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SOSYAL BİLİMLER ENSTİTÜSÜ
İKTİSAT ANA BİLİM
İKTİSAT YÜKSEK LİSANS PROGRAMI

YÜKSEK LİSANS TEZİ

**REFORM OF THE INTERNATIONAL MONETARY SYSTEM:
WORLD CENTRAL BANKING OR FREE BANKING?**

NURBEK MADMAROV

11710031

TEZ DANIŞMANI

PROF. DR. ERCAN EREN

İSTANBUL

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ABSTRACT

Reform of the International Monetary System: World Central Banking or Free Banking?

Nurbek MADMAROV

JULY 2013

Over the centuries we have not learned origins or symptoms of crises accurately. As a result of this, we have always had the crises and lastly the 2008 financial crisis (Great Recession). The Great Recession showed we have faulty economic theories and economic policies. Thus, we need theories that can detect the origins of any crises more accurately and then cancel them. Actually, we don't need economic models when crises have already arisen. Here we initially show the flaws of the current monetary system and then proposals to solve these flaws. In this case, we will introduce two type proposals. The first category of proposals is World Central Banking Models: proposals of J.M.Keynes ("Bancor" Plan), P.Davidson ("International Monetary Clearing Union"), J.Stiglitz and B.Greenwald ("Global Greenback Plan"), J.D'Arista ("International Clearing Agency" Plan), J.A.Ocampo (SDR-based Global Reserve System), P.Alessandrini and A.F.Presbitero (SDR-based International Monetary System). According to these writers the flaws of the current global reserve system are *anti-Keynesian bias* (deflationary bias), *the Triffin Dilemma* (the currency asymmetry problem) and *the instability-inequality link*. The second category is Austrian and Free Banking Models: proposals of G.Selgin (Productivity Norm and Free Banking), F.Hayek (Denationalization of Money and Nominal GDP Targeting), L.Von Mises (Gold Standard with Free Banking), and J.H.de Soto and M.Rothbard (Gold Standard with % 100 Reserves). These authors argue that any government intervention like regulations and bailouts in the production of money or any government based institutions like central banks or treasury cause instabilities (business cycles and thereby economic crises) in the free society. According to them we should create a world freed from governments. But they differ in three issues: the identity of the money issuer, the nature of the money substitutes, and the nature of the private property. These issues led them to propose different monetary reforms.

Key Words: Great Recession, the Great Depression, economic models, World Central Banking models, anti-Keynesian bias, the Triffin Dilemma, the instability-inequality link, Austrian Models, Free Banking Models, government intervention, free society

ÖZ

Uluslar Arası Para Sisteminin Reformu: Dünya Merkez Bankacılığı mı yoksa Serbest Bankacılık mı?

NURBEK MADMAROV

TEMMUZ 2013

Yüz yıllar boyunca krizlerin kaynaklarını veya belirtilerini tam olarak öğrenmemiş durumdayız. Bunun sonucu olarak her zaman krizler yaşandı ve en son olarak da 2008 Finansal Krizini (Büyük Resesyon) yaşamış durumdayız. Büyük Resesyon yanlış ekonomik teorilere sahip olduğumuzu ve yanlış ekonomik politikaları kullanmış olduğumuzu gösterdi. Bundan dolayı herhangi bir krizin kaynağını daha doğru bir biçimde tespit edecek ve bunları yok edecek ekonomik teorilere ihtiyaç vardır. Aslında kriz çoktan yaşandıktan sonra modellere ihtiyacımız yoktur. Bu makalede ilk olarak cari parasal sistemin kusurlarını inceleyeceğiz ve daha sonra bunları tedavi etmek için bazı çözüm önerilerinde bulunacağız. İki tür çözüm öneri sınıfından bahsedeceğiz. Bunların ilki Dünya Merkez Bankacılığı Modelleri sınıfıdır: J.M.Keynes (“Bancor” Planı), P.Davidson (“Uluslar Arası Parasal Takas Birliği”), J.Stiglitz and B.Greenwald (“Global Greenback Planı”), J.D’Arista (“Uluslar Arası Takas Kurumu” Planı), J.A.Ocampo (SDRlere dayalı Küresel Rezerv Sistemi), P.Alessandrini and A.F.Presbitero (SDRlere dayalı Uluslar Arası Para Sistemi). Bu yazarlara göre cari parasal sistemin üç kusuru vardır. Bunlar: *Keynesyen karşıtı sapma* (deflasyonist sapma), *Triffin İkilemi* (Asimetrik Para Birimi Problemi) ve *İstikrarsızlık-Eşitsizlik İlişkisi*. İkinci öneri sınıfı ise Serbest Bankacılık Modelleridir. Bunlar: G.Selgin (Verimlilik Normu ve Serbest Bankacılık), F.Hayek (Paranın Özelleştirilmesi ve Nominal Çıktı Hedeflemesi), L.Von Mises (Serbest Bankacılığa Dayanan Altın Standardı), J.H.de Soto ve M.Rothbard (%100 Rezerv Bankacılığa Dayanan Altın Standardı). Bu yazarlar paranın üretiminde regülasyonlar ve kurtarma işlemleri gibi herhangi bir hükümet müdahalesinin veya merkez bankaları ve hazineler gibi herhangi bir hükümet kaynaklı kurumların işlemlerinin serbest toplumda istikrarsızlıklara (başlangıçta konjoktürel dalgalanmalara ve daha sonra ekonomik krizlere) yol açacaklarını savunurlar. Ancak kendi aralarında serbest bankacılığın uygulama sınırlarında ayrılırlar. G.Selgin toplumda dengesizlikler yaratan unsurun kısmi rezerv serbest bankacılık değil de, hükümetler olduğunu savunurken M.Rothbard ve J.H.de Soto ise bu dengesizliklerin kaynağının sadece hükümetler olmadığını aynı zamanda kısmi rezerv serbest bankacılığın olduğunu savunurlar.

Anahtar Kelimeler: Büyük Resesyon, Büyük Bunalım, ekonomik modeller, Dünya Merkez Bankacılığı Modelleri, Keynesyen karşıtı sapma, Triffin İkilemi, İstikrarsızlık-Eşitsizlik İlişkisi, Austrian Modeller, Serbest Bankacılık Modelleri, hükümet müdahalesi, serbest toplum

PREFACE

It is a genuine pleasure for me to see my graduate (master) thesis, *Reform of the International Monetary System: World Central Banking or Free Banking?* I decided to write my work in English because most sources used in my thesis were in English.

This thesis was thoroughly examined by Prof.Dr.Ercan Eren, my advisor. Firstly, I am grateful to him for his research sources and advice, and his continuous help. His comments, instructions and contributions always motivated me in my work.

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INTRODUCTION

Over the centuries, we have not learned what the exact origins or symptoms of crises. Economists still have different views about the origins of the Great Depression. During 1930s Keynesians blamed inefficient free market mechanism. According to them, there could not be equilibrium when there were no government interventions. They thought at least central banks could bailout insolvent banks and financial institutions. However, classical economists and Austrians blamed the government interventions for their contribution to deepening the crisis. Also, inefficient macroeconomic policies of central banks caused widespread disorders. Austrians claimed that the classical gold standard indeed collapsed due to the protective external trade policies of countries. Furthermore, there is no compromise among the economists about the origins of 2008 Financial Crisis. However, there is widespread thought that cheap money policy of central banks led to appearance of the crisis. Neoclassical economic doctrine has (and its terms: rational expectations hypothesis, real business cycles theory and efficient market hypothesis) failed to explain the crisis. Actually, Keynesians and Austrians have criticized these terms and offered better explanations.

But in this thesis, our intention is not to prohibit a specific crisis, but to learn the origins of all crises and then try to cancel them by reform proposals. In this case, for Keynesians, the debate about international monetary system is being continued through three different channels. First channel is that the academicians' attention focused on the huge global imbalances caused by the massive foreign exchange reserve accumulation for "self-insurance" by developing countries (mostly by China). Secondly, the attention is on the creation of international liquidity and countercyclical macroeconomic policies. Third channel is the reform of the international monetary system (IMS) and mostly the

global reserve system. Here we have to emphasize that global imbalances are at the heart of the Keynesian crises theory. When investments fall short of the savings in the system, there will always be the crises. Now we have to express flaws of the current global monetary system. Rapid foreign exchange reserve accumulation by developing countries forces the deficit countries to adjust their balance of payments deficits. Here macroeconomic adjustment burden is asymmetric. While the adjustment is compulsory for deficit countries, it is voluntary for surplus countries. This asymmetric adjustment process creates a global deflationary bias (anti-Keynesian bias). This was also in case during the WWII. At that time, while the US had huge reserves of gold, the UK and Western Europe had large deficits. The second flaw of the system is currency asymmetry problem (the Triffin Dilemma). R.Triffin emphasized very important issue about monetary systems in all times: international reserve system directed by a key national currency is quite unstable. That is to say, a national currency should not be used as a national currency and an international currency at the same time. The third flaw is inequity bias. This is caused by the net transfer of resources from developing countries to major countries. Nevertheless, such reserve accumulation contributes to global imbalances (potential instability of the system). The relation between these two flaws is inequity-instability bias.

After we have diagnosed the main flaws of the current monetary system, we have to propose some cures for them. In this case, world central banking (WCB) models are among the most relevant proposals. These models are proposals of J.M.Keynes (“Bancor” Plan), P.Davidson (“International Monetary Clearing Union”), J.Stiglitz and B.Greenwald (“Global Greenback Plan”), J.D’Arista (“International Clearing Agency” Plan), J.A.Ocampo (SDR-based Global Reserve System), P.Alessandrini and A.F.Presbitero (SDR-based International Monetary System). Keynes’s model is fundamental for other WCB models. It is quite like the P.Davidson’s model. D’Arista’s model tries to generate an international institution for international trade and financial transactions. Greenwald and Stiglitz’s model is the same as D’Arista’s Public International Investment Fund for developing countries. Both aim to provide funds for the development and infrastructure. The most updated models are Ocampo’s, and Alessandrini and Presbitero’s models. These models try to shape the international

financial architecture that fits best with Keynesian Principles (in Alessandrini and Presbitero's model).

Achieving these models is started with Chapter 1. This chapter gives the brief history of the IMSs and their comparison. The Bretton Woods (BW) is the most successful period of all. But it has some fundamental flaws. At the end of the Chapter 1, we will compare the Keynes's Plan with White's Plan. In Chapter 2, the WCB models will be discussed.

The last chapter is about the models of the Austrians and Free Bankers. They are opposed to any government intervention. It could be government itself, its institutions and applications (bailouts and regulations of banks). They all lead to monetary instabilities. But they differentiate in three issues: the identity of the money producer, the nature of the money substitutes and the nature of the private property. These issues lead them to propose different monetary reforms. G.Selgin's and F.Hayek's proposal are alike. They both propose a free banking and nominal GDP targeting (productivity norm). The latter becomes important when the initial is improbable. However, other writers' (L.Mises, M.Rothbard and J.H. De Soto) proposals are different. L.Mises's model is simply a gold standard with free banking, and M.Rothbard's and J.H.De Soto's models are both a gold standard with %100 reserve requirements. At the end of the Chapter 3, the critiques of these models will be discussed.

In this work, we will propose better models than mainstream economic models. Our intention is to proof the relevance of Keynes and Mises basically and models related to the crises theories. We hope they will be play role to cure the problems of the current monetary system. Finally, we will try to unite all possible necessary models in different economic schools. We think this is the most powerful side of the work.

THE HISTORY AND EVOLUTION OF THE INTERNATIONAL MONETARY SYSTEMS (IMS)

1.1. The Gold Standard

From 1870s to the outbreak of the WWI the world mainly used the classical gold standard. It is a monetary system in which the standard economic unit of account is mostly based on the given amount of gold of the specific country. In other words, the money supply was linked to the quantity of gold. The earliest country that accepted the gold standard is Great Britain. That is she took the advantage of the early admission which we will talk about later. With the settlement of the price of gold at too low a rate by Sir Isaac Newton, the silver supply began to disappear. In 1774, gold was minted and with this silver was accepted as subsidiary, and the limits were determined by the use of silver coins exceeding 25 pounds. At the beginning the system experienced several instabilities. In 1793, the intense outflow of capital in the form of gold and silver from France caused great amounts of liquidity in Britain and thereby the British people rushed to the banks. As a reaction the British government commanded the Bank of England to hang convertibility because there had been the concern of exhaustion of gold reserves. In 1825, Britain once again faced with the threat of a new bank run. These experiences led Britain to look for acts (Kindleberger, 1993, pp.37-70).

In the Bank of England an Issue Department, which was in charge issuing of paper currencies, and a Banking Department, in charge of making loans and discounts, were established (Kindleberger, 1993, pp.57-75). Here except a fixed amount of bank notes backed by the government securities, every issued note had to be backed by Issue Department bullion. This means the establishment of a full gold standard for British money. As a result of this politics, the Bank of England was not flexible to adjust the

money supply in urgent situations because it mainly preferred the security than the flexibility of the system. When several crises like 1847, 1857 and 1866 happened, the government allowed the Bank of England to issue notes not backed by bullions. Accordingly, it was seen that the responsibility of the amount of bank notes and reserves was mainly central banks’.

The Europe continent joined the system later. European countries wanted to take advantage of foreign finance in the world and this led them to start leaving the bimetallism because under this standard carrying on profitable trade was improbable. Portugal in 1854 and Germany in 1871 adopted the gold standard in order to open trade with Great Britain and this accelerated the transition process (Eichengreen, 2008, p.17).

Under the gold standard the stability of exchange rates led the markets to be more open and the trade expectations to be more optimist. On the other hand, the pressure on the reserves of the Bank of England increased and this triggered the rise of interest rates. The lack of the central banks in the other countries led them to postpone gold convertibility to let their currencies depreciate suitably. Also, faster pace of economic growth and financial development in these countries deteriorated the role of the Britain in the system (Eichengreen, 2008, p.42). However, it was not these factors that ended the system but was the outbreak of WWI. During the WWI, in European countries, gold exports were hanged to stop the flight of the gold and the giant monetization of paper currency and the increase in bank credit made them impossible to convert into gold. Consequently, this war not only ended the gold standard but also stopped the international trade (Dillard, 1967, p.510).

1.2. The Interwar Period (1919-1939)

As Germany was responsible for the war, it was also thought as responsible for the after war disorders and they were forced to sign the treaty and pay for the reparation (compensate) to the Allies. The Reparation Commission decided this amount as 132 billion gold marks plus 26 in export taxes (Kindleberger, 1993, p.290). In addition, Germany lost one-third of its coal mines and under the Versailles Treaty were forced to

provide additional coal to France. After they lost the coal mines, they used iron ore (in Lorraine) in production and the consequence was inefficiency in the European steel industry (Dillard, 1967, p.511).

After the summer of 1922, Germany was released itself from reparation payments. Then, French and Belgian soldiers were sent to occupy the Ruhr to implement reparation payment, and this triggered the lay-off of German workers and in order to help these workers the German government issued money dramatically. Consequently, average wholesale prices increased from an index of $1.4 \cdot 10^3$ (1993=100) to $126 \cdot 10^{12}$ in December 1923 (Mayhew, 2001, p.1). The mark got worthless and replaced by the Rentenmark in November. Later the Rentenmark was replaced by the Reichmark with the Dawes Plan.

During this period, the gold standard was left by the US and a few other small countries because money was no more convertible into gold. However, the Great Britain wanted to return, but the return meant that the pound have to appreciate and in order to make it work, it needed to deflate its price level. The British were more desirable to accept imports because the pound would buy %10 more than before abroad. This triggered negative balance of trade so the Bank of England decided to increase the bank rate to encourage loans to flow into Britain to pay for the deficit in the balance of payments. This consequently caused housing shortages, unemployment and the diminishing of construction (Mayhew, 2001, p.3). Due to these difficulties, it was hard for Britain to maintain the system because high interest and unemployment were remained highly sticky.

The US started to replace the Great Britain in the position of world's major banker by giving long term debts. In order to be in such a large creditor role, the US should have increased its imports to enable foreigners to earn dollars. However, the US increased the tariffs and debtors paid their interest loans by further loans rather than by the rise of the productivity (Dillard, 1967, p.541). Later these high debts put the debtors in an unstable position.

With the Schacht's campaign, an effort against German borrowing in New York caused a turn to short term loans. Around 1927 in Germany, depression had started and higher interest rates push production to even lower levels. Unemployment increased tremendously and the Frankfurt Insurance Company collapsed in August 1929. In the US, the stock market continued to rise and triggered additional decrease in long term lending. When the Bank of France took its gold out of the London, the Bank of England raised the discount rate from %5.5 to %6.5. Then when the stock market collapsed on October 24 (the Wall Street Crash), the market depreciated by %11. Later on October 28 many investors determined to get out of the market and in a single day the Dow Jones Index decreased by 38.33 points (%13). On October 29 the market lost more than \$14 billion (Kindleberger, 1993, pp.353-391). This was the start of the Great Depression. After this crisis in 1932 the major economies like the UK, France, Germany and the US lost about 20, 30, 50 and 50 index points of pre crisis production (1929=100). Finally on September 19, 1931 the UK abandoned the gold standard (Dillard, 1967, p.543).

In conclusion this interwar period was unstable due to these reasons: (a) the increase of sterling and dollar liabilities to foreign central banks, (b) led to the impoverishment in the reserve ratio of the Bank of England and the US Treasury and Feds. Destabilizing speculation caused by lack of confidence currency convertibility undermined the gold standard and lastly finished it (Kindleberger, 1993, pp.353-391).

1.3. The Bretton Woods Period (1941-1971)

This was the international monetary system of the after WWII period. The major goal of the Bretton Woods System was to unite the advantages of the classical gold standard with the advantages of the flexible exchange rates. Thereby the mistakes of the former period would be avoided. After the WWII, the US came out as the strongest and wealthiest power over the world, while the Great Britain lost its global power seriously. Shaping the after WWII period was the duty of the US and UK. In later subsection we will discuss Keynes and White, and then compare their plans.

The system had 3 goals. First, all articles were to be behaved as equal and ideally each country should determine and then preserve its currency parity to every other country currencies. However, the US was the only country that pegged its currency to gold. Other member countries pegged their currencies directly to the dollar and indirectly to gold. 1 ounce of gold was determined \$35 and the currencies were allowed to fluctuate within %1 with the dollar. Second, countries would use their reserves or draw reserves from the IMF to finance payment deficits. Third, capital controls were supposed to impede destabilizing speculation from compelling members to change (adjust) their parities unintentionally (Bordo and et.al, 1993, p.37). However, these goals were not fully conducted and evolved into dollar-gold exchange standard.

