

Martin Stojanovik, MSc<sup>1</sup>

Prof. Blagoja Nanevski, PhD<sup>2</sup>

## **PUBLIC DEBT, DEFICITS AND ISSUES WITH EXCESS DEBT**

### **Abstract**

This paper presents a short and long-run analysis of the economic effects of public debt and budget deficits, whilst connecting unconventional public debt connected issues to the global current economic conditions. Short-term budget deficits are relatively desirable, while the long-term effects of deficit accumulation blend into the effects of public debt accumulation. The long-term economic effects of high public debt levels are crowding out investment, causing unemployment and increased inequality. While some of the mechanisms of dealing with high public debt levels don't have their place in the classical economic literature, they are a part of the anticrisis mechanisms of indebted countries.

Key words: public debt, deficits, short-run, long-run, odious debt, monetizing public debt

---

<sup>1</sup> Integrated Business Faculty

<sup>2</sup> Integrated Business Institute

## 1. Introduction

In the economic literature the issues of debt and deficits are correlated to the global economic conditions. During economic expansions, maximizing the rate of GDP growth and improving and maintaining high living standards are the most abundant titles of journal articles. It is only during economic recessions that the issues of high levels of debt, deficits, and the economic consequences they bring resurface.

Debt, as an economic term has two meanings. If used wisely and moderately it can improve welfare. If the borrowed funds are used for productive causes, that will bring higher returns and eventually increase GDP growth.<sup>3</sup> However, if the incurred debt is used for nonproductive causes, when the obligations mature it can create repayment problems. Usually when the government debt is a repayment concern, the taxpayers bear the consequences.

Since the commencement of the economic crisis, the EU and Eurozone member states face tremendous pressures from the financial markets in their quests for lowering the public debt levels. The overall debt of the 17 member states part of the Eurozone in 2007 was 59% of GDP. In 2011 the overall public debt levels rose to 82,5% of GDP. The budget deficit of the Eurozone member states was 0,9% of GDP in 2007. In 2011 the budget deficits rose to 4,4% of GDP.<sup>4</sup> Understanding the importance and the implications of the terms public debts and deficits is of crucial importance for maintaining a sustainable economic future for the Eurozone member states, especially in periods of economic downturn.

The paper presents the short and long-run economic effects of the accumulated budget deficits and high public debt levels. Additionally the paper covers unconventional economic issues connected to high public debt levels. Parts 2 through 4 offer a general notion about budget deficits and public debt, and provide an in-depth analysis of their economic effects. is presented. Part 5 offers an insight into unconventional policies in combating high debt levels. Part 6 introduces the concept of odious debt.

---

<sup>3</sup> Cecchetti, S. G, Mohanty, M. S., Zampolli, F., “The Real Effects of Debt”, September 2011, The Bank of International Settlements (BIS)

<sup>4</sup> Eurostat Database, [www.ec.europa.eu/eurostat](http://www.ec.europa.eu/eurostat)

## 2. The Economic Reasoning Behind Budget Deficits

The conventional wisdom holds that budget deficits crowd out capital, lower the living standards for future generations, and reduce national income.<sup>5</sup> Budget deficits occur in case the government is unable or unwilling to balance the net receipts and net expenditures. Budget deficits aren't troublesome as an economic phenomenon. They are the result of a bookkeeping technique. However persistent, and especially constantly increasing budget deficits have a negative effect on the key macroeconomic parameters.

Government deficits present a stock, while debt is a flow.<sup>6</sup> Government deficits aren't hazardous to the economy in the short run, however their accumulation leads to rising debt levels, which ultimately may lead to an economic recession.

As the standard definition goes, deficit is defined as the difference between total current government spending and total current government revenue. Macroeconomic textbooks present the identity (1) as the main relation between the public debt and the deficits.<sup>7</sup>

$$D_t = G_t - T_t \quad (1)$$

This is called primary deficit.

$$B_t = B_{t-1} + D_t \quad (2)$$

From Identity (2) we can derive the equation for current debt levels:

$$B_t = B_{t-n} + \sum_{i=0}^{t-n} D_{t-i} \quad (3)$$

$$SFA_t = (B_{t-1} - B_t) - D_t \quad (4)$$

The calculation performed in equation (4) is called a debt-deficit adjustment. Temporary debt-deficit adjustments tend to cancel out over time. However persistent adjustments should give causes for concern.<sup>8</sup> Identity (4) shows that a positive debt-deficit adjustment occurs when the public debt rises more in period (t) - (t-1) than the budget deficit

