBES	23	8,39	,461	2,210
I'm curious to learn more about MBES	23	8,52	,448	2,150
I agree about the usefulness of MBES for those who participate in them	23	8,65	,292	1,402
I agree that MBES are needed	23	7,83	,572	2,741
I firmly support MBES	22	7,41	,595	2,789
I want to participate in MBES	23	6,52	,612	2,937
I prefer to participate in MBES together with my current partners	23	8,13	,480	2,302
There is no place for MBES in Bulgaria	22	4,55	,711	3,334
I'm sure that MBESs exist in Bulgaria	23	6,43	,719	3,449
The phenomenon MBES is a financial innovation	23	7,26	,704	3,374
Valid N (listwise)	21			

1.1. The highest average of recognition of a phenomenon is that of money (9.02) and the lowest recognition averages are those of barter money (6.83) and barter systems (6.7). We can sum up the recognition rates of this and other related phenomena by taking the average of the results for all 6 phenomena. It is 7.64, which shows that the respondents estimate their competence at about 76.4 %. This result is satisfactory. A total of 5 out of the 23 respondents have stated that they fully know all the phenomena. Their qualifications vary and we cannot conclude that this depends on their education.

1.2. The respondents show that they are well informed about MBES (8.39), they are quite curious to learn more about MBES (8.52), they agree about the usefulness of MBES for those who participate in them (8.65), and evaluate the need for MBES at 7.83, the level of support being at 7.41. The need for trust among the partners is confirmed (8.13). The low rating (4.55) of the statement that there is no place for MBES in Bulgaria also can be interpreted as a high rating of the need to have this experience.

1.3. The eagerness to participate in MBES is relatively low – 6.52 out of 10. This gives the future builders of MBES the task to create motivation for participation.

1.4. The question of whether MBES is a financial innovation is rated at 7.26, which is a border result and proves that t**he phenomenon can be analyzed with the tools of finance theory**.

We have come to the conclusion that the economic agents are not informed enough about the essence and the role of MBES but there is still room for an experiment whose success will depend to a very large extent on its design. The average rating of all statements showing familiarity with MBES is 7.47. This rating has the meaning of a **recognition index** and can be interpreted as roughly 74.7 % **recognition of the phenomena that make up the phenomenon of MBES**. These results do not yet reject the hypothesis of lack of familiarity as a cause for the lack of practice. In the future it would be good to study deeper precisely the question of what is recognized as a potential MBES.

2. In order to establish **the attitudes towards participation in MBES** we have analyzed the answers to questions No. 12 with 12 components and No. 14 with 30 components. Since the possible answers are given, ranging from *fully disagree* (1) to *fully agree* (5), we have transformed the overall rating into an index corresponding to the level of agreement in percentages (from 0 to 100). (See Table 2)

2.1. The first question is a control question on the understanding of the advantages of MBES. It averages at 8.55, which is very close to the rating of the advantages in the first part of the question (8.65) and is the highest rated of all the support conditions.

2.2. The statements that *MBES helps recover natural prices*, that *business risk is reduced*, and that *income and costs are linked and the difference (profit) is guaranteed in advance* are rated surprisingly low. Each one has scored 6.7. These results made us check the respondents' levels of education and preparation to participate in the survey. It's not found statistical significance.

2.3. Question No.14 checks a certain number of assumptions about the reasons for the lack of MBES in Bulgaria. They are based on an analysis of existing systems and on the ideas of the author about the social and cultural characteristics of the predominant model of making business in Bulgaria. We have suggested the following reasons to be probable:

2.3.1. Lack of homogeneity in society, which is confirmed by the results of the first question about the lack of partners who would understand the advantage of MBES (6.96).

2.3.2. Significant differentiation in terms of width and depth of the division of labour, which is confirmed by the rejection of the statement that "we are producing everything that we need for our end product ourselves" (4.61).

2.3.3. National and cultural values regarding the integrity between financial and commercial activities. With this subquestion our goal was to survey if and how far the respondents support the idea that money and exchange are organically related or rather the modern understanding that money does not depend on the economic activity and can easily

exist apart from the economy by functioning mainly in the financial sector. Three questions confirm this assumption. These are: 1) there is no relationship between money and exchange – 3.81; 2) money exists mainly outside the exchange – 4.50; and 3) the existence of money does not depend on the economic activity – 5.62.

2.3.4. The assumption that access to the internet and the free use of a technical device and/or connection are a reason to refuse to participate in MBES has been confirmed. This has been verified with the help of two questions rated at 6.67 and 5.50.

2.3.5. The hypothesis that there is a traditional attitude of non-acceptance because of lack of a legal framework (6.1) or because such schemes are fraudulent (4.87) or illegal (4.48) has been partially rejected.

2.3.6. It has been confirmed that avoiding insecurity has a relatively high importance (7.33) as well as risk avoidance (7.05).

2.3.7. The lack of free time for new projects (6.30) and free cash (6.20) as reasons for non-participation have been confirmed. Another reason is the probability of the need for new administrative activities (7.24). Whether the interest for new projects (its lack can be seen from the rate of 4.48) can be compensated is a question of a subsequent survey.

2.3.8. Lack of popularity is also confirmed as a reason (6.19).

2.3.9. The reason that the phenomenon is not discussed by state bodies and institutions has been rejected (4.48).

2.3.10. It is confirmed that the currency used is mainly Bulgarian leva (9.33), which is stable and is applied as local currency within the Eurozone.

2.3.11. Foreign currency is not used often in commercial relations (6.29).

2.3.12. The disapproval of change in price rations is confirmed once again. The disapproval of the fact that the emergence of new price ratios is possible has received a surprisingly high rating (6.19). This points us to a confirmation of the rule that after the comfort zone is established, even if it is not the most desirable condition, changes are avoided.

Table 2 Level of acceptance of MBES in Bulgaria - Negative Attitudes to MBES

Descriptive Statistics					
We have no interest to participate in modern private system of exchange without the legal tender because:	N	Mean		Std. Deviation	
	Statistic	Statistic	Std. Error	Statistic	Index
we have no partners who understand the benefits from using it	23	3,48	,320	1,534	6,957
we produse everything we need/use	23	2,30	,323	1,550	4,609
there is no relationship between money and exchange	21	1,90	,257	1,179	3,810
money exists mainly outside the exchange	20	2,25	,339	1,517	4,500
the existence of money does not depend on the economic activity	21	2,81	,363	1,662	5,619
we haven't got a proper technical device	21	3,33	,354	1,623	6,667
we haven't got reliable access to the internet	20	2,75	,369	1,650	5,500
we don’t want to take part in new projects	21	2,62	,320	1,465	5,238
there is no a legal framework	21	3,05	,362	1,658	6,095
such schemes are fraudulent or illegal	23	2,43	,280	1,343	4,870
we prefer to avoid insecurity	21	3,67	,270	1,238	7,333
we prefer to avoid risk in such a systems	21	3,52	,306	1,401	7,048
we don’t interesting from new projects	21	2,24	,300	1,375	4,476
we have no free time for new projects	20	3,15	,335	1,496	6,300
we have no free cash for new projects	20	3,10	,332	1,483	6,200
there is no popularity of such a systems	21	3,10	,316	1,446	6,190
the phenomenon is not discussed by state bodies and institutions	21	2,24	,316	1,446	4,476
we don’t have any luck of cash	21	2,62	,288	1,322	5,238
usualy the currency we usefor trading is mainly Bulgarian leva	21	4,67	,199	,913	9,333
usualy the currency we usefor trading is mainly foreign currency	21	3,14	,318	1,459	6,286
we don’t have products which we can exchange without cash	21	2,81	,273	1,250	5,619
such schemes are appropriate for small businesses only	20	2,40	,285	1,273	4,800
such schemes are appropriate for farmers only	21	2,24	,284	1,300	4,476
such schemes are appropriate for freelancers only	21	2,14	,278	1,276	4,286
even though we have excess capacity we will not exchange it on barter	21	2,14	,270	1,236	4,286
the liquidity will be reduced	21	2,05	,263	1,203	4,095
our trade relations will be complicated	21	3,19	,264	1,209	6,381
there is a need for new administrative activities	21	3,62	,253	1,161	7,238
new price ratios will be appeared and they are not desirable	21	3,10	,275	1,261	6,190
our market opportunities wil bel limitted because the contracts reduces flexibility	21	2,48	,281	1,289	4,952
Valid N (listwise)	18				

Our conclusion is that the respondents rate relatively high the suggested advantages of MBES, they are inclined to support the operation of MBES but would rather not participate, mainly due to the need for changes related to additional activities, insecurity and forthcoming changes.

3. The third important task of the survey is to see what is the **vision of the MBES design preferred by the respective professional groups**. The question has been formulated as follows: “We would participate in a modern private barter exchange system only if:.... “ and we have given 37 answers (see Table 3). The respondents have been asked to rate the degree to which they agree with each statement on a scale of 5 possibilities: fully disagree, partly disagree, I cannot say, partly agree, and fully agree. As a result of the responses, the preferences for the possible design can be described as follows:

3.1. Main goal – profit (6.26); in contrast to the main goal being social (7.18), and the standard error cannot compensate for the difference. This means that MBES is seen mainly as a social structure.

3.2. Cooperation and unlimited liability are preferred, rated at 6.00 each, rather than a limited liability structure – 5.33.

3.3. A hierarchically managed structure is preferred (8.36) rather than a decentralized one (4.95).

3.4. Participation of natural persons is very well accepted – 7.04. This points us to some mixed form of MBES (people and businesses).

3.5. There is a clear preference for a backed means of payment (8.10) rather than fiat money (4.42).

3.6. There is a clear preference for turning the means of payment into cash (8.73)

3.7. There is a desire to have access to credit (7.14)

3.8. There is a desire to receive assistance, including for commercial activities (8.10), accounting/legal advice (7.64), and financial assistance (7.82).

3.9. The idea of the system functioning as a closed club with a limited access has not received much support (6.0).

3.10. There is no opinion on whether MBES should be limited only to a local activity (5.27), while there is a preference for developing it on a larger scale: national (7.14) or international (7.62).

3.11. There is a clear preference for exchanging various products within the system (8.29).

3.12. To cover the expenses, an insignificant priority is given to commissions on the purchases (6.45), and on sales (6.40), which proves that the respondents understand that in this model the purchases and sales are equivalent and equal. The difference as a whole falls within the statistical error. The options whereby there is an entrance fee (6.00) and a subscription fee (5.80) have also received some support.

3.13. The possibility to apply interest is clearly rejected (4.10) but demurrage[85] is supported (6.00).

[85] The idea is borrowed from Silvio Gesell (Gesell 2007).

3.14. Network marketing is an acceptable way of organizing growth and income distribution (6.29), and support for taking part in the profit of the system is even higher (6.67).

3.15. The preferences for the commission to be paid fully by barter money (6.27) or by legal tender (6.19) are close.

3.16. One of the most important characteristics is the possibility to leave the system at any moment (9.18). This feature, together with the growth of the system (9.43) can be qualified as the most desirable. Adding the support for inheriting and transferring property (8.38), the desired design reminds a **contemporary capital structure**. This is further backed by the desire to turn the MBES into a public company (9.43).

3.17. The need for the system to be a member of an international organization is also important (7.24).

The enumerated basic characteristics can become the basis for developing an institutional and structural design of an MBES which the participants should agree on. It would be a challenge to make an experiment of an MBES on the territory of a selected community. Thus, the conclusions we have come to as theoretical assumptions will be tested in practice.

Table 3 Vision of the MBES Design

Descriptive Statistics					
We agree to participate in MBES only if:	N	Mean		Std. Deviation	
	Statistic	Statistic	Std. Error	Statistic	Index
The main goal is profit	23	3,13	,297	1,424	6,26
The main goal is social or ecological	22	3,59	,243	1,141	7,18
the system is settled as limited liability structure	21	2,67	,279	1,278	5,33
the system is settled as UNlimited liability structure	21	3,00	,316	1,449	6,00
the system is settled as ccoperation	22	3,00	,279	1,309	6,00
the system is hierarchically managed	22	4,18	,204	,958	8,36
the system is decentralized managed	21	2,48	,335	1,537	4,95
позволява се участието на физически лица	21	3,52	,273	1,250	7,05
Participation of natural persons is allowed	19	2,21	,271	1,182	4,42
the currency is backed by real value	20	4,05	,246	1,099	8,10
the currency is NOTbacked by real value /fiat money/	19	2,21	,321	1,398	4,42
the means of payment can be turned into cash	22	4,36	,214	1,002	8,73
credit is allowed	21	3,57	,289	1,326	7,14
we have asistance for our commercial activities	21	4,05	,201	,921	8,10
we have asistance for our accounting activities and legal advices	22	3,82	,284	1,332	7,64
получаваме финансово консултиране	22	3,91	,207	,971	7,82
the system is closed club with a limited access	21	3,00	,301	1,378	6,00
the system is local	22	2,64	,276	1,293	5,27
the system is national	21	3,57	,272	1,248	7,14
the system is international	21	3,81	,255	1,167	7,62
products in the same sector are exchanged	21	2,24	,266	1,221	4,48
products in different sectors are exchanged and intersector connections are being created	21	4,14	,221	1,014	8,29
cost recovery - by entrance fees	21	3,00	,316	1,449	6,00
cost recovery - by subscriptions for a certain period	20	2,90	,307	1,373	5,80
cost recovery - by incomes fees	22	3,23	,294	1,378	6,45
cost recovery - by sells fees	20	3,20	,304	1,361	6,40
interest rate is used	21	2,05	,288	1,322	4,10
demurrage (rate) is used	22	3,00	,316	1,480	6,00
the system is developing by network (multilevel) marketing	21	3,14	,318	1,459	6,29
we are partners in the profit	21	3,33	,287	1,317	6,67
commissions to be paid fully by barter money	22	3,14	,304	1,424	6,27
commissions to be paid partially by barter money	21	3,10	,266	1,221	6,19
we can leave the system at any moment	22	4,59	,157	,734	9,18
the assets can be sold, inheriting and transferring	21	4,19	,245	1,123	8,38
the system is a member of international network	21	3,62	,305	1,396	7,24
the system can grow	21	4,71	,122	,561	9,43
the system can be turn into public company	21	4,05	,244	1,117	8,10
Valid N (listwise)	17				

4. There is a lot of research on the influence of the cultural model on socio-economic phenomena based on social group values (Smith 1812, Ariely 2012, Hofstede 2001). A good illustration of that is the scheme of Hofstede regarding the manifestation of culture on a deeper psychological level, where the values are in the core of all rituals, heroes and symbols combined in different practices. (Hofstede 2001). This is why we have assumed

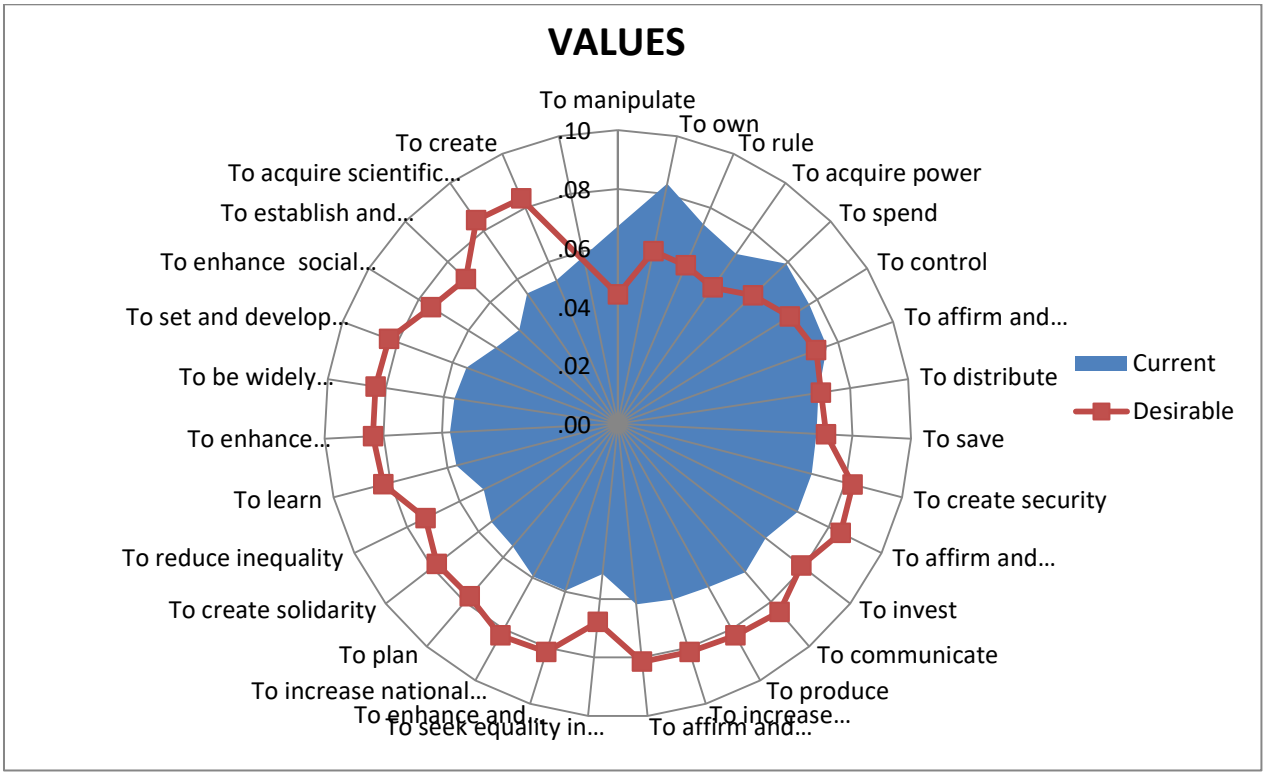
that the definition of key values to assess the current state and to establish the desired state will help the experiment of introducing MBES in Bulgaria.

The survey should show **what value system corresponds to the desired design of MBES in Bulgaria**. This task is addressed by question No.18 in comparison to No. 19. Both questions propose the same values. The difference is that the first one checks the assessment of the current state, and the second – that of the desired state (see Table 4).

We consider the resulting difference in the assessment of the current and the desired states to be **a generator of and potential for change**. The biggest differences in the averages of the same values signal the biggest potential for change.

There is a widespread idea that cultural characteristics can be viewed also as a basis for institutional preconditions for the emergence and development of social phenomena (Hayek 1997), and, as S. Moscovici rightly claims, sociology should be based on psychology (Moscovici 2008).

Chart 1. Prerequisites Values for the Success of MBES



The distribution of the results of the survey on the chart clearly demonstrates how the averages of the desired state are almost always outside the line of the current state averages. The following values are an exception: to manipulate, to own, to rule, to acquire power, to spend, to control, and to affirm and develop individuality. In the last indicator there is no

considerable difference, and in the rest we do not have a statistical significance of the results. The differences in *to manipulate* and *to own* are considered to be very important for the environment and these results are statistically significant.

A coincidence is found also in *to distribute* and partially in *to save*.

The biggest difference is observed in *to create, to enhance social cohesion, to establish and develop state institutions, to set and develop moral and ethical standards*, and *to acquire scientific knowledge*. For all of them there is a positive difference of 50% and 60%, which is statistically significant.

The Chart 1 shows also the exact values that would motivate participation in MBES.

The statistical significance of the results has been estimated using the Wilcoxon method. It confirms that the better part of the differences have statistical significance.

Table 4 Prerequisites Values for the Success of MBES

VALUES	Current	Desirable	Change in %
To manipulate	6,73	4,40	-35%
To own	8,35	6,00	-28%
To rule	7,39	5,87	-21%
To acquire power	7,05	5,65	-20%
To spend	7,91	6,35	-20%
To control	7,68	6,90	-10%
To affirm and develop individuality	7,59	7,20	-5%
To distribute	6,91	7,00	1%
To save	6,77	7,10	5%
To create security	6,82	8,26	21%
To affirm and develop the diversity	6,82	8,45	24%
To invest	6,36	7,90	24%
To communicate	6,67	8,45	27%
To produce	6,36	8,25	30%
To increase disposable Incomes	6,27	8,15	30%
To affirm and develop the learning	6,18	8,15	32%
To seek equality in rights	5,14	6,79	32%
To enhance and develop the family	5,95	8,15	37%
To increase national income	5,95	8,25	39%
To plan	5,50	7,75	41%
To create solidarity	5,45	7,80	43%
To reduce inequality	5,09	7,30	43%
To learn	5,68	8,25	45%
To enhance knowledge	5,73	8,35	46%
To b**e widely applied scientific achievements**	5,64	8,35	48%
To set and develop moral and ethical standards	5,50	8,32	51%
To enhance social cohesion	4,90	7,50	53%
To establish and develop government institutions	4,64	7,15	54%
To acquire scientific knowledge	5,41	8,45	56%
To create	5,32	8,35	57%

Table 5 Prerequisites Values for the Success of MBES

Wilcoxon Signed Ranks Test	Z	Asymp. Sig. (2-tailed)
To own	-2,767[a]	,006
To spend	-1,483[a]	,138
To invest	-2,306[b]	,021
To control	-1,440[a]	,150
To distribute	-,385[b]	,700
To produce	-1,824[b]	,068
To save	-,829[b]	,407
To learn	-3,142[b]	,002
To create	-2,989[b]	,003
To rule	-1,776[a]	,076
To manipulate	-2,206[a]	,027
To plan	-2,455[b]	,014
To communicate	-2,083[b]	,037
To reduce inequality	-2,091[b]	,037
To increase national income	-2,418[b]	,016
To increase disposable Incomes	-2,170[b]	,030
To enhance knowledge	-2,849[b]	,004
To enhance social cohesion	-2,418[b]	,016
To seek equality in rights	-1,879[b]	,060
To create solidarity	-2,306[b]	,021
To create security	-1,969[b]	,049
To acquire power	-1,818[a]	,069
To affirm and develop individuality	-,070[b]	,944
To affirm and develop the diversity	-2,385[b]	,017
To enhance and develop the family	-2,375[b]	,018
To enhance knowledge	-2,400[b]	,016
To establish and develop government institutions	-2,953[b]	,003
To set and develop moral and ethical standards	-2,736[b]	,006
To acquire scientific knowledge	-3,017[b]	,003
To be widely applied scientific achievements	-3,048[b]	,002

A well-known example is the success of Argentina in the field of the so called social currencies (Powell 2002). Researchers found out that the main group of activists are women. This made us formulate two additional hypotheses:

1. Women should rate higher than men the values that encourage social interaction, such as *to reduce inequality, to create solidarity, to create security, to enhance and develop the family*, which has been confirmed also by the check-up with the Mann-Whitney statistical method.
2. Men should give more importance only to values providing for competitiveness, such as *to manipulate*, and *to acquire power*, but the difference has not been confirmed by the statistical check-up.

3. The goal that men would support should be profit, while women should support socially oriented activities. This assumption has proved correct to some extent because the difference in the averages confirms it but it is not statistically significant.

For the rest of the answers we have found out that there is no statistical significance of the difference in terms of sex. The application of Hofstede's methodology also shows that society in Bulgaria has predominantly masculine behavior (Franova 2015, Minkov 2007).

Discussion of the conclusions

The survey has led us to the following more significant conclusions:

1. In Bulgaria the phenomenon of MBES is familiar and supported but the readiness to participate in such a system is low.
2. MBES is seen mainly as a social structure but the expectations are that it would work as a business unit.
3. The answers given vary depending on the qualities of the experts but it cannot be claimed that these differences are valid for the society in Bulgaria. We have found that among the qualities of the respondents the most important one is the practical experience. A broader and more detailed survey is needed, aimed mostly at economically active persons in practice.
4. The common opinion about the recognized advantages and disadvantages of MBES has been confirmed.
5. We have found some significant areas in which respondents express a wish for a greater importance of certain values. This part of the questionnaire generates the largest potential for development of the project and for a possible experiment on the territory of Bulgaria.

The success of the research consists mostly in that it is the first of its kind and it gives guidelines for a more large-scale survey with a more detailed assessment of the conditions for introducing MBES in Bulgaria. At the moment, while still processing the results, the survey keeps giving us answers that will be processed later and the statistical test will be run again. Three new assumptions have emerged from the results of the current survey:

1) The MBES design is not universal and it is inapplicable under certain conditions, for example in Bulgaria with its typical characteristics of today.

2) To implement an idea such as the MBES it is necessary to have certain social, cultural and economic features of the society, which come mostly from the tradition of possession and from a set of production relations, including a sustainably large share of small and medium-sized businesses, active entrepreneurship, and a cooperative model of thinking.

In this regard, the so called social money may develop *mostly* as a result of already established social and economic relations in the environment it emerges from.

3) MBES models are successful mostly in socially mature (homogenous) societies and in countries with a well-developed economic infrastructure.