At the beginning of the system there were difficulties in the transition to full convertibility and these were caused by the bilateralism and the dollar shortage. Utilization of exchange controls encouraged bilateral arrangements in international trade (Dillard, 1967, p.547). Europe had been dependant on external export markets and foreign food and raw materials supply sources and as a holder of the two-thirds of the world monetary gold stock, the US provided these needed imports (Bordo and et.al, 1993, p.38). Many economists thought that this situation would last for a long time because productivity gap between the US and the European countries never thought to be closed. The US carried out the Marshall Plan in order to avoid this. All European nations except Germany and Spain were invited to attend to the aid conference but Eastern European nations rejected such an invitation because of the Soviet effect. The Plan gave away \$13 bullion between 1948 and 1952 (Bordo and et.al, 1993, p.41). The success of the Marshall Plan can be seen from **Table 1**.

Table 1: Marshall Plan (Index of Industrial Production)

Country	1938	1947	1948	1949	1950
Belgium	100	106	114	116	120
France	100	92	108	118	121
West Germany	100	33	50	75	96
Italy	100	86	91	96	109

Netherlands	100	95	113	127	139
UK	100	115	128	137	150
Average	100	88	101	111	122

Source: Dillard, D. (1993)

Industrial Production Indexes for some OECD countries are given above. On average, the increase in industrial production was %22. On overall, the OECD countries had succeeded % 39 rises in industrial production, % 100 increases in exports, % 33 increases in imports and current account surplus (Bordo and et.al, 1993, p.42). Furthermore, Europe established European Payment Unit (EPU) in September, 1950. Its purpose was to make bilateral clearing accounts more useless and control the system by multilateralism. It was quite successful and then became the center of a worldwide multilateral settlement area (Bordo and et.al, 1993, p.43). It also supplied the way toward currency convertibility. But after eight countries declared their currencies convertible for account transactions on 27th December, 1958, the EPU became useless and it was replaced by the European Monetary Arrangement.

One of the most important events occurred in this period was the economic integration of Europe by the European Coal and Steel Community and European Economic Community (EEC).

When the US at first time faced the balance of payments deficit in 1951, it replaced gold and dollars with SDRs. After the loss of confidence, gold and dollars did not lead to an increase in reserves but it was sold to hoarders. Central banks were converting the dollars into gold. This run to gold decreased the gold prices in the world and more importantly led to the rise of the confidence loss for the US to continue this system. In August, 1971 the US raised the gold price to \$38 and then to \$42.50 per ounce and increased the floating range from %1.5 to %2.25. In addition to this, mistakes in monetary policy dramatic outflow of dollars to the eurocurrency market in 1970 contributed to the collapse of the Bretton Woods. This outflow of dollars and the war expenditures paved the way for the collapse the system. Lastly President Nixon ended the gold convertibility on 15th August, 1971 officially.

1.4. The Dirty Float (1971-Present)

In February 1973 the currency was released to float. In other words, parity between any two currencies was now determined in the exchange market. It was thought that exchange rates would restrain capital flows, floating dollar would lose its dominancy and its role as international unit of account, standard delayed payment, store of value and means of payment. However, these foresights fell through and the dollar continued its primary role. In this period the Europeans started to shape their own currency area. At the beginning, EMS was founded by Germany and then the Euro was established (Kindleberger, 1993, p.455).

Also, in 1970s world banks looked for the places to give their funds. These loans led to the boom in bank loans especially in Los Angeles. Bankers trusted debtors till Mexico was unsuccessful in paying its interest in August 1982.

The origin of the failure was the unavoidable increase in international capital mobility which made currency pegs more fragile and frequent, and adjustments more difficult (Eichengreen, 2008, p.183). Developing countries suffered much from exchange rate fluctuations and even Europe and the US as well. Countries started to interrupt foreign exchange markets to control these fluctuations (Eichengreen, 2008, p.184).

1.5. Fluctuations of the 1990s

This period was unstable and full of crises. At the beginning of 1990s, Asia looked quite immunized for the huge exchange rate volatilities affecting the rest of the world due to the strong government budgets, capital controls and high export-led growth. Consequently, investing in Asia was quite attractive so foreign investors lent to Asian banks as if these banks would be insolvent (Eichengreen, 2008, p.192). But this area was disturbed by inconsistent capital account policy, exchange rate policy and political instabilities because it took great capital flows and did not have strict banking regulations.

The Asian Crisis started with the collapse of the Thai baht. It was caused by the cut of baht peg to the dollar because it was no longer possible for the Thai government to afford the hard peg system. After this the effect showed itself in the Philippines. This country was also adopting the hard peg to the dollar and was highly dependent on external capital flows. It was thought that managing with this regime was difficult and then the Philippines determined to float the peso. This in turn made the pressure on Indonesia and Malaysia. In Indonesia banking and financial system collapsed and this led to the production decrease. S. Korea stayed unaffected with the commitment of reform in its financial system and also China remained safe.

Following this crisis, the Chang Mai Initiative agreement was founded and by this other unaffected Asian governments armed to give financial support to affected countries. Furthermore, Argentina, Brazil, and Turkey were influenced as well because in these countries there were problem of high budget deficit and structural problems the Philippines (Eichengreen, 2008, p.199). In Europe in 1990s the Maastricht Treaty was formed and its aim was to prohibit weak economies from entering. Mainly the monetary union was only centered on France and Germany but its target was to admit other countries like Portugal, Spain, Italy and Ireland. There was also an ECB and a Stability Pact to manage with national budgets (Eichengreen, 2008, p.221). In its first years the euro was against the dollar but in later years improved price transparency and supported trade.

1.6. Comparison of the Periods

As a start I want to express tree objectives of the IMS: internal balance (using macroeconomic policies to succeed non-inflationary growth), allocative efficiency (efficient allocation of capital by enabling flows to reply to relative price signals), and financial stability (minimizing the risks to financial stability). These terms are similar to the terms of the impossible trinity. Now let us see terms in the history of the IMS.

Over the past the IMS performed these objectives with different weights. For example, in the Gold Standard, national currencies were fixed to gold, free capital flows were allowed across borders and instruments of monetary policy were not used. In other words, while member countries abandoned the internal balance, they adopted allocative efficiency and financial stability. In the Bretton Woods system, the allocative efficiency was given up to pursue internal balance and financial stability. After the Bretton Woods countries decided to perform independent monetary, exchange and financial stability policies. Capital mobility also highly increased. In today's IMS three objective are attempted to be achieved at the same time. Capital became more and more mobile across the borders than the former period. However, in this period, capital account imbalances increased (King, 2011, pp.1-7).

Net capital flows were the largest under the Gold Standard among the relevant periods (**Table 2.1**). Nowadays they are %2.2 and the lowest flows (%0.8) flows occurred in the Bretton Woods period.

Table 2.1: Historical Performance of the IMSs (Economic Downturns and Current Account Balances)

	Downturns		Current Account Balances
	Years of negative world growth (share of period in %)	Years of negative country GDP growth (share of period)	Surpluses and deficits (% of GDP)
Pre-Gold Standard (1820-1869)	-	-	-
Gold Standard (1870-1913)	7	19	2.4
Interwar Period (1925-1939)	2	27	1.2
Bretton Woods (1948-1972)	0	4	0.8
<i>Memo: (1948-1958)</i>	0	0	0.8
<i>(1959-1972)</i>	0	0	0.8
Current (1973-2008)	0	13	2.2
<i>Memo: (1973-1989)</i>	0	18	1.6
<i>(1990-2008)</i>	0	11	2.8

Sources: Bordo et al (2001), Global Financial Data, Hutchison and Noy (2006), IMF World Economic Outlook (October 2010), Maddison (2006) with updated data from www.ggd.net/MADDISON/oriindex.htm, Mecagni et al (2009), Reinhart (2010), Taylor (2002) and Bank calculations.

The reason of the largest capital flows in the Gold standard was passive monetary policy. It was not threat to global financial stability as today's monetary system. But huge amount of capital flows from advanced economies to the fast growing Asian and American economies really led to capital account imbalances. We can conclude that the most stable in this perspective is the Bretton Woods. Because capital controls were explicitly applied in order to prohibit speculative activities. Also, the most 2nd unstable period is today's monetary system. Gross and net capital flows are caused by financial globalization. It is thought that the globalization will bring large benefits to countries because it enables economic agents to smooth their consumption path more efficiently. However, financial globalization contributed to large costs. Due to financial globalization, financial crises become more frequent than in other periods. Moreover, today's IMS allowed large global current account imbalances due to export-led growth policies of the major Asian countries and still growing external liabilities of the US (Dell'Arricia and et.al, 2008, pp.40-42). Contrary to what happened in the Gold Standard, in today's system capital flows from emerging market economies to advanced economies. This could be caused by the property rights (Lucas, 1990, pp.92-96).

Table 2.2 shows that incidence of currency and currency and banking crises (number per year) in the Gold Standard (1.3 and 0.6) was lower than the interwar (2.1 and 1.7) and current period (2.6 and 3.7).

Table 2.2: Historical Performance of the IMSs (Incidence of Crises)

	Incidence of Crises		
	Banking crises (number per years)	Currency crises (number per year)	External default (number per year)
Pre-Gold Standard (1820-1869)	0.6	-	0.7
Gold Standard (1870-1913)	1.3	0.6	0.9
Interwar Period (1925-1939)	2.1	1.7	1.5

Bretton Woods (1948-1972)	0.1	1.7	0.7
<i>Memo: (1948-1958)</i>	0.0	1.4	0.3
<i>(1959-1972)</i>	0.1	1.9	1.1
Current (1973-2008)	2.6	3.7	1.3
<i>Memo:</i>	2.2	5.4	1.8
<i>(1973-1989)</i>	3.0	2.4	0.8
<i>(1990-2008)</i>			

Sources: Bordo et al (2001), Global Financial Data, Hutchison and Noy (2006), IMF World Economic Outlook (October 2010), Maddison (2006) with updated data from www.ggd.net/MADDISON/oriindex.htm, Mecagni et al (2009), Reinhart (2010), Taylor (2002) and Bank calculations.

Among the others, in the BW period crises were the most occasional. Today's system let huge capital flows and it is now more profitable to make financial investments. But this caused more frequent banking and financial crises. External factors (1.3 per year) like financial globalization, financial liberalization and deregulations contributed to the crises. Furthermore, these factors are the highest (1.5 per year) in the interwar period. Two wars, liberalization and lack of necessary regulations before the Great Depression can be classified as the most important among other factors. Due to the Great Depression and inability of necessary government regulations and bailouts really deteriorated economic downturns. We can see this was the case in Panel B. On the other hand, economic downturns were not happened in world GDP and only four periods in country GDP base in the BW period. In this period countries were more protectionist and applied restrictions on capital flows. Indeed it prevented speculative activities and led to the most successful fin stability period.

Lastly, we can compare the world GDP (per capita), world inflation and their volatilities for the different periods. In **Table 2.3** in world GDP and its volatility case, the BW period fulfilled the best performance (2.8 and 0.3).

Table 2.3: Historical Performance of the IMSs (World GDP and World Inflation)

	World GDP (per capita)		World Inflation	
	Growth (Annual Average %)	Volatility (Coefficient of variation)	Average (%)	Volatility (Standard deviation percentage points)
Pre-Gold Standard (1820-1869)	0.5	-	-	-
Gold Standard (1870-1913)	1.3	1.2	0.6	3.0
Interwar Period (1925-1939)	1.2	3.3	0.0	4.6
Bretton Woods (1948-1972)	2.8	0.3	3.3	2.1
<i>Memo: (1948-1958)</i>	2.7	0.4	3.1	2.9
<i>(1959-1972)</i>	3.0	0.3	3.5	1.3
Current (1973-2008)	1.8	0.7	4.8	3.5
<i>Memo: (1973-1989)</i>				
<i>(1990-2008)</i>	1.4	0.8	7.5	3.4
	2.2	0.6	2.3	0.9

Sources: Bordo et al (2001), Global Financial Data, Hutchison and Noy (2006), IMF World Economic Outlook (October 2010), Maddison (2006) with updated data from www.ggdnc.net/MADDISON/oriindex.htm, Mecagni et al (2009), Reinhart (2010), Taylor (2002) and Bank calculations.

The most successful 2nd period is the current system (1.8 and 0.7). The poorest is the interwar period (1.2 and 3.3). The fixed exchange rate regime with adjustable parities in the BW enabled the world trade to increase incredibly and this led to multilateral growth in the production of countries. While the inflation rate decreased in countries, on average it was higher (%4.8) than the BW (%3.3). Its volatility was also higher. Moreover, the sound GDP growth performances were not caused by the post-war reconstruction because **Table 2.3** gives no information about causality. We can conclude that this

period was successful because the BW existed during the period of high economic growth and financial stability (Bordo, 1993, pp.7-11).

In history the BW displayed strong performance as a result of its fundamental design flaws. Particularly strict controls on capital flows led to the supply of global liquidity needs with the US gold stock and balance of payments deficit. Ascending global reserves demand was provided by the increase of the US external liabilities and thereby this led to the loss of the credibility of dollar as major international currency. Also, the war expenditures triggered the balance of payments deficit to increase. Permanent inflationary pressure increase in the late 1960s made it intolerable to continue the system and finally the BW collapsed in 1971 (Bordo, 1993, pp.73-85).

1.7. H.D. White vs. J.M.Keynes, and Bretton Woods vs. International Clearing Union as a Historical Dialogue

After the WWII, Keynes and White attempted to reshape the IMS. They tried to increase international cooperation in monetary matters. Two plans were originally published in April 1943. While they had similarities, they had also differences. Finally after the competition of the two plans, White's plan won the negotiations. Although the UK had the greatest economist of the 20th century, the Americans had the economic power.

Indeed two plans included many flaws and the Articles of Agreement for the IMF as well. However, White and Keynes thought their own countries' self interests. White realized that the US superiority was based on multilateral and multinational regime of open trade and finance. The UK's aim was externalization of the system of the Empire interests and progress of bilateral economic relationship with the US. In this subsection, firstly we will talk about White and Keynes's basic ideas, then differences and similarities, and lastly some superiorities of Keynes's Plan.

1.7.1. White's Ideas

Indeed White was Keynesian. Many economists like Laidler, Harrod, Lekachman and Stein. Flanders stated his studies and policy proposals were highly in quality Keynesian. However, White's views on international monetary economics had developed autonomously of Keynes. Subjecting monetary and exchange rate policies to certain rules, and giving some flexibility to central banks in abnormal situations were his basic views. Also, he defended fixed but adjustable exchange rate. In a 400 page report in 1934 he determined that using the gold standard was quite useful instrument for monetary policy, providing that the central bank was ready to change exchange rate in extreme circumstances. Keynes wrote an article for the same issue as well. He discussed that the central banks should try to change exchange rates to enable equilibrium in the balance of payments. Adherence to fixed parities rigidly could be left for central bank cooperation except following discretionary rules (to devalue a currency) to lessen (lighten) immediate on ongoing strain. Unlike White, Keynes did not support using monetary policy for such aims. Indeed the rate of interest should be used to achieve full employment. In other words he preferred internal balance to external balance (Keynes, *Collected Writings* XXI, pp.360-369). Furthermore, White argued that managing a currency in the absence of gold or another anchor was very unsafe because some countries could manipulate it to obtain trade competitiveness.

According to White, in the development of the international role of the dollar, currency stability played main role. In "The Future of Gold" he argued that the ability create full confidence of improbability of devolution of a currency was restricted and this really impressed the preference of gold over currencies or other financial assets. Although White was skeptical about the feasibility of the international currency arrangement, he mostly supported multilateral cooperation. In his PhD thesis, he determined capital flows affected the pre-war France negatively and concluded that imposing controls on the foreign investments was useful to prevent speculative capital flights (White, 1933, pp.311-312). Besides, as capital inflows became frequent in 1936 in the US, he advised to apply %100 reserve requirements on foreign bank deposits and take a stamp tax from securities transfers to abroad.

1.7.2. Keynes's Ideas

Both of them had same views on major subjects of economic policy. In the conduction of a domestic economic policy, both proposed active countercyclical economic policies to keep (preserve) high employment levels. As an international economic policy both supported fixed but adjustable exchange rates to encourage open goods and services trade and they should be protected through the controls of the capital flows. However, they had difficulties on some issues. While Keynes had tried to prohibit Britain from losing too much finance control, White gave significant importance to price stability and monetary discipline as a policy goal.

Their initial drafts of plans were independent of each other. Though Keynes spent three months in Washington to discuss bilateral financial assistance for the British, there is no formal document to prove that White's plan was influenced by the Keynes's. The British officials wanted to shape a trading zone excluding the US to make the Empire preferences everlasting and to free more than \$13 billion. As both of them were confronted with the US interests, the US rejected them. Actually Keynes thought full liberalization as a long term objective but he was compelled to negotiate with the US to take its financial support. Mainly White made three objections to British plans:

- He emphasized post war financial needs of British council was not acceptable because approving such a proposal meant putting finance and position of the US into danger. Therefore, he thought the IMF and the WB were multilateral financial institutions and more effective than bilateral financial aid to the UK (White, 1945, p.207).
- Due to deficiency of gold and liquid assets, blocked balances possessed by another country's residents would be very dangerous to monetary stability and to the continuation of liberal trade politics. That is why the IMF could eliminate such dangers (Horsefield, 1969, p.47).
- White did not accept the applicability of the Empire's trade preferences and currency limitations.

In this case, Keynes had two choices; approving either the US bilateral assessment or British trade preferences. Besides, for Keynes attendance of the Soviets was unimportant due to its minor effect on UK economic interests but its superiority in deciding post war peace and economic relations was really dangerous for the US. White's Stabilization Fund was designed as bilateral payments accounts between countries because accomplishment of currency convertibility could take many years (Horsefield, 1969, p.41).

Keynes's primary aim was to prohibit deflation in international monetary system and therefore the price movements were in the second importance. In conformity with avoiding deflation, he requested the International Clearing Union (ICU) should be an international lender of last resort. In order to be confident on drawing a sizeable part of their quotas without policing or facing unexpected impediments, three were needed:

- International Currency. In Keynes's Plan central banks could pay payments as gold and in return they would borrow in "bancor", international currency used to make arrangements in debts with other central banks. Once it was created, bancor balances could not be paid off on demand at the ICU, but also could be called off automatically when a debtor country repaid its credits. However, White opposed it and proposed to create an International Bank, which could issue notes for its gold reserves and such notes should be kept as an international unit of account (Horsefield, 1969, pp.78-82).
- A Large Fund. Keynes proposed total quotas of the Fund should be %75 of pre-war world trade (\$38 billion) and part of %25-50 could be used. Contrary to this, White proposed this amount as at least \$5 billion and borrowing quota would be %100. Keynes stated lastly that this amount should be \$12 billion to ensure to fight against deflation. Furthermore, the total amount should be increased with the world trade growth. The Fund could serve as a lender of last resort and allocate its limited resources by forcing conditions in return for their usage.