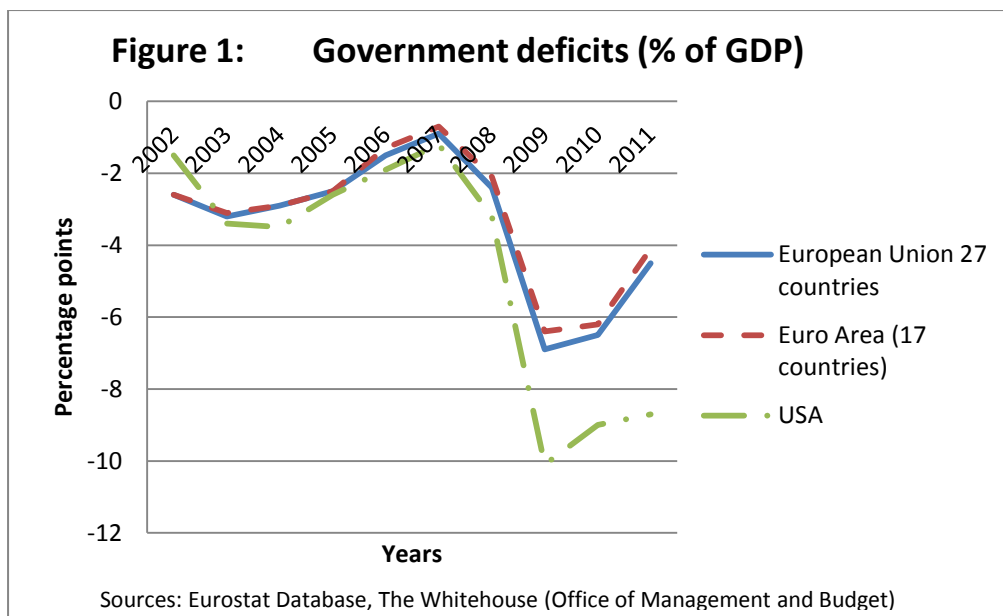
<sup>5</sup> Ball, L., Elmendorf, D., W., Mankiw, N., G., "The Deficit Gamble", 1995, NBER, Working Paper No. 5015

<sup>6</sup> Atanasovski, Z., "Public Finance", 2004, Faculty of Economics, Skopje, pg. 297

<sup>7</sup> Hagen, v. J., Wolff, B., G., "What do Deficits tell us About Debt? Empirical Evidence on Creative Accounting with fiscal rules in the EU", Series 1: Studies of the Economic Research Centre, No 38/2004

<sup>8</sup> Ibid

in period (t). High and persistent debt-deficit adjustment levels point to an inconsistent and dubious mechanism of calculating budget deficits.



In Figure 1, the cyclical pattern of the budget deficits of the EU-27, Eurozone-17 countries and the USA is evident. The three curves follow a similar pattern, gradually repairing budget deficits during economic expansions, while sharply declining since the start of the economic crisis, with a slow signal of recovery. The reasons behind the larger budget deficit incurred by the USA are the three episodes of quantitative easing conducted by the Federal Reserve Bank in the past 5 years. On the other hand, the EU and Eurozone member states are combating the recession by adopting an austerity policy, with some expansionary elements that has yet to be proven effective. Part of the large deficit increase is due to the effect of the automatic stabilizers of the economy.<sup>9</sup>

In analyzing the effects of budget deficits on the economy it is important to distinguish between the short-term and long-term effects. Additionally what is even more important the changes in the short and long-run tend to be contradictory. In the short-run government deficits have no effect on macroeconomic indicators. This implies that a higher budget deficit should be encouraged. Higher budget deficit stimulates the economy, since it

<sup>9</sup> Dolls, M., Fuest, C., Peichl, A., "Automatic Stabilizers and the Economic Crisis: US vs. Europe", (2010), NBER, Working Paper No. 16275

can be achieved either through higher government spending, or through lower government revenues (taxes). Either way, it increases aggregate demand and stimulates the economy.

Identity (3) offers the standard view of the long-term effects of government deficits. The accumulation of government deficits leads to a persistent increase in the level of debt. This in turn has plenty adverse effects on the economy. As we will see later on in this paper there is a possibility, outside of conventional wisdom, to use the previously mentioned short-run strategy of dealing with deficits, and increase the standard of living without any long-run problems.