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MONETARY POLICY IN ALBANIA 2006-2015

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Abstract: *Current paper aims at recognizing monetary policy in Albania during the period 2006 - 2015. The focus is on exploration the monetary policy in Albania - the way it is designed, approved and implemented, accomplishing the main objective of the Central Bank - Bank of Albania - to achieve and maintain the price stability. The interest is in three main directions: 1) a theoretical framework that guide the design of monetary policy in terms of the legal basis and decision - making body, the intermediate and operational objectives, the monetary variables of economy – the monetary supply, interest rates and exchange rates, framework of instruments employed to implement the monetary policy; 2) an amendment of the theoretical framework and approaches for the selected period; 3) performance of the targeted variables.*

Research is divided in three main pillars. First one is focused on short representation of the country and macro economic framework.

Second part aims at examining Albania monetary policy in terms of a theoretical framework for the period of 2006 - 2015.

Third part purpose is to follow up the amendment of the theoretical framework and approaches for the selected period and the performance of targeted variables.

The research showed, in respect to the monetary variables of the economy, the Bank of Albania has implemented and maintained a free-floating exchange rate regime and price stability inflation rate at 3 per cent with a fluctuation band of ± 1 per cent for the observed period.

Fundamental change is seen in intermediate and operational objectives where Bank of Albania targets the adoption of more advanced forms. The choice of intermediate and operational objectives depends on the monetary policy regime and the level of economic and financial market development. For the period 2006 - 2008, Bank of Albania has put an accord on the annual growth of money supply (M3); net domestic assets; and net international reserves. After year 2009 the priority has been set to steer short-term interbank rates close to the Bank of Albania's key interest rate. A significant step is done in this regard - instruments

are employed to achieve the objective as repurchase agreements, outright transactions, foreign exchange market operations, overnight deposit, overnight loan.

Key words: *Western Balkans, Albania, macroeconomic, monetary policy, monetary supply, interest rates, exchange rate, key interest rate, interbank market interest rate*

JEL Classification: *E5, E4, E51, E52, E58, E6*

Introduction

The Bank of Albania is the monetary authority of the Republic of Albania. Pursuant to the legal framework in force, it has the exclusive right to design, approve and implement the monetary policy in Albania. The monetary policy is designed, approved and implemented with a view to accomplish the mandated objective of the Bank of Albania: achieve and maintain price stability.

Global theory and practice suggest that price stability is the greatest contribution that the central bank can make to sustain the long-term economic growth of the country.

This quantitative definition of price stability reflects the level of development of the Albanian economy as a small, open and emerging economy.

The Supervisory Council of the Bank of Albania is the supreme decision-making body of the central bank. It is responsible for the design of monetary policy and the approval of guidelines to

implement it. Monetary policy decisions is to be taken every month according to a pre announced schedule.

Current paper aims at recognizing the monetary policy in Republic of Albania for the period 2006 - 2015. The period of observation is chosen based on the documentation availability, as the preparation of structured monetary policy documents, by the Bank of Albania", has started after year 2005.

1. Country representation and macroeconomic framework

1.1. Why Albania?

Albania, officially known as the Republic of Albania (Albanian: *Republika e Shqipërisë)*, is a country in Southeastern Europe. It is bordered by Montenegro to the northwest, Kosovo to the northeast, the Republic of Macedonia to the east, and Greece to the south and southeast. It has a coast on the Adriatic Sea to the west and on the Ionian Sea to the southwest. It is less than 72 km (45 mi) from Italy, across the Strait of Otranto which links the Adriatic Sea to the Ionian Sea.

Albania declared independence in 1912 and was recognized the following year.

After the liberation of Albania from Nazi occupation[86], the country became a Communist state, the People's Republic of Albania (renamed "the People's Socialist Republic of Albania" in 1976), which was led by Enver Hoxha and the Labour Party of Albania.

The socialist reconstruction of Albania was launched immediately after the annulling of the monarchy and the establishment of a "People's Republic".

Religious freedoms were severely curtailed during the Communist period, with all forms of worship being outlawed. In August 1945, the Agrarian Reform Law meant that large swaths of property owned by religious groups were nationalized, along with the estates of monasteries and dioceses.

After protests beginning in 1989 and reforms made by the communist government in 1990, the People's Republic was dissolved in 1991-92 and the Republic of Albania was founded Albania is a parliamentary republic.

Albania is a member of the United Nations, NATO, the Organization for Security and Co-operation in Europe, the Council of Europe and the World Trade Organization. It is one of the founding members of the Energy Community and the Union for the Mediterranean. It is also an official candidate for membership in the European Union.

1.2. Macroeconomic frame

Albania is a middle-income country that has made enormous strides in establishing a credible, multi-party democracy and market economy over the last two decades. Following graduation from the International Development Association (IDA) to the International Bank for Reconstruction and Development (IBRD) in 2008, Albania has generally been able to maintain positive growth rates and financial stability, despite the ongoing economic crisis.

Before the global financial crisis, Albania was one of the fastest-growing economies in Europe, enjoying average annual real growth rates of 6%, accompanied by rapid reductions in poverty. However, after 2008 average growth halved and macroeconomic imbalances in the public and external sectors emerged. The pace of growth was also mirrored in poverty and unemployment: between 2002 and 2008, poverty in the country fell by half (to about 12.4%) but in 2012 it increased again to 14.3%. Unemployment increased from 12.5% in 2008 to 16.9% in 2013, with youth unemployment reaching 26.9%.

[8686] The occupation of Poland by Nazi Germany and the Soviet Union during the Second World War (1939–1945) began with the invasion of Poland in September 1939, and formally concluded with the defeat of Nazism by the Allies in May 1945

The recovery to growth rates above 3% in 2011 moderated in 2012 and 2013, reflecting the deteriorating situation in the Euro zone and the difficult situation in the energy sector. Real Gross Domestic Product (GDP) growth dipped to a low point of -2.3% in the third quarter of 2013. A rebound is expected in 2014, but growth is also expected to stay below the country's potential over the medium term.

Albania weathered the 2008 global financial crisis relatively well, but the economy is weak and macroeconomic imbalances are large.

Looking toward the future, Albania is focused on supporting economic recovery and growth in a difficult external environment, broadening and sustaining the country's social gains, and reducing vulnerability to climate change – particularly through improved water resource management. Key challenges for Albania going forward include early resumption of fiscal consolidation and strengthened public expenditure management, regulatory and institutional reform, reduction of infrastructure deficits, and improvement in the effectiveness of social protection systems and key health services.

2. Albania monetary policy - theoretical framework and approaches

2.1. Central bank

The Bank of Albania is the monetary authority of the Republic of Albania. Pursuant to the legal framework in force, it has the exclusive right to design, approve and implement the monetary policy in Albania. The monetary policy is designed, approved and implemented with a view to accomplish the mandated objective of the Bank of Albania: achieve and maintain price stability.

According to the Law "On the Bank of Albania", the primary objective of the Bank of Albania's monetary policy is to achieve and maintain price stability.

Albania had its first central bank institution in 1913. It was founded under the agreement concluded between Ismail Qemali's Government and Mr. Karol Pitner and Mr. Oskar Pollak, representatives of the Wienner Bank Verein, acting on behalf of the Austrian-Hungarian banking group, and Mr. Pietro Fenolio and Mr. Guido Ansbaher, representatives of the Banca Commerciale Italiana, acting on behalf of the Italian banking group. The banking institution was short-lived due to the political climate of the era and outbreak of the First World War.

The Supervisory Council of the Bank of Albania is the supreme decision-making body of the central bank, composed of 9 members, appointed by the Assembly of the Republic of Albania for a term of seven years, eligible for reappointment. It is responsible for the design of

monetary policy and the approval of guidelines to implement it. Monetary policy decisions are taken every month according to a pre-announced schedule.

2.2. Background

The fall of communism in Albania occurred in late-1990 and early-1991. It was followed by a year of economic collapse, social disorder and widespread emigration. The turnaround began in 1992 when stabilization measures were introduced through a one-year reform program.

Under this program, annual inflation was to be reduced to below 20 per cent.

Money growth was to be the principal nominal anchor of the program. This would be supported by a fiscal policy which eliminated monetary deficit financing by mid-1993 and by a tight credit policy. A two-tier banking system was established in April 1992.

Under this stabilization program, which was supported by the International Monetary Fund (IMF) and other international institutions, monetary policy was based on direct instruments of monetary control. This decision was dictated by the poor state of the banking system, the external debt situation and the need to finance the large budget deficit. During the first half of the 1990s, the banking system was dominated by three state-owned banks which quickly accumulated substantial debt problems. Eventually, one of these banks (the Rural Commercial Bank) was liquidated in January 1998 and a second one (the National Commercial Bank) was privatized to foreign investors in 2000. Furthermore, the last and largest state-owned bank, the Savings Bank, was privatized to Raiffeisen Bank of Austria in late 2003. This development is expected to provide a major boost to lending activities and financial intermediation, as the Savings Bank, the only bank in Albania with comprehensive national coverage, was not allowed to lend to the private sector during the process of privatization.

Meanwhile, non-bank financial institutions have a limited, though growing, influence in Albania. Micro-credits are increasingly being provided by savings and credit agencies (SCAs) and by end-2002 there were 109 SCAs operating throughout the country. This is compared to only 36 at end 2000.4 The insurance market is still dominated by the state but the largest insurance company, INSIG, is currently undergoing privatization, with the support of the EBRD and the International Finance Corporation (IFC).

At the beginning of 1996, some licenses on private banking activity were issued to several foreign banks, paving the way for a real market in that field. Nevertheless, the Bank of Albania continued to impose ceilings on deposit rates offered by state-owned banks. Only recently has the consolidation of the banking system allowed indirect instruments of monetary control, including the establishment of required reserves, a refinancing window and a liquidity

requirement, to replace direct instruments. New private banks have played a key role in encouraging the use of indirect instruments of monetary control and inter-bank competition. For example, in July 2000 the Bank of Albania adopted multiple-price one-week repos of Tbills, followed by fixed-rate repos in April 2001. The T-bill market has expanded considerably since then.

The control of interest rates was an important part of Albanian stabilization policy during the transition period. Real interest rates turned positive in the third-quarter of 1994 (see Chart 1) when inflation declined, however these rates remained under Central Bank control until the banking system began consolidating and monetary policy moved gradually towards the use of indirect instruments. The Bank of Albania started to eliminate direct control over interest rates at the beginning of 2000. Within a year, the controlled interest rates on 3-month, 6-month and 12-month deposits were removed and replaced with indirect instruments of monetary.

2.3. Legal basis & Decision making body

2.3.1. Legal basis

To design its monetary policy, Bank of Albania, is based on two main documents: Constitution of the Republic of Albania and the Law "On the Bank of Albania", namely:

Pursuant to Article 161 of the Constitution of the Republic of Albania, the Bank of Albania "*… is granted the exclusive right to independently implement the monetary policy*".

Pursuant to Article 3, paragraph 4a of the Law No. 8269, dated 23 December 1997, "On the Bank of Albania", the basic task of this institution is "*to independently formulate, adopt and implement the monetary policy of the Republic of Albania, consistent with its main objective*".

Pursuant to Article 3, paragraph 1 of the Law No. 8269, dated 23 December 1997, "On the Bank of Albania", the primary objective of the Bank of Albania is "*to achieve and maintain price stability*".

Pursuant to Article 43, paragraph a of the Law No. 8269, dated 23 December 1997, "On the Bank of Albania", the Supervisory

Council of the Bank of Albania has the following competences:

"*To approve the monetary policy of the Republic of Albania, defining the limits of the Bank of Albania's operations in the open market, the interest rates on deposits held with the Bank of Albania and on the discounts and loans of the Bank of Albania, and the reserves and level of reserves that commercial banks are required to hold with the Bank of Albania*".

Pursuant to Article 161, paragraph 1 of the Constitution of the Republic of Albania, the Bank of Albania "*... holds and manages the official foreign reserves of the Republic of Albania*".

Pursuant to Article 3, paragraph 4 of the Law No. 8269, dated 23 December 1997, "On the Bank of Albania", the basic task of this institution is to "...*formulate, adopt and execute the exchange*
arrangement and the exchange rate policy in the Republic of Albania".

2.3.2. Decision-making body

The Supervisory Council of the Bank of Albania is the supreme decision-making body of the central bank. It is responsible for the design of monetary policy and the approval of guidelines to implement it.

In formulating and implementing its monetary policy, the Bank of Albania is guided by the following principles:

- *Monetary policy guarantees price stability in the economy.*
- *Monetary policy is forward looking.*
- *Monetary policy is balanced.*
- *Monetary policy is robust.*
- *Monetary policy is transparent.*

2.4. Theoretical framework of monetary policy

Monetary policy is transmitted to the economy with time lags. These time lags are conditioned, firstly, by the response of financial markets to the instruments employed for monetary policy implementation, and secondly, by the response of households and businesses to interest rates and liquidity conditions in financial markets. This chain of effects is known as *the monetary policy transmission mechanism*. Generally, it covers a medium term horizon of one to three years, forming the monetary policy relevant horizon.

Therefore, monetary policy is guided by forecasts for the expected performance of inflation in the future. In practice, central banks set up a comprehensive framework of analysis and forecasting, which enables the timely identification of possible deviations of inflation from the target and informs monetary policy decision-making accordingly.

The Bank of Albania bases its monetary policy decision-making on a thorough analysis of economic, monetary and financial indicators. The main indicator of the balance of inflationary pressures in the economy is the deviation of the medium term forecast inflation from the target. This monetary policy analysis and assessment regime is known as the inflation targeting regime. Monetary policy plays an important role in medium-term forecasts. The actual and expected key interest rate during the forecast horizon determines the performance

of other macroeconomic indicators. Under these circumstances, the task of monetary policy is to determine the trajectory of the key interest rate that achieves the primary objective most effectively.

2.4.1. Bank of Albania Monetary Policy Objective

According to the Law "On the Bank of Albania", the primary objective of the Bank of Albania is to achieve and maintain price stability. By ensuring price stability, the Bank of Albania provides

a direct contribution to sustaining macroeconomic balances in the country, promoting economic growth and improving the standard of living, as well as safeguarding the financial stability of the system.

In addition to measuring inflation as the annual change in the Consumer Price Index, the Bank of Albania uses other measures – namely core inflation, tradable and non-tradable inflation, and the inflationary expectations of economic agents - in order to improve the monetary policy decision making process. These measures provide a more comprehensive basis for more pragmatic decisions. Core inflation represents the stable and long-term part of headline inflation.

In quantitative terms, the Bank of Albania has translated the price stability objective into the maintenance of inflation at 3 per cent, with a fluctuation band of ± 1 per cent. As well as that the Bank of Albania maintains a free floating exchange rate regime. The value of Lek against foreign currencies is freely determined in the foreign exchange market by demand and supply.

2.4.2. Operational objectives & Monetary policy instruments

Operational objectives

Operational objectives establish the link between monetary policy operations and its primary objective, achieving and maintaining price stability. The choice of these operational objectives depends on the monetary policy regime and the level of economic and financial market development.

The operational objective of the Bank of Albania's monetary policy, after 2009, is to steer short-term interbank rates close to the Bank of Albania's key interest rate, set by the Supervisory Council, and to minimize their volatility.

Steering short-term interbank rates close to the Bank of Albania's key interest rate enhances the effectiveness and transparency of the monetary policy, thus contributing to a better control of long term interest rates in the economy.

Experience shows that this operational approach mitigates the volatility of interest rates in the financial markets. By controlling the short-term interbank rate and facilitating the predictability of its changes through a clear monetary policy strategy, the medium and long-term interest rates respond to the changes in short-term interest rates to a predictable extent.

Monetary policy instruments

In order to achieve its objectives, the Bank of Albania employs open market instruments. Monetary policy instruments are oriented towards the achievement of the Bank of Albania's operational objective. Consistent with the monetary policy framework principles, the Bank of Albania does not have any commitments with regard to interventions in the foreign exchange market and the exchange rate.

The interest rate on repurchase agreements of seven-day maturity, applied in the regular weekly auctions of the Bank of Albania is the key rate used to transmit monetary policy signals.

This interest rate is set by the Supervisory Council of the Bank of Albania and states central bank's monetary policy stance. It also serves as a reference system for other interest rates of the Bank of Albania.

The following makes a brief description of the *instruments*[87] employed to implement the monetary policy.

- Open market operations

Open market operations represent the purchase or sale of market securities by the Bank of Albania.

Operations of repurchase and reverse repurchase agreements are respectively known as repo and reverse repo.

Open market operations also include foreign currency operations. However, in contrast to domestic currency operations, they do not seek to manage interest rates or liquidity in the system and signal the monetary policy. The main purpose of foreign currency operations is to change the level of the international reserve and smooth high and risky fluctuations in the exchange rate.

Open market operations include:

• (reverse) repurchase agreements; and

[87] For more detailed information on the types and use of monetary policy instruments at the Bank of Albania, please refer to *"Bank of Albania's Monetary Policy Instruments and Procedures for their Execution" (www.bankofalbania.org)*

• outright transactions.

- Standing facilities

The main purpose of standing facilities is to adjust the level of liquidity in the banking system and steer short-term interest rates in the money market. They are always and exclusively initiated by commercial banks. The latter are the sole counterparties to the Bank of Albania in these operations.

The Bank of Albania provides the following standing facilities:

• overnight deposit; and

• overnight loan.

- Required reserve

Through the required reserve instrument, the Bank of Albania aims to adjust money supply and the level of liquidity in the banking system, as well as to steer interbank rates. The Bank of Albania requires commercial banks to hold a certain amount of reserve in Lek and in foreign currency with the central bank.

The Bank of Albania continuously revisec its monetary policy instruments depending on the conditions of the Albanian financial market and monetary policy course. These revisions aim at enhancing their effectiveness.

- Other instruments

The above instruments are conventional monetary policy instruments. In particular circumstances, the Bank of Albania may consider employing other instruments, in order to enhance the effectiveness of the above instruments or to complement their effectiveness. These instruments are in compliance with the legal framework of the Bank of Albania. By nature, they can only be used occasionally, as deemed necessary by the Bank of Albania.

Forward guidance is such a monetary policy instrument. Bank of Albania's public commitment to pursue a certain monetary policy path in the future helps to reduce the uncertainties in the financial markets and to increase the effectiveness of its conventional instruments.

3. The amendment of the theoretical framework and performance of targeted variables

3.1. The amendment of the theoretical framework

According to the Law "On the Bank of Albania", the primary objective of the Bank of Albania's monetary policy is to achieve and maintain price stability. For this reason Bank of Albania has implemented and maintained a free-floating exchange rate regime for the observed period. The value of the Lek against the other foreign currencies is freely

determined in the foreign exchange market by its supply and demand. The free-floating exchange rate regime allows the Bank of Albania's monetary policy for maximum flexibility in achieving the inflation target. The Bank of Albania has defined price stability as the keeping of the consumer price inflation rate at 3.0%, with a tolerance band of ± 1 percentage point around this central numerical figure for the observed period.

The research showed change in *intermediate and operational objectives* where Bank of Albania targets the adoption of more advanced forms. The choice of intermediate and operational objectives depends on the monetary policy regime and the level of economic and financial market development. For the period 2006 - 2008, Bank of Albania has put an accord, as follows:

- The annual growth of money supply (M3) is the intermediate objective.

The definition of M3 annual growth as an intermediate objective is based on the argument that inflation, being a monetary phenomenon, is influenced by the money supply growth.

- Net domestic assets.

Net domestic assets of the Bank of Albania represent the amount of the Bank of Albania claims, excluding its foreign currency claims on nonresidents.

- Net international reserves.

Net international reserves of the Bank of Albania represent the Bank of Albania net foreign assets, minus all foreign currency assets of commercial banks held with the Bank of Albania (required reserve in foreign currency plus excess reserve in foreign currency).

After year 2009 a major step has been taken in terms of the institutional development of the interbank rates, through the establishment and maintenance of TRIBOR and TRIBID reference rates.

The Monetary Policy Document for the 2009-2011 period was a significant move in this regard - the instruments are employed to achieve the objective, namely:

- (Reverse) repurchase agreements.

In compliance with its operational objective, the Bank of Albania employs (reverse) repurchase agreements to steer short-term interest rates in the interbank market, and to temporarily withdraw or inject liquidity into the banking system. Repurchase agreements are used to temporarily reduce the liquidity in the banking system. Reverse repurchase agreements are used to temporarily increase the liquidity in the banking system or banks' capacity to increase lending or currency in circulation. (Reverse) repurchase agreements of one-week maturity are executed through standard auctions, while agreements of one-day, one-month and three-month maturity are executed through quick auctions.

- Outright transactions.

The Bank of Albania reduces the liquidity in the market through outright sale transactions and increases it through outright purchase transactions. These transactions are executed through the purchase or sale of Treasury bills of up to one-year maturity or highly credible debt securities.

- Foreign exchange market operations.

Foreign exchange market operations are carried out by the Bank of Albania through the purchase or sale of foreign currency in the market when the central bank intends to intervene in the market.

- Overnight deposit.

The overnight deposit assists commercial banks in operating with the excess liquidity, by placing it for only one day with the Bank of Albania. Overnight deposit also helps withdraw the excess liquidity from the banking system and smooth large fluctuations in short-term interest rates in the interbank market. The interest rate on overnight deposit is the lowest interest rate offered by the

Bank of Albania in the market.

- Overnight loan.

The overnight loan is a fully collaterized loan provided to assist commercial banks in solving their overnight liquidity problems. It also helps to smooth fluctuations in short-term interest rates in the interbank market. The interest rate on overnight loan is higher than the key interest rate.

Next steps considered to boost the development of the interbank market in Republic of Albania are as follows[88]: first, setting the prime rates in the functioning of commercial banks. These rates can and should serve as a guide to setting prices on banking products, both on the assets and liabilities' side. Second, the functioning of the collateralized market through repo or reverse repo contracts. Although in its classical concept the interbank market is an uncollateralized market, its enhancement with the abovementioned instruments would open the way to its thorough development, ensuring a more efficient distribution of liquidity among the market operators. Third, banks can and should be active in quoting the liquidity in the Albanian Lek, keeping the same stance as in the foreign exchange market.

[88] for more details see: www.bankofalbania.org, Speech of the Governor of the Bank of Albania, Ardian Fullani, at the Forum "Interbank Market Development and Improvement of Operational Policy at the Bank of Albania", 21 June 2010

3.2. Performance of the targeted variables

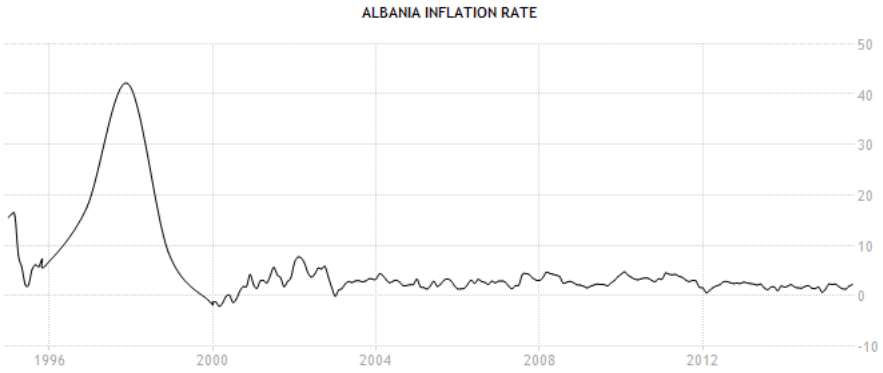
Consumer price inflation rate

"*Achieving and maintaining price stability*" implies pursuing low but positive inflation rates and preserving them for relatively long periods of time. In quantitative terms, the Bank of Albania defines price stability as the keeping of the consumer price inflation rate at 3.0%, with a tolerance band of ± 1 percentage point around this central numerical figure. The inflation target is measured by the annual rate of change in the Consumer Price Index, which is calculated and published by INSTAT.

This quantitative definition of price stability reflects the level of development of the Albanian economy as a small, open and emerging economy. As such, it is characterized by a high relative price volatility, towards finding stable structural balances of the market economy. In addition, the quantitative inflation target of 3.0% supports the EU integration process, enabling a reasonable time span for the real and nominal convergence of the Albanian economy with the EU. Lastly, keeping the inflation target at the same numerical figure as in the previous years will contribute positively to better anchoring the public's inflation expectations around the Bank of Albania's announced target.

Measuring inflation as the annual change in the Consumer Price Index, the Bank of Albania uses other measures – namely core inflation, tradable and non-tradable inflation, and the inflationary expectations of economic agents - in order to improve the monetary policy decision-making process.

These measures provide a more comprehensive basis for more pragmatic decisions.



Source: http://www.tradingeconomics.com / INSTITUTI / STATISTIKAVE (INSTAT)

Inflation Rate in Albania averaged 3.19 percent from 1995 until 2015, reaching an all time high of 42.08 percent in December of 1997 and a record low of -2.11 percent in March of 2000. Inflation Rate in Albania is reported by the Instituti i Statistikave (INSTAT).

Exchange rate regime

The Bank of Albania has implemented a free-floating exchange rate regime. The value of the Lek against the other foreign currencies is freely determined in the foreign exchange market by its supply and demand. The free-floating exchange rate regime allows the Bank of Albania's monetary policy for maximum flexibility in achieving the inflation target. In addition, the implementation of this regime reflects and enables the free movement of goods and capital in Albania's commercial and financial exchanges with its trading partners.