When the Fund started to increase loans in 1947, White understood he had made mistake by limiting the size of the Fund source, because he had been unsuccessful in foreseeing

the fast extension in the dollar value of the world trade. In order to supply an increasing shortage of the Fund resources he suggested providing an international medium of exchange to complement the IMF sources to enable international trade among members.

- An Automatic Lender. Keynes suggested the ICU could increase credit in line with demand. Restricting the credits to short term loans would limit creation of excess credit. The SDRs were formulated to make this happen by demanding member countries to reestablish their holding within some time limit. But progressive relaxation and final termination made it impossible to continue (Boughton, 2001, p.933). A debtor country was supposed to use loans to affect a balance in its economic relations with the rest of the world and imposed to increasing rate of interest. Keynes argued that disciplining a disobedient country by following this way could be more difficult without a multilateral agreement (Horsefield, 1969, pp. 6-9).

If the Fund staff decided proper steps had not been taken to gain equilibrium, the Fund would refuse loans demands because creation of excess and short credits could be dangerous in the same degree to major creditor country (Horsefield, 1969, p. 52). Furthermore, due to the small amount of the Fund resources, it would have to allocate credits rather than giving away them freely. Contrary to Keynes Plan, the Stability Fund would not be an international lender of last resort.

1.7.3. Similarities and Differences of the Two Plans

These issues are taken from Raymond F. Mikesell (1994, pp.12-13):

- Both plans supplied countries with international liquidity to help them stabilize their, removed exchange limitations on current transactions, and prohibited bilateral payment arrangements.
- Original White plan was sticky, regarding exchange rate stability and removal of exchange limitations and inequitable payments arrangements. But it was smaller in providing balance of payments aids than Keynes's plan. Despite its supremacy

in supplying balance of payments aids, Keynes's plan was liberal in determining the responsibilities of countries (with respect to exchange rate stability and exchange restrictions) further.

- Multilateral clearing agreement of national balances, and debits and credits of net balances in a CU was the main feature of Keynes plan. However, White's plan was based on subscriptions of national currencies and drawings made by countries which had balance of payments deficits. In Keynes's plan, deficit balances were financed by overdrafts until the amounts resolved by the members' quotas. While White's Unitas was only a unit of account, Keynes's Bancor was an international currency. Despite the definition of both units in gold measures, the gold price of Bancor could be adjusted by a vote of the members. Therefore, the ICU represented an adjustable international gold standard system.

1.7.4. Superiorities of Keynes Plan over White's Plan

Lastly we can give some advantages of the Keynes Plan (Mikesell, 1994, pp.13-14):

- In Keynes's plan members could finance their balance of payments deficits through the ICU. However, under the White's plan members could get the currencies of members to arrange their bilateral deficits with those countries but they couldn't use those currencies to arrange deficits with third members. The member could have balance of payments surplus so it needed to borrow a particular currency but under the White's plan it was impossible due to the absence of multilateral clearing mechanism.
- While under Keynes's plan no currency would be inadequate, under the White's plan the supply of a currency might be less than the demand for it.
- Under the Keynes plan governing board of the ICU had the right to impel both surplus and deficit countries to restrict their positions.
- Quotas in the ICU were dependent only on economic factors, but in the under the White's plan the quotas of the major four countries were based on political issues.

WORLD CENTRAL BANKING MODELS

The 2008 financial crisis can only accelerate the loss of thrust on dollar and the cancelling the dollar in the IMS. Here we have to understand this: without solving the global imbalances, there is always likelihood of crises. Therefore, firstly the symptoms of the diseases must be detected and then the diseases have to be cured. Therefore, we will start with the problems (symptoms) of the current monetary system and then we try to give cures (proposals related to World Central Banking). Our intention is to solve these problems as further as possible by using these proposals.

2.1. Problems of the Current Monetary System (Fundamental Flaws of the Current System)

After the collapse of the BW system, fiat US dollar started to be used as means of payment and foreign exchange reserves have been accumulated in dollars. Other currencies such as the euro, the renminbi, the yen, the pound sterling, francs have tried to compete with the dollar to foreign reserve assets and means of payment. Because of the impossibility of the feasibility of fixed exchange rates, flexible exchange rates have been generally used by world countries. Rising intensity of capital mobility played major role in this preference. The financial globalization has revealed the reality that developing countries are exposed to intense pro-cyclical fluctuations in financing themselves in extreme circumstances. Also, they suffered much from pro-cyclical fluctuations in international trade (especially commodity and price fluctuations). The passive attitude of the IMF to solve the international problems led them to protect

themselves by raising the stock of foreign exchange reserves mainly in dollars (“self-insurance”) (Arzenman and Lee, 2007, pp.3-6). The US is still increasing its current account deficit via selling the T-Bills to these countries (especially Asian countries) because the consumption boom could only be borrowed by these resources. Balance of payments of the US and Asian countries are like the two sides of a coin. But the US current account deficit is neither politically nor economically feasible. It is not feasible economically, because foreign investors will ultimately lose confidence and it is not politically feasible since foreign countries will not forever finance the US wars.

Firstly, the current global reserve system is unstable and inequitable. Like all former IMSs, it has no mechanism of mutual payments system. Especially during economic downturns, these macroeconomic effects are contractionary and during economic upturns, fiat dollar standard could be expansionary, though. Mainly the current IMS have three basic flaws. First, it has anti-Keynesian bias (deflationary bias). Second, using a national currency as an international currency –key currency issue–increases the instabilities of the system (the Triffin Dilemma). Third, mainly the accumulation of exchange reserves by developing countries inequalities in the monetary system (inequality bias). The link between the second and the third imperfections is called as the inequality-instability link (Ocampo, 2010, pp.289-290).

2.1.1. The Anti-Keynesian Bias

The first basic flaw is that in the current IMS there is asymmetric burden of current account adjustment. The main burden of adjustment rests on the deficit countries. These countries have to adjust because they don’t have enough financing or there is a danger of the capital flight. Surplus countries are forced to adjust as well because current account surpluses create inflationary effects in those countries but these pressures are not significant. In other words the adjustment is compulsory for the debtor and voluntary for the creditor. Thereby, this leads to global deflationary bias (Ocampo, 2010, pp.293-297). On the other hand, even if all deficit countries have enough financing, there can also be a deflationary bias since policy authorities respond

disproportionately to the accumulation of outside liabilities relative outside assets. Today while surplus countries are the Asian and some Latin American countries, and Germany, deficit countries are the US, and Greece, Ireland and Spain.

2.1.2. The Triffin Dilemma

Using dollar as an international reserve currency generates serious problems and this issue was discussed by Robert Triffin in 1960s. At the beginning, other countries respond to this as showing confidence for the convertibility and the stability of the dollar in the future. This will put the place of the US in danger in the long run. Initially it can take a large amount of and increasing debts, but if continuing to accept increasing resources from the world, the dollar hoarding will be replaced by the dollar dishoarding. However, if it reestablishes complete outside transactions balance, it will stop to supply a world with reserve flood (Triffin, 1968, pp.87-88).

In the 1970s, other countries changed their dollar reserves to gold, as they had no longer trusted that the US would be able to continue the system. The US had already huge amounts of debts owing to its central position in the BW system and the Vietnam War. Foreign actors started to change their dollars into the gold and this made it difficult to pursue gold-exchange standard. Consequently, the US left the BW system in 1971. In today's monetary system the US can run much more larger and progressive deficits than ever before since under fiat dollar standard, dollars are not redeemed by any valuable commodity. Especially since the 1997 Asian crisis, Asian countries increased accumulation of foreign exchange reserves incredibly and this lead to the increase of the US deficits. Thereby, this standard generates inflationary rather than deflationary effects over the world. In turn this generates the loss of confidence in dollar as international means of payment.

The central place of the US in the current standard has merits and demerits. Main advantage is greater monetary independence due to the absence of its responsibility for dollar-gold convertibility. Furthermore, this enables to increase the demand for the US Treasury Bonds. Besides, the dollar depreciation has positive wealth effect for the US

citizens. On the other hand, the ascending deficits lead to the loss of benefits of active macroeconomic policies (Stiglitz, 2006, pp.245-268).

2.1.3. The Growing Inequities and the Inequity-Instability Link

The developing countries have been giving debts to the US at low interest rates and in return take foreign exchange reserves denominated in dollars. This tendency accelerated especially after the Latin American debt crisis in 1980s and the East Asian financial crises in 1997. They suffered much from the fluctuations in international trade and capital mobility. Financial globalization increased volatility of the exchange rates and thereby capital flows. This led to instabilities in the balance of payments of these countries. As a solution they started to accumulate foreign reserves and soak up huge part of excess capital inflows to insure themselves against possibility of the financial crises-“self-insurance”. That is the countercyclical macroeconomic policy used to eliminate the effects of pro-cyclical capital inflows. This policy also ensures to soak up large part of the windfall earnings. But while they are taking advantage of these resources, debtor countries’ burdens are getting more and more unstable. In other words, their deficits are bringing us the heavy deflationary pressures and with this the possibility of crises are increasing (inequity-instability link) (Ocampo, 2010, pp.297-305).

2.2. J.M.Keynes’s “Bancor” Plan

According to R.Skidelsky (2011, pp.7-10), global imbalances played an important role in the start of the housing sector crisis in 2008 because they may cause disorders by means of the intense flow of capital and limitations on international trade. Here trade limitations can be caused by the current account surpluses of developing countries. This happened by the deflationary effects (of accumulation of foreign exchange reserves by developing countries) on the US and indirectly on the world

countries. Indeed, pessimistic expectations of economic actors restrict the international trade.

Keynes put the global balances at the core of the economic crises. When investments fall short of savings, the Keynesian unemployment appears. In Keynes's day a country that ran current surpluses was the US. It accumulated huge amount of gold and this caused the deflationist environment over the world. On those days, the deficit country running a current account deficit was the UK. In the Gold Standard a country that ran current account deficit could not devalue its currency against gold instead could deflate domestic prices. But a surplus country had many options; it could increase domestic prices, sterilize its accumulating gold or give foreign loans. In other words while the adjustment of current account was obligatory for the deficit country, it was voluntary for the creditor. The same condition is valid for the current system (Keynes, 1980, p.28).

In the middle of the 1940s the pound sterling was the international means of payment and it was fully convertible to gold. The flaw in the Gold Standard was that the UK was permanently increasing its liabilities and this actually led to the loss of confidence about its ability to redeem gold for these liabilities. This is the case what is called the Triffin Dilemma (Ocampo, 2010, pp.297-305). As a conclusion we can say that Keynes's "Bancor" plan was established to cancel these global imbalances so it is highly relevant for the current system.

2.2. 1. Proposal for an International Clearing Union (ICU)

The proposal was published on April 7, 1943. Keynes regarded his CU constructed as drawings quotas by members. At the center of the plan was the goal of creating a central bank that lends to deficit countries under particular banking conditions. Initially let me tell you about the properties of the plan¹ (Riddle, 1943, pp.1-3):

¹ some properties could be expressed above but we think it is necessary to discuss them again for the issue entirety

- The plan brings a mechanism for funding foreign loans to member countries and tries to illustrate conditions that enable a state of equilibrium.
- The unit of account is called “bancor” and it is used for tying the member countries’ currencies to gold and to each other. Actually, in this case Keynes predicted that bancor would be defined by gold and currencies would be expressed by their parities to bancor; parities between currencies would be expressed by their relation to gold and bancor as well.
- Gold is used in adjusting international balances. That is to say, members will be able to buy and sell gold freely at a determined price.
- ICU manages only with central banks, treasuries or fiscal authorities of the member countries. Central banks keep accounts in terms of bancor in the ICU.
- The ICU, even if begins with no funds, will supply and draft facilities to member countries.

2.2. 2. Objectives of the Plan

These issues are taken from De Veigh (1993, p.535):

- An instrument of international currency to make bilateral arrangements unnecessary
- An organized method of setting foreign exchange rates
- An amount of international currency restricted by intentional expansion and contraction
- A stabilizing mechanism to exert pressure on countries whose payments system is inclined to be unbalanced

- A means of reassurance whose methods of restrictions and discrimination will be unnecessary

2.2. 3. Principles of the Plan

The principles are taken from “British and American Plans for International Clearing Stabilization” by J.H.Riddle (1943, pp.5-21):

1. Bilateral accounts between countries (as in the BW) will not disappear; instead a member will have “multilateral clearing account” with other members by means of the ICU (international transactions will be settled through clearing accounts held by member central banks).
2. The ICU determines the overdraft facilities for member countries, the amount of debit and credit balances will be regulated by the quotas allocated to each member. The first quotas could be the sum of each country’s exports and imports on the average of 3 pre-crisis (2008 Financial Crisis) years and could be %75 of this amount. These quotas will be adjusted annually by the average weight of export and imports.
3. If a member decides to use its debit balance by more than a quarter of its quota in a year, it has take permission from the Governing Board. If its debit balance has gone above $\frac{1}{4}$ of its quota at least 2 years, it should decrease the value of its currency in terms of bancor within %5 without the permission of the Board. The Board could ask a member to have a debit balance equal to $\frac{1}{2}$ of its quota to put appropriate collateral. If a member is allowed to raise its debit balance to more than half of its quota, it needs to do the followings: **(a)** to decrease the value of its currency, **(b)** to control external capital activities and **(c)** forego an appropriate part of any separate gold or other liquid reserves

Moreover, the Board could propose any inside precautions that influence its own economy that might emerge suitably to regain the international balance equilibrium.

If a member's debit balances go over $\frac{3}{4}$ or more of its quota, it could be supposed to take precautions. If it fails, the Board may announce it in default.

A member will pay %1 per year on the amount of its average bancor balance exceeding $\frac{1}{4}$ of its quota no matter being a debit or a credit balance; and it will be charged for extra %1 on its average balance more than $\frac{1}{2}$ of its quota no matter being a debit or a credit balance. These excess credits (amounts) could be used for its assistance.

4. However, a surplus country takes the following measures if it has more than $\frac{1}{2}$ of its quota on average in a year:
 - (a) Precautions for the expansion of domestic credit and domestic demand
 - (b) Need to appreciate its currency in terms bancor or support an increase in earnings
 - (c) Decrease the tariffs and other controls on imports
 - (d) International development funds

Though a member can take a credit balance in bancor by depositing gold in the CU, it cannot require gold for its bancor from the CU. The Board could distribute gold to countries with credits on their clearing accounts in order to eliminate these credits.

5. Countries, that are not members, can have clearing account at the ICU, but they are not allowed to have overdrafts and have vote on the Board.
6. Members can retreat from the CU within one year's announcement, excluding they have to make acceptable arrangements to repay any debit balance.

2.2. 4. Implications of the Plan

- Surplus countries like developing countries can keep their surpluses in the ICU account and this saves the world from deflationary environment. Keeping these resources can be useful for the surplus countries' citizens by expanding domestic credit, domestic demand and increasing wages. Also, the deficit countries could take benefits as they are now restricted by lower tariffs and other controls on their imports and have possibility to use the excess surplus sources for the

development. The deficit countries can use the loan for buying surplus countries' goods as well. As a result, both will be better off.

- There will some penalties to the US at the beginning (stated at **3a**, **3b** and **3c**) but it will be better off when the deflationary pressure starts to disappear.
- No country will take advantage of capital flights to perform own political interests, avoid internal taxation, predict owner turning refugee. At the same time no country will gain fugitive funds or could use them for fixed investment (Keynes, 1980, p.185).

As a result of implications above, there will be no anti-Keynesian bias. Thereby, there will be symmetric adjustment of current account. The ICU enables international equilibrium through subjecting deficit and surplus countries to a mechanism of penalties and incentives. For deficit countries, it is easy to improve its current account since it can take adequate funds from surplus countries through ICU and there is no threat of capital flight.

- Under this system, gold reserves are obtained from mining and accumulation of foreign exchange reserves can only be materialized through exports of goods. As a result, countries don't have to push their domestic demand below domestic production and they will not have downward pressure on domestic production.
- Discarding these resources blocks the use of the purchasing power and therefore causes seepage in effective demand. Instead they should use them for responding to ascending international trade and volatility of capital flows (Kaffenböck, 2008, p.40).
- No country could set its own currency as international means of payment. That is to say the Triffin Dilemma will disappear. The "Bancor" plan eliminates one of the important flaws of the current monetary system through establishing international currency (bancor). Thus the instability-inequity link will not come true. Furthermore, no country will be able to withdraw from its debt. Because international wealth redistributions by the way of key currency depreciations will vanish (Costabile, 2009, p.88).
- The basic goal of the plan is to make a current account stable. Since the current account will be balanced, the financial account will also be balanced (Net

Reserve Demand=Net Foreign Saving=Current Account=0). This indicates there will be no wealth transfer between any two countries. Thus, the plan will not block the FDI, but could restrict speculative capital flows.

- Though by the mechanism of the ICU, world trade will increase incredibly, thereby increase the world output (decrease the global unemployment), in turn will increase global inflation as well. However, this can be prevented by the domestic central banks. Alternatively low exchange rate volatility will stimulus economic activity, FDI and domestic demand, and all of these will cause simultaneous decrease in unemployment and increase in inflation.

2.3. P.Davidson's Proposal

P.Davidson proposes a plan quite like the Keynes Plan. According to him, such a supranational central bank (the ICU) is politically neither feasible nor necessary. But there can be a supranational central bank like the Euro Area. His proposal is a more modest proposal that aims to create an international arrangement that does not demand local banking units or domestic macroeconomic policies to abandon national control. By this proposal, each nation will decide the best economic conditions for its people without subjecting to deflationary pressures through trade. Also, each nation will not have capabilities to export inflationary pressures to the world. Here we propose a closed, double-entry balance clearing institution to maintain the payments "score" among several trade partners and somewhat mutually agreement rules to generate and backflow liquidity during sustaining the purchasing power of international currency (Davidson, 2002, p.231).

Davidson (2001, 2002 and 2009) summarizes his plan in eight conditions:

- 1) The unit of account and main reserve asset for international liquidity is International Monetary Clearing Unit (IMCU). IMCUs will be held solely by central banks, but not by the citizens. This prohibits using a national currency as an international means of payment and leads to some results as the ICU.

- 2) The central bank of a country or a union will supply IMCU deposits to its domestic currency in a one-way. That is to say, it will not give a currency in return to IMCU deposits. A central bank will set its own rules in making available foreign currencies to its own bankers and private agents. IMCU will be the sole liquid asset for international financial transactions and should only flow between central banks and the Union. There will be no exhaustion of reserves from the system since at the same time central banks hold only IMCUs as liquid reserve assets. Furthermore, all important private international transactions clearing will be restored among central banks' balances in the ICU.

The one-way convertibility allows each nation to set controls and regulations on international capital flows. Here the aim is to prohibit fast changes in bull-bear attitude from beating the market maker and causing incredible fluctuations in international price trends.