### **3. Public Debt Persistence – Depression Economics**

A number of advanced and developing countries are having troubles at the moment maintaining and lowering the debt levels. The economically prosperous past 3 decades, with only sporadic shocks to the global economy, lead to a surge in economic growth. In order to use the momentum stimulate higher economic growth, countries entered the financial markets and borrowed funds extensively. Capital flows moved from the countries with excess to the countries with a shortage of capital. The debt levels rose to historic high levels, uncharacterized during peacetimes before. This led to the resurrection of the Minsky Moment which caused borrowers to trust this flow of economic prosperity and not realize some of the bad loans they've made.<sup>10</sup>

Once the Great Recession hit the world economy, global economic conditions changed significantly. A number of banks bankrupted and the taxpayers eventually carried the burden of supporting the economic recovery. High public debt levels cause an increase in the bond spreads of the indebted countries, depending on the type of public debt incurred. Domestic public debt has a lower effect on the foreign financial markets country performance than external public debt.

Increasing levels of debt create a phenomenon called debt overhang. Krugman (1988) defines debt overhang as a situation where the debt repayment falls short of the contractual value of the debt. A hypothesis developed by Rogoff and Reinhart (2010,2012) drawn from

---

<sup>10</sup> "Beyond the Minsky Moment – What We've Been, Why we Can't Go Back, and the Road Ahead for Financial Reform", April 2012, Levy Economics Institute of Bard College

extensive empirical research, points to a debt overhang level of 90% as being critical for a country. Public debts beyond this level are unsustainable and the risk of default is pretty high.

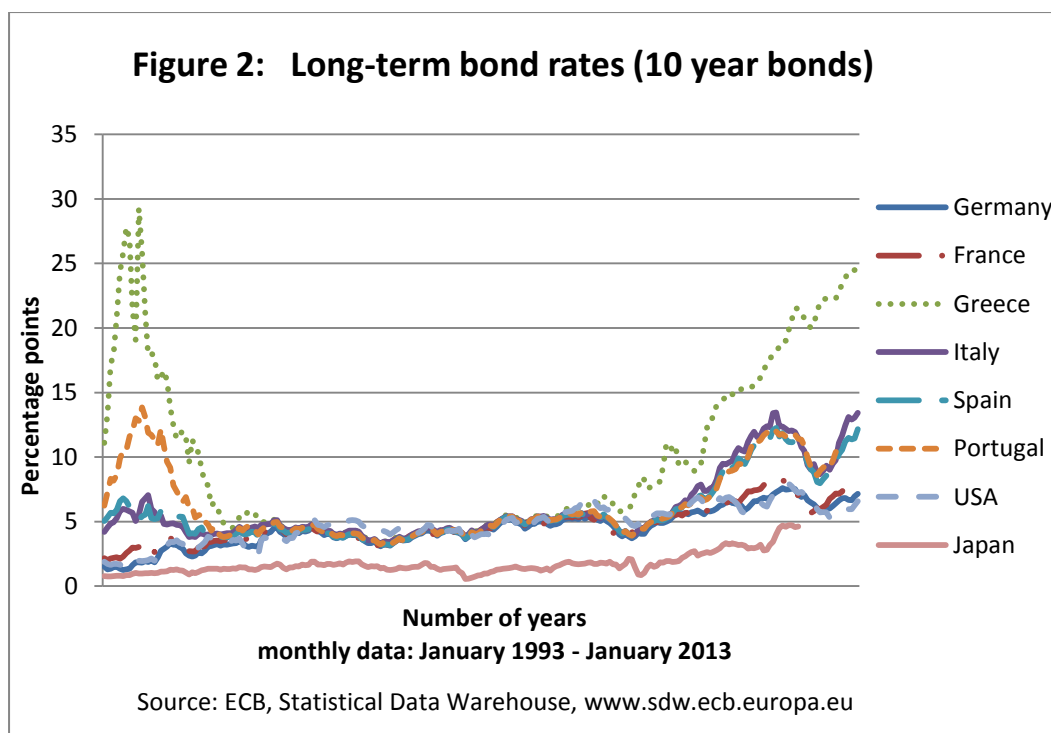


Figure 2 presents the monthly long-term bond rates of 8 countries from January 1993 until January 2013. The curves are correlated, and follow similar patterns, since the bond markets and prices are influenced by the same factors globally. The long-term bond rates are determined as a sum of short-term bond rates and investors expectations of future interest rates. As seen from the graph long-term bond rates spike twice during the past 20 years: during the 1993-1994 period and after 2007 during the economic recession. The 1993-1994 bond market rally occurred because of several factors. First there was a sequence of previous events: 1987 stock market crash, the 1990 Gulf war and the 1992 European exchange rate mechanism turbulence.<sup>11</sup> Besides these pre-occurring events, at the beginning of 1994 several apparently unrelated events occurred that caused investors to lose their confidence in the bond market: investors began to question Japanese programme of acquiring Japanese government bonds; USA Federal Reserve Bank tightened its monetary policy by 25 basis