Consistent with its monetary policy, as a guarantee to cope with the severe shocks on the real sector of the economy, and in order to safeguard the country's financial stability, the Bank of Albania is committed to holding a sufficient level of foreign reserve. In line with the best international practices, the Bank of Albania determines the sufficient level of foreign reserve based on the concurrent observance of these two quantitative criteria:

• the maintenance, in the medium run, of foreign reserve levels sufficient to cover at least 4 months of imports of goods and services; and

• the maintenance, in the medium run, of foreign reserve levels sufficient to cover the short-term foreign debt of the Albanian economy.

In order to increase the level of foreign reserve and contribute to the stabilization and development of the domestic financial markets, the Bank of Albania may intervene in the domestic foreign exchange market. These interventions, however, will not reflect the monetary policy; they will neither affect nor prejudice the achievement of the primary objective of the Bank of Albania.

The Bank of Albania intervenes in the foreign exchange market in accordance with the relevant internal regulations. The latter are made transparent to the public.

Source: http://www.tradingeconomics.com / OTK INTERBANK

The Albanian Lek averaged 111.98 from 1998 until 2015, reaching an all time high of 151.87 in October of 2000 and a record low of 76.38 in July of 2008.

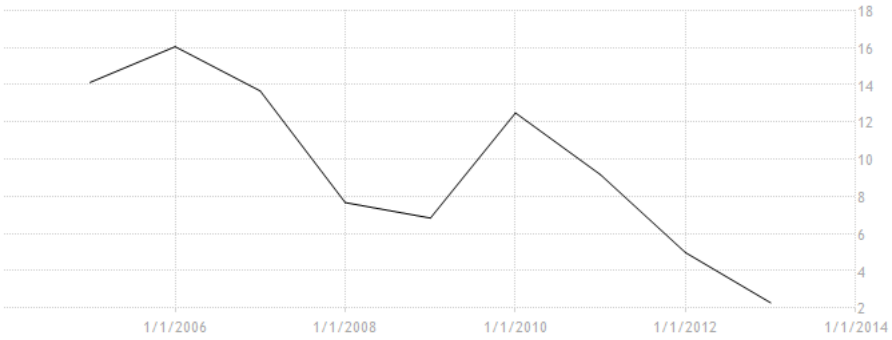
Annual growth of money supply (M3)

The Bank of Albania uses the broad money aggregate (M3) as an indicator of inflationary pressures in the economy. The informative role of broad money finds support in the argument that inflation is a monetary phenomenon over long time periods, and consequently, it is affected by the growth of money supply in the economy. Accordingly, the growth of broad money beyond the demand of the economy signals and provides room for mounting inflationary pressures.

The annual growth rate of M3 aggregate and its confrontation with the real demand of the economy for money will serve as an indicator of monetary inflationary pressures. The quantitative adequacy levels of money growth are revised over the course of the year, consistent

with the performance of monetary developments and the corrective measures proposed by the Bank of Albania in the monetary program.

ANNUAL BROAD MONEY GROWTH

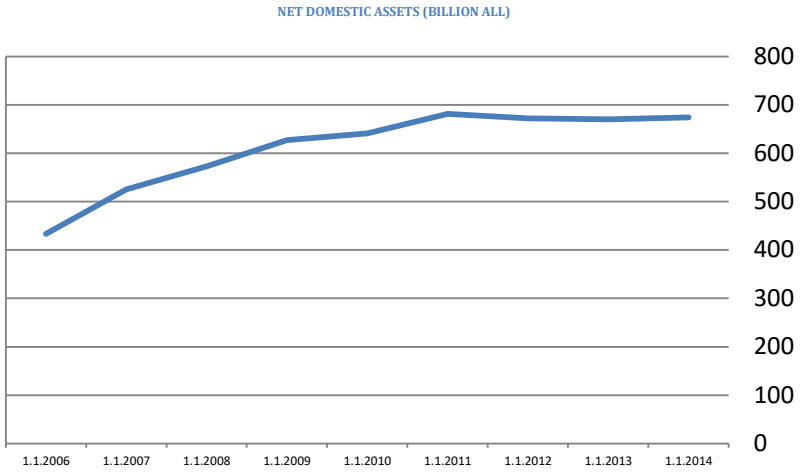


source: http://www.tradingeconomics.com / BANK OF ALBANIA

Annual Broad money growth (%) in Albania was last measured at 4.8% for the Q2 in 2015, according to the Bank of Albania. Negative trend is scored as per annual broad money growth which record for 2006 is 16.3%. Private sector demand for financing continues to appear sluggish, providing low contribution to the creation of money in the economy.

Net domestic assets

Net domestic assets of the Bank of Albania represent the amount of the Bank of Albania claims, excluding its foreign currency claims on nonresidents. More concretely, here are included the Bank of Albania (net) claims on the Government, and its claims on commercial banks. An upper limit is set on these claims, which implies that the Bank of Albania cannot increase the position of net domestic assets beyond the set limit.

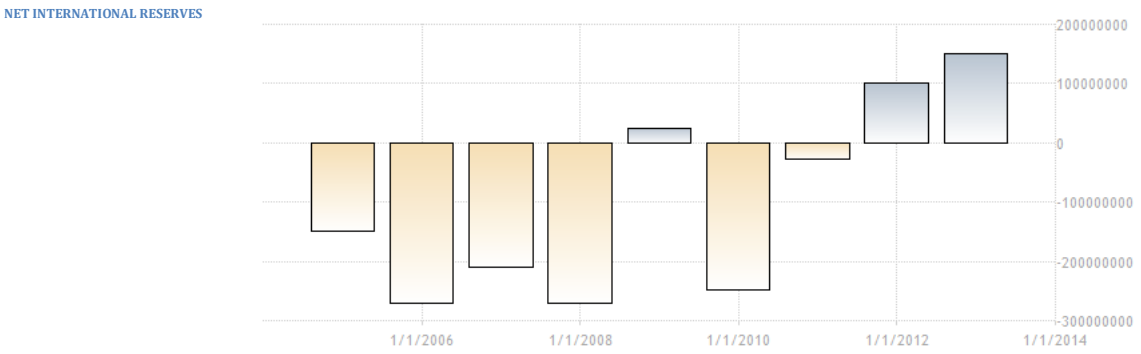


source: www.imf.org

Net domestic assets ware last measured at ALL 670 billion in 2013, as per Bank of Albania and forecasted at ALL 682 billion for 2015. They mark a increasing trend compared to 2006 when they have been measured at ALL 433 billion. Increase is generally triggered by claims on commercial banks and on the private sector.

Net international reserves

Net international reserves of the Bank of Albania represent the Bank of Albania net foreign assets, minus all foreign currency assets of commercial banks held with the Bank of Albania (required reserve in foreign currency plus excess reserve in foreign currency).



source: http://www.tradingeconomics.com / BANK OF ALBANIA

Changes in net reserves (US dollar) in Albania was last measured at USD 150,50 million in 2013, according to the World Bank. Changes in net reserves is the net change in a country's holdings of international reserves resulting from transactions on the current, capital, and

financial accounts. Until 2013 net international reserves had negative values, afterward trend had been changed.

Interbank rate

The Supervisory Council deemed that the monetary conditions are appropriate for achieving the price stability objective and decided to keep the key interest rate unchanged, at 2.0%. Albania's interest rate has been cut several times until brought down to its new historic low of 2%.

Albania Interbank transactions consist in short-term ones, mainly one and seven days. Since the last interest rate cut in January, interbank interest rates have remained mainly below the key rate. The overnight rate averaged 1.92% for Q2 2015 and The seven-day rate fell to 1.97%

The borrowing volume in the interbank market is estimated to be around 1.0% of total banking

system assets. The market is segmented and, due to exposure restrictions, liquidity management

is oftentimes inefficient

Conclusion

Fundamental change is seen in intermediate and operational objectives where Bank of Albania targets the adoption of more advanced forms. The choice of intermediate and operational objectives depends on the monetary policy regime and the level of economic and financial market development. For the period 2006 - 2008, Bank of Albania has put an accord on the annual growth of money supply (M3); net domestic assets; and net international reserves. After 2009 the priority has been set to steer short-term interbank rates close to the Bank of Albania’s key interest rate and the instruments which are employed to achieve the objective.

In respect to the monetary variables of the economy, the Bank of Albania has implemented and maintained a free-floating exchange rate regime.

In quantitative terms, the Bank of Albania defines price stability as the keeping and maintaining of the consumer price inflation rate at 3.0%.

Targeting the interbank market interest rates seems a practical option for Albania but currently there are plenty of room for improvement in this philosophy and practice.

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LONG-TERM INTEREST RATES' INTEGRATION AND DYNAMICS IN SOME CEE COUNTRIES ON THE ROAD TO EUROZONE

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Abstract: *As most 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 long-term interest rates, namely their co-integration as regard of some CEE countries towards the euro area as a whole. The center of the study includes also the most significant determinants of the long-term interest rates and their influence before, during and after the crisis. The results could be useful for recommending particular policies at different economic circumstances.*

Key words: *Long-term interest rates, CEE countries, co-integration, determinants, global financial crisis*

JEL Classification: *E43, F36*

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 the co-integration between the long-term interest rates of some Central and Eastern European countries with those of the euro area as a whole (EU 19) and tries to explain the most possible determinants and their influence for the deviations before, during and after the global financial crisis. As the global financial crisis deteriorate the common economic stance of the European continent, the convergence of the CEE countries to the Eurozone was severely deviated. An interesting issue is whether the long-term interest rates are still on their path of long-term relationship even when the investigation is including also the period after the crisis. Because of the crucial role of the crisis there is also interesting whether the most influencing factors of the dynamics of the long-term interest rates are changing their strength or not. This could be useful for focusing on particular policies to soften their negative influence.

Next sections are organized as follows: Chapter 2 presents literature review regarding co-integration of the long-term interest rates and the determinants influencing their dynamics. Chapter 3 is methodological explanation of the research procedure. Chapter 4 represents the results, and conclusions are summarized in the last Chapter 5.

2. 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. As in this report we are considering the long-term interest rates in some CEE countries on their road to euro zone, we are focusing on the literature in this narrower aspect of economic integration regarding the Maastricht convergence criteria.

Although by entering the Eurozone one can expect positive developments of the macroeconomic variables in regard of lower long-term interest rates, there are also important possible negative effects. Toporowski (2015) mentioned that after the global financial crisis lower interest rates could be a negative impulse for worsening growth perspectives due to the fact that the cheaper capital is not always used to finance investment, but also too often to finance consumption and wage growth. This could undermine the competitiveness of the CEE

countries and also their efforts for further convergence. The moral hazard is one other also important problem of lower interest rates because it encourages risky investment, such as in the housing market, creating bubbles or macroeconomic imbalances. [89]

Haug, MacKinnon and Michelis (1999) employs systems-based co-integration techniques to determine which European Union countries would form a successful Economic and Monetary Union, based on long-run behavior of the nominal convergence criteria laid down in the Maastricht treaty. They study the long-term interest rates using monthly long-term government bond yields for 11 countries and concluded that there is co-integration among eight countries: Belgium, Denmark, France, Germany, Ireland, Luxembourg, the Netherlands, and the UK.[90]

Meister (2002) investigates some CEE countries for *co-integration* of the Maastricht criteria with EMU countries using the Johansen co-integration method and VAR regression. The results show that the group of countries which entered the EU in 2004 (Czech Republic, Hungary, Latvia, Poland, Slovak Republic and Slovenia) are on their way to convergence. In contrast the later joined countries (Bulgaria and Romania) are lagging behind but showed positive development.[91]

Holz (2006) analyzes the 10-year government bond yields of 5 CEE countries, namely Czech Republic, Hungary, Poland, Slovakia and Latvia. His results show that there is a forming co-integration block between the three biggest CEE countries, namely Czech Republic, Hungary and Poland. A co-integration relationship vis-à-vis EMU can only be identified for Slovakia.[92]

Bellas, Papaioannou and Petrova (2010) analyses the determinants of emerging market sovereign bond spreads by examining the short and long-run effects of fundamental (macroeconomic: risk-free rate, the stock of debt, gross domestic product, *fiscal balance*) and temporary (financial market) factors on these spreads. Analysis through fixed-effects model and pooled mean group model indicate that in the long run, fundamentals are significant

[89] Toporowski, P., 2015, A Post-Crisis Eurozone: Still an Attractive Offer for Central Europe, Policy Paper № 22 (124), PISM, July 2015

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determinants of emerging market sovereign bond spreads, while in the short run, financial volatility is a more important determinant of spreads than fundamental indicators.[93]

Dumičić and Ridzak (2011) analyze the determinants of the changes in sovereign bond spreads in emerging European markets before and during the recent global financial crisis. Using least squares and controlling for serial correlation the authors found that the dynamics of spreads can be explained by both market sentiment indicators (equity prices volatility index) and macroeconomic fundamentals (real GDP growth, *inflation rate*, exchange rate, general *government debt*, external debt, short-term external debt, international reserves, current account balance), with external imbalances not exerting any discernible effect on spreads prior to the crisis, but became increasingly significant as the crisis broke out.[94]

Moinescu (2012) investigates the mechanism by which lending to private sector may induce risks to the long-term interest rates convergence process in the new EU Member States and the empirical assessment highlights the importance of the sovereign risk premium transmission channel to long-term interest rate, with *approximately two thirds of the CDS rate contributing to the level of government bonds long-term yields*.[95]

3. Methodology:

For the purpose of our analysis the econometric softwares JMulTi[96] and SPSS[97] are used.

The examined countries are*: Bulgaria, Czech Republic, Hungary, Poland and Romania*. They are members of the EU and have an obligation to enter also the Euro area. The investigation period is a 10-year period between June 2005 and first half of 2015 (*2005 M6 to 2015 M6*).

For the first part of the analysis t*he Johansen co-integration method* is applied in order to illustrate if there is a co-movement between the long-term interest rates of the above mentioned Central and Eastern European countries with those of the euro area. Data for Euro area is represented as a benchmark for the analysis. The time series of the long-term interest

[93] Bellas, D., Papaioannou, M., Petrova, I., 2010, Determinants of Emerging Market Sovereign Bond Spreads: Fundamentals vs Financial Stress, IMF Working Papers, WP/10/281, December 2010

[94] Dumičić, M., Ridzak, T., 2011, Determinants of Sovereign Risk Premia for European Emerging Markets, Croatian National Bank, Zagreb, Financial Theory and Practice, 35 (3) 277-299 (2011)

[95] Moinescu, B., Credit Accelerator, CDS Rate and Long Term Yields: Empirical Evidences From the CEE Economies, JAQM, Vol. 7, No. 3, Fall 2012

96 JMulTi is an interactive open-source software designed for univariate and multivariate time series analysis.

97 SPSS – Statistical Package for Social Sciences

rates are presented on a monthly basis. Initially a test for non-stationarity is implemented with Johansen trace test following.

For the second part of the analysis an *OLS regression* is used in order to explain the influence of the most crucial reasons for the deviations during the global financial crisis. The period could be divided into three sub periods, which represents the pre-crisis period , the period of the global financial crisis and conditional post-crisis period[98]. Because of the different timing of the available data the analysis is implemented with three separated models, namely:

- Long-term interest rates and debt and deficit – quarterly data;
- Long-term interest rates and inflation – monthly data;
- Long-term interest rates and CDS spreads – daily data.

All abovementioned data is extracted from Eurostat, except the CDS spreads which are from HSBC database.

4. Results

To start with the analysis we first conducted a test for non-stationarity. The Augmented Dickey-Fuller test is applied to all time series of the long-term interest rates. The tests are done including a constant and without trend. It is important that the time series are integrated of order 1 for the co-integration analysis to be reliable.

Appropriate lag length is chosen by considering Akaike, Hannan-Quinn and Schwarz criteria and also the Ng and Perron procedure, described below.

BG 1% 5% 10%
-3.43 -2.86 -2.57
value of test statistic: -0.9862

optimal number of lags (searched up to 10 lags of 1. differences):
Akaike Info Criterion: 3
Hannan-Quinn Criterion: 3
Schwarz Criterion: 0

98 The economics of the all EU countries are not yet reached their levels before the crisis.

For Bulgaria the value of test statistic – 0,9862 is greater than the critical value -2,57 at 10%, hence one can accept the null hypothesis and conclude that there is a unit root and the time series for this country is *non-stationary*. As regard of the optimal lag length, Akaike and Hannan-Quinn are pointing at 3. Although it is better to use 0 according to Schwarz criterion, because it's the smallest (the smaller the lag length, the more reliable results), we are choosing Akaike Info Criterion by following Ng and Perron[99]. According their recommendations we set an upper bound for the optimal lag length and run the ADF test. If the absolute value of the t-statistic for testing significance of the last lagged difference is greater than 1.6, then one should set the max value and perform the unit root test. Otherwise, one should reduce the lag length by one and repeat the process. JMulTi suggests maximum number of lags to be 10, so we chose 10 and repeat the process until reaching the optimal number of lags. For Bulgaria it's 3, which match the Akaike and Hannan-Quinn criteria. The same procedure is applied to all other countries.

CZ 1% 5% 10%
-3.43 -2.86 -2.57
value of test statistic: 0.1098

optimal number of lags (searched up to 10 lags of 1. differences):
Akaike Info Criterion: 2
Hannan-Quinn Criterion: 2
Schwarz Criterion: 2

The same is true for the Czech Republic, where the value of test statistic is also greater than the critical value at 10%. The time series is *non-stationary* and considering all information criteria the optimal lag length is 2. The result according Perron's procedure is 8, which is too large, so we choose the optimal lag length of 2.

HU 1% 5% 10%
-3.43 -2.86 -2.57
value of test statistic: -0.7500
optimal number of lags (searched up to 10 lags of 1. differences):
Akaike Info Criterion: 2

[99] Ng and Perron "Unit Root Tests in ARMA Models with Data-Dependent Methods for the Selection of the Truncation Lag", JASA, 1995

Hannan-Quinn Criterion: 2
Schwarz Criterion: 2

Hungary's time series is *non-stationary* too with optimal lag length of 2 according to all three information criteria and Perron's procedure. The value of test statistic -0,7500 is greater than the critical value -2,57 at 10%.

PL 1% 5% 10%
-3.43 -2.86 -2.57
value of test statistic: -0.3968

optimal number of lags (searched up to 10 lags of 1. differences):
Akaike Info Criterion: 3
Hannan-Quinn Criterion: 2
Schwarz Criterion: 1

Poland's time series also has a unit root which can be seen as the value of test statistic -0,3968 is greater than the critical value -2,57 at 10%. Here we choose the optimal lag length to be 2 according to Hannan-Quinn Criterion, the procedure of Perron is pointing the same.

RO 1% 5% 10%
-3.43 -2.86 -2.57
value of test statistic: -1.0200

optimal number of lags (searched up to 10 lags of 1. differences):
Akaike Info Criterion: 0
Hannan-Quinn Criterion: 0
Schwarz Criterion: 0

Non-stationarity characterizes also the time series of Romania. Here Perron's procedure is not followed because it's result of 8 is too large. All information criteria are pointing that there is no optimal lag length, i. e. the optimal lag length is 0.

EA 1% 5% 10%

-3.43 -2.86 -2.57

value of test statistic: -1.3749

optimal number of lags (searched up to 10 lags of 1. differences):

Akaike Info Criterion: 8

Hannan-Quinn Criterion: 1

Schwarz Criterion: 1

Finally, for the euro area there is also acceptance of the null hypothesis of existence of a unit root, which is proved by the value of test statistic -0,7241 greater than the critical value -2,57. Again it is better to choose the smaller lag length and according to all information criteria and Perron's procedure it is 1.

As all time series are non-stationary we could proceed to implement the co-integration analysis using the Johansen Trace Test.

Johansen Trace Test for: BG CZ EA HU PL RO

sample range: [2005 M7, 2015 M6], T = 120

included lags (levels): 1

dimension of the process: 6

intercept included

response surface computed:

---

r0	LR	pval	90%	95%	99%
0	93.67	0.1958	98.98	103.68	112.88
1	56.66	0.6191	72.74	76.81	84.84
2	32.48	0.8293	50.50	53.94	60.81
3	14.21	0.9625	32.25	35.07	40.78
4	6.28	0.9302	17.98	20.16	24.69
5	1.06	0.9289	7.60	9.14	12.53

OPTIMAL ENDOGENOUS LAGS FROM INFORMATION CRITERIA

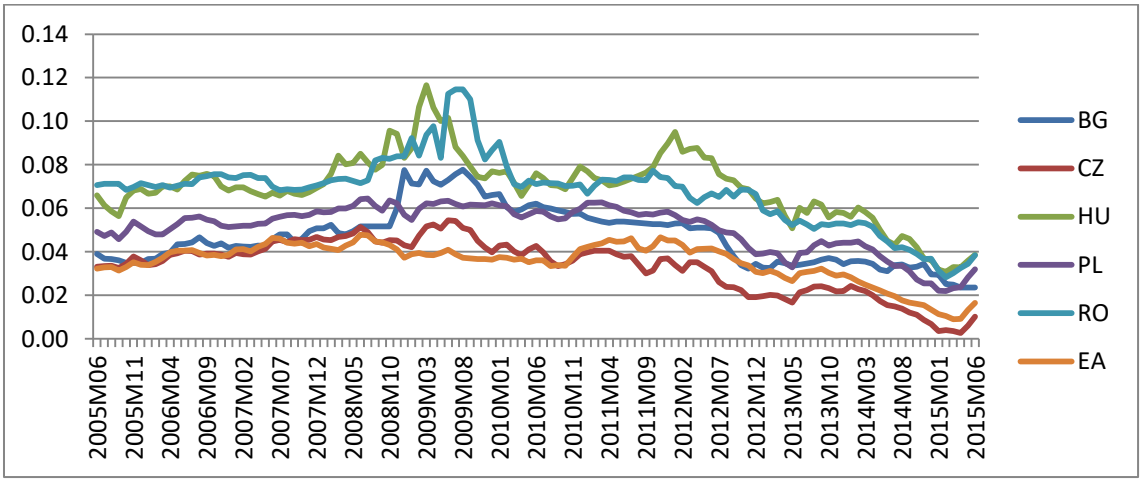
sample range: [2006 M4, 2015 M6], T = 111

optimal number of lags (searched up to 10 lags of levels):
Akaike Info Criterion: 3
Hannan-Quinn Criterion: 1
Schwarz Criterion: 1

Regarding Dwyer (2014)[100] the Johansen test makes it possible to estimate all co-integrating vectors when there are more than two variables. If there are three variables each with unit roots, there are two possible co-integrating vectors. More generally, if there are n variables, there are n-1 possible co-integrating vectors.

As results show there are 5 co-integration vectors of these 6 cases which is a confirmation of a long-run relationship between the long-term interest rates of Bulgaria, Czech Republic, Hungary, Poland and Romania towards the countries already members of EMU.

Let's proceed with the second part of the analysis.



As the graph shows there is significant deviation from the path of pre-crisis convergence. We suggest and obviously that is due to the global financial crisis and the problems related to it. So we proceed with examining the impact of some suggested indicators

[100] Dwyer, G. ,The Johansen Tests for Cointegration, Lecture, April 2014

which could be directly linked with the long-term interest rates, namely through the global financial crisis. There are many papers which investigate the determinants of long-term interest rates but this paper build up with investigating whether these determinants are eligible also for the so called in this paper post-crisis period. It is interesting whether they are strengthening or loosening their influence after the crisis. We included in the analysis the following variables: the global financial crisis, represented by the CDS spreads, also the budget deficit and government debt, both represented as a share of GDP, and inflation, represented as a HICP.

This methodology allows to make a direct link between the long-term interest rates and the other convergence criteria, thus showing their importance and mutual interconnectivity in the process of euro zone entry despite that they are very criticized.

For this purpose we use the methodology of OLS.

Debt and deficit / quarterly data

Pre-Crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	5,012	,390
	Dbt	,009	,011
	Def	-,061	,035

Crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	5,191	,369
	Dbt	,019	,008
	Def	-,072	,039

Post-Crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	2,296	,536
	Dbt	,027	,011
	Def	-,056	,097

The results show that the influence of the debt factor is statistically insignificant in the pre-crisis model.

This could be explained with the good economic circumstances of prosperous growth, which is a sign of not focusing on the debt ratio. However, the debt factor is increasing its influence during the crisis and also after the crisis. Perhaps that is due to the increasing importance of the fiscal discipline, erasing from the Greek debt crisis, which has very deep impact in the market expectations. The fear from country bankruptcy has sharpened the perceptions of market participants and they are more carefully.

In regard of the deficit factor, there is increasing influence during the crisis, but it is slightly easing after the crisis. The reason could be the relatively calmed economic circumstances. It should be mentioned that results show a negative link between the deficit levels and the long-term interest rates. These strange results are caused by the insignificant regression coefficients of the deficit factor in all three models.