- 3) The exchange rate between any currency and the IMCU will be determined in the beginning by each country. This enables fixed exchange rates between currencies through the IMCU and stimulates trade and FDI as it was in the Gold Standard. The future will be less risky by this feature.
- 4) Contracts between different nation people will be written under domestic laws and approval of contract making parties. Contracts that will be arranged in terms of a foreign currency will demand the commitment of accessibility of foreign funds.
- 5) An overdraft system should be based on the CU rules. This system could make existing short-term creditor balances to fund the productive international

activities and the terms would be arranged by the “pro bono publico” CU managers.

- 6) A trigger mechanism should support a creditor country to spend in line with a deal of international community of excess credit balances built up by running current account surpluses. These excess credits can be spent in three ways: **(a)** on the products of another member, **(b)** on new FDI projections and **(c)** to supply one-sided transfers (foreign assistance) to deficit countries

Spending via **(a)** compels the surplus country to make adjustments through goods and services balances directly. Spending by means of **(b)** supplies the adjustment by the current account and **(c)** allows the adjustment directly by the way of current account balance. The payments imbalance could be eliminated by any of these three ways; otherwise the surplus country might use excess resources for its residents’ interests judged as the best. These prohibit transfer of the burden to the deficit country. Oversaving in the form of the international liquid reserves (to protect themselves from volatility of the international trade and capital flows- “self-insurance”) will be forbidden to release contractionary pressures on the global economy. If the surplus country does not spend the excessive resources, the Union will distribute them among debtor countries. The debtors do not need to deflate their real economy by decreasing imports since oversaving will compensate it. Davidson emphasized that this plan imposes penalties mainly on the surplus nations.

As a result of **(6)**, the macroeconomic adjustment mechanism may become symmetric therefore anti-Keynesian bias may disappear.

- 7) The system of stabilizing the long term purchasing power of the IMCU in terms of each member's domestic basket of goods can be established. This needs a fixed exchange rates system between domestic currencies and the IMCU which only alters with efficient wages. This enables that the purchasing power of each central bank's balances of the IMCUs will not decrease in terms of foreign goods. If a foreign government allows wage price inflation domestically, the exchange rate between its currency and the IMCU will be decreased to express inflation.

However, if productivity growth causes production costs to decrease, the country will either **(i)** to allow the IMCU to buy less amount of the domestic currency and this enables to get all benefits of productivity increases for its citizens, or **(ii)** to maintain the nominal exchange rate fixed and here the benefits of productivity growth is distributed among trading countries. This feature generates a system of relative efficiency wage parities among members. Nominal exchange rate is mainly changed to adjust relative efficiency wages among trading partners. This prohibits the benefits (costs) from competitive advantage (competitive disadvantage). Besides, it prohibits any country from keeping a beggar-thy-neighbor, export-thy-unemployment policy by continuing real exchange rate devaluation not reflect shifts in efficiency wages.

- 8) If a country has persistent current account deficit, though it has succeeded full employment, then this is the proof of the country is living further than its means. If the deficit country is poor, then one of the surplus countries will be forced to support it. If it is comparatively rich than the other deficit countries, it should

adjust its balance of payments by the way of devaluation of its exchange rate (Klaffenböck, 2008, p.42).

However, if the deficit continues to rise, although it has balance of trade surplus, it is clear that it could be bearing too much international debt service. In this case the “pro bono” officials ought to make the debtor to meet with the creditors to reduce debt payments by **(a)** delaying the payments, **(b)** decreasing the interest rates and **(c)** abandon the debts.

Feature **(6)** forces the surplus country to carry the main duty in cancelling the global imbalance. In the absence of this, even if we have fixed and/or flexible exchange rates and/or capital controls, there will always exist international liquidity crises, in turn led to deflationary pressure over the world economy.

2.4. A Modest Proposal for International Monetary Reform by J.Stiglitz and B.Greenwald

An ideal system of international payments can be described by stability in exchange rates and the absence of surprising crises, and world countries will not suffer from the deflationary effects of chronic outside deficits distorting outcomes of chronic outside surpluses. Both conditions are very important for the effective international capital flows and are not materialized in the current monetary system (Greenwald and Stiglitz, 2010, p.314).

2.4.1. A Simple Reform Proposal

Any International Monetary Reform can moderate the flaws of the current IMS by:

- (a) Separating foreign reserve accumulation from the position of any reserve currency country that runs current account deficit
- (b) Supplying rules that put surplus countries into order
- (c) Supplying a more stable reserve money than the dollar or other reserve currencies like the euro, the yen and the sterling

To make these happen we can use adjusted SDRs. As reserves demand grows in line with world trade (%7 per year), a yearly distribution of \$200 billion (as SDRs) will assure any demand for reserve accumulation and can easily be credited to the IMF balances of members. The SDR allocations should be taxed by %50 per unit of current account surplus and these collected taxes can be used for international finance assistance among developing countries (Greenwald and Stiglitz, 2008, p.37-38).

The reform could be somewhat slow because a group of countries will be accepted to the new system, and attending countries will only keep sole the new reserve currency. If adequate number of countries attended to the “club”, then the reserve currency holding countries will also attend. Every year each member will donate some fixed amount of money to the Global Reserve Fund (GRF) and the GRF will issue “global greenbacks” equal to the amount of reserve accumulation by the “club” members. There will be no difference in the importance of any country and member countries have only got an asset that can be that can be used in extreme circumstances (Greenwald and Stiglitz, 2010, p.335). The collected money could be used by developing countries to fund development plans and global public goods such as environmental plans, health enterprises, welfare and social aids (Stiglitz, 2002, pp.1-3). Moreover, after this, the poorest countries may be provided with remaining funds. There are many ways to the allocation of the funds. They should be allocated (1) according to a country’s income and population. Here the sole condition should be global externalities (costs of countries to each other), (2) via either already present international institutions or “special trust funds” by the UN, (3) competitively for development directed projects in which nongovernmental organizations and states can attend and (4) to individuals directly. Here these funds should be used for education and health of the poorest countries (Stiglitz, 2006, pp.266-268).

If a country received less than it needed, the new “global greenbacks” would be matched with reserves. If a country got more than it needed, it might transform the new obtained money into conventional currencies to support its currency. In the end, all the new money will be matched to reserves and this can be used by the members in the times of economic crises (Stiglitz, 2002, pp.1-3).

As each club country is now keeping the new money, each no more needs to hold dollars or Euros as reserves, holding this has incredible outcomes for the earlier reserve currency holders and for international economic stability. Each member no more needs to lose some of its purchasing power so the deflationary forces will disappear. Furthermore, this plan prohibits the US from pursuing unsustainable fiscal policies (Greenwald and Stiglitz, 2010, p.336). Moreover, the sum of worldwide deficits and surpluses will not be zero; instead there will be equivalence between them. As a result, global greenbacks should be issued yearly to offset the deficits (Stiglitz, 2006, p.265).

2.4.2. Costs and Benefits of the New System

These subjects are inspired by Greenwald and Stiglitz (2008, pp.40-43):

- The greatest loser will be the US since it needs to give up the monopoly of issuing the paper money for real goods and services. The Euro Area will also suffer from the same case.
- The foreign central banks worried about the value of their dollar assets will get three benefits:
 - a) An alternative store of value will be obtained by the issue of SDR reserves. Accordingly, this international money (“global greenbacks”) will be substitute for the key currencies. The Triffin Dilemma will start to disappear.
 - b) The creation of SDR reserves will decrease demand for dollar reserves (“self-insurance”) and thereby decrease the US current account deficit. Moreover, this will eliminate the persistent downward force on the

value of the dollar assets. Consequently, this will moderate deflationary bias.

c) An outside liquidity resource will diminish the force on reserve competition which in turn makes international current account system and exchange rate dynamics more stable.

- Even if the imports go over the exports by more than the amount of new money issue, crises might not happen frequently.
- Issuing their own currencies by developing countries make them financially more stable.
- Benefits obtained from the decreasing deflationary pressures will be distributed among the members.
- Economic development in developing countries will be more efficient due to the stable automatic purchasing power mechanism.

2.5. Proposal from J.A.Ocampo: SDR-Based Global Reserve System

This idea was contained in the article of the IMF Articles of Agreement and means that measure are taken to make the SDR the main reserve asset in the current IMS (IMF, 2011, pp.22-26 and 51-55). Although the macroeconomic adjustment of the US will decrease the net supply of dollar holdings kept by the world countries, we need more regular and stable IMS not based on balance of payments and macroeconomic policies of the US. This invitation was recently made by the central bank governor Zhou (2009, p.1). According to him: (a) an international reserve currency initially ought to be pegged to a stable commodity and generated by the way of particular rules, (b) it must be issued flexibly to permit its adjustment to the altering demand, and (c) the adjustments must be separated from economic conditions and independency of any country.

2.5.1. Bases and Properties of the Proposal

In near past, proposals for SDR allocations pursue two distinct approaches. The first one is creating SDRs in a countercyclical way, in turn preventing distribution during economic upturns and making them ready for the financial crises period in which they have countercyclical impacts (UN, 1999, pp.11-14; Condessus, 2000, pp.6-8; Ocampo, 2002, pp.11-13; Akyüz, 2005, pp.12-19). The second approach suggests that regular allocation of SDRs that reflects the additional global demand for reserves (Stiglitz, 2006, pp.245-268). Making regular allocations during busts and restraining them during booms makes the two approaches complement. This modest reform can fix some of the flaws of the current system. It will partially correct the Triffin Dilemma and inequities, and will work against the anti-Keynesian bias. However, this reform could be reinforced with some supplementary properties. Below we will express these properties.

As the supply of SDRs expands, we have to include some rules to enable a sufficient SDR demand. All countries are required to keep a growing part of their foreign exchange reserves in SDRs when they are not borrowing from the IMF or interfering to work against depreciation forces of their currency. Fines like decreasing the allocation when a member doesn't meet those conditions should be created to guarantee these rules. An alternative is to enable the SDRs to use in private transactions, therefore to transform it to a real international monetary instrument (Kennen, 1983, pp.656-661). Another modest reform can be permitting deposits (either reserve requirement or excess reserves) of financial institution in central banks to be kept in SDRs. The extended use of SDR in international transactions ensures it to convert itself to the main global reserve asset.

Increasing issuance of SDRs during economic downturns will prevent deflationary forces caused by the asymmetric adjustment process. As the received SDRs by the majority of deficit countries are improbable to meet the required funds during crises, enhancing the "collective insurance" by the IMF indeed decreases the anti-Keynesian bias. It should actually be met by shifting to a completely SDR funded IMF lending. This will decrease the shortages related to quotas and "arrangements to

borrow”. The latter provides the extra power to the countries granting funds, which weakens the real multilateral feature of the institution.

In order to create an entirely SDR funded IMF lending two paths are needed. The first is during crises the IMF issues new SDRs and these will be eliminated when the relevant loans are repaid (Clark and Polak, 2002, pp.5-24). This is complementary to the countercyclical creation of the SDRs as international reserve assets. The second is that SDRs, not used by countries as deposits in the IMF, will be used by the countries in need (Ocampo, 2010, pp.305-310).

Any of these solutions only function, if the volume of the IMF loans decreases the asymmetric forces that deficit countries experience during crises (deflationary pressure) and the demand for foreign exchange reserves by developing countries to ensure self-insurance. Here an aspiring reform is the generation of overdraft facilities that can be used by all IMF members without conditioning up to a specific level. Such facilities will be useful to make the current system more symmetric for surplus and deficit countries, thereby overwhelms the anti-Keynesian bias. Punishing the countries that run huge current account surpluses or have excessive reserves (exceptional demand for reserves by developing countries) by hanging their SDR allocations can also be useful to deal with the deflationary bias. Besides, the aspiring reform should regard superior demand for foreign reserves by developing countries. In other words, it should contain the “development link” in SDR allocations: allocating nearly %80 (or more) to developing countries and after that allotting the allocation shares among members in accord with IMF quotas (Williamson, 2010, pp.6-7). The alternative to an asymmetric allocation is the development link by the UN Commission (UN, 2009, pp.109-131). In this case the IMF can buy bonds from Multilateral Development Banks (MDBs) in return to SDRs. Then these resources will be used to meet demands for long term financial resources by developing countries. Alternatively, the funds can be given to advanced economies in return they provide financial assistance for the poorest countries and international public goods.

2.5.2. Complementary Reforms

As emphasized by Bergsten (2007, pp.1-2), it will be useful to generate substitution account, by which countries convert their dollar assets into SDR based assets, to ensure stability to the current system.

Regional monetary agreements can be complementary as well. The future IMF can be thought as the peak of a regional reserve funds network (Ocampo, 2002, p.22). Such a system is much similar to that of the MDBs. Furthermore, it is like the ECB and the Fed. Through supplying complementary forms of collective insurance and scope for macroeconomic policy among partners, regional agreements will raise the IMS stability. These arrangements allow poor countries to have stronger voice in international arena (Ocampo, 2006, pp.5-8). The Latin American Reserve Fund and the Chiang Mai are two successful regional agreements that are getting multilateral clearing institutions. Regional agreements should be supported by the international community and can be the building blocks for extensive reforms (UN, 2009, pp.109-131).

The model of a fully SDR based IMF funding and regional agreements can solve the flaws of fiat dollar standard. Fixing the Triffin Dilemma appears to be easier, though decreasing deflationary bias and the inequities through developing countries is more difficult. Finally, we can introduce two more reforms.

The first is locating the IMF at the heart of global macroeconomic policy supervising. This role contains reinforcing the surveillance of advanced economies and performing the place for macroeconomic policy coordination among countries. Here it is important to overwhelm the customary dependence on temporary mechanisms. Generating an international structure for such coordination is highly possible by this way and this ensures developing countries to raise their voice (Ocampo, 2006, p.6).

The second reform is that the positive role that current account regulations could play in a restructured international financial system should be reconsidered. Well planned regulations can decrease the risks that developing countries deals, increase the scope for countercyclical macroeconomic policies intervention and diminish the costs of self-insurance (Ocampo, 2010, pp.310-313).

2.6. Proposal from P.Alessandrini and A.F.Presbitero: SDR-Based IMS

As global imbalances increases with recovery in world economics the position of dollar as an international means of payment weakens. Developing countries are still accumulating huge amount of foreign exchange reserves. As a result the US current account deficit is still increasing and this generates suspicion about the strength of dollar. This paves the way for the creation of the fiduciary supernational money. In this case the first candidate that comes to mind is SDR. From the definition it can be seen that it could be used as new supernational money (SM). Because it carries the soul of Bancor and after some modifications it can be used as complete SM (Machlup, 1968, pp.45-70). Some proposals to transform SDRs into a real SM were made recently by Zhou (2009) and this call is meaningful in several matters. First, China has no aim of being world money leader. Second, due to the huge amount of foreign exchange reserves they hold, they are worried about any dollar asset crises. Third, it will support the foundation of any SM standard.

2.6.1. SDR-Based IMS

Firstly let me explain some terms of the plan. Introduction of SM depends on five basic principles of the Keynes Plan: gradualism, the banking principle, complementarity, multilateralism, and symmetric adjustment process. Gradualism means that flexibility in agreeing lower “supernational management”, provided that reaching the aim needs further enhancement. Other principles will be explained later. In this proposal, Keynes’s ICU is simply the IMF and the bancor is SDR. Whereas bancors are issued in return for gold and have fixed but adjustable exchange rate value of gold, the value of the SDRs will be determined by a currency basket including the dollar, the euro, the yen, the sterling weighted by their shares in the international trade and financial systems. The currencies of developing countries should be included to make the SDR more sound or attractive. SDRs like bancors circulate solely among central banks. Consequently, SDRs can play the role of bancor and be thought as SM (Alessandrini and Fratianni, 2008, pp.11-18).

SDRs can be issued either exogenously or endogenously. In exogenous issuing, allocated SDRs by the IMF are recorded in the balance sheet of central banks and recorded with negative sign in the balance sheet of the IMF. Despite being imaginary assets and liabilities in the old design, the new design will be used for stabilization and development. The second issuing, which helps to raise the supernationality of the SDRs, can be performed in two ways. The first way is Overdraft (OD) facilities. With the OD facilities, the SDRs turn into SM, like bancor, that satisfies Keynes's banking principle in Keynes's publications (in 1930 and 1943). Despite causing inflationary bias and governmental matters, it weakens asymmetric macroeconomic adjustment (thereby the deflationary bias) and dispenses international money towards developing countries again.

The second way is substitution account (SA) facilities. This is the system that helps to change foreign reserve assets into SDR based claims (Kennen, 2010, pp.1-3). By this way dollar assets can be transformed into SDRs. China could take SDR-valued deposits for its huge amount of foreign exchange reserves. Here the IMF works as the ICU and it ensures multilateral rather than bilateral arrangements for debit/credit flows between central banks. China prefers the SDRs for dollar assets because the SDRs have more stable value than any currency. At the same time the SDRs are not only international reserve assets but they are also substitutions to any key currency. Besides, the key currency country no longer manipulates the dollar standard by simply claiming goods and services for its money and no longer has seignorage revenues. As a result of this, the Triffin Dilemma is solved. Thereby, the instability-inequality link will be eliminated by endogenous SDR creation.

They together add the demand-determined component to SDR issuance. However, there are differences between these two facilities. While OD facility contributes to the international liquidity, SA facility only changes the international liquidity combination. OD facilities decrease the external limitations of necessary resources for developing countries; indeed the long term loans will be available by this way. The available liquidities, without exposing limiting policies and exchange rate

devaluations, enable the deficit countries to have time to discover true macroeconomic adjustment policy (Alessandrini and Fratianni, 2008, pp.13-18 and 21-23).

2.6.2. Supernational Governance

The IMF should be given the principal role. It will implement a monetary function by using the SDR-valued deposits and a credit function via using OD facilities. However, there are worries about the plan. The first one is the possibility of the inflationary bias when the OD is used. It will not be the case because of the two reasons. Strict conservativeness of the major countries whose currencies are in the SDR basket restricts the price level fluctuations. The second reason: the IMF will interrupt to OD by determining increasing quantitative ceilings when member central banks apply weak monetary policy. The second worry is the existence of moral hazard. Although exogenous SDR creation weakens the moral hazard, the risk will appear if SDR creation, by OD, exceeds some threshold level (partial unconditionality) (Alessandrini and Presbitero, 2011, pp.144).

2.6.3. Discretionary of the IMF

If the IMF arranges the international liquidity counter-cyclically, it should be given additional discretion. It can be given more discretion to eliminate shocks with more SDR allocations, increasing unconditional OD, and collateral requirements. On the other hand, collateral demands could not be reached due to the discrepancy of countries. The IMF will increase OD facilities if the relevant country attends to investment and development activities (Alessandrini and Presbitero, 2011, pp.25-26).