<sup>11</sup> Borio, E. V. C., McCauley, N. R., “The anatomy of the Bond Market Turbulence of 1994”, BIS Working Paper No.32

points, with reports that the tightening will continue; the breakdown of Clinton-Hosokawa open trade negotiations; the markets responded negatively to the decline of the discount rate while the repo rates remained unchanged.<sup>12</sup>

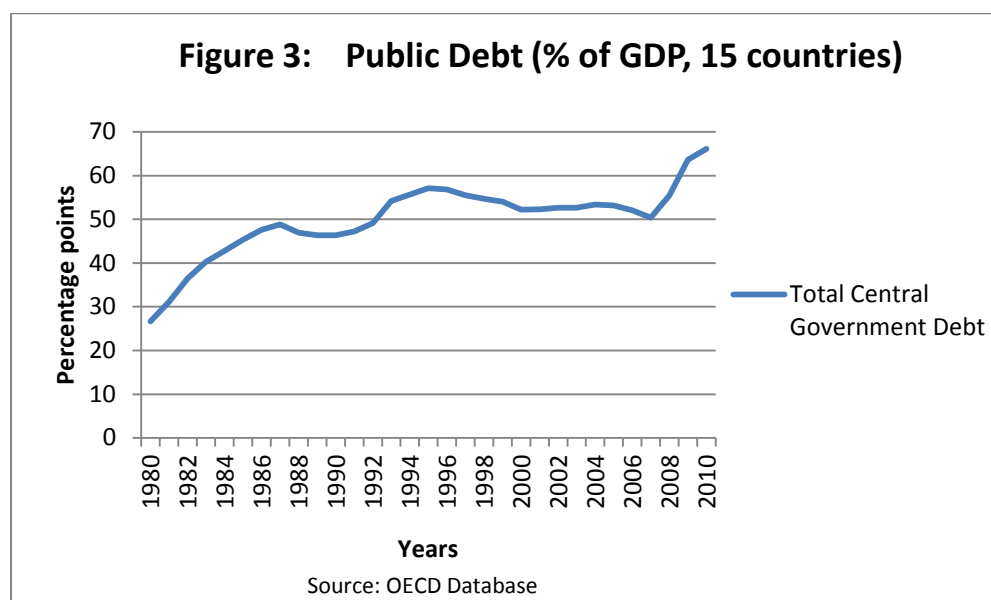


Figure 3 presents the Total central government debt (% of GDP) of 15 OECD member countries.<sup>13</sup> The 15 countries are chosen based on the data available. The omission of several highly indebted countries from this analysis is due to the lack of suitable data. We took simple averages in the period of 1980-2010 and calculated the average central government indebtedness of the OECD member countries. A noticeable upward trend points to the fact that government debt has increased overall in the past twenty years. However the rate of debt increase varies from one period to the next. In the 1980's the debt levels increased rapidly. This period was characterized by economic expansion, and increased debt levels weren't worrisome at all, in fact they lead to higher economic growth for the indebted countries. In the early 1990's a period of deleveraging occurred, when countries had efforts to lower their debt levels. Then the average debt levels remained constant for a decade, finally reaching their lowest point in the pre-crisis periods. Now this is extremely important point, illustrated by this graph and debated by economists. Some economists argue that the pre crisis central

<sup>12</sup> Recent Developments in Bond Markets, A Report to the Ministers and Governors by the Chairman of the Group of Deputies, April 1994

<sup>13</sup> The 15 countries are: Australia, Austria, Belgium, Denmark, Germany, Iceland, Italy, Japan, Korea, Mexico, Netherlands, Portugal, Spain, Sweden, United States.

government debt levels for the countries that are hit the hardest from this economic crisis were low on average. It is since the beginning of the crisis and the investor pressures that these debt levels skyrocketed. Spain's central government debt level was extremely low, only 33,7%, while Italy's debt level was 98%. Although high, this is close to the hypothesis of debt overhang levels, which holds that debt above 90% decreases economic growth drastically, and increases the probability for default.<sup>14</sup> Since the recession started in the first two years (as presented on the graph) government debt increased significantly.