However, the deficit factor tends to be influencing the long-term interest rates because of the threshold of 3% which could be easily violated in times of economic crisis. Besides is also the trend to structural reforms in the EU, which requires a significant amount of resources.

Inflation / monthly data

Pre-crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	4,571	,208
	Inflation	,197	,040

The inflation factor tends to be very strong and to increase its influence throughout the crisis and after the crisis. It's strongly linked to the long-term interest rates than the factors debt and fiscal balance. The price stability objective is in the heart of the monetary policy of the ECB, determining all its operations. The low inflation objective is crucial for the level of interest rates in short- and long-term period. The Fisher's effects is widely known and explains the positive link between the inflation rate and nominal interest rates. The results maintain Fisher's conclusions of the importance of the inflation rate for the interest rate level.

Crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	4,749	,202
	Inflation	,330	,040

Post-crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	2,983	,129
	Inflation	,462	,062

CDS / daily data

Pre-crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	4,399	,040
	CDS spread	,044	,001

In the case of CDS spreads the regression coefficients show that the influence of CDS spreads is decreasing throughout the crisis and slightly increasing after the crisis, but significantly below the level before the crisis, which is strange. Although the sharpened market sentiments and the fear of second crisis appearance are very strong, the model appears to show conflictting results at a first sight.

Crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	3,946	,052
	CDS spread	,009	,000

Post-crisis Model		Coefficients	
		B	Std. Error
1	(Constant)	1,418	,051
	CDS spread	,016	,000

However, in peaceful times the CDS spreads are very crucial indicator for determining coming fluctuations in the economic circumstances. When the crisis begin it is obvious that the economy is recessive and finally when the growth is back on its positive path the CDS is becoming again an indicator with significant importance.

Conclusions

In times when the global financial crisis has eased its unfavorable influence on the CEE economies the long-term interest rates of Bulgaria, Czech Republic, Hungary, Poland and Romania are still on their path of long-term relationship with the members of the euro area. This shows the positive convergence process even after the severe crisis.

The investigation of the most important determinants of the long-term interest rates presents their influence before, during and after the crisis. The factors debt, deficit, inflation and CDS spreads influence in a different way and in a different direction throughout the period. Inflation is the most influencing factor and is increasing its influence throughout and after the crisis. This shows the importance of the *monetary policy of price stability irrespectively of the economic stance*.

The *fiscal discipline* is also important but the results show less significant influence, and even insignificant in the case of the deficit factor. One can conclude that despite the low regression coefficients they influence the level of long-term interest rates and that the influence is most pronounced in crisis times. This *conflicting situation* is hardly solving because exactly during crisis periods the fiscal balance is almost always deteriorated and the debt levels tends to vastly rise.

CDS spreads appear to be crucial in calm economic situation where one could receive from them information about possible negative shocks and likely near recession. They tend to ease their influence when the economy enters the real crisis period.

So even that the long-term interest rates of the investigated CEE countries didn't fall out from the convergence path and continue to integrate each other and with the euro area member states, there are indicators which should be bear in mind and greatly considering in order not to lose the positive direction from the EU and EMU participation and integration.

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ASPECTS OF INVESTMENT SURVEILLANCE AND PROTECTION OF CLIENTS' ASSETS

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Abstract: *The protection of clients' assets has a key role for the financial markets not only in terms of their development, but also in terms of their stability and steadiness. In this paper issues of a current importance are reviewed concerning the protection of clients' assets in Bulgaria and the EU. Simultaneously there is a review of the risks to which the investors in the capital markets are exposed, as well as the framework for protection of those investors. The goal of the paper is to point out the imperfections of the protection and also to propose some directions for amendments aiming for better investors' protection. The paper emphasizes on the financial regulation in Bulgaria and the EU.*

Key words: *protection of clients' assets, financial regulation, capital market.*

Clients' assets protection is mainly connected with preventive and follow-up measures, which aim to limit and oppose the risks of loss on capital markets. That does not include the traditional investment risk, which is inherent to all investments on the capital market and is in regard to fluctuations of financial instruments' prices. In this paper issues connected to risks which arise from investors' relations with the intermediary (investment firm, bank, etc.) are analyzed.

This topic is interesting and important having in mind the enormous losses investors went through since 2007. The discussed period includes the world financial crisis, as well as some of the biggest investment banks and investment firms failures. [101] The weak regulation, non-transparent behavior of capital market participants and complicated financial

[101] The bankruptcy of Lehmen Brothers in 2008, as well as the Ponzi scheme of Bernerd Madof in December 2008 brought billions of losses for investors.

instruments, as well as too big to fail investment companies were most often pointed out by economist and regulators as reasons for the crisis.[102]

As a response to the chaos in USA and EU there was a massive regulatory campaign for tightening the legal framework requirements and increase of investment survailence over capital markets. The theoretical explanation for the necessity of regulations is in terms of market failures as imperfect competition, information asymmetry etc. The probability of market failure in the context of the key role that capita markets have determine the existence of a certain level of financial regulations.[103]

The Lehmen Brothers failure had a systemic importance which the "too-big-to-fail" institutions have. The enormous costs caused by that failure as well as the number of parties who suffered was an evidence that regulation could have been better grounded. As a consequence the American government responded with a new financial legislation – the Dodd-Frank Act from the summer of 2010 which was later named as the most massive financial reform since the Great depression.[104]

The amendment in Europe were mainly in the EU but the process of implementation is still on the way.[105] As a part of the measures after the crisis there are new structures created responsible for the supervision of the financial sector, as well as new regulations aiming to obtain higher investor protection.[106]

Besides the actions which were taken there are still many imperfections which may impose risk of loss for investors. In the present paper a stress on the clients assets protection is put as to those part of the legislative framework which should be considered as problematic and should be reviewed in order to prevent losses and misappropriations for investors.

[102] The de Larosière Group report from February, 2009, p. 3, also: Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, 2008.

[103] Howells, P., Bain, K., Financial markets and institutions, 2000, p. 360

[104] Dodd-Frank Wallstreet reform and Consumer Protection Act from July, 21st 2010 and FDIC's 2010 annual report, p. 6.

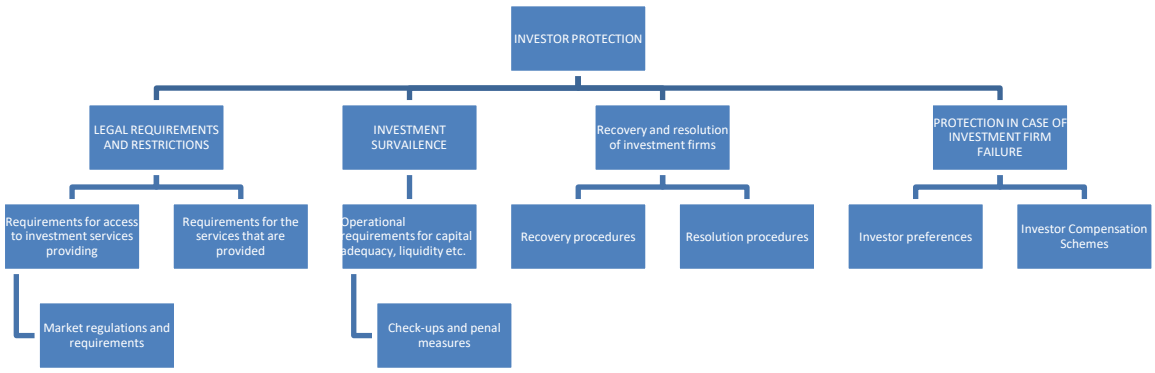
105 By the end of 2015 the new directives for deposit insurance schemes and for resolution and restructuring of credit institutions and investment intermediaries has been adopted and implemented in the national legislation, while the new directive on investor compensation schemes has been put on hold since 2011.

[106] The European Banking Authority was created, also the European Securities and Markets Authority, the European Insurance and Occupational Pensions Authority , as of 2011.

CLIENTS' ASSETS PROTECTION FRAMEWORK

Financial regulations could be structured using different approaches. Frederic Mishkin for example overviews 10 main categories.[107] From the perspective of clients investing on the capital market protection could be discussed in three levels: (Figure

Fig. 1



Source: Author's review and oppinion

First of all, we could outline the legal requirements that investment firms, financial instruments and capital markets should fullfill. There is a threshold for access to the right to provide investment services such as capital requirements, fulfillment of criteria for persons who are allowed to managed an investment firm, a detailed activity programm to be presented

[107] According to F. Mishkin the ten basic financial regulation categories are: the government safety net, restrictions on asset holdings, capital requirements, prompt corrective action, chartering and examination, assessment of risk management, disclosure requirements, consumer protection, restrictions on competition, and macroprudential supervision.. See: Mishkin F., The Economics of Money, Banking and Financial Markets, 10th Edition,2013, p. 242.

and many others, where the aim is to limit the probability for fraud actions.[108] Moreover the services provided by investment firms are prescribed by the legislation as well as the financial instruments traded are also subject to supervision.[109] Many changes and improvements were adopted in this regard after the world financial crisis. For instance, in the UK new financial instruments could not be traded anymore without the approval of the FCA (Financial Conduct Authority).

Investment survailence includes further requirements for capital adequacy, reporting and the process of administration and operation of clients assets once the investment firm has started its business. The effective supervision is performed through check-ups by the national supervision authority and through its right to impose administrative measures where the law has been infringed.

In some cases, the number of market participants could be enourmous which would hinder the effective supervision, or it will be uneffective where there is deliberate fraud actions.[110] As part of the survailence different actions could be taken – administrative resolutions and punishments, imposing a temporary requisitor, changing the operational structure etc. Furthermore, if the survailence has failed or the investment company has managed to hide some illeagal actions, frauds or losses and it turned out to experience troubles with its financial position two more steps of protection are prescribed.

The first one is in regard of the new requirements for recovery and resolution of investment companies which were enacted through the Directive 2014/59/EU for the recovery and resolution of credit institutions and investment firms that should have been implemented in the national legislation in 2016.[111] The new recovery and resolution measures impose the creation of huge administrative bodies who will be responsible in case a credit institution or investment firms is facing significant financial difficulties that could lead to large investor losses and contengiency effect in regard to systemic risks. That was provoked again from the

[108] See for example Art. 8-13 of Markets in Financial Instruments Act, last amended SG No. 94/4.12.2015.

[109] See for example Art. 5 of Markets in Financial Instruments Act, last amended SG No. 94/4.12.2015. Also, the requirements for the public companies and the IPOs are limiting the risk for investors. Also the admission to trade of investment instruments especially after the financial crisis has been tighten since many derivative instruments happened to fail on the market and caused enormous losses for both market and investors.

[110] For instance on the UK and American capital markets there are more than 4 thousand investment firms and it could be practically impossible or too expensive to closely supervise each of them on a regular basis compared with other markets as many of the EU member states where the number of investment companies is often about 100 or less.

[111] See DIRECTIVE 2014/59/EU of the European Council for the recovery and resolution of credit institutions and investment firms from May 2014.

recent crisis and the use of the state aid financing in those type of cases. In short this pillow of investor protection includes a variety of measures for recovery and resolution where the funding is meant to be gathered ex-ante from the regarded institutions subject to this legislation.

If the third pillow fails to prevent an investment firm from a failure or it has been thought to be too late for its activation the last resort protection is also foreseen. In a case of investment firm failure investors could benefit from investor preferences and priviliges in the process of liquadion, as well as of the compensation provided by the investor compensation schemes.[112]

The changes and actions after the world financial crisis were in regard of all four pillows of investor protection aiming at higher legal requirement, stricter survailence, measures for recovery and resolution, as well as higher last resort protection and compensation in case of eventual losses. When observing investor protection pillows and measures it is important to understand the nature of risks on which capital market investments are exposed.

Risks for investments on the capital market

The common division of risk for investors on the capital market the could be a subjected to control is to financial and operational risk. The financial risk is connected to the consequences in a case of failure of investment firm or a third party. Operational risk is rather in regard of issues that may arise in the process of administration or holding clients assets. Table 1 shows systemized information for both types.

112 Those are legal entities who have the obligation to cover investor losses to a certain limit amount where and investment firm has failed to return clients assets and where certain legal action has been undertaken against the firm. Usually the funds for those compensation payments are ex-ante or ex-post gathered from all investment firms on the respective regional market. There is an EU Directive which impose the existence of such scheme in every EU member-state (See Directive 97/9/EC of the European Parliament and of the Council of 3 March 1997 on investor-compensation schemes).

Table 1. Risk for investors assets on the capital market

Financial risk	Description
1.Risk of investment firm default	➢ Treating clients assets as part of defaulting firm rather than belonging to ➢ Freezing assets - imposing costs to clients in terms of disruption and inconvenience connected with transfer of clients assets.
2.Risk of third party default	➢ The risk of client asset losses in the event of a default by a third party (custodian bank, or an intermediate broker, clearing house or other party to which the firm transfers client funds for transaction purposes).
Operational risk	Description
2. Theft or embezzlement	➢ The risk of client assets being stolen or otherwise misappropriated by employees or managers of the firm or third party
3. Fraud	➢ The risk of an unauthorised transfer or fraudulent use of client assets (eg, to cover own-account trading losses, or other dishonest behaviour conducted by employees or managers of the firm or third party)
4. Segregation error	➢ The risk that client assets are incorrectly identified as firm assets rather than client assets, or vice versa.
5. Settlement error	➢ The risk that there is a mismatch between delivery of securities and payment of client funds.
6. Reconciliation error	➢ The risk that the firm is unable to reconcile client balances in its own internal records with those in the reports of third parties
7. Accounting or record-keeping error	➢ The risk that, due to recording problems, the firm is unable to allocate client assets to individual clients. Accounting frauds.
8. Failure to execute (or other breaches of) client instructions	➢ The risk of losses arising from a firm's failure to execute a client's transaction on time or in the correct manner, or to otherwise breach instructions
9. Other poor investment management	➢ The risk of churning, mispricing, corporate action failures, stocklending failures , etc. which result from failure in the corporate management (including bad investment decisions) [113]
10. Bad investment advice	➢ The risk of receiving negligent financial advice (eg, advice without a reasonable basis)

Source: *OXERA, Description and assessment of the national investor compensation schemes established in accordance with Directive 97/9/EC, 2005.*

Financial risk includes investment firm default risk and third party default risk. The issues that arise in a case of investment firm default refer mainly to transferring or paying back clients assets to investors. If the firm has treated part of the clients assets as its own that could impose losses for investors. In this regard a key issue turned to be the segregation of clients assets. Particularly risky are the money funds in a number of countries, including Bulgaria, as they are practically compounded with the funds of the investment firm and are kept in its bank account.[114] When there isn't a clear segregation of clients assets they could be treated as unprotected because of the fact that the identification of ownership is difficult to

[113] The biggest investment bank in USA JPMorgan Chase has removed its investment manager due to bad investmen decision which lead to loss of 2,3 bill. dollars. http://www.bloomberg.com/news/articles/2012-05-11/jpmorgan-loses-2-billion-as-mistakes-trounce-hedges

[114] The risk of misuse of financial instruments is lower.

be established.[115] A solution to this problem is a separation of clients assets from firms' ones – in a sub-accounts or in a special accounts on which firms to have limited rights to operate with. Those measures are implemented in some countries where the investment firms' bank accounts are with a special regulation. [116]

Another risk, which the compounding of firms' and clients money brings is the failure of the bank in which the investment firm keeps its funds. In this case the investment firm being a professional investor is not protected by the relevant deposit insurance scheme and thus the money which are in the account of the firm are not to be repaid. Following that even the small investors will lose their money which alternatively could result in firm's default if it is unable to refund the clients assets with own assets. A solution to this problem is the separation of clients money in the bank accounts and its inclusion in the scope of protection of deposit insurance schemes. The default situation regards also the issue for the regulation of liquidation of assets of the defaulted firm. Those issue has not been harmonized in the EU perspective. A significant issue is also the investors preferences in the liquidation order and the rights of investors compared with those of the creditors of the defaulted firm. Investors should be on a front position. The liquidation of a default investment firm in Bulgaria is prescribed in the Trade Act as there are no preferences for investors among other creditors. There should be significant changes in this regard in order to obtain higher investor protection.

A third party default could impose significant losses not only for investment firms but also for investors. The use of second intermediary has been popular especially during the globalization of the capital markets. Trading on the international market requires domestic brokers to connect with foreign ones. Those relationships lead to certain risk and it is mainly connected with the probability the foreign broker to fail supply money or financial instrument subject to the contract. Currently, no last resort protection is foreseen in this relation, but it is discussed on EU level.[117]

Bad investment advice is one of the operational risks which triggers a significant discussion and is subject of application only in the UK. Those risk appears when one financial

[115] For instance, there is a requirement the clients money funds to be classified in the balance sheet of the investment firm, and in a case of no segregation that could lead to a misuse.

[116] For instance the „Escrow" accounts which are popular in USA and UK and which suppose such asset segregation.

[117] See art. 6 of EC proposal for changes in Directive 97/9/EO from July 2010, which foresees investor compensation schemes to protect investors and pay compensations in case of third party custodian default. This proposal has still not been into force and no clarification on when and if it will be adopted. Currently only Sweden is an example of providing protection for third party failure.

consultant or adviser gives advice to a client to invest his money in a particular instruments without giving the client the full information for the level of risk this investment carries. Thereafter the client could experience significant losses and the intermediary could happen to be unable to cover them which would trigger investor compensation scheme to interfere. The UK investor protection scheme (FSCS Financial Services Compensation Scheme) pays compensations mainly for bad investment advice. This protection is getting more attention on EU level.

Regulatory arbitrage and cross national differenced in the clients assets protection

The default of Lehmen Brothers and its subsidiaries some of which investment firms, brought the questions for the different clients assets protection across different states. The different treatment of clients assets brings various difficulties in regard mainly to investors interests. Also, the different conditions impose difficulties on liquidators in the process of determination of clients claims. The delay in those processes was admit as a result of Lehmen Brothers default and brought to losses and lost benefits for the clients.

In regard to member-states of EU and respectively to states in the European economic area there is recommendation enacted with the Directive for the markets of financial instruments which states that there should be introduced appropriate requirements for facilitating the distinction of own and clients assets not only for financial instruments but also for money funds.[118] Each member-state has the discretion to use its own judgement how and to what extent to apply this recommendation.

In Bulgaria those type of regulations are prescribed in the Financial instruments market Act and further developed in Ordinance 38 of the FSC where an investment intermediary has no right to use clients assets for own account or for the account of other clients. The intermediary should ensure a clear segregation of its assets from those of its clients and in the cases of custodian services that should be done through separate accounts. In practice, it turns that bank accounts investment firm compile of all type of ownership money as currently banks could not separate clients money from those of the investment firm. That is discussed as possible only in a case of opening separate clients accounts which will trigger the relevant service costs.

[118] Directive 2004/39/EC on markets in financial instruments.

When the country of the custodian does not allow separation of clients accounts those clients assets are written on the name of the investment firms as it is an obligation of the firm to provide proper identification of clients assets in another way.[119]

The existence of different requirements from the regulatory authorities in each state could be a serious gap in the notification of investors in regard of their own funds. In Spain when and investment firm has to hold clients assets in omnibus account in a third party custodian it has to receive a written assent from the clients. While in France there is a distinction on basis of the type of the firm – in a case of a bank no segregation is needed, but if it is investment firm it is imperative. In USA on the other side it is allowed clients assets to be held in omnibus accounts but only if there are not encumbered. In Italy non bank investment firms do not have right to held clients assets, instead they have to have contract for custodian services with a third party. It is an interesting example of USA where the legislation allows a temporary deficit on clients accounts and a decent time deadline is allowed to restore the deficit. The latter creates a precondition for misuse of clients assets. Clients assets deficit in other states is reckoned as malpractice and in most of the cases leads to triggering the investor compensation scheme, which should refund the losses up to a certain limit and in accordance to prescribed conditions.

Problems with the last resort protection for investors

Investor compensation schemes has the major problem of inadequate funding which may lead to risk of shortage of funds for compensation payments. A solution in this direction is introducing funding model bound with the amount of eventual payments.[120] Another issues which are important to be investigated in future projects and workings are connected with analysis of the limit of protection and funding of compensation schemes, both for investors on the capital market and for depositors, in the context of their sustainability levels. The latter is very important for developing and maintaining a reliable financial safety net.

[119] Clients assets are hold separately from those of the investment firm but in the so called omnibus accounts. Usually those are accounts of investment intermediary in a third party where clients assets are held separately but in aggregate type in contrast to individual accounts which are on the name of each clients.

[120] See Miteva, D. Development of investor protection schemes and limits of protection, PhD Dissertation ,UNWE, 2013.

Conclusion

It could be concluded that investments on the capital market are exposed to a number of risks. Globalization and free market of financial services are increasingly imposing measures for synchronization of investor protection, but as pointed out briefly in this paper there are still many issues and gaps at place and a number of actions should be taken in order to provide a better clients assets protection. That could be done by using a common structure which will allow easy identification of clients positions.[121]

Having in mind the investment risk which investment instruments bare and the significant place of capital market financing in the financial market especially in a time of bank crisis it is important to establish and maintain relevant investor protection framework.

To reach a higher level of protection all levels of financial regulation should be active and appropriate to the development of capital market. Regulation of markets of financial instruments should be the light of increasing transparency and investor protection, strengthening credibility, limiting non regulated fields and providing appropriate authorities necessary to the supervisory bodies to fulfil their goals.

[121] For example the requirement for a Single Customer View introduced in deposit insurance could be a good practice.

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FUNDAMENTAL PRINCIPLES AND FACTORS OF ECONOMIC DEVELOPMENT ACCORDING TO KINKEL ON THE 70TH ANNIVERSARY OF HIS DISAPPEARANCE

Nikolay Bogatzky
Independent Researcher

I have the great honor and pleasure to present this work on Ivan Kinkel – Russian-Bulgarian economist, almost unknown to the international scientific community and mostly misunderstood by the same Bulgarian scientific community – right here in Sofia, in the city where he worked, and especially in the year of the 70th anniversary of his disappearance.

Nikolay Bogatzky

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JEL Classification: *A12, B25, B31, B52, N14, O10, Z13*

Introduction

The present times, characterized by socio-economic crises and permanent global instability, record again a great boost of the interdisciplinary studies aimed at defining the long-term universal regularity of the economic development, of its phases, driving forces etc. That is the focus of the scientific community, interested in both the history and the development of the political economy in general, and that is where the theoretical contribution of the scholar and the protagonist of my paper, Ivan Germanov Kinkel, could be also appreciated. After all, the trends to come to an understanding of the historical and global economics are even quantitatively justified, because the hundreds of years of economic history and human development should not be taken for granted focusing on the last 200-300 years, although the present is really characterized by extreme dynamism and turbulent changes. Thus, the ideas of Kinkel could also serve as a stimulus for economic interpretations of the current period.

The rise of the totalitarian regimes in the twenties and the thirties of the last century caused a large migration of scholars, including some Russian economists. Those of them, who landed in the Balkans, and especially in Bulgaria and Serbia, where they are still regarded as

true pillars of the local science, are almost completely unknown to the international scientific community.[122] Therefore, the main reason for my work was to fill the blank pages of the history of the economic thought.

In 2015, the year of the research and completion of this paper, we mark the 70th anniversary of the disappearance of Ivan Germanov Kinkel. Anniversaries of important scientists are always a reason to slow down, get rid of the routine and turn toward the past, reflecting on their contribution to the spiritual enrichment of humanity, on their legacy to future generations and the possible way to use and develop it.

The figure of Ivan Kinkel intrigued me also for quite personal reasons. Some sources cite Ivan Kinkel as an officer of the White Army of General Wrangel[123] who later emigrated to Bulgaria. This story reminds me of the personal history of my grandfather Georgi Bogatzky.

Ivan Kinkel was also a very erudite man, completely devoted to the science which in itself is a sufficient reason for being commemorated with a special study.

The scientific work of Ivan Kinkel from the twenties to the mid-forties of the twentieth century, comes as a first attempt to work on the economic history in Bulgaria, linking it not only to the general economic theory, but also to the other sciences. Kinkel's ideas on the principles, factors, periodization in Economic History etc. are spread out in various publications and some of them even evolve over time. That is why an attempt to systematize his theories, to analyze them and to find their originality in a more exhaustive way, would have been more than appropriate and welcome not only as a contribution to his memory, but also as a service to the scientific community, to which this scholar is almost unknown. Unfortunately, such a project would have required a huge amount of work and I chose to focus on just one of the most mature Kinkel's works (*Fundamental Principles and Factors of Economic Development*), which is only a small step towards his popularization.