2.6.4. The International Aid System

In order to decrease the outside financing restrictions of developing countries two views should be examined. The first is the institutional feasibility, which contains

change of the novel IMF assignment. The second is the link between the possible benefits of the new SDR design and the costs carried by donors. Asymmetric allocation of SDRs in favor of developing countries (by nature they will take more SDR deposits) supplies developing countries with foreign assistance to diminish their outside restrictions and/or to pay for development programs and/or to increase public investment in infrastructures. Moreover, they will enhance assistance efficacy relative to the standard foreign assistance standard by evading donor breakup, political effect, and aid volatility (Alessandrini and Presbitero, 2011, pp.27-29).

2.7. Proposals of J.D'Arista

2.7.1. Public International Investment Fund for Developing Countries

Foreign portfolio capital flows caused raise in price levels and in instabilities in financial markets in developing countries, which in turn with the outflow of these resources, currency crises occurred. These countries have lacked resources for infrastructure and development as well.

In order to solve these problems, closed-end funds should be designed as an isolated institution under the BW umbrella. These funds will create self liabilities and use the returns to purchase stocks and bonds of private and public agents. They can be traded in advanced and emerging countries' markets and these countries' liabilities could be used as international reserves. Investing the reserves of emerging economies in these funds could readdress outside savings back into the economies of the countries (D'Arista and Erturk, 2010a, pp.20-21). International reserves will support the improvement of securities markets, decrease the necessity of capital controls and enable pension funds to expand their portfolios.

The main purpose of the funds should be infrastructure and development projects. But less attractiveness and high costs of some projects may moderate useful projects (D'Arista, 2007, pp.135-137).

2.7.2. Reforming the IMS

D'Arista and Ertürk's proposal for the IMS has many similarities with Keynes's plan. They updated some of the elements of the Keynes's plan to achieve needs of the current monetary system. Main fundamentals are similar to Keynes's plan. However, this plan gives more authority. To do this, the current monetary system should have three properties. First, countries and their central banks should be autonomous to pursue proper macroeconomic policies. Second, they could be competent to apply efficient countercyclical policies at home as well. Third, there should be symmetric link between the earning of the real wealth and the facility of financial liabilities.

International Clearing Agency (ICA) works as a clearing house in the international transactions. ICA is neither a supranational central bank like the ICU nor creates supranational money like bancor. Money creation is left to the central banks. It only unites various nations to deal with international trade and financial transactions in their own money by creating multilateral clearing payment mechanism.

The ICA would barter transactions (in terms of members' currencies) through multilateral debit/credit clearing balances. These clearing balances are international reserves of the system and priced in terms of all members' currencies basket weighted by the member's importance in international trade. Though exchange rates change by changes in the level of reserves, speculators can no longer damage the system (D'Arista and Erturk, 2010b, pp.77-78).

Central banks of all joining countries will be welcomed to the membership of the ICA and the branches will be established in every big financial center. Each member could perform its own monetary policy and decide which exchange rate it will use (D'Arista and Erturk, 2007, p.649).

2.7.3. Working Mechanism of the System

This subsection is taken from D'Arista (1999, pp.743-748). **Table 3.1** shows the clearing system.

Table 3.1: The Clearing Function

	Country A				ICA		Country B			
	National Commercial Bank		National Central Bank				National Commercial Bank		National Central Bank	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
1		$+CD_B$								$-CD_B$
2	$+R_D$	$-CD_B$ $+CD_A$	$+CD_B$	$+R_D$						
3			$-CD_B$ $+R_I$		$+CD_B$	$+R_A$				
4					$-CD_B$	$-R_B$	$+/-CD_B$ $+R_I$	$-R_D$	$-R_D$	
	+	+	+	+	0	0	-	-	-	-

CD : Currency Deposit R : Reserves I : International **A**:Country A **B**: Country B

Source: D'Arista (1999)

Country A sells goods, services and investments to Country B in return a cheque (in B's currency). The seller accumulates (invests) the B's cheque in its bank account. The bank of A invests the cheque in its national central bank and obtains a credit in its reserve account. National central bank A gives the cheque to the ICA and takes a credit in its international reserve account. The ICA gives the cheque to national central bank B and in return takes payment by the way of debiting Country B's international reserve account. Finally, national bank B gives the cheque to national commercial bank A and in return debits its reserve account. Consequently, Country A's international and domestic bank reserves are increased. Contrary to this, Country B's international and domestic bank reserves are decreased. In this case, both the ICA's total assets and liabilities, and global liquidity will not change. As a summary, here the ICA performs open market

operations by getting government securities from members in return for their reserve balances. These operations allow the countries to cure most of the imbalances in international trade or capital flows, and maintain stability. Besides, it can function as a lender of last resort. It supplies a national bank with necessary liquidity by the way of purchasing government securities of that nation and increasing the country's international reserves or vice versa (D'Arista, 2007, p.138).

Table 3.2 shows the exchange rate adjustment mechanism as a result of transaction above.

Table 3.2: Exchange Rate Adjustment

	ICA	
	Assets	Liabilities
Stocks of assets and liabilities before transactions in Table 3.1	$GS_A : \%100$ $GS_B : \%100$	$R_A : \%100$ $R_B : \%100$
Stocks of assets and liabilities after transactions in Table 3.1	$GS_A : \%100$ $GS_B : \%100$	$R_A : \%105$ $R_B : \%95$
Stocks of assets and liabilities after changes in reserve levels and exchange rates	$GS_A : \%105$ $GS_B : \%95$	$R_A : \%105$ $R_B : \%95$

GS: Government Securities R: Reserves A: Country A B: Country B

Source: D'Arista (1999)

The last column shows the response of the ICA. It will shift the level of government A and B's securities to adjust their values to match the values of the two countries' reserves at the new exchange rates. The resulting adjustments don't change the global liquidity. On the other hand, if the ICA had to purchase government securities from A's citizens or to sell government securities to B's citizens, it would have serious effects on two countries' inside and outside reserves, and exchange rates.

Country A and B can respond to exchange rate fluctuations by their national macroeconomic policies. When there are no capital controls, the resulting interest rate and asset price effects may strengthen capital flows' pro-cyclical reaction. If these

capital flows get extreme and thereby unforeseeable shocks arise, the ICA can stop and restrict subsequent exchange rate fluctuations by the way of setting one or more members' international reserves. This is shown in **Table 3.3**.

Table 3.3: Adjustment in Reserve Holding

	National Central Bank A		ICA		National Central Bank B	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Stocks of assets and liabilities after clearing transactions	GS_D (other*)	C	GS_A : %100	R_A : %105	GS_D (other*)	C
	R_I	R_D (other**)	GS_B : %100	R_B : %95	R_I	R_D (other**)
	%105	%105	%200	%200	%95	%95
Flows in reserve adjustment process	GS : +%5		GS_A : -%5	R_A : -%5	GS : -%5	
	R_I : -%5		GS_B : +%5	R_B : +%5	R_I : +%5	
Stocks of assets and liabilities after reserve adjustment process	GS_D (other*)	C	GS_A : %95	R_A : %100	GS_D (other*)	C
	R_I	R_D (other**)	GS_B : %105	R_B : %100	R_I	R_D (other**)
	%105	%105	%200	%200	%95	%95

GS : Government Securities R : Reserves C : Currency in circulation

A: Country A **B**: Country B **D**: Domestic **I**: International

other* includes loans and discounts to domestic financial institutions and holdings of other domestic securities, other** includes government deposits and other domestic liabilities

Source: D'Arista (1999)

The first column shows the impact of the transactions in **Table 3.1** on liabilities and assets of the ICA and the two central banks. While the international reserves of A raises by the amount %5, the international reserves of B falls by the same amount. Accordingly, there will be expansionary pressure on A's economy and contractionary pressure on B's economy. In the absorption of these pressures, the ICA purchases

government B's securities from central bank B in return giving B the international reserve and the opposite transaction is the case for A. These reserve changes have the effect on the balance sheet of the ICA and the two central banks as shown in the third column.

2.7.4. Advantages of the ICA

D'Arista (1999, pp.738-739) summarizes the advantages of the ICA as following:

- The International Clearing System (ICS) prohibits low wages, extravagant use of goods and capital export
- The ICA will cancel over-the-counter foreign exchange transactions of big multinational banks, finish activities of casino (\$1.5 trillion per day) and decreases exchange rate fluctuations. It will limit the activities of speculators as well.
- The ICA prohibits self-insurance, anti-Keynesian bias, and the Triffin Dilemma. It curbs inflation as well. All these can be realized by absorbing the excess foreign exchange reserves in a member country. Thus, the booms will be curbed and busts will be prohibited.
- The ICA, through moderating the need foreign exchange reserve accumulation, will help developing countries to use their capital in establishing more advanced goods and services markets.

2.8. Comparison of the Models

- ❖ All of the above plans solve or at least restricts the three flaws of the current monetary system. Moreover, all plans have multilateral clearing mechanism for debit/credit balances and restrict the pro-cyclical effects of capital flows.
- ❖ Other plans except D'Arista's plan are more feasible than Keynes's and Davidson's plans. Because all the other plans aim to use SDRs (in Stiglitz they

are “global greenbacks”) as supranational money and restructure the functions of the IMF to turn it a SBM. Using SDRs and the IMF is easier than to generate a new SM like bancor and IMCU, and establish a new international financial architecture. Also, in Keynes’s and Davidson’s model local governments have to hand lots of power to the CU or the IMCU so these models are not very probable. D’Arista’s model is the most advantageous one. The ICA gives the more authority to central banks and governments in conducting macroeconomic policies than any other plan. Lastly, Davidson’s model is more modest and probable than Keynes’s model because his model does not have a governing board which restricts the national central banks by its commands.

- ❖ Keynes’s bancor is the most restrictive asset among all. It could only be held by central banks, pegged to gold in a one way and managed by the Governing Board. Of course, SDRs are held only by central banks as well but creating SDRs are easier than creating bancor. SDRs are basket of currencies and maybe less stable than bancor but they are created by the same way in Keynes’s plan (OD facilities) and the less strict institution, the IMF. Furthermore, Ocampo’s SDRs can be used in private transactions. Ocampo’s SDRs creation is like Alessandrini’s and Stiglitz proposals. Maybe the least strict institution among all is the ICA because it is neither a SBM nor creates a SM. It only functions as the clearing house for the international trade and financial transactions. Moreover, it gives right to member countries to conduct own monetary policies. But these features can also be the disadvantage because without the principles of the Keynes plan it will be difficult to solve the flaws.
- ❖ The exchange rate in Keynes’s plan and Davidson’s plan is fixed but adjustable. The exception is in Keynes’s plan exchange rates are not allowed to change more than %5. Fixed exchange is the biggest advantage of these plans over other plans. In other plans, exchange rates are determined by the market. Here again the worst performance is of D’Arista plan. Because SDRs are at least SM and they have stable value in terms of major economies currencies but this is not the case in the ICA mechanism. National currencies are always less stable than SDRs.

Exchange rates in the D'Arista's model are determined by adjustments in the reserves.

- ❖ Quotas are only available in Keynes's plan. These are measured by the member country's average of the exports and imports of the last 3 years. In D'Arista's and Davidson's model there are no quotas. In Ocampo's plan, initially SDR allocations to developing countries should be %80 or more to reflect the huge accumulation of reserves by them better, and then allocations should be changed in line with IMF quotas. In the remaining plans, quotas are determined by the IMF.
- ❖ In Keynes's plan, the member will pay %1 per year on the amount of its average bancor balance exceeding $\frac{1}{4}$ of its quota and will be charged with additional %1 if its bancor balance exceeds $\frac{1}{2}$ of its quota. In addition to this, the Governing Board will only interrupt to credits above %50 of the member's quota. In Stiglitz's plan if a country has a surplus, its SDR allocations will be exposed to tax by %50 per unit of the surplus. In Ocampo's proposal all countries have to keep a growing part of their foreign exchange reserves in SDRs when they are not borrowing from the IMF or interfering to depreciation pressures of their currency. If they reject to obey this rule, they will be punished by hanging their SDR allocations. In other remaining plans there are no explicit credit limits.
- ❖ In Keynes's plan, the member will pay %1 per year on the amount of its average bancor balance exceeding $\frac{1}{4}$ of its quota and will be charged with additional %1 if its bancor balance exceeds $\frac{1}{2}$ of its quota. If these balances exceed $\frac{3}{4}$ or more of its quota, it will be forced to take special precautions by the Board. In Stiglitz's, Ocampo's and Alessandrini's plans, debit limit will be modified by SDR allocations. In other plans there are no explicit debit limits.
- ❖ In Keynes's plan the deficit country are required to depreciate its currency against bancor to earn benefits from trade competitiveness, increase controls over external capital flows and forego proper part of its gold or other reserve stock. The surplus country has to appreciate its currency by exchange rate adjustment or wage increases, or increase the domestic credit and domestic demand, or provide international development funds to deficit countries. In Davidson's

proposal, if the deficit country is poor, then one of surplus countries have to help him and if it is rich enough, it must devalue its currency. Surplus country has to use its excess reserves to buy another member's goods and services, or make new FDI projects, or to give one-sided transfers to deficit countries. In Davidson's proposal, the main adjustment burden will be mainly on the shoulders of the surplus countries. But in Keynes's plan both deficit and surplus countries have nearly equal role in adjustment process. In Stiglitz's plan, adjustment takes place according to market mechanism because deficit countries keep their reserves in "global greenbacks". Nevertheless, penalty of tax on SDR allocations of surplus countries may discourage them or even lead them to keep reserves further with precautionary motives. In the ICA proposal, pressures of changes in domestic reserves of countries caused by clearing mechanism of the system will be absorbed by the ICA's purchasing and selling of government securities to central banks and making necessary adjustments in the international reserve accounts.

- ❖ In Ocampo's and Alessandrini's proposals, adjustment mechanisms take place by exogenous and endogenous SDR creation by the IMF. Huge current account surpluses will be punished by the decrease of the SDRs allocation. Excess reserves should be kept in the IMF accounts in terms of SDRs and then they can be used by deficit countries and also by surplus countries. The long term loans will be available for developing countries by OD (in Ocampo's plan the IMF can trade SDRs for bonds of MDBs). The available liquidities, without exposing limiting policies and exchange rate devaluations, enable the deficit countries to have time to discover true macroeconomic adjustment policy. Also, the funds can be transformed to major economies providing that they will give financial aids to poorest countries and international public goods to all developing countries. Providing the development funds for developing countries is the case in D'Arista's and Stiglitz's proposal. Closed-end funds designed under the BW umbrella (D'Arista) and the collected money in the "club" (Stiglitz) can be used for development plans and global public goods.

AUSTRIAN and FREE BANKING MODELS

Austrians explain crises via the business cycles. Business cycles are the most dangerous symptom of the economic crises. Besides, they are the result of the inefficient IMS. Nowadays, fiat dollar standard and fiduciary medium (in credit creation) are used and money supply is determined by national central banks and commercial banks. Government based organizations and institutions have been given significant responsibilities today and throughout history. In some circumstances in which monetary policy is impotent, government fiscal policies have been used and in deep recessions, government regulations and bailouts have been applied. Moreover, Austrians think that any government intervention to a free society or the creation of money by central banks or government based institutions lead to instabilities. They all agree with the second idea- there is no need for a government in a free society. However, they have different views in three issues: the identity of the money producer, the nature of the money substitutes and the nature of the private property. Accordingly, they can be classified as Austrians (Mises, Rothbard and De Soto) and Free Bankers (Selgin, White and Hayek). These issues led them to have different views about business cycles and thereby propose different monetary reforms. In this chapter, we will firstly explain the business cycle views of G.Selgin and then F.Hayek. Thereafter, we will talk about the business cycle theories of the Austrians. Finally, in the last three sections we will give the proposals of these writers.

3.1. Austrian and Free Banking Monetary Theory and Monetary Reform Aim

Money is natural in a free market. Since it is a part of the private property right, the production of money should be left to a free market (there should be no government intervention). Money cannot be a fiat because the fiat is not a traded thing and thereby it cannot be a medium of exchange. Thereby, a fiat will become money substitute (a legal asset to money that is redeemable for money at parity). Austrians (including free bankers) agree with each other on is that when money substitute is created by private agent, the agent will not be able to abolish its redemption forever and hence convert the money substitute to money, but the state can do that. We can give example evolved as a result of nature of the free market; throughout the history gold has been most reliable commodity money and silver has been money or money substitute (Mises, 1980, p.416 and pp.435-437).

Austrians (including free bankers) differentiate in two issues. The first one is the difference in the identity of money issuers. Hayek (1976, pp.42-46) argued that the government could create currencies in the competition with private issuers. Selgin (1988, pp.167-168) and White (1989, p.14) supported the government creation of money, provided that the government money stayed fixed and used only for bank reserves. Selgin argued that money proper could not only be government's fiat money but also it can be private issuers' gold or fiat money. White stated that nearly everything could be a money proper. Mises allowed government to function as "conversion agency" (as will be explained in the Mises's proposal). Solely Rothbard and Soto supported complete private issuers. Rothbard's aim was to abolish the Fed and converting dollars into gold. After government's gold stock was privatized, private agents would be able to mint gold coins and create money certificates (Rothbard, 1994, pp.146-151). Soto was also opposed the monetary system whom central bank and government could interrupt. For Soto, the central bank is not a natural product of the free banking system rather it has been founded exogenously by the government. Therefore, the money production should subject to traditional principles of civil and merchant laws; issuers should achieve certain obligations (%100 reserve requirement for demand deposits) (De Soto, 1995, pp.26-27).

The second issue is the nature of money substitutes. Free bankers assert that the creation of money substitutes (fiduciary media or money certificates) is the right of the private property (contract freedom) (Selgin, 1988, pp.31-31, and pp.161-162; White 1989, pp.235-236, and p.246). Mises claimed that money producers did not have the legal right to create fiduciary media, but could create only completely redeemable money substitutes. Money substitutes should be redeemable for money at parity. He also stated that a free banking with fractional reserves could create infinitive money (credit boom). Creating fiduciary medias would distort prices and lead to false signals. He thought that restrictions to the creation of fiduciary media or matching the creation of fiduciary media to shifts in money demand could not be possible under free banking system. Furthermore, banks could organize themselves as cartels and their fiduciary media will increase infinitely. Nevertheless, free bankers think that banks increase fiduciary media only to offset demand expansion. (Selgin, 1988, pp.89-125). For Hayek (1976, pp.46-55), it is unimportant to discriminate money from money substitutes; but the competition will force banks to restrict their issuance. According to Rothbard, only creation of money certificates is one of the private property rights. But fiduciary media is unjust and thereby leads to widespread disorders (Rothbard, 1994, pp.35-40). For Soto, when banks take privilege to use some of the deposits via fractional reserve banking, it will be the government attack on depositors' private property rights. Indeed it is an abuse of the traditional principles. As a result, "tragedy of commons" appears (De Soto, 1995, p.29).