#### **4. The Economics Effects of Public Debt**

Debt creates many adverse effects on the economy, if it is above some threshold value. Minor, sustainable levels of debt have both positive and negative effects on the economic performance of the economy. Borrowing increases present consumption, thus creating an intertemporal effect. This is why most of the models analyzing different types of debt, have intertemporal characteristics. A rise in public debt, will eventually make future generations richer in human and productive capital, while a transfer from future to present consumption can raise society's intertemporal welfare. Additionally debt creates liquidity benefits, in the forms of easier credit conditions for households and companies, and in this way crowding in private investment.<sup>15</sup>

However, the accumulation of debt has its risks. As debt levels rise, borrowers become increasingly vulnerable to income changes, as their main source for repayment of the debt obligations. Consider the example of a highly-leveraged company. If a company has a leverage level of 95%, if the price of its assets falls by more than 5%, the company is experiencing severe defaulting problems and insolvency. The same is true for public debt. Even a mild shock to an indebted economy can produce severe default problems. Once investors realize these issue, they will demand higher interest rates as a compensation for the higher risk, and eventually if the debt problems grow further, they will stop lending to the particular economy.

---

<sup>14</sup> Reinhart, M. C., Reinhart, R. V., Rogoff, S. K., "Debt Overhangs: Past and Present", (2012), NBER, Working Paper no. 18015

Reinhart, M. C., Rogoff, S. K., "A Decade of Debt", (2011), NBER, Working paper no. 16827

<sup>15</sup> Michael Woodford, 1990. "Self-Fulfilling Expectations and Fluctuations in Aggregate Demand," NBER Working Papers 3361, National Bureau of Economic Research



When analyzing the effects of debt, a similar pattern is utilized as in the analysis of the effects of deficit. The analysis is conducted both in the short and long run.

In the short – run the economy is Keynesian.<sup>16</sup> The government in the short-run can increase the debt by increasing the government deficit. Let's consider that the government decides to keep government spending constant, and decrease the tax rates. This will leave a larger sum of money in the hands of the households and companies, so it will increase aggregate spending and demand in the economy. The increase in aggregate demand raises national income. Higher national income maximized the utilization of production capacities in the economy.<sup>17</sup> So the Keynesian view encourages higher levels of debt in the short-run.

In the long-run the economy is neo-classical. In the long-run only the supply of factors of production, and their productivity affect the national income. The Private Sector Budget Constraint is given by:

$$Y = C + S + T \quad (5)$$

GDP when presented as an identity of four types of spending is presented as follows:

$$Y = C + I + G + NX \quad (6)$$

$$S = Y - C - G \quad (7)$$

This identity states that national saving must equal investment in a closed economy.

Combining (6) and (7) yields:

$$S + (T - G) = I + NX \quad (8)$$

Identity (8) states an obvious fact. In an open economy, the national saving must equal the sum of investment and net exports.

$$CA = EX - IM \quad (9)$$

The current account must equal the negative of the capital account, thus:

$$CA = NFI \quad (10)$$

---

<sup>16</sup> Elmendorf, W.,D., Mankiw. N. G., "Government Debt", NBER, Working Paper 6470

<sup>17</sup> For additional references to the Keynesian school of economic thought refer to Keynes, J. M. "The General Theory of Employment, Interest and Money", 1936

Substituting (10) in (8) gives us:

$$S + (T - G) = I + NFI \quad (11)$$

This identity identifies the uses of national saving for investment purposes domestically or in foreign countries. If a government deficit (a decrease in  $(T-G)$ ) occurs, the identity can be satisfied in three ways: Private savings should increase, or domestic investment may decline, or foreign investment may decline. Reduced domestic investment means lower output, increased unemployment, and increased poverty. Reduced foreign investment means lower levels of capital owned by domestic residents abroad. An important point is that reduced foreign investment doesn't automatically lead to a decline in net exports.<sup>18</sup> Krugman and Obstfield give a mathematical description of why this isn't regularly the case:<sup>19</sup>

$$S^p = I + CA - S^g \quad (12)$$

$$S^g = G - T \quad (13)$$

$$CA = S^p - I - (G - T) \quad (14)$$

What this identity shows is that as government deficit rises, and private saving and investment remain unchanged, the current account surplus decreases. However if  $\Delta S^p = \Delta(G - T)$ , then the current account balance will remain unchanged. So twin deficits do occur, however it is not a rule that happens always under every circumstance.