Leaving the high ambitions for a global look and exhaustive work on Kinkel behind, two general considerations could still be made. According to the first, the scholar is firmly convinced that the economic laws are extrapolated from past experiences. The second general moment of Kinkel's work refers to his "eclectic" interdisciplinary approach, which is the

[122] cf. Nenovsky N., *Ivan Kinkel's (1883–1945) theory of economic development*, The European Journal of the History of Economic Thought, 2013

[123] Baron Pyotr Nikolayevich Wrangel or Vrangel (Russian: Барон Пётр Никола́евич Вра́нгель, Baron Pyotr Nikolayevich Vrangel; German: Freiherr Peter von Wrangel; August 27 [O.S. August 15] 1878 – April 25, 1928) was an officer in the Imperial Russian army and later commanding general of the anti-Bolshevik White Army in Southern Russia in the later stages of the Russian Civil War.

implementation and combination of different instruments, laws and principles not only of the economy, but also of other sciences - sociology, psychology, biology etc. It is quite upsetting that although Kinkel was well known to the cultured circles in Bulgaria (the country in which he conducted his entire scientific activity), the biographical details and the evaluation of his work could be rather sporadic, inaccurate and ideological. The main reason for that could be determined by a twofold research - of the intricate personal story of the scientist and of the tormented history of the country (Bulgaria).

By publishing some of his articles under different pseudonyms, such as M. Mladenov, A. Fridyung and others, Kinkel himself contributed to the first: the "misinterpretations" of his scientific work.

As far as the second determining factor, the Bulgarian history, the larger ideological-interpretative ambiguity on Kinkel was caused in the sixties and the seventies of the twentieth century.[124] More surprising is the fact that even the new research appears not to have any scientific value and is full of biographical errors.

In fact, just recently, two new articles, written by Pencho Penchev [125] (Bulgarian National University of Economics) and by Nikolay Nenovsky[126] (University of Amiens), have "done justice" to the scientific legacy of Kinkel.

In this paper, I will try to depict the figure of Ivan Kinkel more from the perspective of the economic scientist, touching briefly – except for quick remarks – upon his enormous amount of work in other scientific fields. My attention will focus mainly on his volume *Fundamental Principles and Factors of Economic Development* as published in 1942 by the School of Financial and Administrative Sciences of Sofia, and never republished or translated into another language.

The other main sources used were the works of Kinkel, mainly written in Bulgarian language. The secondary sources, as noted earlier, are quite chaotic, ambiguous and imprecise (except for the two recent articles of Nenovsky and Penchev), thus their use was very selective and cautious.

Therefore, the object of this paper will be the economic work of Ivan Kinkel, and the *Fundamental Principles and Factors of Economic Development* specifically. The main intent is directed towards the popularization of a scholar, almost unknown to the international

[124] cf. Grigorov K., *Development of bourgeois economic thought in Bulgaria between the two World Wars - theoretical guidelines*, Science and Art, Sofia, 1960, pp. 220-233.

[125] Penchev P., *Professor Ivan Kinkel as a theorist of Economic History*, Economic Thought, Sofia, n. 3, 2013.

[126] Nenovsky N., *Ivan Kinkel's (1883–1945) theory of economic development*, The European Journal of the History of Economic Thought, 2013

scientific community, by researching and discussing the originality of his thought. Meanwhile, the other goal is to demonstrate that even in peripheral countries such as Bulgaria, the economic thought was valuable and innovative. In this manner, I will try to arrive to a certain "revision" of the scientific memory of Ivan Kinkel – the scholar who despite of his preparation, his scientific zeal and determination, is mostly misunderstood or read in the light of the dominant ideologies of the moment.

Ivan Germanov Kinkel was born in Bryansk on January 18, 1883. In early October, 1917, he was personally invited by Lenin to be the Secretary of the Supreme Economic Council. He did not accept the prestigious assignment for health reasons and went to Bulgaria with a permit, handwritten by Lenin himself, allowing him to cross the border. It seems that Kinkel might have unfortunately destroyed this very valuable document during his short stay in Ukraine.

Ivan Kinkel died in Sofia on May 25, 1945.

Kinkel can be defined as a really multifaceted persona: a Professor of History of Economic Thought, Political Economy and History of Economic Doctrines at the University of Sofia and at the Free University of Sofia; a founder and first secretary of the Bulgarian Society of Sociology, a founder of the Bulgarian School of Psychoanalysis, etc. After the legal-economic foundation received at the Imperial Tsarskoye Selo Lyceum, he studied medicine in Berlin, philosophy in Leipzig and psychoanalysis in Zurich. His speculative activity and scientific production ranged across different fields – economics, economic history, history of economic doctrines, sociology, social psychology, law, philosophy, psychoanalysis and others, and he published interesting works in all these disciplines. Kinkel's research in economics was aimed primarily at understanding the mechanisms, the driving forces and the forms of the economic and social development, with the firm belief that only a holistic vision made of different interpretations of the object of study – the economic development, would lead to a significant scientific result. Kinkel himself calls his scientific method "interdisciplinary" and even "eclectic."

1. The Economic History According to Kinkel

The roots of Kinkel's thought could be traced back to the physiocratic doctrine of the XVIII century. At that time the economists, stimulated by the discoveries of the natural science, began to consider the economic phenomena in their entirety, by supporting general statements of their causal relationships. Kinkel's spirit and scientific convictions could be recognized hereinafter in the thinking of William Ellis – a friend and collaborator of John Stuart Mill. In the introduction of his well-known volume *Outlines of Social Economy*, Ellis already underlines the contrast between the wealth of the original inhabitants of Australia and North America and that of the contemporary societies of the same countries. Ellis paints in a

very expressive manner the changing conditions in these countries where "twenty million now live in peace and security, while originally only two million lived in conflict and confusion".

> …history teaches us that the progress which we have made from barbarism to our actual state of civilization has been gradual, although more rapid of late years than formerly and reflection convinces us that there is ample room for further progress. It is our duty, then, since we are born into world greatly improved by the exertions of our fathers, to hand it down still more improved to those who are to come after us. To perform this duty, the wish alone will not suffice, we must acquire knowledge to guide us in its performance. To know how to advance in civilization or happiness, we ought to have clear understanding of the causes of the progress already made, and of the obstacles which retard our further progress and to this end we will at once direct our thoughts. [127]

You can better understand Kinkel's thinking in comparison with other scholars', investigating some aspects of his general ideas. According to Kinkel, the central issue of economic history is "What moves and regulates life and progress?".[128] As a result, his research focused on the driving forces of progress and the discovery of the principles that determine the direction of economic development. For Kinkel, economic history is close to sociology; it is a cognitive rather than normative science with specific tasks to observe, describe, understand and explain. Economic history should not provide religious, ethical or philosophical evaluations and should not even be influenced by political ideologies and motivations[129]; it should rather be developed sociologically, otherwise it risks becoming pure history of economic facts and thus losing its scientific status.[130]

2. Economic Development in History According to Kinkel

Deep down, Ivan Kinkel believes that the economic development of humanity is evolutionary.

According to the scientist, the evolutionary course of forms of economic expressions and institutions produces a greater amount and variety of economic goods through increasing

[127] Ellis, William, *Outlines of Social Economy*, Second Edition, Smith, Elder and Co., London, 1850, pp. 1-7.

[128] Kinkel I., *The ethical factor in economic history, Yearbook of Sofia University (Faculty of Law n. 25), 1930, p.8.*

[129] Ibid, pp. 191-193.

[130] Kinkel I., *On the character of the Bulgarian economy and its development during the XVII-XIX*, review for monograph *The economic history of Bulgaria* by G. Nathan, Magazine of the Bulgarian Society of Economics, 7, p. 438.

efficiency. New and more sophisticated forms appear in the framework of economic relations. Kinkel's views on economic evolution include the presence of a certain continuity between different stages of socio-economic formations in economic history. Each formation or stage of economic development of humanity, compared to the previous formation or stage, shows elements of improvement. At the same time, the new formation brings some of the most important characteristics inherited from the previous. Ultimately, progress «means the evolution of the entire socio-economic system towards the most effective forms in terms of production and more satisfactory in terms of consumption».[131]

The evolutionary development, however, is not presented as a continuous improvement and advancement. Cyclicality may experience in its movement. That is why Kinkel did not accept without reservation the views of representatives of the German Historical School, comprised of Marx and Engels, according to which the economic development of humanity passes through phases fundamentally different from one another. According to Kinkel, such views are wrong for several reasons: take into account only European peoples; consider the economics of the various ancient civilizations as a single, continuous, without stages of development; deny the existence of capitalist forms during the Middle Ages and so on.

3. Fundamental Principles of Economic Development

The first principle is continuity, namely "to acquire-inherit – economic institutions, apparatus, production techniques, interactions between individuals and social groups – in the economic life of the next civilization, from the economic culture of the previous one". Moreover, «later civilizations adopted historical forms that had already existed and been experienced, but for a shorter period of time than the duration of the same forms (economic systems, stages or eras) in earlier civilizations, when such forms were starting their development from the beginning and their whole development could last much longer [an example is the transmission and the duration of the feudal-aristocratic system in different civilizations]. When a posterior civilization acquired a system or economic institutions (readymade and developed), it had only the task to develop and refine them.»[132] Kinkel offers highly articulated examples that include the influence of the Ancient Oriental Civilization on the Greco-Roman and Byzantine Civilizations (agriculture, industry, trade, monetary affairs, banking, science, religion, philosophy, political organization, art); and cultural influence and

[131] Kinkel I., *Fundamental principles and factors of economic development*, Yearbook of School of the Financial and Administrative Sciences of Sofia, vol. I, 1942, p. 3.

[132] Ibidem, p.17.

assimilation of different Greco-Roman cultural institutions by modern people (agriculture, industry, law, political organization, religion, philosophy, science, art).

The second principle is the economic and cultural influence among the peoples of the same historical period. The economic and cultural achievements of the various peoples seldom remain known and accessible only to their own creators, and usually reach other nations, stimulating their development. «The Culture [Kinkel writes], owns a perennially international character, because every valuable result achieved by a people, is transmitted to others.»[133] Here are some detailed examples: the influence of the Egyptian culture on the cultural life of the Mediterranean, Persian, Indian and Assyrian-Babylonian peoples (religious beliefs, organization and forms of economic system, technology, military art); the influence of the Assyrian-Babylonian culture on the Ancient Judea and on the Persians (economic institutions, law, spiritual life, technology, industry, art); the cultural influence of the Greeks on the Romans (industrial technology, architecture, culinary arts, organizational and economic structures, political organization, law, art, science); the cultural influence of the Greeks on the Romans (industrial technology, architecture, culinary arts, organizational and economic structures, political organization, law, art, science).

The third principle in the economic development of the civilizations is "the biogenetic law of growth". It is conceived on the Comtian leitmotiv that the biological laws would be also valid in society.

The first manifestation of the so-called "biogenetic law" is "the law of evolution, or development in the change of social forms".

> The forms of economic reality derive one from other, namely, the rudimentary elements of a late formation have their origin already in the foundations of previous formation. When the previous formation begins to set, to crumble and no longer responds to the needs of society's increased forces of production and consumption, the new elements – already present inside – come together to form the basis and the framework of new formation, inside which in their turn will grow new elements for a subsequent formation and so on. In this manner, the formations are configured as steps of a uniform development, in which a certain progress is evident. The formations that succeed one after the other in the chain of development are improved more and more. The subsequent formations are more varied and different than the previous ones, or rather, more later formations differ from the previous on the basis of the amplification of certain phenomena – the growth of productive forces, the material and

[133] Ibid, p.27.

spiritual culture in society, the collective and individual well-being and so on.[134]

The other fundamental expression of «the biogenetic law» refers to «the dialectical law» of the development of social changes «in the sense that in any condition or social formation (thesis), presuppositions and opposing tendencies (antithesis) are done by time, which further and further corrodes the original condition or formation. From the elements of these assumptions and antithetical tendencies, a new condition or formation (synthesis) is developed and it is perfected over those of the thesis and antithesis taken separately»[135].

Kinkel also mentions other manifestations of "the biogenetic law" as "the principle of integration and differentiation of the phenomena during their change, growth and development"; "the law of adaptation-imitation"; etc.

Particularly significant and heuristic for Kinkel's "biogenetic law" are the theories of the biologist Ernst Haeckel, that «the ontogenesis or the development of the advanced species is generally explained as a short and rapid repetition of the phylogenesis or the development of the whole species, i.e. the whole chain of increasingly advanced ones, which form genetically every individual». Kinkel is fascinated by the psycho-sociological ideas of the time, according to which the phases of the development of the individual correspond to the phases of the development of the society: "so you can finally understand the very meaning of the spiritual development of the society during the consecutive historical-cultural ages serving as a basis of the stages and the meaning of the individual spiritual development".

For the scholar, the manifestations of this law prove «the existence of a continuity-acquisition of the economic and cultural formations in later civilizations», ensuring that every civilization, before embarking on the very particular way of its development, initially manifests the economic formations of previous civilizations.

> …the second civilization appeared in the cultural history (the Greco-Roman), initially repeated or exhibited economic formations of the first civilizations (those of the ancient Eastern nations) and then brought new and special ways into its own economic culture (going a step higher), influenced by the forces of production-consumption of its constituent peoples. And the third civilization in the historical order (the Contemporary-European) earlier experienced formations and cultural-economic relations developed by the first civilization (the Ancient-Eastern); then, shortly repeated the formations and the ways of the second civilization (the Greek-Roman); and finally, new, special and more

[134] Ibid, p.36.

> elaborate and complex formations appeared in the economic reality of the comtemporary European nations; the European civilization explored other ways that corresponded to the new and larger forces of the production-consumption and the new socio-cultural needs of its constituent peoples, a need much greater than those that the ancient Greeks or Romans could develop.

Even in this, Kinkel provides many examples and evidence of his concepts: the ancient Greek civilization of the so-called "Mycenaean-Cretan" era as a model of the Oriental civilization; the similarity of the economic system of the most ancient Roman times (the royal age) and the Egyptian times (the first period of Egypt); the similarities between the social reality in Europe during the early Middle Ages and the economic-cultural reality of the Ancient Oriental Civilization, or between the Late Middle Ages and the third era of the Greco-Roman civilization's economic-cultural reality, etc.

Quite interesting is the criticism of the principles of Kinkel in one of the newest and very valid articles written by Pencho Penchev (Bulgarian National University of Economics).

> The problem of Kinkel's three principles is that they do not contemplate the possibility of choice, of the spontaneous emergence of institutions, of the role of ideas and of the case. To accept them means to completely disregard the freedom of the individuals to choose between different options of action, to make mistakes, to learn and to correct their mistakes. It disregards the possibility that natural phenomena or other random events may exert influence. The historic-economic development and the entire destiny of humanity would be predetermined. The same individual would turn from a conscious and rational agent, in a part of some collective species, guided exclusively by "objective" principles and (probably) directed towards completely predetermined goal. [136]

In my opinion, Penchev's criticism is generally right, but should be directed not only to the scholar Kinkel, but also to a group of scientists, or even to a whole paradigm of scientific thought. Kinkel's work, in perfect line with the tradition and praxis of his time, is engaged in the construction of an ideal theoretical model (*the ideal type* of Max Weber, an author, appreciated by Kinkel, as clear from the volume in question, *Fundamental Principles and Factors of Economic Development*), which contains historical data (even conjectural), and helps the understanding-simplification of the socio-economic reality from a historical viewpoint. For such models the simplicity and generality of the conclusions are essential, because otherwise they would lose their explanatory quality, sinking into a mere description.

[136] Penchev P., *Professor Ivan Kinkel as a theorist of Economic History*, Economic Thought, Sofia, n. 3, 2013, p. 13.

According to Karl Jaspers, *the ideal type* is to be considered as an "ideal" connection, independent from the reality: the connection is evident, but not necessarily true, so the relationship between the *ideal type* and the individual case is a matter of interpretation (*Deutung*).

In this regard it is useful to remember the *motto* of the book *Principles of Economics* Alfred Marshall, appreciated even today – *Natura non facit saltum* – explained by the author in the preface to the eighth edition of the same book:

> Economic evolution is gradual. Its progress is sometimes arrested or reversed by political catastrophes: but its forward movements are never sudden; for even in the Western world and in Japan it is based on habit, partly conscious, partly unconscious. And though an inventor, or an organizer, or a financier of genius may seem to have modified the economic structure of a people almost at a stroke; yet that part of his influence, which has not been merely superficial and transitory, is found on inquiry to have done little more than bring to a head a broad constructive movement which had long been in preparation..[137]

After all, the German Historical School, on which basis Ivan Kinkel builds his theories, assumes a general negative attitude towards the concept of a rational economic man. "The Germans" reject the idea of the individual, who is free from the effects of the social factors and decides independently to increase to the maximum a personal wellbeing. According to this School, man is primarily a social being, a product of the civilization, of history, of his needs, of his education and his relationship with real values; people are never the same, because both geographically and historically they are in a constant cultural evolution. Therefore, for the German Historical School, man is a cultural entity, focused on social values. In addition, representatives of this School of thought are adverse to any abstractive and deductive analysis methods, because according to them the main emphasis in economic science should be placed on historical-economic concrete cases.

4. The main factors of the economic development

So much has been written on the factors of the economic development, both before and after the appearance of Ivan Kinkel, on the scene of economic thought. It is a difficult task to make a brief general overview of the literature that precedes and follows him, because even the very concepts of growth and development are qualitatively and quantitatively changed. From the historical point of view, the factors of economic development have generally been

[137] Marshall, A., *Principles of Economics*, Macmillan and Co., Preface to the 8th ed., London, 1920, p. 16.

associated with the current economic situation of the period in question. For example, when trade was the main economic activity during the mercantilist era, gold and trade were considered the main economic factors as well as the drivers of growth. Similarly, land was the most important factor for the economic advancement when agriculture was the main economic activity in the physiocratic period. Hereinafter, Land[138], Labor and Capital were traditionally accepted by the classics and the neo-classical authors as the main factors of economic development, but sometimes others were added, such as Technology, Management and so on. According to Alfred Marshall "The agents of production are commonly classed as Land, Labor and Capital. […and] Capital consists in a great part of knowledge and organization".[139] Classical economists have explained the process of growth in terms of technological progress and also of population growth. Some economists like Anthony Thirlwall and Simon Smith Kuznets included agriculture within the main factors of economic development, and this is very interesting, as it is discussed in recent studies, concerning the role of agriculture for the economies of developing countries. Richard T. Gill adds other factors such as the production of scale, the division of labor, and organization. Overall, it can be concluded that the capital is the center of most theories of economic growth. The pressing technological progress of recent decades assigned capital an even more important role for economic growth, while the role of other factors as land and labor has decreased to the point that the accumulation of capital has become the principal factor of economic development. Consequently, Harrod-Domar's theory, according to which the rate of growth is determined by the propensity to save and the marginal output of capital, is the most prevalent. In recent decades, economists have shown that the growth rate of production is the main factor in most definitions of economic growth; in other words, economic growth is the essential goal of all the processes of economic development, and in its turn it depends on the way in which capital may be accumulated. Michael P. Todaro presented three main factors of economic growth: 1. the accumulation of capital, including all the new investments in land, physical equipment and human resources; 2. population growth and hence the consequent growth of the labor force; 3. technological progress. Currently, management of modern technology needs an appropriately qualified labor force. This workforce development – skilled labor – and technological progress, depend largely on the accumulation of capital. Thus, it can be said that the accumulation of capital is the main factor in all of the theories of economic growth. In other words, while there is a consensus that capital, land and labor are the main economic factors,

[138] Although many economists preferred the term "land" instead of natural resources, it seems that most of them referring to natural resources. For example, Marshall writes: «By Land is meant the material and the forces which Nature gives freely for man's aid, in land and water, in air and light and heat.».

[139] Marshall, A., *Principles of Economics*, Macmillan and Co. 8th ed., London, 1920, p. 84.

current global economic conditions suggest that capital holds a key role in the production, probably due to its relative scarcity.

After this very brief description of the literature about the factors of economic development, it is very interesting that exactly capital appears as "the great absent" among Ivan Kinkel's factors, or capital is not indicated as a separate and autonomous factor. The main factor of economic development would instead be "the growth of the forces of production". Whether this growth derives or takes place through the accumulation of capital, for the scholar, this is rather a secondary question. The causes may be different: the ideological beliefs of the researcher, the intent to be general and basic at best, security in the decline of the power of the capitalist relations, etc.

In his 1942-1943 publications, Kinkel reviews the factors of the economic development more systematically and in depth. The scholar divides the factors into two groups – fundamental factors and auxiliary factors. The first group concerns the forces of production and consumption, while the second includes politics, ethics, aesthetics, science and external and internal nature. The content and the meaning of each of these factors are discussed in detail.

4.1. The evolution of production forces

Kinkel does not conceal the fact that the evolution of production forces is often identified as the main factor of economic development by several authors, but his ambition is to resolve shortcomings in "the elements, the constituent characteristic and determining moments". According to the scholar, the productive forces consist of three elements - human labor power, the forces and energies of nature, and technological strength.

1.1.1. Human labor and its three main connotations

First of all, the condition and evolution of labor force in society depends on the amount of manpower (which depends on the productivity, the condition of health, the life expectancy, and the amount of holidays in the nation) and the amount of intellectual operators (which depends on the general intellectual and cultural level, and the condition of specialized economic knowledge).

The second important moment for development of productive forces "is the improvement in the division of labor, namely the specialization and differentiation of labor within society". The division of labor and economic activities in society takes place in four ways: according to the natural differences between people (based on gender and generation); by the profession and performed activities (social division of labor through specialization); according to the technical division of labor (the division of the production process into separate parts and basic functions); and according to the international division of labor.

The third important moment in the evolution of the productive forces is the progress-improvement of economic organization, which is organized as: organization of production in enterprises; organization of all producers in an entire branch-production sector; and organization of the entire national economy.

1.1.2. The forces and energies of nature

The second element of the social productive forces according to Kinkel is formed by energies and forces of nature, used together with human workforce in production. "The evolution of productive forces in relation to this factor means the evolution in the use of natural forces and energies increasingly or in a more effective way in the production process."[140]

1.1.3. Tecnology

The third and final factor in the evolution of productive forces is technology. This is technique used in production and "also often to capture and use of energy and natural forces in the production process"[141].

Kinkel does not forget to underline that the last two elements of the forces of production – the use of natural energy and technology – have had a huge development in recent times.

4.2. The evolution of the sources of consumption

According to Kinkel this factor has not been taken sufficiently into consideration in the specific literature. It is even listed as auxiliary factor caused by the evolution of productive forces (the first main Kinkel's factor). The forces of consumption, instead, are "an autonomous factor, often not only independent, but also determinant for the evolution of productive forces and even for the entire economic reality"[142]. Therefore, the evolution of the forces of consumption, as a main factor of economic development, is determined by "the spiritual progress of society". "The spiritual progress of society causes […] the need for a row of cultural goods, partially by economic nature […], the need of which was not at all experienced before, at the lower spiritual level. All these needs and spiritual-cultural expressions in society and their continued development, differentiation and rise, confer […] a powerful impulse precisely to the economic life and its development toward more complex

[140] Kinkel I., *Fundamental principles and factors of economic development*, Yearbook of School of the Financial and Administrative Sciences of Sofia, vol. I, 1942, p. 57.

[141] Ivi.

[142] Ibidem, p. 59.

and improved productive forms, able to satisfy the new social needs, while providing the required additional mass of various goods."[143]

Here Kinkel provides examples and analyzes the trends of consumption (obtained through imitation, fashion and education of wealthier groups) as an expression of "spiritual progress". The necessity of various goods have not only an individual character ("individual-cultural needs", which is divided into "personal" and "social"), but also collective ("social-cultural necessity"). "Significant part of the people's social needs [the group of "individual-social" needs] is also included in the cultural needs of society – the needs of training institutions and their related goods, healthcare institutions, theaters, museums, etc. The evolution of social-cultural needs means instead a growing need for increasing amounts of diversified goods for the satisfaction of these needs. Thus, the evolution of the socio-cultural tastes and needs has always been one of the biggest forces for economic development of society."[144]

5. Complementary factors of economic development

This distinction of Kinkel between main and complementary factors of economic development appears very natural, but it was not so simple in the History of Economic Thought. Many economists, perhaps even to defend their science from intruders, have tried a clear separation between economic and non-economic factors.

One of the traditional classifications for division of the factors into physical and non-physical, placed economic factors in the category of physical factors. The problem of this classification is that some non-physical factors, such as knowledge, management, organization etc., are generally treated as economic factors.

According to their scientific relevance instead, the non-economic factors could be factors within sociology, while those studied by economists – mostly those which favored the production and growth, would be "the real" economic factors. According to this classification, labor, capital, land and natural resources, technology, management, etc., were considered economic factors; consequently culture, religion, tradition, etc., were placed among the non-economic factors.

One of the most recent distinctions, and quite close to Kinkel's convictions, assumes that the factors that directly affect the functions of production and growth, belong to the category of

[143] Ibidem, p. 60.

[144] Ibidem, p. 63.

economic factors, while those that affect behavior, shape or type of human activity – including economic activities – should be classified as non-economic factors.

Already in 1942, Kinkel's interdisciplinary and sociological approach provided an original and convincing answer to this debate.

According to Kinkel, the complementary factors "enrich" the main influence exerted on economic development. Some of them are more important, active and present in history, others less so. Some act directly, others indirectly or only on the major factors (the forces of production and consumption).