The two arguments above led Austrians to propose different monetary reforms. Also, we can add one more argument: nature of private property. To Hayek (1973, pp.94-124), possession of private property enabled market participants to improve these rights (in human being's evolution) to struggle with non-market societies. However, private property is an instrument to materialize this. Moreover, Mises thought private property was necessary for the human development. Human property rights were based on human nature. Besides, he argued that private property and the market were caused by human ideas (Mises, 1998, pp.32-41; 1999, pp.264-270, pp.650-653 and 755-756). For Rothbard, private property was both an instrument (means) and a goal (end). It strengthened the market economy and human rights. It is a part of the natural order.

Mises thought that in a mixed agents economy (in which both the governments and private agents could issue money), the government, after some time, started to overwhelm private printing (and money substitutes creation). It would make its coins (and money substitutes) legal tender and thereby this would lead to seignorage. Even if the government was given a regulatory function, after some time it would organize banks as cartels, which in turn would lead to inflation. As a result, Mises argued monetary reform aim should be to found the purest market economy standard. The government should be released from all its functions. State issuance of fiduciary media should also be prohibited because of its future inflationary effects. In contrast, Hayek argued that the monopoly position of the central bank in money supply and its legal tender function should be canceled.

3.2. Austrian and Free Banking Business Cycle Theories

2008 Financial Crisis brought a chance for Austrian School to introduce their theories to the world. Nowadays mainstream economics has difficulties and desperation in explaining the crisis. Indeed the Austrians have solid theories to explain the business cycles happened nowadays and especially throughout history. In this subsection we will first explain some basic flaws of mainstream economics and try to fix them with the Austrian theories. Then we will explain Austrian Business Cycle Theory (ABCT) and lastly the sound money principle.

The first proposition of the Austrians is their rejection of rational expectations hypothesis. Instead agents are subject to uncertainties and always have strict information about the market and the prices (Garrison, 2004, p.190). In fact that is the uncertainty that will bring market efficiency by testing agents' talents whether they will be able to foresee their wishes and whether they will be able to find necessary means (instruments) to fulfill these wishes (Gloria-Palermo, 1999, p.84). An entrepreneur tries to find way that best matches with people's time preferences when they are determining whether they make investment in short term production or in long term production. This determination process not only allows entrepreneurs production plans to match up with

people's demand, but it also discovers the most effective estimation for people's future wishes. The intertemporal coordination of capitals and labors is essential (Horwitz, 2010, p.98).

Austrians think prices are major information source for agents, because they bear essential information about other agents' demands (Hayek, 1990, pp.90-110). In this case, interest rates offered by commercial banks are good estimation of time preferences of agents. Low interest rates encourages investors to shift their production plans from present to future (in long term, there will be capital intensive production) (Rothbard, 2000, pp.4-9; Garrison, 2002, pp.64-68). Consequently, the major goal of the ABCT is to examine why instantaneous business cycles start economic recession and in turn deteriorate global economies (Rothbard, 2000, p.8). When central banks change the money supply arbitrarily by "cheap money policy" (or change interest rates by giving loans to financial institutions), prices and interest rates will be distorted and no longer become necessary information for people's time preferences (Mises, 1998, pp.483-488, pp.490-493, pp.624-625 and p.643)

Furthermore, connection between time preferences and prices (or interest rates) will be broken up by the credit creation of commercial banks via fractional reserve banking (De Soto, 1995, pp.32-35). Even though banks promise full repayment for demand deposits, they give away the major part of the demand deposits to agents needing funds for their consumption and investment. Via this operation, they can generate money "out of thin air" and thereby affect the monetary supply sufficiently (BIS, 2003, p.1). When there is injection of extra credits, commercial banks' interest rates decreases under the natural interest rate. As a result, interest rates no longer become a sound indicator for the time preferences because in fact consumers either have not changed their time preferences or have inclination to decrease savings and make more expenditures on consumption today (in response to falling interest rates) (Miller, 2009, pp.27-34). Accordingly, entrepreneurs increase their long term productions (spend more on capital goods). Via the competition among producers, they take more credits and this in turn increases interest rates. Producers of capital goods expand their

productions and this requires consumers' wages to increase and labor force movement from other sectors to capital goods production.

On the other hand, consumers maintain spending their increased wages and even their savings. Consequently, there will be highly increasing demand for production goods, and thereby this triggers harsh competition between entrepreneurs and capital goods producers, and this leads to expand credits further (Horwitz, 2010, p.100).

The monetary interference by commercial banks has three serious effects:

1. It leads to increase in inflation, in turn this weakens the international trade competitiveness of a country (Rothbard, 1996, pp.73-79)
2. The resulting negative balance of trade causes continuous outflow of money. As a result of exchange of foreign assets for domestic assets, commercial banks will have permanent moderation in their liquid and real assets. This will make them to decrease credit expansion and in whole economy bank loans will decrease (Rothbard, 1996, p.68).
3. This adverse credit expansion leads to long term investment to get more capital intense. Thus, profitable projects (when interest rates are low) before are realized indeed they are unprofitable.

As a result of (2), banks no longer want to finance matured loans again and debtors are compulsorily willing to burden more debts. When banks default on their liabilities, all kind of deposits (demand, time and savings) will collapse. The economic adjustment process pushes itself from inflationary environment to deflationary one. Accordingly, stock prices will decrease rapidly, which in turn leads to pessimism in investment and consumption. But central banks' deposit insurance or purchase of banks' risky assets cannot stop this self adjustment process (Polleit, 2009, pp.7-12).

Fiat money standard inflation and deflation are not praxeological terms and they have been caused by the price-level stabilization policies manipulated either by a government or its central bank. But according to Mises, there are no such constants and stable money term in a free society. Money is also a commodity in a free society, and there will normally be inflation and deflation. They are the phenomenon appeared as a

result of voluntary exchanges. In the fiat dollar standard, inflation and deflation will arise by reason of property rights abuse (Polleit, 2009, pp.11-13). Also, there should be no term like full employment. It is arisen after the intervention to labor market by government and labor unions.

Then what is the proposed solution of Austrians? They propose the sound money principle (Polleit, 2011, p.1):

- Agents choose currencies freely (money need to be preferred and generated by the free demand and the free supply)
- Personal property rights should be defended against government manipulations

3.3. L. Von Mises's Proposal

Mises claimed that historically gold standard had been the only “sound” money standard because it enables to determine the purchasing power of money independently of manipulations of governments (Mises, 1953, p.433). Thus, it is consistent with a free market. He proposed instructions for reform which finally intend to relieve the market totally from the government pressures.

The first step to monetary reform should be to prohibit the money supply increases of central banks absolutely. This step should be done because only such a radical decision prohibits inflationary expectations and it is the only way to end side effects of inflation (Mises, 1953, p.448). Actually not only the creation of money supply by central banks should be prohibited, but also the central banks should be abolished completely. Because when the central banks continue to exist, it will most probably issue new fiduciary medium to help finance the needs of the governments.

The next step involves three stages (Mises, 1953, pp.448-457):

- 1) This stage contains three steps:
 - To forbid the Central Monetary Authority completely from creating any extra money and credit.

- All banks should be forced to redeem %100 reserves for all kinds of deposits and bank notes in the future. Here Mises opposes to fractional reserve banking because when it exists it will neither be enough to cancel credit creation totally nor the business cycles and economic downturns.
 - To remove any intervention of the government or central banks from possessing, purchasing and selling gold by citizens in domestic and foreign markets.
- 2) After the gold markets become stable and as a result of this a free market parity between gold and currency become available, the government should announce a new parity.
- 3) Contains two steps:
- A Conversion Agency will be in charge of exchanging gold for dollars.
 - The Conversion Agency sells obtained dollars to the Treasury and it should eliminate all notes (dollars). The Conversion Agency will also need to produce gold coins for dollars.

After these stages are completed, the monetary system will converge to Peel's Bank Act of 1844. When a central bank is replaced by a free banking, the total government controls and manipulations over money will come to end (Mises, 1978, pp.125-140). Under the free banking any bank that tries to increase its note or credits excessively will be punished by the market mechanism. Excess notes or credits will return back to the relevant bank via the clearing house because these amounts will be required to pay back (redeem). Money like other commodities will be determined by demand and supply mechanism. It is now completely united to the free market and its value reflects time preferences of agents (Mises, 1953, pp.395-399).

Mises's proposal are followed and updated by the Rothbard and De Soto, and Hayek and Selgin. Rothbard and De Soto's proposals are followers of Mises's proposal. But there is a difference. Rothbard and De Soto's models are stricter than Mises's model. While Mises's model gives the government some scope in monetary affairs, their models aim to abolish the government and its institutions' interventions in monetary issues completely. On the other hand, Hayek updated Mises's proposal by a commodity

money with free banking. In system, the value of issuer's money should be based on some kind of commodity or basket of commodities. Selgin proposes a free banking model unlike Hayek's model. In his thesis, bank notes of commercial banks should be redeemable on base money (based on not only gold, but also fiat money). In addition, Hayek and Selgin propose money rules more stable than inflation targeting to limit the scopes of central banks in monetary affairs, if free banking models above are improbable.

3.4. M.Rothbard's Proposal

M.N.Rothbard mainly supported a genuine (authentic) gold standard in a country and an international case. Also, he did not support to establish the gold standard before 1933. Then he commented on some questions about the government, fiat money, commodity money and etc. He was strictly opposing the government itself, its any intervention and institutions. After that, he advanced his thesis about the discrepancy of fiat and commodity money. Fixing the price of gold in terms of dollars would become one of the activities of the government when dollars were independent assets. But they should not be independent assets due to the nature of money and market economy. When everyone has the right to print paper dollars, then operation of the market economy (production → money → goods) will be break down, because no one wants to be the first producer and want only issue notes. Government could not solve this problem, even deteriorates it (Rothbard, 2001, pp.19-26).

In the pure free market, money cannot be names of the paper tickets like “dollars”, “pounds” and “francs”. These names indeed evolved from the names of the unit of weight of commodity money (gold or silver). Money is one of the commodities, especially the most marketable one. In this case nobody accepts the paper tickets as money because they could not be traded for goods and services (Rothbard, 2001, pp.26-32). Since the paper tickets could not be means of exchange, there will be no exchange rates. There will only be the exchange rates between commodities.

The intervention of the government started after it declared itself responsible for minting (the process of bullion into coin). In this case, Mises stated that Gresham Law was indeed a government intervention law rather than a free market law. Via its minting monopoly, the government throughout history has performed many debasements, and this leads to loss of confidence in money. Furthermore, via establishing a central bank and declaring it as a lender of last resort, delaying specie payments, and via fostering agents to use fiat or bank deposits (rather than gold) in their daily transactions, the governments will start inflationary process (Rothbard, 2001, pp.32-42).

As a sound monetary system Rothbard proposed %100 Gold Banking (reserves in gold or silver). His proposal differed from pre-1933 gold standard system because the latter was based on Chicago School proposal (%100 fiat paper standard). %100 fiat paper standard was thought as a useful and effective banking system to prohibit exploitation of the money supply from the government intervention. %100 Gold Banking is instead the only standard that will eradicate government interference completely. Besides, the author thought that fractional reserve banking is fraudulent (Rothbard, 2001, pp.42-55). The creation of demand liabilities more than assets is like the warehouse that creates notes (receipts) for never present assets. In fact, bank notes and deposits are the guaranty so banks should not issue fiduciary medium. If they do so, it will be an abuse of the guaranty contract.

He argued that his proposal was the only standard consistent with a free market and prohibits inflation and thereby business cycles. Than Rothbard (2005, pp.31-32) summarizes his monetary reform proposal in six stages:

- 1) In the current monetary system, there are much more dollars than the gold so we have to pursue the following ways:
 - Matching the supply of dollars to gold stock by enabling the deflation
 - To increase the price of gold in terms of dollars
- 2) Via both liquidation of the Federal Reserve System and redeeming %100 reserve for all kind of deposits, we should take the gold stock from the governments and giving it to the banks and the public

- 3) Taking all kind of note (notes and deposits) creation from the Treasury and the Fed, and giving that responsibility to the private banks. These banks will be able to issue notes and deposits in return of demands of customers
- 4) Fluctuating the value of any kind of silver assets in terms of gold (or dollars) enables the public to use gold and silver currencies simultaneously
- 5) Using the terms like “gold gram” and “gold ounces” instead of “dollars” after some time of application
- 6) Enabling the free mining of gold and silver coins by private agents

The final goal of this reform is to replace all countries’ currencies with gold to establish a global gold standard system. In this kind of monetary standard there will be no exchange rates between fiat currencies excluding between gold silver. National currency names will be replaced by only “gold gram” (or “gold ounces”) and thereby all currencies will be saved from the government intervention.

When **(1)** is established, there will be no dollars or any other national currencies because all of them will be replaced with the world gold stock. After **(2)** and **(3)** are completed, there will be no manipulation of money supply by banks or central banks. Consequently, there will be no inflation and business cycles. **(4)** enables private agents to use silver (or silver denominated assets) as a substitute of gold and this prohibits liquidity shortages (cause by limited gold stocks in any country). Via **(5)**, not only dollars as national or international currencies will be eliminated, but also their brand will be eliminated. As a result of this, the total source of government manipulation will be cancelled. **(6)** allows economic agents freely to issue gold and silver coins, and this is compatible with a free society.

3.5. J.H.De Soto’s Proposal

Jesus Huerta De Soto published his book Money, Bank Credit and Economic Cycles in 2012. He had published two more editions before in 2006 and in 2009. In those books he proposed the banking system the same as Mises’s and Rothbard’s

proposals. Actually, he attempted to advance and update Rothbard's proposal that will meet a need of the current monetary system.

His plan (De Soto, 2009, pp. 733-743; 2012b, p.1) has three preliminary stages:

- 1) Founding and advancing the fundamental principles of Peel's Act (1844) via the reestablishment of a %100 reserve requirement to all kinds of demand deposits and its equivalents. This stage prohibits all future crises because credit expansion will no longer be possible (investments match with former voluntary savings). There will be no violation of private property rights via fractional reserve banking.
- 2) When **(1)** is realized, the lender of last resort role of a central bank and thereby, central banks themselves and government regulations will be extinct (eliminated).
- 3) Full denationalization of the current, monopolistic, and fiat paper money standard, and replacing it with a classic gold standard. Indeed the classic gold standard is the only monetary standard that cannot be manipulated and limited by the governments. Via **(3)** inflationary activities of agents will be curbed (disciplined).

3.5.1. Advantages of the Proposal

De Soto (2006, pp.745-760) explains the advantages of the plan as following:

- (a) Via **(1)** it prohibits all future banking crises.
- (b) Artificial booms by fractional reserve banking become even worse with the lender of last resort role of the central banks. By only **(1)** [or with **(2)**], artificial booms and their consequences will be eliminated. Investments always match with savings completely. However, **(1)** cannot prohibit crises caused by wars, natural disasters or sudden shocks to confidence and time preferences.
- (c) There will no longer be violations of private property rights by the way of fractional reserve banking. In Rothbard's proposal, we stated that fractional reserve banking had been fraudulent and unjust because governments, by using

it, would finance their self-interests, and it had been irresponsible because artificial credit expansion would create crises.

- (d) Through this reform “manic depressive” economic process will be exchanged by more stable and sustainable process. Not only artificial economic expansion (caused by artificial credit creation) will be eliminated, but also business cycles will be eliminated. Circulating money will be increased by the expansion of the world gold stock (%3 per year throughout former 100 years). If productivity grows faster than the gold stock, everybody will be able to benefit from falling prices (because purchasing power of money now increases). Increasing productivity, economic progress, and slow increasing money supply together will increase real factor incomes; thereby will decrease tensions of collective bargaining.
- (e) It prohibits speculative transactions and their possible effects. Indeed speculation in financial markets can be restricted and takeover bids could be performed when there are objective economic motives. They ought not to be financed via credit creation out of nothing (by banks).
- (f) It is consistent with democracy because it values the private property rights. Economic agents now equally have the right to determine the production of money. When fractional reserve banking is abolished, the resulting benefits will be distributed among individuals.
- (g) When the opportunity of monetization of war expenditures is taken away from the governments hands, there will no more be wars and will be more peaceful world society. The resulting benefits will be distributed again. Also, there will be no requirement for an international central bank and it cannot manipulate world currencies because the worldwide classic gold standard will bring more benefits than the international central bank will do.

3.5.2. Toward the Proposed System

De Soto (2009 and 2012a, pp.788-805), discussed the stages of the plan in detail. Firstly, all reforms have been both politically unfeasible in the short term and authorities have not allowed to study of final goals, and have not been effused to the public. In

order to realize these reforms people should be educated about the benefits of the proposal and imposition of the short term policy to these goals.

The first stage of the reform is “central planning” in financial and banking system; a central bank manipulates the whole monetary system. The central banks are dependent on the governments. Central banks, commercial banks and governments manipulate the money supply and the value of the currencies. Individual countries monetary policies are independent of each other and they apply flexible exchange rates in the international trade. All these factors have led to inflationary times, and banking, financial and economic crises all over the world.

The second stage: central banks become independent and pursue a specific monetary rule to reach their monetary policy targets. International cooperation among national central banks increases, and economic and trade integration increase by the creation of fixed but adjustable exchange rates. Consequently, credit expansion (and inflation) stays milder and thereby all above crises become less deep.

The third stage is like the second stage but some radical differences occur. Commercial banks now keep %100 reserve with respect to demand deposits. This cancels the last lender of resort function of the central banks (and administrative rules to manage deposit and credit institutions). The only responsibility of central banks is to ensure money supply to increase utmost the increase in productivity. Banks can no longer create money “out of thin air”. Monetary growth (that is the increase in world gold stock) finances the public spending. Accordingly, on theory the business cycles and crises are eradicated. In this stage private bankers will be transformed into managers of mutual funds as shown in **Table 4**.

Table 4: Consolidated Balance Sheet of Banking System

Σ Assets	Σ Liabilities
Assets corresponding to owner's equity (property of banks' stockholders)	Owner's equity prior to the reform (property of banks' stockholder's)
Banks bills produced as backing for the total sum of deposits and handed over to banks so that they will maintain a %100	The sum of demand deposits and equivalents not exchanged for shares in the fund, as decided by their holders (the

reserve beginning at the time of reform	largest portion of banks' accounting liabilities prior to the reform)
The total of all other banking assets, which are transferred to mutual funds and managed by banks (treasury bills held by banks are cancelled in the account books)	The sum of the new fund shares to be exchanged by outstanding treasury bonds and, if possible, used to partially or totally liquidate other state liabilities (social security pensions, etc.)
Total Assets	Total Liabilities

P.S. The total money supply is the same before and after demand deposits are backed by a %100 reserve in the form of bank bills

Source: Soto (2006)

Depositors should be given time to change their deposits into mutual fund shares. The central banks should issue legal bills equal total amount of demand deposits and their equivalents. As a result of this, %100 reserve requirement will be founded. Then bank assets should be shifted to security mutual funds and these funds' shares will be exchanged for the treasury bonds of world countries (also for state social security pensions).