Government debt affects monetary policy. Higher debt levels lead to higher interest rates, which in turn force the Central Bank to act and lower interest rates through expansionary measures. In the long run, this increases inflation. Persistent government debt in the long run increases the inequality in society, because of the intertemporal transfer of wealth. Additionally long-term government debt leaves the country vulnerable to economic crisis.

---

<sup>18</sup> This is known in the economic theory under the term "twin deficits". For more literature on this subject check: "Understanding the Twin Deficits: New Approaches, New Results", (2005) FRBSF Economic Letter, No.2005-16; Frankel, J., "Could the Twin Deficits Jeopardize US Hegemony", (2006), Journal of Policy Modeling

<sup>19</sup> Krugman, P., Obstfield, M., "International Economics", (2003), 6<sup>th</sup> Edition, Pearson

## 5. Public Debt, the Central Bank and Inflation

The quantity and term structure of the government bonds issues are conditioned by several macroeconomic factors. Debt issues affect the price level, interest rates, macroeconomic policy and the rate of economic growth. The Stability and Growth Pact signed by all EU Member States, and its Reform of 2005, included criteria for establishing a fiscal policy in each state that will keep the budget deficits to a 3% threshold, and the debt/GDP at 60%.<sup>20</sup>

The Central Bank, as an independent institution in the financial system, is responsible for regulating the quantity of money in the economy, and keeping the economic conditions stable. In the case of government bonds there is no such institution that independently monitors the indebtedness; the decision-making power is solely in the hands of the Ministry of Finance.

The main task of the Central Bank is to regulate the quantity of money in the economy and adopt policies that will ensure long-term currency stability. The majority of Central Banks successfully complete the task of creating and maintaining stable price levels and currency stability. There have been examples in the past and in the present of Central Banks which under government influence print additional quantities of money in order to achieve growth and lower the debt levels through increasing inflation. These episodes have proven fatal for the economies which took large periods for economic recovery. This is why the independence of the functioning of the Central Bank is crucial for maintaining successful financial system.

The “Age of inflation” term was constantly under review in the 1950’s and 1960’s, while economists feared that post-World War II prosperous economic periods could be disrupted if inflation was not properly tamed.<sup>21</sup> The global economy in the past two decades faces the “Age of issuing government debt” and all the consequences caused from irresponsible behavior and accumulation of debt.

The monetary and fiscal policies should be simultaneously conducted in order to ensure economic stability and prosperity. The consequences of the public debt are different

---

<sup>20</sup> Todorovic, M., Bogdanovic, J., “The European Union Debt Crisis and the Eurozone’s Survival”, 2011, Ed. 8, pg. 165-180

<sup>21</sup> Sennholz, H. F., “Age of Inflation”, 1979, Western Islands, ISBN 0882792342

depending on the term structure of the debt. The effects differ additionally based on the purpose of utilization of these borrowed funds. Negative consequences occur when the borrowed funds are used for covering budget deficits and present consumption.

The debt levels have a number of various effects depending on whether the public debt is domestic or external. Currently the United Kingdom and Japan have high public debt levels, but owed mostly to domestic investors and a sovereign currency and monetary policy. Bearing in mind that the interest rates are formed in the domestic markets, the government bond rates are less vulnerable to foreign financial market pressures. On the other hand the countries that owed money to foreign creditors and didn't have their own sovereign monetary policy suffer enormous consequences from the economic recession. Greece faced liquidity problems, as there was no demand for their government bonds, thus making them highly dependent on debt restructuring packages and foreign aid. Spain and Italy reached government bond rates of around 7%, which caused market panic, since levels above this threshold value weren't sustainable for these two economies.

## **6. Extreme levels of debt**

Extremely high levels of debt can occur both to advanced and emerging market economies. The adverse effects of short and long-run accumulation of public debt were discussed in the previous parts. In the next two parts the research is broadened to include additional views, rarely present in conventional macroeconomic literature concerning public debt and deficits.

Extreme debt levels usually crowd out capital, create unstable political situation, sometimes decrease net exports, increase inflation, increase unemployment, cause deadweight losses from additional taxation of the economic sectors. However drastic sanctions of dealing with extreme levels of debt will only place additional pressure on the economic performance.