5.1. Political factor

Kinkel's assumption that "the effect [of the State intervention in economy] has been always positive" could be very interesting and questionable. Knowing the scientific ground of Kinkel – the German Historical School, favorable to state intervention in economy – an ideological reading would eliminate immediately the issue judging the scholar as retrograde, "fierce" collectivist, socialist or communist. I would prefer instead a more neutral interpretation. In my view, Kinkel's declaration belongs to the group of so-called "value judgments" (how things should be) and supports that the administrative power (the political factor) has always had a very important role in economy and economic development in evolutionary key. In this reading, the above-mentioned statement about the state intervention in economy does not appear as "scandalous"; after all, such an evaluation is not rejected even by the same literature specifically oriented towards economic liberalism. In Kinkel's text the justification for such interpretation is found immediately after the statement about the "increasingly positive state intervention" effect: "The reason for this more or less deep and large state intrusion in economy was based primarily on the need to remove from society a series of contradictions, conflicts and social-economic discomforts, or obstacles to the free economic development. In other cases, it was necessary to help the still weak domestic economic forces and the interventions that were done as protectionist measures, especially when the evolution of national economy meant prosperity of the state as well as realization of political goals"[145].

The influence of the political factor, defined as a state intervention in economy, is analyzed through concrete examples – in the history of the Ancient Oriental Civilization, the history of Greco-Roman Civilization and in the history of the Modern European Civilization –

[145] Ibid, p. 65.

in a detailed historical-economic examination within the text of *Fundamental Principles and Factors of Economic Development*.

5.2. Legal factor

Regarding the influence exerted by the legal factor on economy, Kinkel, observing the main doctrines – the general sociological views, the ideas of the German jurist and sociologist Rudolf Stammler, the historical-materialist concept – seems to be close to the latest convictions of Engels, according to whom there are mutual influences between law and economy. The scholar does not underline in this sense "the legal expression of existing and already created economic phenomena, but rather legal norms (institutions), designed to stimulate-develop phenomena and economic relations just started"[146]. Kinkel, of course, does not fail to provide historical examples of this process as well; they are the major socio-economic reforms of the Roman emperors, the mercantilist-protectionist policy of the XVI-XVIII century, the phenomena of economy's liberal period (XIX century) and modern contemporary period.

5.3. Ethical-religious factor

According to Kinkel, the moral-religious influence on economy is generally weaker; it may arise together with other factors of economic development, in some cases it could be also stronger and even crucial for economic development. For this factor as well, the scholar is not short on historical examples: in the Prehistoric era (the collaborative and voluntary work among parents or between villagers, the rites of donation as origin of exchange); in the culture of the ancient Chinese civilization (the philosophical-moral precepts of Confucius); in the ancient India (the moral philosophy of Jainism and Brahmanism); in the ancient Judea (the laws of Moses, Deuteronomy, Talmud); in the economic culture of the Greco-Roman Civilization (Aristotle, the Sparta, the Gracchi brothers, the Christian religion); in the Middle Ages (the ethics handicraft cooperatives - external, internal and social, the theological and philosophical doctrines rooted in Christianity); in the modern Western European civilization (Protestantism, Calvinism, Puritanism, Baptists and Adventism according to Weber); in the nineteenth century (cooperativism, associationism, cooperative movement and social legislation).

[146] Ibid, p. 71.

5.4. Aesthetic-artistic factor

In the1943 publication, Kinkel integrates his complementary factors of economic development with the aesthetics-artistic, the scientific and the natural factor.

For what concerns the aesthetics-artistic, its influence is oriented in two directions: "creativity in different artistic fields and its use in society (as social expression of art); and the embellishment of private and public life"[147].

5.5. Scientific factor

The scientific factor is defined as "the spiritual and intellectual expression of the individual, although the successes of science are the result of the entire society's life and spiritual development". It influences the economic development through the discoveries in the field: technological (the great leaps in technology during the eighteenth and nineteenth century - equipment, instruments and installations in all productive spheres, the use of electricity, heat, light and other natural forces etc.); agricultural (agricultural chemistry); organizational (Taylorism, Fordism, etc.); economic (the political-economic ideas about protectionism of industry and commerce, the theories of Smith and Ricardo); ideological (the cooperative ideology) etc.

5.6. Factors of nature

According to Kinkel the relevant factors of nature from economic standpoint are divided into two main categories: external factors of nature around the man, and internal factors (interior).

5.6.1. External factors of nature

The scholar writes: "The availability of a variety of natural factors as a basis for economic activity and the presence of certain natural conditions favorable to economic activities will contribute and greatly stimulate the economic development. On the contrary, the lack of certain factors or natural conditions will delay or even impede the economic development. It is also evident that the very presence of natural factors and conditions will determine in a particular way the slopes of economic activity in each society, or rather, will determine in which direction – agricultural, of extraction or industrial – the economic activity in the society

[147] Kinkel I., *Fundamental principles and factors of economic development*, Yearbook of School of the Financial and Administrative Sciences of Sofia, vol. II, 1943, p. 9.

in question will be developed "[148]. Besides the presence of natural resources, Kinkel underlines "the natural conditions, those favorable to communications" and the assets of international trade as indispensable preconditions for economic development, giving as an example the British economy of the nineteenth century.

5.6.2. Factors of individual interior nature

According to Kinkel, the socio-economic development "can be influenced by people's natural characteristics". In this regard, he performs a detailed historical examination of the inner qualities and attitudes of some major races in relation to economic development.

As distinctive traits of the ancient race of Asia Minor he indicates "the high level of practical intelligence, the special aptitude in mathematics and the special empathy - the ability of individuals to understand feelings, aspirations and interests of others in order to direct consequently their own actions"[149]. "That is why among the peoples derived from this breed – Assyrian-Babylonians, ancient Greeks, Armenians and Jews – the particular aptitude for commerce and banking-credit affairs is strongly manifested, because all these activities are based on the above mentioned abilities."[150]

The other human race that gives birth and contributes to the formation of great ancient civilizations is the Oriental one. "The peoples derived from this breed – ancient Egyptian, Assyrian-Babylonians, Phoenicians and Arabs – had special abilities manifested in the sophisticated and fine organization of political-economic life, in the creation of complex agricultural, industrial, commercial and transport forms."[151]

According to Kinkel, particularly informed about "the prerogatives (innate and acquired) of the Jews", the Jews have the characteristics of both races - from Asia Minor and the Oriental one. A kind of "a natural selection" with regard to crafts and "typically Jewish" professions was carried out In the Jewish families.

The peoples of the Mediterranean race (Greeks, Romans, Italians, Spaniards, Portuguese, Frenchmen, South Americans) and the Nordic race (Germans, Scandinavians, Danish, Netherlands, partially central-northern French, British, North Americans) would have also been founders of great civilizations and cultures. The inner traits, common and specific to the two European races, are: "tenacity and perseverance in the pursuit of their targets; strong and

[148] Ibid, p. 16.

[149] Ibid, p. 20.

[150] Ivi.

[151] Ibid, p. 21.

continuous will; prudence and farsightedness; rational mentality with the subjection of feelings to goals; spirit of organization; entrepreneurial genius and aptitude for navigation"[152]. For Kinkel, all these qualities and attitudes have caused the formidable growth, experienced by the people belonging to the Mediterranean and Nordic race.

Certainly these last factors – "the factors of internal nature", or "racial-biological" as sometimes called by Kinkel – at first sight will appear very controversial and questionable. Undoubtedly, already the very use of the words "inner racial qualities" in a scientific discourse, today seems anachronistic, if not even pseudo-scientific and offensive – "The progress of genetics in this century have refuted Gobineau's claims […]. Skin color and body shape are simple adaptations to the climate of various regions."[153] It should be emphasized, however, that no race or individual might feel "discriminated", because as convinced evolutionist, Kinkel mentions and analyzes the characteristics (only positive), exclusively in view of development and economic progress. Eventually, Kinkel could be accused of cultural rather than biological racism. Trying to impose today such criticism to Kinkel's thought, with intellectual honesty, many positions in our time should be seen in the same light: the belief of Europeans that they are superior to others from cultural and intellectual point of view; the North American arrogance to act as "masters of the world", because this would be the destiny of their nation; the distinction between the qualitative "old" Europeans and "new intruders" without established institutions; the same "Old Europe", but with "two speeds"; Northern Italians who despise southerners because they have not developed a "big industry" etc. For what concerns the other controversial Kinkel's statement about the "transformation of the constitutive qualities of the peoples by means of mixing with other peoples", it should be noted that even today, asking what is the cultural contribution of the millions of immigrants currently in Europe, this would bring to no less "scandalous" statements than Kinkel's even in the most erudite circles . By the way, the reflections of the famous biologist and Pulitzer Prize Winner, Jared Diamond Mason, are very interesting:

> Today, segments of Western society publicly repudiate racism. Yet many (perhaps most!) Westerners continue to accept racist explanations privately or subconsciously. In Japan and many other countries, such explanations are still advanced publicly and without apology. Even educated white Americans, Europeans, and Australians, when the subject of Australian Aborigines comes

[152] Ibid, p. 24.

[153] *Introduzione di Luca e Francesco Cavalli-Sforza*, Diamond J., *Armi, acciaio e Malattie (Breve storia del Mondo negli ultimi tredicimila anni)*, Giulio Einaudi, Torino, 2006

> up, assume that there is something primitive about the Aborigines themselves. They certainly look different from whites. Many of the living descendants of those Aborigines who survived the era of European colonization are now finding it difficult to succeed economically in white Australian society. A seemingly compelling argument goes as follows. White immigrants to Australia built a literate, industrialized, politically centralized, democratic state based on metal tools and on food production, all within a century of colonizing a continent where the Aborigines had been living as tribal hunter-gatherers without metal for at least 40,000 years. Here were two successive experiments in human development, in which the environment was identical and the sole variable was the people occupying that environment. What further proof could be wanted to establish that the differences between Aboriginal Australian and European societies arose from differences between the peoples themselves? [154]
>
> It *seems* logical to suppose that history's pattern reflects innate differences among people themselves. Of course, we're taught that it's not polite to say so in public.
>
> […] We keep seeing all those glaring, persistent differences in peoples' status. We're assured that the seemingly transparent biological explanation for the world's inequalities […], but we're not told what the correct explanation is. Until we have some convincing, detailed, agreed-upon explanation for the broad pattern of history, most people will continue to suspect that the racist biological explanation is correct after all. [155]

Therefore, these debates seem far from being exhausted, even in recent times. In my view, the issue of Kinkel's "racism" is resolved by going beyond the mere use of our author's "dangerous" terminology. The scholar after all, does not raise all those questions that, in a more or less conscious or declared way, will take racist or anti-racist positions, even if it is true, that on one hand, this protects his humanist spirit, but on the other, the same thing goes against the recognition of his theories. For Kinkel, the question of Why there are developed and less developed nations, does not exist, as well as there is no argument posed about desirability of economic development or relationship between economic growth and human

[154] Diamond J., *Guns, Germs and Steel (The Fates of Human Societies)*, W. W. Norton & Company, New York, London, 1997, p. 19.

[155] Ibidem, p. 25.

prosperity. The scientist is interested only in economic progress and its key factors in generally evolutionist tone.

Certainly it would be a nonsense and petty criticism to talk about "the big deficiencies" of Kinkel's factors of economic development, from the distance of half a century, during which science has made giant steps, and without considering the substantial brevity of the scholar's work. I think that the statements of Kinkel generally hold the test of time, just as it was in his intention. Moreover, the scientists after Kinkel focused on the articulation of some arguments as: the agriculture, "all developments of economically complex, socially stratified, politically centralized societies beyond the level of small nascent chiefdoms were based on food production"[156]; the writing and rate of diffusion of ideas; the ability to spread migration within a continent; the demography; the ecology and environmental variability; the class, the family and traditions; the role of individuals in history; the dependence and political independence; the socio-cultural dependence and independence; the geographical exposure to external threats; the cultural idiosyncrasies (small almost random events that eventually become permanent characteristics), etc. After all, it seems that the majority of posterity's research could still be included in the general plan provided by Kinkel.

6. Kinkel and economic development

Only some of the essential scientific legacy left by Ivan Germanov Kinkel has been reviewed, but these traits are already sufficient to reach several conclusions. The contribution that he has brought to economic thought is remarkable and multifaceted, but not fully appreciated. In his economic publications you can find elements of great originality, which are still unknown.

6.1. Scientist for "domestic use"

Some of his ideas are certainly controversial and open to criticism (the "always positive" state's role in economic development, the inner qualities related to economic development, etc.), but overall, viewed from certain angles, they do not appear to be very far from the "today's scientific sensibility". The main reason that the work of Kinkel has remained exclusively for "domestic use"[157], in my opinion, would not be found in the questionability of his concepts, but rather in the presence of other concomitant causes: the scholar's ideas are scattered in several publications and some of them evolve over time; the

[156] Ibidem, p. 406.

[157] Penchev P., *Professor Ivan Kinkel as a theorist of Economic History*, Economic Thought, Sofia, n. 3, 2013, p. 20.

personal story of the scientist was very intricate (some of his works are published even under aliases); the history of the country where he lived (Bulgaria) was equally tormented; and there is the aspect of the style of his writings, certainly not very "sophisticated and elegant" (perhaps because Kinkel was Russian and wrote in Bulgarian or perhaps – as a dark humor – because "he had lost his right hand during the Revolution").

6.2. Interdisciplinary method

As already mentioned, Kinkel calls his scientific method "interdisciplinary" and even "eclectic." This means the use and combination of different instruments, laws, principles, not only from economy, but also from other sciences - sociology, psychology, biology, etc. To the contemporary scholar, inclined to narrow specialization, Kinkel's method will seem impossible, but it is simply the encyclopedic character of the Russian scientists of that time and their ambition to bring all natural and social sciences together. Precisely with this mentality and approach, Kinkel also deals systematically with a number of other factors too, in addition to the purely economic development's factors.

Particularly interesting is Kinkel's attempt to present his views on the role of biology that consists not only of "the biogenetic law of economic development", but also of "the economy's organic analysis model". Awareness about the importance of "the natural factors" in economic development directs part of the scholar's research to social and individual psychology.[158] Driven by his desire to understand various forms of social dynamics and components (in this case – the extreme changes during the Russian Revolution), Kinkel offers an original analysis of the Revolution in terms the progress of psychology, psychoanalysis and medicine. The main revolutionary expressions are defined by a variety of perspectives as: "manic psychosis", "mass insanity", "furious obsession", "persecution mania", "paranoia", "mental epidemic", "maniacal impulsiveness", "mania of grandeur", "euphoria", "sexual excesses", "alcoholism", etc. According to Kinkel, the role of psychological factors is fundamental during revolutions. He argues that "the psychological revolution must precede the social one"[159] and that "the revolution dies politically, because it dies earlier in the popular psychology"[160]. On this subject, Kinkel comes even to formulate a mental regression's law of revolutionary society toward primitive forms of human behavior (such as that of

[158] Kinkel I., *Psychopathy in social revolutionary movements (socio-psychopathological and psychoanalytical essay on the psychology of the revolutionary society), Yearbook of Sofia University (Faculty of Law)*, 1924, 1-167

[159] Kinkel I., *Methods of knowledge in the Contemporary Sociology, Yearbook of Sofia University (Faculty of Law n. 26), 1931*, p. 54.

[160] Kinkel I., *Social Psychopathy in the revolutionary movements (socio-psychopathological and psychoanalytical essay on the psychology of the revolutionary society)*, Yearbook of Sofia University (Faculty of Law), 1924, p. 84.

"degenerated, elevated to the role of revolutionary leader"[161]). All this does not mean that revolution could not lead also to a positive social development.[162] Kinkel's interests in psychology are not a parenthesis of his scientific work, he becomes the founder of Freudianism in Bulgaria (the founder of the Bulgarian Psychoanalytic Circle in 1921). According to Nikola Atanasov, Kinkel's article on the psychology of religion written in 1921, was translated into German in 1922 upon the personal recommendation of Sigmund Freud and Otto Rank, and later translated into Swedish, Russian and English.[163]

Ivan Kinkel was prolific also in the field of sociology. He is considered by Bulgarian sociologists as one of the Bulgarian Society of Sociology's founding fathers (he was the President of that society in the period of 1931-1939). Even here, in the encyclopedic volume *Methods of Knowledge in Contemporary Sociology*, Kinkel resumes his favorite topic of socio-economic development.

In the mid-thirties, Kinkel applied his sociological approach to a series of new phenomena of socio-economic life: the crisis of parliamentary democracy and political parties, the emergence of authoritarian regimes (Fascism and Nazism), the evolution towards dirigiste and planned economy, the autarchy etc.

6.2. Concluding perspectives

With the "laudable", in itself intention to implement a general conceptual framework on economic development in history, Ivan Kinkel tried to leave the reticence of the Bulgarian's provincial science and to transcend limited local problems.

Studying the scholar's heritage is configured primarily as "filling the faded pages" in the Bulgarian and European's history of economic and social thought, as well as a necessary memory's revision of the scientist Ivan Germanov Kinkel, mostly misunderstood, in the 70th anniversary of his disappearance.

Kinkel's theories on economic development are a contribution, which must be presented to the international academic community, because his ideas – both methodologically and theoretically – are very relevant and may provide instruments to guide the analysis of today's economic situation.

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[161] Ibid, 128.

[162] Ibid, pp. 21, 51, 85, 156.

[163] Atanasov N., *The Psychoanalytic movement between the two world wars*, Anniversary collection of the Institute of Psychology, Bulgarian Academy of Sciences, Prof. Marin Drinov, Sofia, 1997

One of the main recommendations arising from Kinkel's thought, is the need to examine the historical society in longer periods and not to focus only on the conditions and problems of the moment.

Also, the interdisciplinary method should be re-evaluated. The Economy, as opposed to what some contemporary theorists think, could be not only organically linked, but also properly seen from the standpoint of other social spheres (politics, ideology, ethics, etc.) and vice versa (today other social fields are fully pervaded by economics). Economic development is undoubtedly connected not only to economic factors (social, natural, political, legal, aesthetic, artistic, geographical and geo-strategic, etc.). They are crucial for our age, which is characterized by extreme dynamism and turbulent changes.

To conclude this work, I would like to cite Ellis, because he is in perfect accordance with the scientific spirit of the scholar Ivan Germanov Kinkel - the main protagonist of this paper.

> History teaches us that the progress which we have made from barbarism to our actual state of civilization has been gradual, although more rapid of late years than formerly ; and reflection convinces us that there is ample room for further progress. It is our duty, then, since we are born into a world greatly improved by the exertions of our fathers, to hand it down still more improved to those who are to come after us. To perform this duty, the wish alone will not suffice ; we must acquire know ledge to guide us in its performance. To know how to advance in civilization or happiness, we ought to have a clear understanding of the causes of the progress already made, and of the obstacles which retard our further progress; and to this end we will at once direct our thoughts.[164]

(English version edited by Juliana Dukov)

[164] Ellis, William, *Outlines of Social Economy*, Second Edition, Smith, Elder and Co., London, 1850, p. 4.

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THE REFORMS IN THE ECONOMIC GOVERNANCE AND THE NEW FINANCIAL MECHANISMS IN EURO AREA AFTER DEBT CRISIS

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Abstract: *The economic governance in the Eurozone and the EU is not the same after the crisis. The results of the financial crisis changed the EU's way of thinking about addressing issues such as the public debt service, the banking system functioning, the ECB's role and the depth of its intervention. When R. Mundell (1961) developed the theory of optimum currency areas the Eurozone was certainly not in his mind, while the same view is maintained by P. Krugman (2009) too. However, the EU financial and economic sector is entirely different today. After tens of EU bodies meetings there is now a number of new rescue mechanisms, institutions and regulations. But, are all these changes well enough to get the Eurozone out of the crisis? Certainly not, but they had never been given in the past as well. The "moral hazard" and the lack of a last resort lender did not finally work as the EU leaders thought. The Eurozone is the core of the EU and it is slowly evolved, step by step, from an economic to a political union. The EU has at its disposal the European Stability Mechanism (ESM) with a lending capacity of over half a billion euros, while there have been also other mechanisms like the EFSF and the EFSM, with the total sum of granted loans by these three mechanisms to date being amounted to over 350 billion euros. Additionally, the EU heads rapidly for a banking union through the establishment of new institutions like the Single Resolution Fund (SRF), the Single Resolution Mechanism (SRM) and the Single Supervisory Mechanism (SSM), which will supervise over 180 systemic banks in the Eurozone. Furthermore, the ECB used non-standard monetary policy mechanisms in order to support countries and banking institutions. The best known mechanism is the Quantitative Easing (QE) programme worth about one trillion euros. The new model of economic governance moves to a progressive direction, but the size of the instruments may not be enough for the EU to exit the crisis.*

Key words: *economic governance, institutional reforms, Eurozone*

1. Introduction

This article is trying to highlight the institutional reforms promoted in the EU and the Eurozone, which aimed at the debt crisis resolution as well as the economic and political deepening. At the same time, it is noting the structural weaknesses that did not allow the EU and the Eurozone to deal immediately with the financial crisis.

The global economic crisis burst out in September 2008[165] in the USA –like in October 1929– and a short time later shifted to the Old Continent. Chart 1 shows the evolution of GDP at current prices in the USA, the Eurozone, the EU, China and Russia. It is easily understood that the USA economy recovered much faster than anticipated and in 2010 it exceeded the GDP of 2008, whereas the Eurozone and the EU countries –though having achieved positive growth rates since 2011– have not reached yet the maximum GDP of 2008. The European edifice and more specifically its heart, namely the member states of the Economic and Monetary Union (EMU), did not manage to exit recession quickly, while, according to Charts 2 and 3, their growth and unemployment indexes[166] are even now worse than those of the USA and China.

Between 2011 and 2015 the euro depreciated by 30% against the US dollar[167], while the Eurozone GDP increased marginally during the years 2009-2014 compared to the USA GDP, which soared over 18% in the same period. All the above-mentioned evidence supports the view that the euro edifice has not managed yet to exit the vicious circle of the economic crisis, the monetary uncertainty and the financial instability.

Nevertheless, is the EU of 2008 the same with that of 2015? The answer is negative; of course, the EU is not the same; it is very different in economic, social and political terms. The time of the EU evolution since its establishment runs very slow, but during the last five years of the crisis the political time has been shrunk and many changes in the EU have been made, at least when it comes to economic governance and financial sector function.

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[165] Although many economists had marked the real estate market recession since 2007 and the relative problems in the mortgage loan market due to high leverage that was transmitted to the financial sector, the international literature recognizes as the beginning of the global economic crisis the 15th of September 2008, the date when Lehman Brothers –the USA's fourth largest investment bank– announced its bankruptcy.

[166] According to figures of the World Bank, the unemployment rate for June 2015 in the USA was 5.3%, whereas in the Eurozone it was 11.1% and in the EU 9.6%. Respectively, the growth rate for the first quarter of 2015 in the USA was 2.9% compared to 1% in the Eurozone and 1.5% in the EU.

[167] On 03.05.2011 the EUR/USD exchange rate was at 1.48, whereas on 11.03.2015 it was at 1.05.

Finally, is the EU a shaky edifice that slowly collapses? Likewise, the answer to this question is also negative. The relative figures show that in 2014 the EU GDP remained the highest in the world (18.46 billion dollars), while it represented 29.78% of the global economy, which is a bit less than 1/3 of the global GDP, despite the fact that the EU constitutes just 7% of the global population[168].

1.1 Economic governance in the EU

The EU is not just a union of states; it is a sui generis entity, something much more than a confederation and way too much beyond a federation. The economic governance differs from the monetary governance[169]. The economic governance, which is the pillar of the EMU, includes the EU rules implemented by the states, but the economic policy remains at national level. On the contrary, the monetary policy has shifted to European level. According to theorists of this field (Barro and Gordon, 1983), the quality of monetary union depends on the rules, the prudence and the reputation of the central bank. As can be seen next, central bankers Trichet and Draghi maintained the ECB's quality level at the highest possible standards and stabilized the monetary union amid debt crisis. On the other hand, some economists (Krugman, 2009), who claimed before 1999 that the EMU had not been fulfilling the conditions set by the theory of "Optimum Currency Areas" (OCA) and that it could hardly cope with an asymmetric economic shock, were at least partly confirmed.

1.2 Was the Eurozone prepared to deal with the crisis?

The OCA theory (Mundell, 1961) argued that the adoption of a common currency from at least two states or a group of states, such as those of the Eurogroup, is legitimate since it would create more economic benefits than damages for them. The main criteria[170] for an

[168] All these data are collected from the highly recognized and reliable databases of the World Bank and the Eurostat.

[169] The body in charge of the economic governance in the EU is Ecofin and in the Eurozone is Eurogroup, while for monetary governance issues the competent body is the ECB.