In the fourth stage we should relieve total banking system from central bank rules. After the rest central bank rules are abolished, total central bank system can also be abolished. In this case, fiduciary medium should be privatized and be replaced by historically most marketable good (gold). When this is applied everywhere in the world, the countries should reach to an international agreement to found a classical gold standard with %100 reserve requirement. When this happens, there will be single international monetary standard in which fixed exchange rates are applied. At first there can be strict inflation (the price of gold in terms of dollars increase) or deflation (pressing the price of dollars in terms of gold) because of strict gold stock against currencies. There will be no credit booms and possibly mild deflation over the world but it is not dangerous (because it arises as a result of the operation of the free market mechanism). Output growth will be sustainable and stable, and there will be no crises.

The fifth stage can be named as complete free banking exposed to %100 reserve requirements on demand deposits and there is one global classical gold standard. There is no credit expansion and mild deflation all over the world and thereby no business cycles and crises. Consequently, output growth will be sustainable and stable. International Agreements for avoiding any unnecessary and real shocks should be reached.

3.6. G.Selgin's Proposal: Productivity Norm and Free Banking

3.6.1. G.Selgin on Business Cycles

- He denoted that he and L.White had been the supporters of the fractional free banking (FB) (Selgin, 2000, p.93). But they were opponents of fiat money standard. Because he said that “no fiat money can ever arise ‘innocently’ ”- without the government interference. Any commodity money with the absence of the government intervention is self reinforcing. In a history there weren't any event in which fiat money defeated commodity money in competition. Establishing a fiat money standard had only been in favor of enriching governments (Selgin and White, 1996, p.83).
- Since depositors know eminently what banks do with their money, the view, fractional reserve banking is fraudulent, is wrong. Forbidding willing contractual agreements is interference into the credit market and limitation of contractual freedom (Selgin and White, 1996, p.87).
- An increase in the supply of money (in a regulated monetary system) does not only cause a boom but also moderate a bust. Because it creates much more money than people can spend in demand for goods, services, and production factors. These all lead to a decrease in interest rate which will in turn triggers further increase in production (Selgin, 2000, p.97). Nevertheless, fractional reserve banking resources lead to the growth in industrialization of the West and developed countries (Selgin, 2000, p.98).

You can see from above that Selgin mostly blame the governments for business cycles. That is why he gives proposals to moderate the scope of the governments and central banks as strictly as possible. All his proposals (productivity norm and free banking) aim to give the governments as lower responsibility as possible in conducting the monetary policy (or even eliminate their attendance).

3.6.2. Introduction to “Productivity Norm”

Leijovhuvfud (1981, p.276-285) stated that there would be no more the Phillips curve relationship. This comment is highly relevant to today. Policy makers could no longer affect employment by simply following Taylor rule (inflation targeting rule). During the 2008 financial crisis, inflation targeting had been criticized for its inability to affect asset prices. Actually it could only affect commodity prices. Thereby it is time to replace it with more affective rule like productivity norm. It is a rule like nominal GDP targeting in Hayek’s proposal. At the end of this proposal, we will give the relationship between these two targets. Actually, any rule binds the hands of central banks but these last two rules bind them more than inflation targeting does. As a result, we will minimize the arbitrary damages of central bank monetary policy.

In this subsection, firstly we will offer the extensive comparison of the productivity norm and price-level stabilization. Then we will give the summary information about criticisms, flaws, and probable dangers of the price-level stabilization. As a conclusion, we will list the features of the productivity norm.

3.6.3. Price-Level Stabilization

One of the claimed benefits of the price-level stability is that it restrains debtor-creditor injustice. However, it has been used not to restrain the claimed injustice, but to fight against short run macroeconomic swings. Secondly, according to Yeager (1986, p.370), macroeconomic swings are resulted from monetary disequilibrium. But Yeager’s claim excludes two points of the quantity theory of money: which are the shifts in

monetary supply or in velocity (V) triggers immediate, uniform and low cost adjustments in all prices. If these points were indeed viable, monetary disequilibrium would no more exist and there would no need to such a policy. In this case, major alleged advantage of the price-level stabilization is that it minimizes the general adjustments burden caused by changes in the money supply. When productivity changes, this will no more be valid. But necessary price changes in price-level stabilization are probably be more volatile than they are in the productivity norm.

Private agents cannot completely predict the changes in real money demand or nominal money demand, and resulting requirements for the general price adjustments. In this case price-stabilization policies decrease the uncertainties and thereby enable agents to take advantage of long term contracts and production process. Also, it binds the hands of the central banks by making them to commit a proper rule.

3.6. 4. The Productivity Norm

In theory a productivity norm is the same as stabilization of a price index of factors of production; in practice it is close to the stabilization of the nominal GDP per capita. Both the productivity norm and the price level stabilization have same principles. Both norms accept a kind of monetary policy that fights against monetary disequilibrium, but both cannot accept that a monetary policy will push employment and output from their natural levels. Also, both norms assume private agents have incorrect expectations about income, real output, or general price level.

A formal expression of the productivity norm is given by Bean (1983, pp.806-819), who founded model for labor market disorders. In this model, wages are pre-set, and price level and productivity are ambiguous. The policy goal is to minimize the output gap ($y_t - y_t^*$): $y_t - y_t^* = \beta[(p_t - p_{t-1}) + \phi(u_t - u_{t-1})]$

Here $0 < \beta < 1$, and y_t and y_t^* are natural logarithm of actual and expected productivity per worker. p_t is price and $u_{t-1} + p_{t-1}$ is nominal wage.

If the elasticity of labor supply to productivity ($\partial \ln L^s / \partial \ln y$) is low, then φ will be 1 and changes in the price level is perfectly proportional to opposite output changes. In this case, this policy is the same as money income ($p_t + y_t$) stabilization.

If $\varphi < 1$ (means $\partial \ln L^s / \partial \ln y$ is elastic), the price level will adjust less than the output changes. Generally the price level will change to stabilize money income per worker ($p_t + y_t - l_t^*$). Here l_t^* is natural labor level. That is to say, this means the price level should project productivity changes. If l_t^* is fixed and $\partial \ln M^d / \partial \ln Y = 1^2$, then pursuing productivity norm needs nominal money to stay constant. If $\partial \ln M^d / \partial \ln Y > 1$, then when productivity raises (falls), nominal money needs also to raise (fall) in order to avoid more decrease and increase in price level than productivity changes. If $\partial \ln M^d / \partial \ln Y < 1$, productivity changes need an adverse shift in nominal money.

If productivity changes, a stable price level no more achieves debtor-creditor justice. When productivity increases (price level remains constant), debtors will take benefits (profits, dividends and wages). Here creditors will not earn profits.

The stimulus supplied by productivity changes to equilibrium price changes is either instantaneous or in the second tool position. When additional money is injected to the economy, the demand for goods and services will change. The monetary injection affects the demand more intensely under a price-level stabilization than a productivity norm. Also, price adjustment responses will be more fierce and serious to price level changes than to productivity changes because such productivity changes means changes in productivity costs. If $\partial D / \partial p = 1$, a change in selling price of product is equivalent to a change in production cost. As a result, producer revenues and profits remain constant. Such a price change will not make the producer to negotiate for new wages or quantity of labor force.

Taking all points into account, total producer revenues are more compatible with total production costs under the productivity norm than they are price-level stabilization

² Here Y is the real income

norm. If price is rising, the price-level stabilization needs money incomes to increase, which should be transformed into short-lived expansion of profits and vice versa.

B. Ohlin (1937, p.321) argued that since price-level stabilization needs permanent applicability of Say's Law, the productivity, not price-level stabilization, is indeed compatible with monetary equilibrium maintenance.

Above we have mentioned the superiorities of productivity norm. But how can we use this in practice? Since price index of production factors cannot be constructed, instead we can use measures like nominal GDP targeting or domestic final demand. Nominal GDP per capita rather than aggregate nominal GDP should be stabilized to avoid labor force growth. Thereby, nominal GDP should increase in line with changes in labor force and capital stock. Nominal GDP targeting helps to stabilize price level but it was criticized for being inconsistent with stabilization of price level when supply shocks arose (Barro, 1986, p.26). However, the productivity norm aims not to stabilize price level or real GDP, but aims to prevent such price and output swings which push economic variables away from their natural levels. As a conclusion we will give some properties of the productivity norm (Selgin, 1997, pp.64-68):

- In practice, a nominal GDP targeting allows central banks to response to disorders of money velocity more quickly than they do under inflation targeting
- When output is stable, in the long run a productivity norm converges to price-level stabilization
- When V is stable, a productivity norm is the same as a constant money growth rule (Friedman rule)
- The productivity norm stresses aggregate demand stabilization, which is compatible with natural rate theories and with rational expectations hypothesis
- The productivity norm is milder than both price-level stabilization and full employment because it prevents strict changes in price and employment
- Application of a productivity norm is quite easy
- When real interest rate equals real output growth rate, the productivity norm is equivalent to optimal quantity theory of money
- It binds the hands of the central banks more tightly than other norms

3.6.5. Free Banking

When a central bank controls the money supply, either it directly manipulates the money supply or follows some monetary rule. Theorists that support monetary central planning opposed the free banking. Especially Chicago school economists argued that that either the creation of fiduciary medium by commercial banks had not been desirable and beneficial, or these institutions led to monetary instabilities. According to Selgin, they are actually both desirable and beneficial institutions and in fact monetary instabilities appear in the regulated monetary system (Selgin, 1998, pp.97-117). On the other hand, Friedman (1959, pp.4-9) argued that free banking causes progressive inflation due to excess commodity money resource costs, and fraud and concluded that we should give the monopoly of issuing currency to the central bank.

In addition to this, Viner (1962, pp.244-274) argued the Chicago supported the monetary rules because they had prohibited monetary policy from arbitrary changes by monetary authorities and thereby ensured certain monetary policy. However, discretionary rules give some flexibility to monetary authorities in extreme circumstances. Using more discretion in normal times could generate abuse of rules and it is socially less optimal than adherence to specific rule.

Following some monetary rule actually prohibits arbitrary changes in the money supply and manipulation of the value of money by inflationist policies. For Selgin, alternative way of preventing all these abuses is that allowing the currency supply to be determined by competition (free banking). This solution can fulfill stability in the value of money and cancel government intervention. Thus, it eliminates the manipulation of the money supply by the government and reduces the need for the government money. Since commercial banks will be given permission to issue their own banknotes, these notes compete with each other. Bank notes will be redeemable in base money (they will be based not only on gold, but also on fiat dollars). Base money should never shift from bank reserves to circulation. Once people start to use bank notes as currencies, the stock of high power money will be fixed forever (same as Friedman's rule). The dollars will not be used as international money and thereby global imbalances (as in today) will no more be widespread.

But how can we perform all these conditions? We can start with eliminating unnecessary regulations like legal reserve requirements, and regional and national bank branching limitations. Besides, bank diversification limitations like the Glass-Steagall Act should be banished. As a result of these plans, money multiplier becomes more certain and foreseeable.

At the beginning while public could not see bank notes as reliable as already existing currencies, banking innovations might encourage them to use them. Fed dollars (or any other national currency) could be driven out of circulation by other sound bank notes. However, this radical reform seems neither politically nor socially possible in the future. There will be oppositions by governments because they will lose their main debt source and people are not also accustomed to using such a system. But these claims don't justify the inability and improbability of the reform.

3.7. F.A.Hayek's Proposal: Denationalization of Money

3.7.1. F. Hayek on Business Cycles

- Hayek's works are different from Mises's works. Hayek's works were classified in two groups: Hayek I (before 1936) and Hayek II (after 1936). While Hayek I shared the same ideas as Mises, Hayek II distinctly differed from him (Block and Garschina, 1996, pp.77-79).
- Contrary to what economists think, without the control of a government, the market always experiences unemployment or inflation, the government's intervention indeed leads to such problems
- A monetary disorder caused by an increase in the money supply (by a central bank) pushes the interest rates below the natural rate of interest. This induces capital investment and thus causes resources to flow from consumption goods production to capital goods production. The consequential relative price discrepancy leads production structure to change and this overinvestment breaks the coordination between consumer and producer plans. As a result, this

monetary disorder increases the return rates artificially and thereby this, as long as extra money is not insulated, leads to economic downturns.

- However, if relative prices changes as a result of “natural” forces of technology, tastes, time preference, there will be no coordination failure between the two plans.
- Banks could not be held responsible for the business cycles because they have never been forbidden from fractional reserves in return demand deposits and they are not smart enough to realize consequences of their actions (Block and Garschina, 1996, pp.81-83). Also, since we use the bank credits for economic development, we should bear consequential swings. Even we have to maintain to use fractional reserve banking because the benefits were larger than the costs (Block and Garschina, 1996, p.85).
- To him, %100 reserve requirement is utopian because it leads economic growth to moderate, and money and notes of banks to cancel, and the total deposits to stay useless and idle (Block and Garschina, 1996, p.89).

3.7.2. F. Hayek on Governments and Central Banks

While we live in a capitalist world, we still have central planning in monetary policy. That is the idea that a government gives a monopoly of issuing money to a single central bank (national reserve system). Also, the government makes that currency as legal tender. It came from the view that the government had a privileged right to control a nation's money (Hayek, 1990, p.29). This situation became even a principle whom we seldom question. Consequently, in the history the monopoly of issuing money has not only divested us of sound money but has also divested us the only way to find sound money. Furthermore, it is not clear that in a certain area only one kind of money must be used.

In the absence of a competitive market, a central bank has no motivation to keep the value of the money it creates and it exploits the value of the money and the resulting false signals lead private capital resources to be misdirected and misallocated (Fed's

reducing interest rate by cheap money policy in today's monetary system). When the central bank pursues a macroeconomic policy that increases the aggregate demand, inflation will arise. Inflation in turn causes misallocation in resources, thereby causes unemployment (Hayek, 1974, pp.3-7). In addition, by using privileged right, the government aims to monetize its expenditures and to supply the regional demands of some voters. When the government debts are significantly high, it will attempt to repay by the help of central bank resources. Recently, the debts of countries in the Euro Zone were met by the ECB directly. Moreover, central banks all over the world tried to rescue the insolvent banking and financial institutions by bailouts. Ultimately, all these factors led inflation to increase as well.

As a result of false signals, inflation artificially decreases the real interest rates and this means that unprofitable projects before seem to be profitable (Butler, 1983, p.60). When inflationary policies end, it will be clear that profitable projects at that time are indeed unprofitable. This triggers economic downturns and unemployment.

However, the governments are only necessary in providing a legal framework in which people could find the best suited monetary institutions (Hayek, 1976, p.22).

3.7.3. Denationalization of Money

Therefore, we need institutions that do not manipulate the value of currencies and do not change the money supply arbitrarily. Thus we have to take the prerogative power of government to issue money and give it to private agents. When this happens, there will be a lot of currencies that compete with each other in the market. The particular currency issuer should keep the value of its money as more credible and stable as possible because lenders will not prefer money that will be depreciated and borrowers will not use money that will be appreciated. Also, the money like fiat money that does not have specific commodity value will not survive so an issuer should redeem its currency on a specific commodity or basket of commodities (Hayek, 1990, p.48). That is to say, currency competition bases on the interaction of the issuers and private agents that demand their money. Agents' beliefs about the value of the money trading for a

specific basket of goods will set the amount of the currency that need to be issued. Thus, for any issuer, it is essential to keep the value of its currency stable to meet the agents' beliefs.

Accordingly, the issuer avoids to issue more than necessary. Also, currency competition prohibits the commercial banks to create excess credit by fractional reserve banking operation. Thereby, they will keep in a cash a %100 reserve of their currencies to preserve their value (Hayek, 1990, pp.40-60). If the issuers don't obey the roles of the free market, they will be punished by the movement from their money to more stable one.

Here the values of the competing currencies may not be anchored to a stable commodity like gold and silver because the operating system of the market will enable them to take the necessary (stable) values. Furthermore, competitive market operation allows the participators to pursue their own self-interests. Besides, this operation encourages the issuers to preserve the value of their currencies and cancel the inflationary effects (Hayek, 1990, pp.10-30).

In the international arena, there will be many currencies with a mixed commodity quality. As a result of the currency competition, there will stay only a few of them. Government monies, protected against any competition, will most probably be eliminated from the market. In addition to the competition, the entry threat of new currencies will also make the already existing issuers to keep their currencies' values even more stable. In the current monetary system, the US is still increasing the current account deficits by simply using its dominant position in the fiat dollar standard. If there were the currency competition, the US will no more issue fiat dollar, which is not redeemable on any commodity and raise its deficits, and instead would be exposed to take much effort to keep the value of the dollars. Of course, this would help to eliminate the global imbalances.

3.7.4. Nominal GDP Targeting

“If I were responsible for the monetary policy of a country, I would certainly try to prevent a threatening deflation, that is, an absolute decrease in the stream of incomes, by all suitable means, and would announce that I intended to do so. This alone would probably be sufficient to prevent a degeneration of the recession into a long-lasting depression.”

F.Hayek (1978)

“The moment there is any sign that the total income stream may actually shrink during a post-deflationary crash, I should certainly not only try everything in my power to prevent it from dwindling, but also I should announce beforehand that I would do so in the event the problem arose”

F.Hayek (1975)

The above quotations are given in order to show that Hayek was indeed a supporter of the Nominal GDP Targeting. We will call upon it when the currency competition is improbable because it really ties the hands of the central bank. It has some superiorities over inflation targeting, about what we are going to explain at the end of the subsection. According to Sumner (1989), a nominal GDP targeting (NGDPT) will improve the operation of a central bank and depends on plain and transparent rule. In this case, the monetary policy is automatically tied to determine a target for the growth of nominal GDP by setting money supply. Then it will establish a market of nominal GDP (NGDP) futures and commit to change the dollar for them, at a given price. This will automatically bind the central bank to open market operations in short term securities. As a result, the money supply and interest rate will be adjusted by market forces and help to push NGDP to its pre-determined target (Sumner, 1989, pp.147-162). If the nominal income growth is expected to increase more than the target rate, NGDP futures will be bought. Consequently, money supply will decrease, in turn moderates GDP growth and pushes it to its target rate, and vice versa.

In the quantity theory of money, the money supply (M) is adjusted to compensate changes in the velocity of money (V) to maintain a stable value of nominal GDP ($P*Y$). In 2008 financial crisis, the bank bailouts chain was caused by the concern of probable contractionary effect of decreasing velocity of money on economies. On the other hand,

these bailouts with pessimist investment and consumption expectations really led the financial crisis to become so deep. At that time, central banks should have allowed the bank failures and responded to fall in V by more active monetary policy in order to maintain the NGDP to its target closely. Moreover, if this rule were applied in the crisis, there would be no speculative bubbles. However, it can't be the case because in the Great Depression, central banks had been just onlookers to the bank bankruptcies and this really deepened the crisis.