One such measure is monetizing the public debt, which refers to the concept of covering high debt levels by printing money. This is the main cause for hyperinflation. Printing money, with no excess demand will cause higher inflation. This will lower the debt amounts paid in the domestic currency; however the debts paid in a foreign currency will remain unchanged. Additional printing of money will put additional inflationary pressures.

Once entering an inflationary spiral of this kind, it will require lot of suffering and years of lost economic progress in order to restore normal inflationary expectations.

In recessionary economic periods, highly indebted countries are more vulnerable to a debt crisis. However which country will be affected remains at the power and estimation of the financial markets. One important factor that leads to higher resistance at high debt levels is the organization and structure of the economy. Some economies, despite entering into a debt crisis have developed industries; developed financial markets, sovereign fiscal and monetary policy and stable political conditions. These countries, despite the debt crisis, gain the investor's confidence that they will be able to work out a path to lower their debt levels. Even if they don't provide immediate results, the investors tend to remain confident that the debt levels they have, are still sustainable based on the economic performance and potential of these countries.

Another concept connected with debt, and fundamental for the economic literature is the Ricardian equivalence. The Ricardian argument is opposite to the short-term analysis of debt we proposed in Part III. It states that short-run government policy of enhancing economic growth through increasing the budget deficits will not increase consumption and growth. This argument postulates that lower taxes today (an increase in the budget deficit) will only lead to higher taxes in the future. If consumers are aware that lower taxes today, will lead to increased taxation tomorrow, when the deficit will have to be decreased, they will not increase consumption today. In fact they will save, so that they can cope with the tax increases in the future. This will depress the economy both in the short and long-run. (Barro, 1974)

## **7. Odious Debt**

Since the beginning of the many wars in the 20<sup>th</sup> and 21<sup>st</sup> Century, a new legal framework for dealing with debt has been developed. One of the first authors to ever address the concept of debt as "odious" is Sack (1927, 1929) stating that if a regime indebts certain country for their own needs to remain on power, not for the wellbeing of the State, and without the consent of the people in the country, than this debt is considered odious debt. Other authors characterize odious debts as incurred by developing world countries, which are irresponsibly spent (Khalfan et al, 2003). However there is evidence that even before the

invention of the concept as such, there were war debts incurred by developed countries that were later on restructured or forgiven.

The classical types of odious debt are hostile debts and war debts.<sup>22</sup> Hostile debts are debts incurred in peacetimes. These debts typically characterize with borrowing by the regime in order to “win over the people”, and strengthen its power by offering popular policy measures that fail to pass the necessary social cost-benefit analysis. The war debts are debts incurred for funding military actions, and the victorious countries are unwilling to repay the debts.

There have been numerous cases throughout history in which the case for odious debt has been invoked by different states in practice:

- Probably the earliest case of odious debt was the refusal of the USA to pay pre-annexed debt obligations to the State of Texas in 1844, which were paid on pro rata basis later on in 1855.
- After the Revolution in 1917, the new Soviet Government refused to repay the previous debt incurred by the Tsar, considering it to be individual debt, and thus odious (Sack 1929:68)
- In 1922, Costa Rica Enacted a law with which it refused to repay the loans to the Royal Bank of Canada, that were incurred by the previous dictatorship regime of Federico Tinoco, thus invoking for the first time the concept of odious debt in relation to a private company (in this case a Bank). This spurred a series of controversies and different opinions about the righteousness of this move. Meron et al (1957) state that in order for the debt to be considered odious, there has to be an approval from the jurisdictions of both states in question. Another view connected to this case is that the concept of odious debt is flexible enough to include debt that is only partly odious (Buchheit et al 2006).
- One of the most recent events where odious debt was invoked was after the government of Saddam Hussein in Iraq was overthrown. Adams (2004) states that all debts connected to financing a dictatorship regime and military actions should be considered odious, and thus forgiven. USA eventually did overthrow the debt obligations from Iraq, but not because of being illegitimate, instead because of

---

<sup>22</sup> Howse, R., “The Concept of Odious Debt in Public International Law”, (2007), No. 185

long-term sustainable debt issues. However this is considered to be more of a political decision, having the same outcome.

### **Economic Implications of Odious Debt**

The Economic Implications of a legal decision to claim certain debt obligation as odious imposes additional aspects to the classical economic view of the concept of debt. Debt as such isn't essentially a bad concept. The causes and uses of the funds acquired through debt determine the usefulness of the debt.