[170] It is noted that the absence of certain circumstances can be addressed by the creation of a common budget (social transfers), which is the core of the confederalization. The EU budget amounts to 1.5% of the EU GDP compared to the USA budget, which amounts to 33% of the national GDP.

optimum currency area are the capital and workforce mobility[171], the symmetric business cycles[172][173] as well as the wage and price flexibility. Many economists (Krugman and Obstfeld, 2009, Gros and Thygesen, 1992) opposed the view that the Eurozone is an optimum currency area by stressing the ECB's weakness to deal with asymmetric shocks caused by the economic crisis. Added to that, the moral hazard in the Eurozone (Krugman, 2009) not only prevents states from being rescued by other states or the ECB[174], but also left the monetary union exposed to a crisis nobody would (like to) imagine, since there was actually no emergency plan. A significant part of the economic crisis was due to the public debt surge and the inability of some governments to borrow so as to serve their obligations. Consequently, there were no appropriate mechanisms to deal with the debt crisis. A recent study (De Grauwe, 2013) holds that there were economic distortions and obstacles at national level before and after the monetary union, which did not allow the economic and monetary integration. Furthermore, after the monetary union there was neither fiscal discipline nor implementation of the monetary rules, since the Stability and Growth Pact was not implemented and, to make matters worse, the fiscal rules were loosened in "good" economic times. Additionally, due to the monetary union states lost their tools of economic equilibrium policy in order to deal with the shocks and the economic crisis.

2. The EU takes one step forward – Establishment of the European support mechanisms

The Eurozone was designed without any provision of a financial assistance mechanism to deal with the moral hazard (Osman, 2012) as opposed to the EU, which

[171] A recent study (Gáková and Dijkstra, 2010) proved that the US workforce mobility from state to state is about 3%, whereas that of the EU is only 1.2% even during the crisis.

[172] A recent study (Antonakakis, Chatziantoniou and Filis, 2015) showed that the expansion of the debt crisis in the Eurozone can be explained by the business cycle crisis in regional countries (spillover effect). The debt crisis resolution can be achieved through a right macroeconomic policy, which will aim at the stabilization of regional economies and their economic development.

[173] According to the analysis of credible economists (Degiannakis, Duffy and Filis, 2014), the EU member states and even more these of the Eurozone have neither similar business cycles nor a sufficient community budget and as a result there are serious problems for them in dealing with the crisis.

[174] The ECB is not allowed by its statute to become a lender of last resort.

provides the BoP[175] assistance to the non-Euroarea member states; a mechanism with quite limited financial potential, though. However, when the debt crisis problem arose, the EU responded very fast –at least, according to its standards– to the exclusion of Portugal, Ireland and Greece from markets. The borrowing cost of these countries soared after 2008, as Chart 4 confirms, so that any public debt refinancing and state budget primary deficit covering became impossible. The EU established in May 2010 the European Financial Stabilization Mechanism (EFSM)[176] and in June 2010 the European Financial Stability Facility (EFSF)[177], which stopped its operations in June 2015, for it was succeeded since October 2012 by the European Stability Mechanism (ESM), which is a permanent support mechanism with a share capital of 60 billion euros. One of the differences between the EFSF and the ESM is that while the former constitutes a company having states as shareholders, being subject to private law and being located in Luxemburg, the latter is an intergovernmental organization, something much more than a company even at a semantic level for the prestige of the Eurozone and the process of its political deepening. Moreover, while the establishment of the EFSM is provided by the EU treaties and it can grant loans under the EU budget guarantee, the establishment of the EFSF and the ESM, on the contrary, is not provided by the treaties and the way of their granting loans is completely different from that of the EFSM. The aim of these mechanisms is to secure the EMU financial stability by supporting the Euroarea member states. Charts 5 and 6 and 7 show where the funds of rescue mechanisms have channeled into. Chart 7 confirms the fact that the EFSF granted Greece the biggest financial assistance, whereas rest countries were granted less funds. It is noted that the joint financial assistance provided by the EFSM and the ESM was about 700 billion euros.

Chart 8 presents the change in interest rate spreads from June 2012 till February 2013 –using the German government bond rate as a benchmark– the period during which strong interventions were made towards the support of countries like Greece and Portugal. As it is easily understood, the EU's establishment of support mechanisms changed the adverse

[175] The Balance of Payments (BoP) allows the non-Euroarea member states to be granted medium-term loans in order to cover their financial needs. Recently, Romania, Latvia and Hungary –in cooperation with the IMF– made use of this assistance programme. However, the size of the mechanism is quite limited in case of a general crisis.

176 The EFSM was established by the 28 EU member states in May 2010. Its lending capacity amounts to 60 billion euros, which are under the EU budget guarantee. The EFSM provided financial assistance to Portugal and Ireland with 26 and 22.5 billion euros respectively, while in July 2015 it granted Greece a seven billion euro bridge loan.

177 The EFSF was established exclusively by the 17 Eurozone member states. Its lending capacity amounts to over 450 billion euros. The EFSF granted Ireland a 17.7 billion euro loan, Portugal a 26 billion euro loan and Greece a 130.9 billion euro loan.

situation of the governments in terms of financing their own obligations and appeased the markets, while all the countries that were in bailout programmes, except for Greece, are now borrowing from the international markets.

The present debt crisis highlighted an innate weakness of the Eurozone, which is the absence of financial assistance mechanisms for the Euroarea member states. On the other hand, the EU responded very quickly to the rising problem and established three mechanisms. Currently, the lending capacity of these mechanisms is about half a trillion euros, while until now 368.5 billion euros have been granted. Table 4 presents the amounts that each mechanism lent to Euroarea member states.

3. The conservative ECB and the change of tack

The ECB is a conservative bank, since its fundamental task lies in maintaining price stability, that is keeping a low inflation rate[178], while according to the theoretical controversy of central bankers "Rules vs Discretion" (Barro and Gordon, 1983, Gordon and Leeper, 2006), the ECB was in favor of rules and against discretion contrary to other banks, like the US Federal Reserve (FED), in which price stability is associated with growth and employment. The ECB was built on Bundesbank model and thus it must not be considered accidental that its headquarters are in Germany. Perhaps it is more conservative than Bundesbank itself. The innate weakness of the Eurosystem to deal with the debt crisis is noticed from the difference in the evolution of Spain's and UK's bond prices. While Spain's macroaggregates were in much better situation than those of the UK (De Grauwe, 2011), the borrowing cost for Spain rose during the crisis, whereas for the UK remained constant and then fell, as depicted in Charts 9 and 10. This happened because markets took for granted that the ECB would have difficulty in assisting Spain, as opposed to the Bank of England (BoE) that responded immediately by using monetary policy instruments to deal with a potential liquidity crisis of the UK government.

But, did the ECB really stay inactive during the economic crisis? The ECB shifted the monetary policy after the crisis from the initial target of price stability to the targeted fight against the output gap. The ECB often exceeded its powers[179] in order to restrain the debt

[178] According to article 127 (1) TFEU of the Lisbon Treaty, the ESCB's fundamental task lies in maintaining price stability.

[179] According to article 123 of the Lisbon Treaty, which replaced article 104 of the Maastricht Treaty, "overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the

crisis (Pronobis, 2014). The ECB used standard monetary policy instruments for crisis management, such as the open market operations[180]. However, the crisis was not possible to be addressed only by standard instruments and as a result the ECB used to a large extent non-standard financing instruments, mainly through asset purchase programmes[181] (APP), since the monetary policy transmission mechanism was disrupted due to dysfunctions in market segments.

On 26.07.2012, during the Global Investment Conference in London, Mario Draghi stated that "the ECB is ready to do whatever it takes to preserve the euro." The reality confirmed that the ECB, in cooperation with the other EU bodies, exceeded itself. It took decisions that surprised the international community. The quantitative easing program announcement on 22.01.2015 –a government bond purchase programme of 60 billion euros per month till September 2016 (over one trillion euros in total)– impressed even the most optimist politicians and economists.

It can be said that, according to the ECB statute, the interventions of the central bank moved across and maybe beyond the borderline of its territory as far as the direct and indirect financing of states and financial institutions is concerned. Nevertheless, its decisions were not contrary, but according to the political decisions made by the Euro Summits. It is no surprise that the Court of Justice of the European Union (CJEU), through a broad and progressive interpretation of the Treaty on the Functioning of the European Union (TFEU), ruled in favour of the ECB with its judgment in case C-62/14, concerning secondary market

Member States in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments." The importance of article 123 should be reminded throughout the discussion for the ECB's attitude and involvement in the debt crisis resolution process.

[180] The open market operations are short-term (main refinancing operations – MROs) and long-term (long-term refinancing operations – LTROs), while the ECB's biggest move was a three-year LTRO programme of one trillion euros in December 2011 and February 2012.

[181] The non-standard financing instruments are used when the monetary policy cannot be implemented through standard financing instruments, namely in periods of economic crisis and financial instability. Such instruments are the following: a) the covered bond purchase programme (to date, two programmes have been completed –the CBPP1 and the CBPP2– and on 04.03.2015 the ECB decided to launch a third programme, namely the CBPP3), b) the asset-backed securities purchase programme (ABSPP), c) the secondary market public sector purchase programme (in fact, the PSPP is the quantitative easing programme which was decided by the ECB Governing Council on 22.01.2015 and was specified by the EU decision 2015/774), d) the bond repurchase programme (OMT), e) the security purchase programme (according to Eurosystem evidence, the ECB possesses through the SMP programme Spanish, Italian, Portuguese and Greek government bonds worth about 218 billion euros. The asset-backed securities and the cover bonds are used for the banking system liquidity support.

government bond purchases for countries with serious financing problems, which actually means indirect financing of governments. This judgement also paved the way for the quantitative easing programme (Quantitative Easing – QE). It is noted that the action against the ECB was brought by the Federal Constitutional Court of Germany, which, based on its own judgments, ruled that the ECB's interventions were illegal.

The ECB in cooperation with the European Commission (EC) contributed to all government support programmes. A decision of great importance for Greece was that of the Eurogroup on 21st February 2012, which stated that the ECB in association with the European central banks that possess Greek government bonds (SMP and ANFA holdings) will return these bonds to Greece in their purchase value and not their nominal value. This decision meant for Greece 6.3 billion euros net profit.

Additionally, in 2012 and 2015 the ECB provided the Greek banking institutions, through the Emergency Liquidity Assistance (ELA), with a liquidity support of over 100 billion euros, even though there was no bailout programme and only with the prospect of signing one in order for them not to collapse. Due to these choices the ECB was accused by several economists of operating as a lender of last resort as well as of putting in danger its solvency by supporting the Greek banking system, while it has been recommended that the ECB's decisions and their rationale should be clear and well-grounded.

According to the ECB report (2015), banks have lowered the credit rating level for granting loans to businesses and individuals by 13% since the beginning of 2015 so as to increase the number of granted loans and boost the liquidity in an environment of monetary policy easing, given that some countries of the Eurozone are even now still in deflation (July 2015 – Greece: 2.2%).

Finally, the need for the ECB to take officially the role of the last resort lender is stressed, while it is recommended that more active policies must be forwarded in order that Euroarea avoids asymmetric business cycles (De Grauwe, 2013).

All the aforementioned evidence clearly demonstrate that the ECB had serious weaknesses in dealing with the crisis, which emanate from its statute, its targets, its available tools and its conservatism that many ECB officers supported. The crisis restraining mechanisms were limited and the standard mechanisms were not adequate to deal with the problem. Despite its weaknesses, the ECB managed to keep the Eurozone alive and banks well recapitalised and firm, while there was also an obvious support to governments facing

problems[182]. All these achievements were made by using instruments, programmes and mechanisms that were agreed at political level and implemented at techno-monetary level. Now the challenge for the ECB is to act in such a way that it reduces the output gap and enhances the consumer instinct trust (De Grauwe and Macchiarelli, 2015).

4. The road towards the European Banking Union

The government support to banks led many countries to the dramatic increase of their public debt, while the fear of crisis transmission from one country to another restricted cross-border bank activities, thus slowing down growth and confining commerce strictly to national markets. The fragmentation in all parts of the chain, like in the financial markets, hinders growth, commerce and cooperation (Farhi and Tirole, 2014). The EU should have acted immediately in order to deal with the financial fragmentation, the uncontrolled European bank sector and the serious divergences in bank resolution and supervision rules, which led to lack of trust and market instability. The European Council of Heads of State and Government in cooperation with the European Parliament, the European Commission and the European Central Bank took a series of decisions[183][184] which enhance the ECB's supervisory role[185], while they also set the institutional pillars required for the banking union.

The starting point was the common decision taken by the Ecofin and the Eurogroup on 18.12.2013, when they agreed the establishment of the Single Supervisory Mechanism (SSM), which was put in force on 04.11.2014. The ECB will supervise through the SSM 130 financial institutions, which represent 85% of the Eurozone financial system assets. In this way, the bank sector's safety and robustness gap is covered, while financial solvency and banking integration at European level are also promoted (Magnus, Backman, Power, 2015).

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[182] The ECB purchased from the secondary market until the end of 2012 government bonds and provided assistance to banking institutions with the total sum of 320 billion euros, which equalled 3.5% of the Eurozone GDP, as opposed to FED and BoE, whose interventions in the US and UK economies equalled over 25% of their GDP.

[183] Council Regulation (EU) No 1024/2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions – Text with SSM relevance

[184] Regulation (EU) No 806/2014 of the European Parliament and of the Council establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No 1093/2010 – Text with SRM relevance

[185] The national central banks were charged until recently with the supervision of the national banking institutions.

Furthermore, the European Parliament voted for and established the Single Resolution Mechanism (SRM) in April 2014, which will be put in force on 01.01.2016, after the EU bank recovery and resolution directive (BRRD)[186] has been adopted by all member states. The SRM's operation will be supported by the Single Resolution Fund (SRF). The SRF should reach at least 1% of the amount of covered deposits of all credit institutions authorised in all the banking union member states –which is estimated to be around 55 billion euros– and it is going to be built up over a period of eight years. In fact, the bank resolution financial burden shifts from national resources to a supranational fund (Lekkos and Leventakis, 2014). Through the banking union, the bond between the financial institutions bailout and the public debt –that is the substantial reason for the European debt crisis– is broken, while the first step for minimizing the borrowing cost difference, which hindered to date competition and growth, is also taken. The banking union will enhance the trust to the banking industry, shrink the fragmentation in the financial sector and reduce dramatically a bank-run risk.

Finally, as far as the banking union is concerned, there was an agreement in April 2014 on the reform of the directive which provides the harmonisation of the national deposit guarantee schemes[187].

The banking union in association with the rescue mechanism establishment opens the discussion about the official, namely the institutional, transformation of the ECB into a lender of last resort (Xafa, 2015). Goodhart and Schoenmaker (2014) have argued for the need of the ECB financing states, although, as was mentioned above, it is formally not allowed to do so by its statute. Actually, however, this has been the case several times during the crisis.

5. The fiscal governance and the democratic legitimacy

During the crisis, the Eurozone spread the panic of the financial markets to the political governance through strict austerity and fiscal consolidation packages, while the countries that implemented these packages were little benefited. Moreover, economic governance reforms took place in the Eurozone due to the economic crisis and under the

[186] Directive 2014/59/EU of the European Parliament and of the Council establishing a framework for the recovery and resolution of credit institutions – Text with EEA relevance

[187] Directive 2014/49/EU of the European Parliament and of the Council on deposit guarantee schemes – Text with EEA relevance

massive pressure of the international markets and the government financial needs. Since 2010's revision of the Stability and Growth Pact (SGP) a number of measures have been taken, with the so-called "Two Pack"[188] –which is an evolution of a series of proposals known as the "Six Pack"[189] – being their flagship. The "Six Pack" provides the strengthening of surveillance and assessment for the states in receipt of financial assistance, for those that are subject to an excessive deficit procedure and for those that are experiencing serious financial difficulties. Furthermore, both the preventive and the corrective arm of the SGP were revised towards a stricter direction by introducing the adoption of national fiscal rules, the prevention and the correction of macroeconomic imbalances and the intensification of deviation sanctions. The change in the government budget approval process is a typical example. More specifically, each member state will have to submit its draft budget for the following year by 15 October annually, namely before submitting it to the national parliament. If the EC has any objection about the draft budget then the government will have to revise it, while it is also provided that the states experiencing severe financial disturbance will come under enhanced surveillance and will also be compulsorily subject to a macroeconomic adjustment programme.

Several economists criticised these reforms (Blanchard and Leigh, 2013), since the produced outcomes are inevitably associated with austerity programmes, while there is also a political problem concerning the infringement of the democratic principle "no taxation without representation"[190]. Additionally, they pointed out the essential difference between legal force and political legitimacy. Actually, they argue about the ability provided to the EC to enforce the adoption of new taxes or expenditure cuts from national governments, because in this way the fundamental principles of democratic legitimacy are undermined. According to De Grauwe & Yuemei Li (2013), as well as depicted in Chart 11, the higher the spreads the more intense the austerity measures were, something that seems quite as a punishment or penalty. Moreover, in the same study it can be figured out that the larger the austerity packages the higher the recession was, as it is also depicted in Chart 12.

[188] The decision 6866/13 refers to a package of measures known as "Two Pack", which includes: a) a regulation on enhanced surveillance of Euroarea member states that are experiencing or threatened with serious financial stability difficulties, b) a regulation on enhanced monitoring and assessment of draft budgetary plans of Euroarea member states, with closer monitoring for those in an excessive deficit procedure.

[189] The EC issued six legislative proposals on 29.09.2010 relating to the reform and enforcement of the budgetary surveillance framework, the establishment and enforcement of a new surveillance framework to identify and correct emerging macroeconomic imbalances, and the harmonisation and strengthening of national budgetary frameworks.

[190] Those who decide to impose a tax should bear the political cost of this decision, which is to publicly account for it.

At the EU level, the member states co-signed on 01.03.2012 the intergovernmental Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (TSCG), while on 01.01.2013 the Fiscal Compact –the TSCG fiscal component– entered into force.

Since the beginning of the crisis as well as more recently –due to the strict austerity measures that accompanied bailout programmes– many economists (Wyplosz, 2015) have accused the EU of imposing infeasible requirements to countries that have no other choice to follow, which, according to them, is something fundamentally irrational and antidemocratic. In fact, the view that a country could be forced by another to take steps that it does not want to take is a violation of the EU democratic principle that all countries are equal.

6. Reflections

The taboos of the European politicians about particular choices create serious problems to the economic integration and political deepening process. One typical example is the Eurogroup that although it takes the most important decisions, it does not have any legal or institutional status. Actually, it is an informal body with no minutes taken at its meetings, while its decisions define at least the future of the euro and the Eurozone.

Likewise, the ECB Governing Council's arbitrary way of setting the inflation target under 2% not only it does not secure the stable and sustainable growth, but rather confirms the imposition of personal obsessions at the expense of a really progressive economic policy.

Furthermore, the amounts allocated by the European budget do not help essentially in the economic integration and political deepening of the EU member states and even more of the Eurozone member states. The fiscal union, through a strong EU budget, is far from the present reality. The structural funds, the Cohesion Fund, the European Investment Bank and other institutions help countries that undergo asymmetric shocks deal with them, but the amounts directed to these countries are too small[191]. The amount of 33 billion euros granted by the structural funds and that of 27 billion euros granted by the European Investment Bank cannot be seriously considered as an effective instrument for combating an asymmetric

[191] In order to be more easily understood the asymmetric shock cost and the need for smoothing out business cycles in the Eurozone member states, a typical finding from a recent study is given, (Antonakakis, Chatziantoniou, Filis, 2015) which prove that 80% of the business cycle shock in the EU member states are caused by the "spillover effect", that is the shock dispersion from the rest EU member states.

economic shock. Typically, the USA government federal budget equals 25% of the national GDP, while the EU budget equals less than 1.5% of the European GDP.

7. Conclusions

The monetary union is something much more than a single exchange rate and a central bank. The loss of the sovereign monetary policy making is only one of the consequences for a country entering the common currency. The investors reacted faster than the cumbersome European governments and the absent European mechanisms, thus leading many countries to economic suffocation. The resolution of the "moral hazard" problem was not enough to prevent the debt crisis from spreading to several Eurozone member states. Both the EU and the ECB reacted in a multilevel way to address the crisis, through the creation of rescue mechanisms and emergency support programmes. A monetary union can work successfully as long as there is a single support and supervision mechanism at fiscal and banking level. Such mechanisms are provided by the political union, which is deeper than the economic union. These mechanisms were absent in the EU and due to the crisis they became gradually piece of the "euro-confederalisation" puzzle. However, their size, response speed and overall function continue to raise doubts about whether they can guarantee the Eurozone's and the EU's survival (De Grauwe and Li, 2015).

8. Appendix: Charts - Tables

Chart 1: GDP at current prices

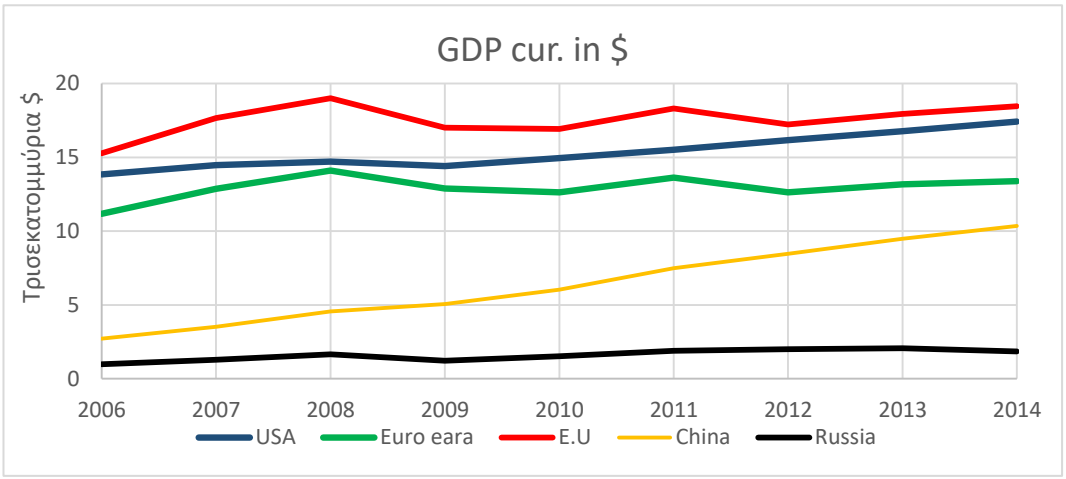


Chart 2: Growth rate

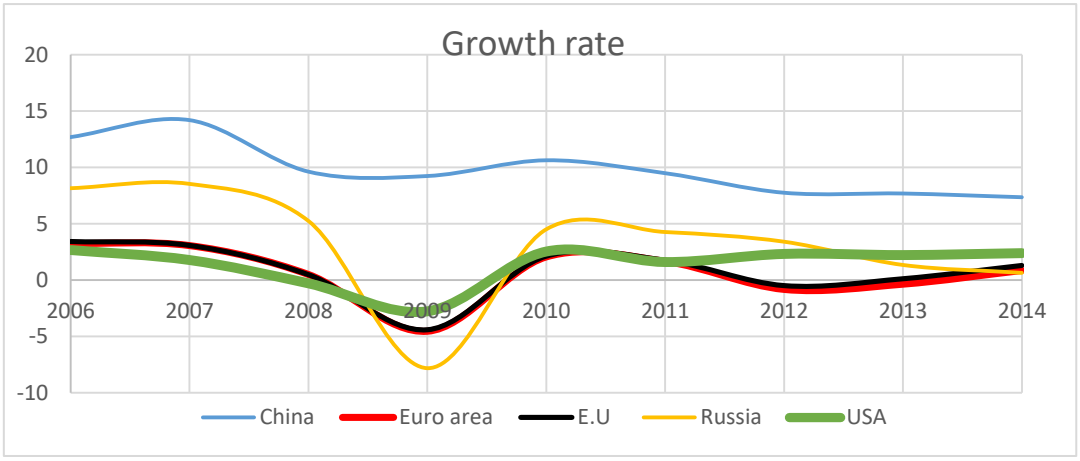


Chart 3: Unemployment rate

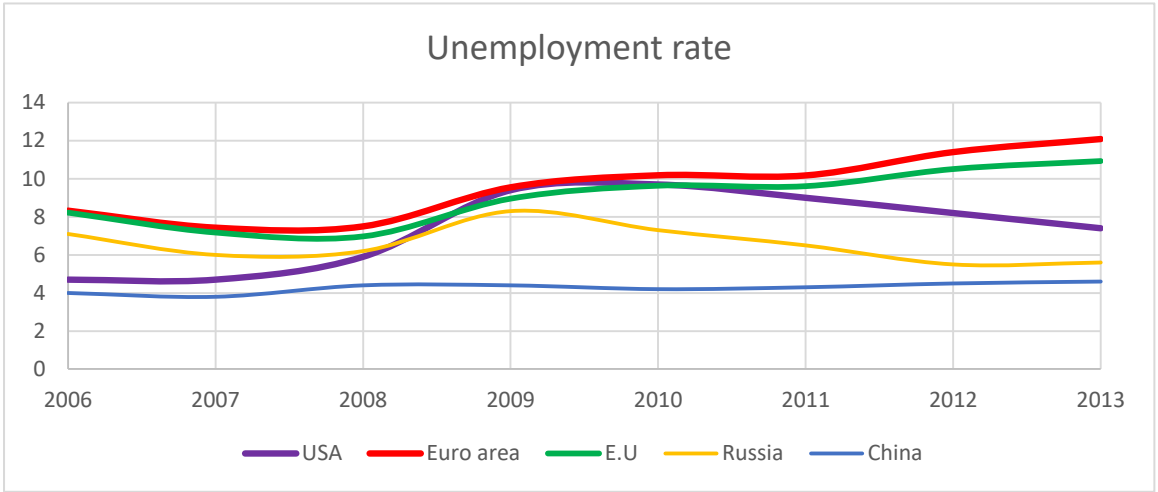


Chart 4: Interest rate spreads for Eurozone member states

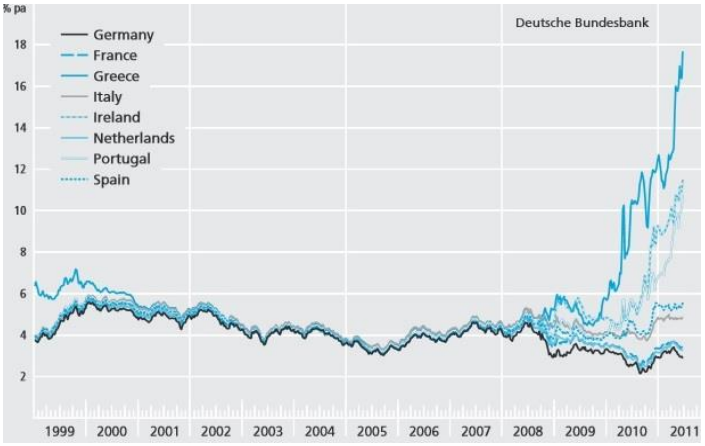
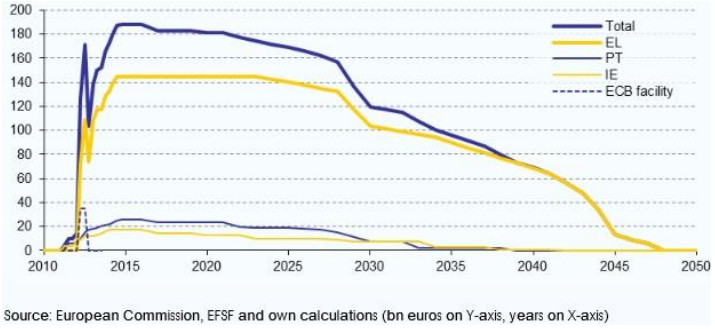
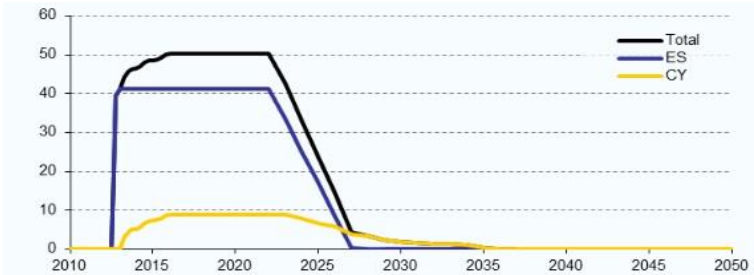