Lastly, we can give some superiorities of NGDP targeting over inflation targeting. Sumner (2011, pp.6-9) summarizes them as the following:

- 1) By using it we can achieve the stability of inflation and GDP simultaneously.
- 2) G.Selgin (1997) argued that nominal GDP targeting would create lower inflation than the normal during the expansion of productivity. It eliminates the considerable part of the asset bubbles which inflation targeting cannot cancel.
- 3) It also stabilizes labor markets by stabilizing the wage growth.
- 4) While it stabilizes incomes, it triggers increase in the volatility of inflation. However, due to its closer relationship with nominal interest rates than inflation, the tax distortions can more efficiently be clarified. It can also explain the liquidity traps better.
- 5) When real shocks arise, the burden of costs are distributed more symmetrically to among debtors and creditors via NGDPT than they are in inflation targeting

3.8. Critiques of the Proposals

Rothbard was aware of his plan's limitations but he thought that it was politically unfeasible and in the transition period in which banks convert their reserves to %100 allows government to interfere in monetary affairs. As a result, the state after some time could dominate the money supply process again. Furthermore, he blamed fractional reserve banking of being fraudulent but he required a shift of the nationalized gold to fractional reserve banks. That's indeed theft and fraud itself.

Mises's proposal is less strict and careful than Rothbard's plan. He lets existing fiduciary media to remain in use to prevent deflation but it is erroneous because there is a danger of the government to manipulate this process. Besides, he gives opportunity to government institution to fight against inflation over time. It is faulty because this leaves the government room in the monetary affairs (by regulations). Over time the Conversion Agency will be able to help to finance future government needs in extreme circumstances. Indeed cancelling any government intervention could be better alternative.

In free bankers' (Selgin and White) offers newly created bank notes can overtake central bank notes as a media of exchange. But in fact people will just not use new notes instead of more marketable and experienced central bank notes. Actually there is a problem of declaring something that was not a medium of exchange before as a medium of exchange and a more important than already existing currencies. Selgin argues that something has to be redeemable for money (money substitute) to be a medium of exchange. In addition to this, the market operation pushes the banks to organize themselves in cartels rather than in the competitive market. Thus, this will lead to inflation, credit expansion and business cycles. Besides, the government involvement in monetary affairs (regulations) could become more and more dangerous that will moderate reform effects. After a while, the central banks may reassert its monetary monopoly or lender of last resort function.

Hayek's proposal suffers from the same problems as free bankers'. New bank notes are supposed to compete with central bank notes. But it will not be possible because economic agents will not accept bank notes that can't be traded for goods and services, or exchange them for other notes. Briefly new notes will not be able to compete with already existing notes. Besides, he proposes the mixed economy rather than market economy. If some power is given to the governments in the competition, in the course of time it will start to dominate the market competition via its already existing monopoly position. In the future it will be able to pass new laws that ensure legal tender of last resort.

In Soto's proposal, there are some problems. The first one is that his reform leaves no scope for the free market developments. He (2006, p.799) automatically offers

gold as the new market money. But historically other money such as silver, copper and etc. has been the market money. Second, while his plan's main advantage is its moderateness, it could also be the disadvantage. First of all, long term goals may be neglected and the stages could be applied in the adverse direction. The state's involvement can bring some problems like the problems explained above. Third, he points that a worldwide introduction of a gold standard prohibits the transition process for having any unnecessary and real effects (De Soto, 2006, p.802). While first participators have advantage of buying gold with low prices, sooner comers will buy it with more expansive prices. Actually these are claimed "real effects". Lastly, fixed exchange rates will not be acceptable because it needs a redistribution of world gold.

CONCLUSION

Chapter 1 gave the brief history of the IMSs and their comparison. The Bretton Woods is the most successful period of all. But it has some fundamental flaws. It was created to leave fund burden after WWII to the US. This over time led to the huge deficits in the balance of payments of the US. Also, it lacks a mechanism for mutual adjustment of balance of payments surpluses and deficits. Indeed the International Clearing union was superior to the Bretton Woods, but it was rejected by the US commission. At the end of the Chapter 1, we concluded that the Keynes's Plan was superior to White's Plan. Thus, we will apply the Keynes's principles to the monetary reforms.

This work showed fundamental flaws of the current monetary system (different in the two schools) and reforms (cures) for them. For Keynesians, the major flaws are anti-Keynesian bias, the Triffin Dilemma and inequity bias (in turn leads to inequity-instability link). For Austrians and Free Bankers (Selgin, White and Hayek), the flaws are fiat money standard, "cheap money" policy of central banks and any government intervention. For Free Bankers, fractional reserve banking is necessary for the process of economic development. But for other Austrians, it is harmful because of its credit creation process. Conclusion for proposed models will be discussed in the following paragraphs.

Recent crisis has shown that the flaws (in WCB models) led the 2008 financial Crisis to get worse. In addition to the flaws, the international attention is on the international liquidity and countercyclical macroeconomic policies, and reform of the IMS. A new institution should solve these problems and prohibit pro-cyclical effects of

speculative capital flows. The proposals of Keynes and Davidson are the same in structure (nature) and have the same implications. Davidson's proposal is more modest version of Keynes's plan. Keeping the excess reserves of surplus countries in the ICU (or in the IMCU) accounts relieves the world from the deflationary pressures through its inflationary effect. Excess reserves could be beneficial for both deficit and surplus countries' citizens. These reserves could be used for the development and infrastructure, investment of world FDI, extension of world trade and world output. But they can trigger inflation. Every member country gains benefits from the stable exchange rates and increasing world output. Nonetheless, there is difference in the degree of penalties. While in Keynes's plan both deficit and surplus countries could be given penalties and incentives, in Davidson's plan surplus countries are mainly imposed to penalties. Moreover, both plans prohibit speculative capital flows. Also, the ICU (or IMCU) eliminates the Triffin Dilemma through establishing the international currency. Developing countries should no more keep reserves for precaution, instead should use excess reserves for their needs. When excess reserves are used, the inequity bias and thus the inequity-insatiability link will disappear.

In Greenwald and Stiglitz's proposal the greatest loser will be the US and the Euro Area because the "global greenbacks" will be used instead of the key currencies. As a result, the US will be relieved from the pressure of adjusting its current account deficit. Instead tax pressure will be imposed to the excess reserves of surplus countries but this could not help to reduce their reserve accumulation because they may decide to devalue their currencies to gain from trade competitiveness. This actually will lead them to accumulate their foreign reserves further and thereby this may increase deflationary pressures. On the other hand, the collected money in the club could be used by developing countries to finance their development plans, and global public goods like environmental plans, health enterprises, welfare and social aids. At the same time, D'Arista's closed-end funds under the BW umbrella can serve as funds for development projects.

D'Arista's ICA is neither a supernational bank nor creates a supernational banking money. It only creates multilateral clearing payment mechanism for

international trade and financial transactions. Her plan gives more flexibility such as money creation and conducting macroeconomic policies to central banks than Keynes's and Davidson's plans. The ICA could not eliminate the Triffin Dilemma by debit/credit clearing balances completely. Because the key currencies still have significant weights in the international reserve basket. Nevertheless, the ICA can absorb excess reserves so it can prohibit anti-Keynesian bias. Also, it automatically cools the expansionary booms and thereby curbs the inflation via absorbing the excessive reserves. Via reducing the self-protective attitude, it will help developing countries to spend excess sources in more qualified goods and services. Since it decreases the exchange rate fluctuations, it will limit the speculative transactions.

The most updated versions of the reforms are of Ocampo and Alessandrini's. In Ocampo's proposal, the most desirable and profitable reform involves countercyclical allocations of SDRs and countercyclical IMF financing (lending). IMF lending should be unconditional (via OD facilities) rather than being conditional. In SDR allocations, very recent exchange reserve amounts by developing and developed countries should be thought. In this case, developing countries should be given larger allocations. Also, the "development link" in SDR allocations should be generated, and allowing the IMF to buy bonds from MDBs and using them in the long term financial resources financing should be included. Complementary reforms will contain the substitution account, building strong regional monetary arrangements and reinforcing IMF governance reforms. The reform should be politically attractive especially to the US because the major economies can find it difficult to adjust their deficits and to leave its independent macroeconomic policies. Attractiveness could be reached by transforming SDRs into mostly a dollar denominated assets. Nonetheless, this will not solve the inequity bias but deepens the instability bias. The substitution account can help countries to relieve from dollar denominated assets and moving to more stable assets, SDRs. Of course, this could solve the Triffin Dilemma and deflationary bias. Regional monetary arrangements enable to build multilateral clearing mechanism in developing countries. They could be opposed by the IMF and the WB because they may exclude global macroeconomic policy coordination. Reinforcing the IMF by giving it central role in the world macroeconomic policy management should also be performed. Moving to fully SDR

based assets may not be attractive to most members, and SDR countercyclical functions are difficult to negotiate. How can we solve all these application problems? Here the proposal of P.Alessandrini and A.Presibitero come to rescue because it includes five basic principles of the Keynes plan. The IMF will transform foreign reserve assets into SDR denominated assets. This could solve the Triffin Dilemma and deflationary bias. When member countries use SDRs rather than the key currencies, the Triffin Dilemma will be canceled, and developing countries keep their reserves in SDR denominated deposits and this moderates deflationary pressures. As a result, the instability-inequity link will be eliminated. On the other hand, using OD facilities may trigger inflation and moral hazard. But they are improbable due to the nature of SDR basket and exogenous SDR creation.

For Austrians and Free Bankers, the monetary reform target is to ensure production of money by the market economy. Thus, the reform should abolish the government role in the money production, and its intervention and activities in the monetary issues. Of all, the proposal of J.H.de Soto is the most successful reform. It is more updated and advanced version of Rothbard's proposal. It includes (i) establishment of a %100 reserve requirement to all kinds of deposits and its equivalents and (ii) full denationalization of the current fiat money standard and replacing it with a classic gold standard. The %100 reserve abolishes the last lender resort function of central banks and create money via credit expansion. When fiduciary media is privatized and replaced by gold, the remaining role of central banks and government will be abolished. Accordingly, we will have full privatized classical gold standard with %100 reserves. When this happens, there will be no credit booms, and business cycles and crises. Also, there will be mild deflation over the world but it is not dangerous because it appears as a result of free market operation. World output growth will be sustainable and stable.

In Rothbard's proposal gold will be market money by making the dollars redeemable for gold at a fixed rate. Thus, the Fed currency will be a money substitute. %100 reserve for Fed notes, Fed deposits and all money substitutes will be redeemed. All kinds of note creation will be taken from the hands of the Treasury and the Fed, and it will be given to private banks. Private agents could also freely mint gold and silver

coins. Since gold and silver are only used as money, there will be a unique exchange rate between them. The long run success of the reform is based on its capability to limit the government actions.

Nevertheless, the mixed economy proposal by Selgin, Hayek and Mises are fragile. Over the time government and central banks regain the dominance in money production and in any monetary affairs. Actually this evolved system will be much like the current system. Lastly, while the rules like nominal GDP targeting and productivity norm bind the hands of the central banks, over time the central banks will be able to pursue more discretionary monetary policies. Consequently, monetary instabilities will arise.

Lastly, we can compare the two schools' proposals on overall. The crises theories of them are different each other. The Keynesian crises occur when investments are less than savings in the system. In this case, the global imbalances caused by deflationary bias and currency asymmetry problem should be solved. However, Austrians and Free Bankers claim that governments, its institutions and its interventions create the business cycles. Thereby, the aim of monetary reform should be to limit the scopes of the government and its institutions in monetary issues. WCB models except D'Arista's model propose to establish the supernational money and a supernational bank. That is to say, they propose to unite the responsibilities of authorities, whether it is a government or a central bank, in one center (the CU). All country central banks could be the members of the CU and it will be responsible for the multilateral clearing arrangements. On the other hand, Austrians and Free Bankers suggest dividing the responsibilities of a government or a central bank in monetary affairs into many parts (give those responsibilities to the private agents like commercial banks and the public). Besides, for Hayek, the outcomes of the merging of national central banks' responsibilities in one institution (the CU) can be more destructive to the monetary system than the national central banks because by this mechanism the desire of one particular group can be dictated to other groups.

Both WCB models except D'Arista's model and Austrian models offer fixed exchange rates. In WCB models there is a fixed but adjustable exchange rate between SM like bancor and national currencies. In Mises's model, there will be the fixed exchange rate between gold and a currency. There will be the fixed exchange rate between gold and silver in Rothbard's model, and there will be the gold parity permanently fixed by law in De Soto's model. While the aim of WCB models is to reach to full employment via fixed exchange rates, Austrians try to freeze the prices (the price-stabilization) by %100 reserve requirements (only let them to increase by the increase in world gold stock). The feasibility of the WCB models and Austrian and Free Banking models are politically and economically difficult. They are politically unfeasible because world governments and their institutions could be undesirable to give both all their responsibilities to the CU and private agents. They are economically unfeasible because it will be difficult for economists to relieve from mainstream economics doctrine and accept new models.

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RESUME

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ABSTRACT

Reform of the International Monetary System: World Central Banking or Free Banking?

Nurbek MADMAROV

JULY 2013

Over the centuries we have not learned origins or symptoms of crises accurately. As a result of this, we have always had the crises and lastly the 2008 financial crisis (Great Recession). The Great Recession showed we have faulty economic theories and economic policies. Thus, we need theories that can detect the origins of any crises more accurately and then cancel them. Actually, we don't need economic models when crises have already arisen. Here we initially show the flaws of the current monetary system and then proposals to solve these flaws. In this case, we will introduce two type proposals. The first category of proposals is World Central Banking Models: proposals of J.M.Keynes ("Bancor" Plan), P.Davidson ("International Monetary Clearing Union"), J.Stiglitz and B.Greenwald ("Global Greenback Plan"), J.D'Arista ("International Clearing Agency" Plan), J.A.Ocampo (SDR-based Global Reserve System), P.Alessandrini and A.F.Presbitero (SDR-based International Monetary System). According to these writers the flaws of the current global reserve system are *anti-Keynesian bias* (deflationary bias), *the Triffin Dilemma* (the currency asymmetry problem) and *the instability-inequality link*. The second category is Austrian and Free Banking Models: proposals of G.Selgin (Productivity Norm and Free Banking), F.Hayek (Denationalization of Money and Nominal GDP Targeting), L.Von Mises (Gold Standard with Free Banking), and J.H.de Soto and M.Rothbard (Gold Standard with % 100 Reserves). These authors argue that any government intervention like regulations and bailouts in the production of money or any government based institutions like central banks or treasury cause instabilities (business cycles and thereby economic crises) in the free society. According to them we should create a world freed from governments. But they differ in three issues: the identity of the money issuer, the nature of the money substitutes, and the nature of the private property. These issues led them to propose different monetary reforms.

Key Words: Great Recession, the Great Depression, economic models, World Central Banking models, anti-Keynesian bias, the Triffin Dilemma, the instability-inequality link, Austrian Models, Free Banking Models, government intervention, free society

ÖZ

Uluslar Arası Para Sisteminin Reformu: Dünya Merkez Bankacılığı mı yoksa Serbest Bankacılık mı?

NURBEK MADMAROV

TEMMUZ 2013

Yüz yıllar boyunca krizlerin kaynaklarını veya belirtilerini tam olarak öğrenmemiş durumdayız. Bunun sonucu olarak her zaman krizler yaşandı ve en son olarak da 2008 Finansal Krizini (Büyük Resesyon) yaşamış durumdayız. Büyük Resesyon yanlış ekonomik teorilere sahip olduğumuzu ve yanlış ekonomik politikaları kullanmış olduğumuzu gösterdi. Bundan dolayı herhangi bir krizin kaynağını daha doğru bir biçimde tespit edecek ve bunları yok edecek ekonomik teorilere ihtiyaç vardır. Aslında kriz çoktan yaşandıktan sonra modellere ihtiyacımız yoktur. Bu makalede ilk olarak cari parasal sistemin kusurlarını inceleyeceğiz ve daha sonra bunları tedavi etmek için bazı çözüm önerilerinde bulunacağız. İki tür çözüm öneri sınıfından bahsedeceğiz. Bunların ilki Dünya Merkez Bankacılığı Modelleri sınıfıdır: J.M.Keynes (“Bancor” Planı), P.Davidson (“Uluslar Arası Parasal Takas Birliği”), J.Stiglitz and B.Greenwald (“Global Greenback Planı”), J.D’Arista (“Uluslar Arası Takas Kurumu” Planı), J.A.Ocampo (SDRlere dayalı Küresel Rezerv Sistemi), P.Alessandrini and A.F.Presbitero (SDRlere dayalı Uluslar Arası Para Sistemi). Bu yazarlara göre cari parasal sistemin üç kusuru vardır. Bunlar: *Keynesyen karşıtı sapma* (deflasyonist sapma), *Triffin İkilemi* (Asimetrik Para Birimi Problemi) ve *İstikrarsızlık-Eşitsizlik İlişkisi*. İkinci öneri sınıfı ise Serbest Bankacılık Modelleridir. Bunlar: G.Selgin (Verimlilik Normu ve Serbest Bankacılık), F.Hayek (Paranın Özelleştirilmesi ve Nominal Çıktı Hedeflemesi), L.Von Mises (Serbest Bankacılığa Dayanan Altın Standardı), J.H.de Soto ve M.Rothbard (%100 Rezerv Bankacılığa Dayanan Altın Standardı). Bu yazarlar paranın üretiminde regülasyonlar ve kurtarma işlemleri gibi herhangi bir hükümet müdahalesinin veya merkez bankaları ve hazineler gibi herhangi bir hükümet kaynaklı kurumların işlemlerinin serbest toplumda istikrarsızlıklara (başlangıçta konjoktürel dalgalanmalara ve daha sonra ekonomik krizlere) yol açacaklarını savunurlar. Ancak kendi aralarında serbest bankacılığın uygulama sınırlarında ayrılırlar. G.Selgin toplumda dengesizlikler yaratan unsurun kısmi rezerv serbest bankacılık değil de, hükümetler olduğunu savunurken M.Rothbard ve J.H.de Soto ise bu dengesizliklerin kaynağının sadece hükümetler olmadığını aynı zamanda kısmi rezerv serbest bankacılığın olduğunu savunurlar.

Anahtar Kelimeler: Büyük Resesyon, Büyük Bunalım, ekonomik modeller, Dünya Merkez Bankacılığı Modelleri, Keynesyen karşıtı sapma, Triffin İkilemi, İstikrarsızlık-Eşitsizlik İlişkisi, Austrian Modeller, Serbest Bankacılık Modelleri, hükümet müdahalesi, serbest toplum