A country providing funds to another country is giving up of its present consumption in order to increase its future consumption. A country can be a lender if it has extra funds to lend, and lending them to another country is safer than placing them in the financial markets. The extra funds are acquired through additional saving by its residents. Increased saving today means increasing future investment and consumption, thus increasing the economic growth additionally. Now if a country lends its savings to another country, and the debtor eventually refuses to pay them back, this means that the lender has willingly or unwillingly given up of these funds both in the present and in the future. Thus the concept of odious debt lacks conventional economic reasoning, and thus it is not acceptable in the economic theory as such.

The odious debt as such has implications on the debtor country as well. A country that refuses to pay its debt for whatever reason is not considered reliable anymore. As we have previously discussed the positive aspects of debt, it is important to note here that the country's accession to foreign financial markets is limited (if it is even present in the first place). Its companies are also put under the loop and regarded pessimistically in all foreign deals that they participate. Thus it is a huge process of restructuring and restoring faith of the markets, before such countries return to the global economic scene.

## **Conclusion**

Debt is merely a financial instrument, allowing the borrowing of sums of money utilized for various purposes. The economic effects of debt arise from its purposes. If it is used for productive causes, the debt causes an inter-temporal increase in the transfer of wealth from the present to the future generation. However non-productive debt utilizations causes adverse effects to the economy.

Budget deficits are stock, while the public debt is a flow. The yearly increase in public debt is a result of the net change in budget deficits. The government in the short-run can increase the debt by increasing the government deficit. By keeping government spending constant and decreasing the tax rates, a larger sum of disposable income will be left in the hands of households and businesses.

In the long-run the accumulation of public debt crowds out investment and capital, lowering the consumption and investment levels of future generations, while raising unemployment levels. The long-run non-economic effects of public debt include political instability, adoption of unconventional policies in battling the debt levels, and inequality.



## References:

1. Cecchetti, S. G, Mohanty, M. S., Zampolli, F., “The Real Effects of Debt”, September 2011, The Bank of International Settlements (BIS)
2. Ball, L., Elmendorf, D.,W., Mankiw, N., G, “The Deficit Gamble”, 1995, NBER, Working Paper No. 5015
3. Atanasovski, Z., “Public Finance”, 2004, Faculty of Economics, Skopje, pg. 297
4. Hagen, v. J., Wolff, B., G., “What do Deficits tell us About Debt? Empirical Evidence on Creative Accounting with fiscal rules in the EU”, Series 1: Studies of the Economic Research Centre, No 38/2004
5. Dolls, M., Fuest, C., Peichl, A., “Automatic Stabilizers and the Economic Crisis: US vs. Europe”,(2010), NBER, Working Paper No. 16275
6. “Beyond the Minsky Moment – What We’ve Been, Why we Can’t Go Back, and the Road Ahead for Financial Reform”, April 2012, Levy Economics Institute of Bard College
7. Borio, E. V. C., McCauley, N. R., “The anatomy of the Bond Market Turbulence of 1994”, BIS Working Paper No.32
8. Recent Developments in Bond Markets, A Report to the Ministers and Governors by the Chairman of the Group of Deputies, April 1994
9. Reinhart, M. C., Reinhart, R. V., Rogoff, S. K., “Debt Overhangs: Past and Present”,(2012), NBER, Working Paper no. 18015
10. Reinhart, M. C., Rogoff, S. K., “A Decade of Debt”,(2011), NBER, Working paper no. 16827
11. Michael Woodford, 1990. "Self-Fulfilling Expectations and Fluctuations in Aggregate Demand," NBER Working Papers 3361, National Bureau of Economic Research,
12. Elmendorf, W.,D., Mankiw. N. G., “Government Debt”, NBER, Working Paper 6470
13. “Understanding the Twin Deficits: New Approaches, New Results”,(2005) FRBSF Economic Letter, No.2005-16
14. Frankel,J., “Could the Twin Deficits Jeopardize US Hegemony”,(2006), Journal of Policy Modeling
15. Krugman,P., Obstfield, M.,”International Economics”,(2003), 6<sup>th</sup> Edition, Pearson
16. Todorovic,M., Bogdanovic, J., “The European Union Debt Crisis and the Eurozone’s Survival”, 2011, Ed. 8, pg. 165-180
17. Sennholz, H. F., “Age of Inflation”, 1979, Western Islands, ISBN 0882792342
18. Howse, R., “The Concept of Odious Debt in Public International Law”, (2007), No. 185

\* \* \*

\* \* \*