Chart 5: EFSF loans



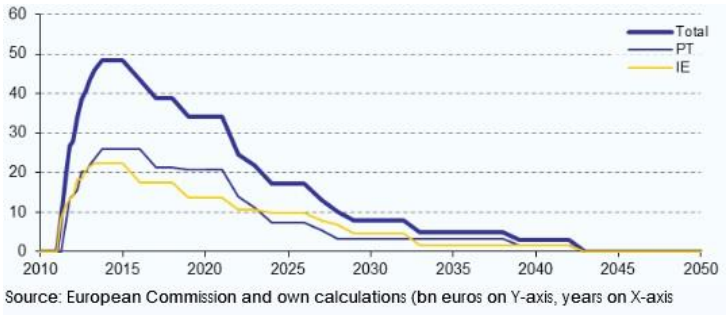
Source: European Commission, EFSF and own calculations (bn euros on Y-axis, years on X-axis)

Chart 6: ESM loans



Source: European Commission, ESM and own calculations (bn euros on Y-axis, years on X-axis)

Chart 7: EFSM loans



Source: European Commission and own calculations (bn euros on Y-axis, years on X-axis

Chart 8: The change in spread from June 2012 until February 2013

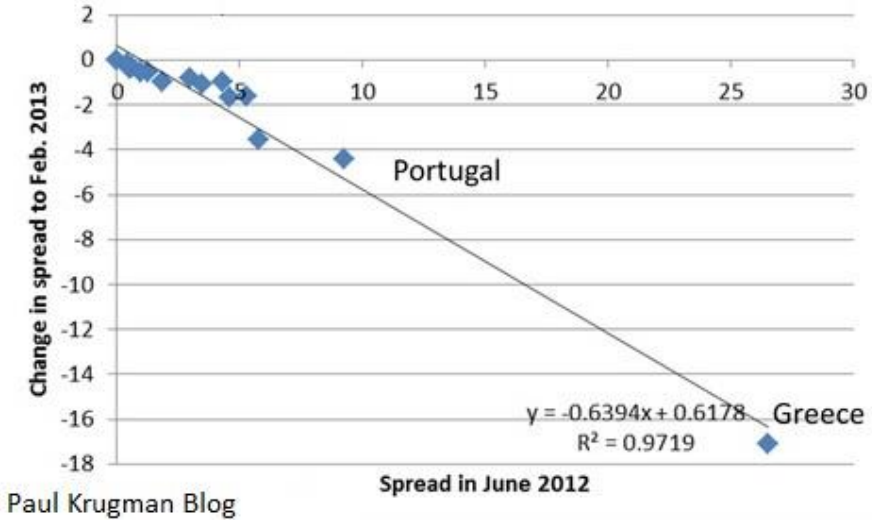


Chart 9: Interest rates of Spain and UK government bonds

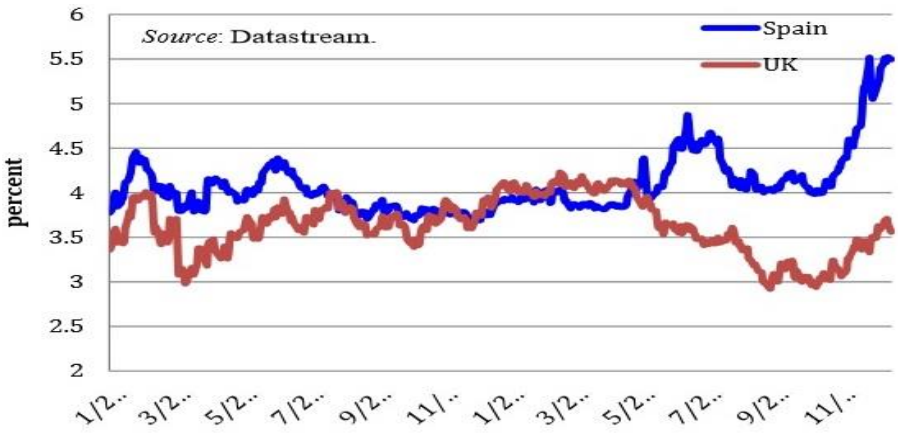


Chart 10: Spain and UK government debts

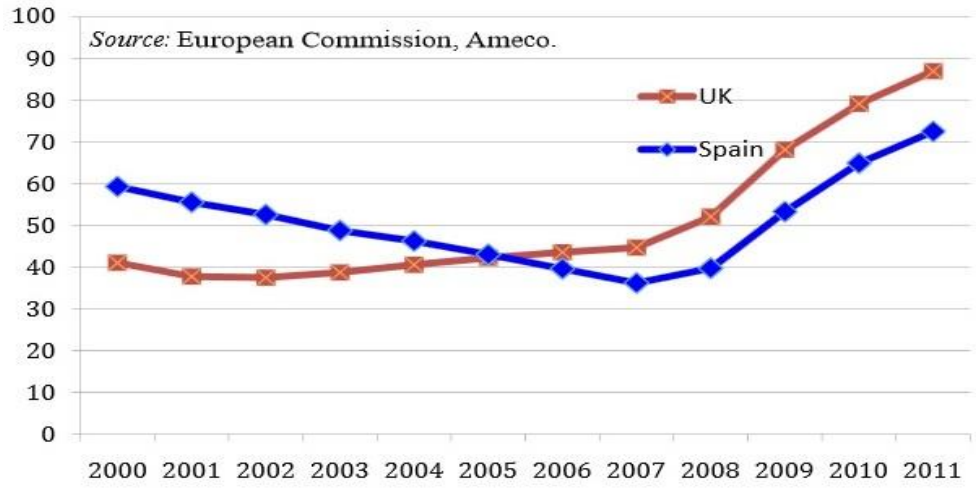


Chart 11: Austerity measures and spread levels

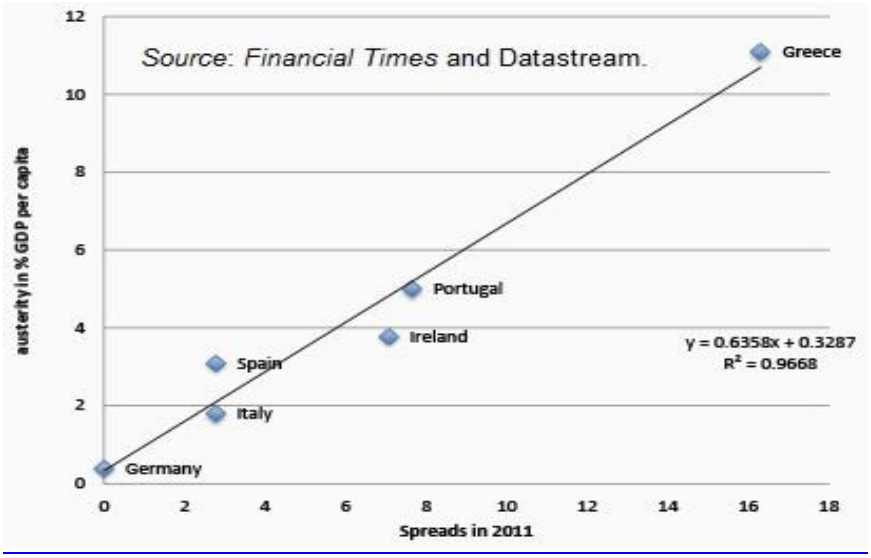


Chart 12: Austerity measures and growth rate

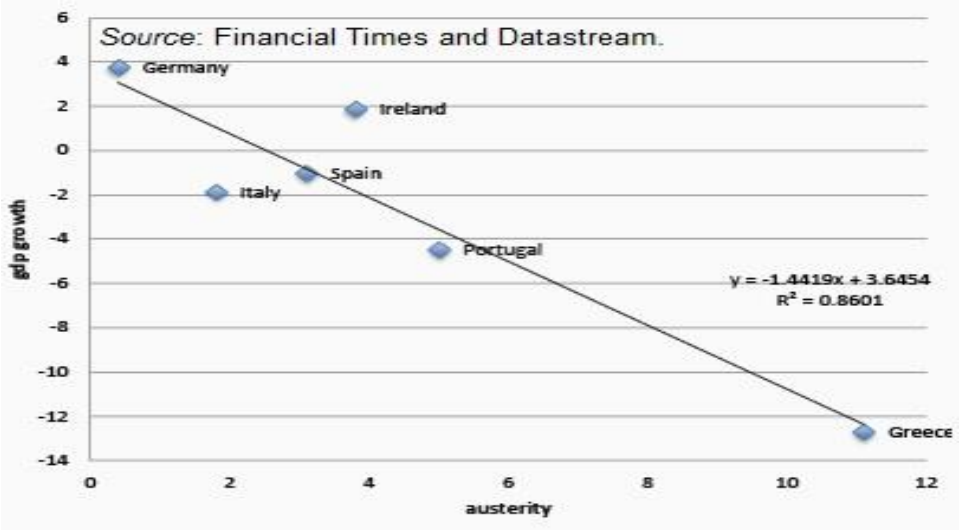


Table 1: GDP at current prices

GDP $	USA	Euroarea	EU	China	Russia
2006	13,855,888,000,000	11,171,913,753,944	15,277,153,474,532	2,729,784,031,906	989,930,542,279
2007	14,477,635,000,000	12,865,170,227,278	17,666,078,553,517	3,523,094,314,821	1,299,705,764,824
2008	14,718,582,000,000	14,104,469,320,998	19,012,781,861,265	4,558,431,073,438	1,660,846,387,625
2009	14,418,739,000,000	12,898,241,885,261	17,005,366,281,318	5,059,419,738,267	1,222,644,282,202
2010	14,964,372,000,000	12,635,364,066,139	16,937,824,892,179	6,039,658,508,486	1,524,917,468,442
2011	15,517,926,000,000	13,621,651,189,769	18,310,001,820,621	7,492,432,097,810	1,904,793,932,483
2012	16,163,158,000,000	12,642,794,345,501	17,232,152,914,473	8,461,623,162,714	2,016,112,133,645
2013	16,768,053,000,000	13,186,281,579,559	17,950,130,244,943	9,490,602,600,148	2,079,024,782,973
2014	17,419,000,000,000	13,402,747,137,991	18,460,645,625,272	10,360,105,247,908	1,860,597,922,763

Source: World Bank

Table 2: Growth rate

Growth	China	Euroarea	EU	Russia	USA
2006	12.68823	3.258509	3.422497	8.153432	2.666626
2007	14.19496	3.060461	3.075478	8.53508	1.77857
2008	9.623377	0.494562	0.479147	5.247954	-0.29162
2009	9.233551	-4.54355	-4.41129	-7.82089	-2.77553
2010	10.63171	2.053446	2.124739	4.503726	2.53192
2011	9.484506	1.66137	1.761179	4.264177	1.601454
2012	7.750298	-0.82858	-0.49113	3.405547	2.321085
2013	7.68381	-0.36473	0.117218	1.340798	2.219308
2014	7.351	0.851212	1.294461	0.640486	2.388227

Source: World Bank

Table 3: Unemployment rate

Un.Rate	USA	Euroarea	E.U	Russia	China
2006	4.7	8.324359	8.221834	7.1	4
2007	4.7	7.43085	7.175679	6	3.8
2008	5.9	7.498431	6.972234	6.2	4.4
2009	9.4	9.551122	8.956025	8.3	4.4
2010	9.7	10.18412	9.6352	7.3	4.2
2011	9	10.17533	9.611461	6.5	4.3
2012	8.2	11.40159	10.51036	5.5	4.5
2013	7.4	12.0867	10.93022	5.6	4.6

Source: World Bank

Table 4: amounts that each mechanism lent

Mechanism/ Country	**Greece**	**Cyprus**	**Ireland**	**Portugal**	**Spain**
EFSF	130.9	0	17.7	26	0
ESM	86	9	0	0	41.3
EFSM	7.16	0	22.5	26	0
Total	**224.06**	**9**	**40.2**	**52**	**41.3**

Source: www. europa.com

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40	Xavier Galiegue	Université d'Orléans / France

CONFERENCE PROGRAM

Wednesday - October 14th		
AFTERNOON	Arrival and accommodation	
19:45 pm	Meeting in front of the UNWE for dinner in a traditional Bulgarian restaurant[1]	
	Cultural show - Nestinarian dance, Bulgarian folk dancing.	
Thursday - October 15th		
8:30-9:00am	**Participants registration**	Registration
09:00 – 9:30 am	**Welcome** ***Presentation of the Conference and Monetary Research Center*** */large conference hall/*	**Statty STATTEV**, Rector, University of National and Word Economy, Sofia, Bulgaria; **Grigoriy VAZOV**, Rector, VUZF University, Sofia, Bulgaria. **Nikolay NENOVSKY**, Monetary Research Center, UNWE, Sofia, Bulgaria;
09:30 – 11:00 am	**Opening plenary (1)** */large conference hall/*	**Chair**: **Radostin VAZOV** **Speakers**: (1) **Petar CHOBANOV**, UNWE, Sofia, Bulgaria (Some Fiscal Lessons During Turbulent Times); (2) **Gordon KERR,** Cobden Partners, London, United Kingdom (Why Every Balkan Country Should Have Its Own Currency Plan B); (3) **Nikolay NENOVSKY,** Monetary Research Center, UNWE, Sofia, Bulgaria (Shadowing the Latin Monetary Union: Interest rates and Debts Dynamics at the Balkans Periphery);
11:00 – 11:30 am	**Coffee Break**	

[1] *Dinner is self paid (Approx. 20 euro per person). It will be held in a traditional Bulgarian restaurant in Vitosha mountain. The distance is approximately 15 minutes by taxi from the proposed hotel and the UNWE.Organized transport could be provided. Ask the organizers for additional information.

11:30-13:00 am	**Presentation Session (1)** **Scientific Articles and Experience Reports (simultaneous)**	Theme 1: Monetary History Experiences - *large conference hall* **Moderator: Ninel Nesheva – KIOSSEVA** **Speakers**: **Olga CHRISTODOULAKI,** London School of Economics, London, United Kingdom (Did Greece Genuinely Introduce Either of the Gold, or Gold Exchange, Standards in 1910?) **Stefania JACONIS** (Currency substitution and instability in the economy: the Soviet experiment of the chervonets in the twenties.) **Tsvetelina MARINOVA,** NBU, Sofia, Bulgaria (Cooperative Banks in Bulgaria from the Ottoman Time to WWI (Institutional Analysis and Statistical Summary) **Peter STOYANOV,** UNWE, Sofia, Bulgaria (The Bank for International Settlements and the dark history of finance between the two World Wars)
		Theme 2: Interdisciplinary Issues Related to Money as Social Phenomenon - *small conference hall* **Moderator: Pencho PENCHEV/Maria GEORGIEVA** **Speakers**: **Jorge Meira COSTA**, University of Minho, Portugal, **Marc GAUVIN**, Independent Researcher, Spain (A Proposal for Harmonising Current Disparate (scientific and legal) Definitions of Money Towards Greater Decidability in the Provision of Justice According to Universal Principles of Contract Law) **Iustina Alina BOITAN,** Bucharest University of Economic Studies, Romania (Exploring the Link Between the Emergence of Alternative Finance Business Models and Financial Inclusion) **Rossitsa TONCHEVA,** Monetary Research Center, UNWE, Sofia, Bulgaria (An Expert Survey of Modern Barter Exchange System in Bulgaria)
13:00 – 14:00 pm	**Lunch**	
14:00-15:30 am	**Presentation Session (2)** **Scientific Articles and Experience Reports (simultaneous)**	Theme 1: Social and Complementary Monetary Systems - *large conference hall* **Moderator: Pencho PENCHEV** **Speakers**: **Ninel Nesheva – KIOSSEVA,** NBU, Sofia, Bulgaria Other Negative And Positive Effects In Smes From Network Participation **Jens Martignoni,** University of Cologne, Germany (Monetary Velocity in a Systemic Perspective) **Miguel Yasuyuki HIROTA,** University of Valencia, Spain (Public Currencies to Enhance Welfare States: Two Draft Plans)

		Theme 2: PhD Student Section - *small conference hall* **Moderator: Nikolay NENOVSKY** **Speakers**: **Galia MANCHEVA,** UNWE, Sofia, Bulgaria (Monetary Policy in Albania 2006-2015) **Ivayla DIMITROVA,** UNWE, Sofia, Bulgaria (Long-term Interest Rates' Integration and Dynamics in Some CEE Countries on the Road to Eurozone) **Quang NGUYEN,** CRIISEA – University of Picardie Jules Verne, Amiens, France (Current Monetary Trends in Asia. Scenarios and Prospects of the Single Currency in Asia (Case Studies of China and Vietnam) **Marios PSYCHALIS,** Athens University of Economics and Business - (The reforms in the economic governance and the new financial mechanisms in Euro area after debt crisis.) –Skype Presentation.
15:30-16:00 pm	**Coffee Break**	
16:00–18:00 pm	**Plenary Panel (2)** */large conference hall/*	**Chair: Silvia TRIFONOVA** **Speakers:** (1) **Jovan ZAFIROSKI,** Faculty of law, St. Cyril and Methodius University, Skopje, Republic of Macedonia (The Greek Crisis Impact on the Macedonian Banking System. Market Reactions and Institutional Responses) (2)**Tatyana STEFANOVA,** ERI at BAS (The reforms in the EMU and the implications for Bulgaria) (3) **Silvia TRIFONOVA,** UNWE, Sofia, Bulgaria, **Atanas ATANASOV,** UNWE, Sofia, Bulgaria (Comparative Study of Balkan Countries' Development Before and After the Crisis); (4) **Lekha CHAKRABORTY,** National Institute of Public Finance and Policy, New Delhi, India (Estimating Monetary Seigniorage in an Emerging Economy: Is There a Scope for "Free Lunch" to Finance Public Investment?); (5) **Goran PETREVSKI,** University SS Cyril and Methodius, Skopje, Republic of Macedonia, **Dragan TEVDOVSKI,** University SS Cyril and Methodius, Skopje, Republic of Macedonia**, Peter EXTERKATE,** University of Sydney, Australia, **and Jane BOGOEV,** World Bank, USA (Fiscal and Monetary Policy Effects in the Three South Eastern European Economies)
18:00-21:00 pm	**Welcome Reception at the University canteen**	

Friday - October 16th		
09:30 – 10:30 am	**Plenary panel (3)** */large conference hall/*	**Chair: Julius HORVATH/Momtchil KARPOUZANOV** **Speakers:** (1) **Daniela BOBEVA,** VUZF University, Sofia, Bulgaria, **Atanas ATANASOV,** UNWE, Sofia, Bulgaria (Macroeconomic Imbalances in the Euro Area Member States); (2) **Bojidar ARCHINKOV,** Foundation Pravitel, **Stoyan DENCHEV**, Rector, UNI BIT, Sofia, Bulgaria (Market Power, Profitability and Rising Consolidation of the Banking Industry in Bulgaria); (3) **Xavier GALIEGUE,** Universite d'Orleans, France (Varieties of Capitalism and European Monetary Integration: What Lessons for the Western Balkan Countries?). (4) **Manyu MORAVENOV**, FairPlay Properties REIT, (The Application of RICS standards for evaluation of RE Development Projects)
10:30 -11: 00 am	**Coffee Break**	
11:00-13:00 pm	**Presentation Session (3)** **Scientific Articles and Experience Reports (simultaneous)**	**Theme 1**: - History of Economic Thought *large conference hall* **Moderator: Tsvetelina MARINOVA** **Speakers**: **Nikolay BOGATZKY,** (Fundamental principles and factors of economic development according to Kinkel on the 70th anniversary of his disappearance) **Momtchil KARPOUZANOV,** Independent Researcher, Bulgaria, **Nikolay NENOVSKY,** Monetary Research Center, UNWE, Sofia, Bulgaria (Value, Prices and Money. Comparing Marx and Menger) **Rumen ANDREEV,** UNWE, Sofia, Bulgaria (Bulgarian Economists for the Economy of Third Reich)
		Theme 2: Monetary Policy and Banking and Financial System - *small conference hall* **Moderator: Gancho GANCHEV** **Speakers**: **Gergana MIHAYLOVA,** Monetary Research Center, UNWE, Sofia, Bulgaria (Banks' Efficiency in Bulgaria in the

		Twenties: From Stabilization to Crisis) **Mohamed KADRIA,** University of Tunis El Manar, Tunisia, **Mohamed Safouane Ben Aissa,** University of Tunis El Manar, Tunisia (Does Inflation Targeting Decrease the Primary Budget Deficit in Emerging Markets? An Empirical Evidence) **Emil KALCHEV,** NBU, Sofia, Bulgaria (The Impact of the Banking Turmoil in 2014 on the Currency Board) **Dimitar CHOBANOV,** UNWE, Sofia, Bulgaria (Which Monetary Policy Regime Is The Most Appropriate For Bulgaria?) **Diyana MITEVA,** Monetary Research Center, UNWE, Sofia, Bulgaria (State aid for the EU banking sector)
13:00 – 14:00 pm	**Lunch**	
14:00-14:30 pm	**Closing remarks**	**Nikolay NENOVSKY** Discussion About MRC perspectives and organizational issues **Liana Trichkova,** UNWE, Sofia, Bulgaria (Presentation of MRC)
14:30 -16:00 pm	**Open Session (workshop)** ***COMPARATIVE HISTORY OF ECONOMIC THOUGHT.***	**Meeting for CHET Association** **Participants**: Vladimir AVTONOMOV, Nikolay BOGATZKY, Julius HORVATH, Antonio MAGLIULO, Gilles Campagnolo, Momtchil KARPOUZANOV, Stefania JACONIS, Nikolay NENOVSKY, Pencho PENCHEV, Teodor SEDLARSKI, Rumen ANDREEV.
Saturday - October 17th		
8:30-20:00	**One day excursion.**	**Visiting the European Capital of Culture for 2019.** **For additional information visit the website of the conference.** **www.mrcenter.info**