EUROPE IN CRISIS,
WHAT WITH DEBTS AND WHAT NEXT?
EUROPE IN CRISIS, WHAT WITH DEBTS AND WHAT NEXT?
Europe in crisis, what with debts and what next?

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The second issue of analytical *Policy Studies* series published by CEVRO Institute Academic Press is devoted to the issue of debt. It is a currently debated hot topic, which the authors are trying to introduce by using non-technical language, stressing the visual capture of main trends and variables, very much like in the previous publication “To pay or not to pay in euro”. Each of the authors chose a slightly different approach in order to point out neglected aspects and connections and thus reveal their new views on current issues to the creators of economic policies, journalists and the general public.

Andreas Hoffmann from the Institute for Economic Policy Studies at Leipzig University analyses in his text similarities and differences between the functioning of euro today and the gold standard in the 19th century and the beginning of the 20th century. He claims that given the strong political commitment of countries to the euro project, the essence of both systems do differ. According to Hoffmann, states lack the option to “jump out” of euro and go back to their original currencies, using them to get out of the crisis through currency depreciation. At the same time, addressing the current structural crisis through zone transfers across states discourages necessary structural reforms.

Josef Mládek from the Prague School of Economics examines side effects and unintended consequences of expansionary monetary policies of developed world central banks on the development of emerging economies. It shows how these policies have promoted rapid growth of debt, commodity boom and pro-cyclical investment development. He states that the current development in this part of the world is unsustainable and predicts that Europe’s troubles will soon move to these countries.

In the final article, Václav Rybáček (CEVRO Institute and the Czech Statistical Office) draws attention to the interdependence of private and government debts. He shows that the standard division of debt is misleading as all debts are essentially private and that due to their volume the only way how to cover them is by inflation.

All articles of this issue underline the importance of studying economic policy and I believe it will be much appreciated not only by the students of new “Economic Policy” field at CEVRO Institute, but also by the general public.

Professor Josef Šíma, Ph.D.
Rector
CEVRO Institute College
THE EURO AS A PROXY FOR THE CLASSICAL GOLD STANDARD?
GOVERNMENT DEBT FINANCING AND POLITICAL COMMITMENT IN HISTORICAL PERSPECTIVE

Andreas Hoffmann
Andreas Hoffmann is an assistant professor at Leipzig university in Germany. His research focus is on international finance, monetary policy and financial crises.

1 INTRODUCTION

In spite of the recent troubles in the euro area, Jesus Huerta de Soto (2012), a famous proponent of the gold standard, argues that the euro should be considered a “second best to the gold standard” and is worth being preserved. From a classical liberal point of view, he sheds some light on the euro’s similarities with the gold standard and on some important advantages of the currency union over its alternative, flexible exchange rates in Europe.

According to Huerta de Soto (2012), the main advantage of the introduction of the common currency is that – like when “going on gold” – European governments have given up monetary nationalism. Like the gold standard, the euro limits state power as it prevents national central banks from manipulating exchange rates and inflating away government debt. Currently, he argues, the common currency – like previously the gold standard – forces important reforms and/or spending cuts upon the countries of the euro area that face severe debt and structural problems. In this respect, the euro should be seen as “a proxy for the gold standard”.

In this policy paper, I attempt to address some similarities and differences in the institutional framework of the classical gold standard (1880–1912) and the European Monetary Union (EMU) (1999–) that affect government debt financing and the way in which countries react to crisis.
I argue that – in line with Huerta de Soto (2012) – giving up monetary nationalism and committing to the rules of either the gold standard or EMU initially restricted the scope of state action. Therefore, the euro – like previously the gold standard – provided some (fiscal) policy credibility. Fiscal policy credibility was the main determinant of capital market integration and low government borrowing costs in Europe under both systems.

But in contrast to Huerta de Soto (2012), I shall emphasize that neither the gold standard, nor the euro itself force reforms and spending cuts upon countries that face crisis and debt problems. The political commitment to the monetary systems determines the willingness to reform or cut spending and therewith fiscal policy credibility in crisis periods:

During the period of the classical gold standard, the political commitment was one-sided. If countries wanted to adhere to the gold standard in times of crisis, credible policies and reforms were urgent. When such policies seemed too unpleasant or politically unfeasible, governments left the gold standard. A country had to be fully committed to the mechanisms of the gold standard to be able to stay on gold. For instance Portugal went off the gold standard in 1890–1 when deflationary pressure rendered high levels of debt unsustainable.

In contrast, in the euro area, the greater institutional integration and the general European political commitment to the European project and the euro allowed for rescue measures and policies that relieve the immediate adjustment pressure during the latest crisis (that crisis countries certainly face when they cannot devalue the currency). This provides incentives to hold on to the euro even if necessary reforms are postponed. The bail-out mechanisms used to contain the crisis have rather strengthened the general political commitment to the euro and contributed to additional institutional integration. Therefore, I argue that – so far – over the course of the crisis, the euro has become less a “proxy for the gold standard” than it was before.

While I concur with Huerta de Soto (2012)’s assessment that a return to monetary nationalism is unlikely to be an accelerator of market friendly reforms in crisis economies, the often discussed move towards fiscal union might be even more problematic and risky. The credibility of the euro area as a whole might be undermined if, for example, permanent fiscal transfers allow to delay necessary reforms and postpone the fiscal consolidation.

2 INSTITUTIONAL SET-UP

Huerta de Soto (2012) argues that the euro can be regarded as a proxy for the gold standard. In both cases, countries have given up monetary sovereignty in favor of
a common standard or currency. However, substantial differences can be found in the institutional set-up of and the political commitment to the gold standard and euro.

### 2.1 Classical Gold Standard

The classical gold standard was not a centrally planned project. While governments felt the need for a monetary standardization, for example, as a means to promote trade in the 1860s, there was no common ground among governments about which standard to choose (Eichengreen and James 2003, Flaundreau et al. 1998).

There are several economic reasons why gold made the race during the 1870s–80s. Most importantly Britain, the economy with the largest and most liquid capital market of the time, was on gold. Being on gold allowed countries to borrow at lower cost from Britain (Eichengreen and James 2003, Bordo and Rockoff 1996). Moreover, going on gold could increase trade with Britain and other gold standard countries as, for example, transaction costs would fall (Lopez-Cordoba and Meissner 2003). According to Eichengreen and James (2003), the fact that by 1879 Britain, Germany and the United States were on gold, was the final reason for the spread of the classical gold standard. “With the three major industrial countries on gold, a new world order was born” (Eichengreen and James 2003, p. 6). Before World War I, most European countries went on gold and gave up monetary sovereignty in favor of exchange rate stability.

Because the classical gold standard was not a centrally planned project, there were no formal rules or agreements countries on the standard had to obey in order to be allowed on the standard. It is a fact that countries that decided to go on gold were able to abandon gold convertibility whenever they wanted (and did so, particularly before 1895) (Flaundreau et al. 1998). Because they did not give up their own currencies, this was easily possible. Debt was usually denominated in domestic currency, not gold.

While the degree of international integration was high, the countries of the classical gold standard did not form an optimum currency area in the way Mundell (1961) proposed. The gold standard was an imperfect currency area. As today, Germany and Britain differed substantially from Portugal or Greece. Asymmetric shocks regularly occurred and labor markets could only partly accommodate them (e.g. via migration to the United States). Because monetary policy was no longer a tool for countries that went on gold, shocks could only be addressed via domestic fiscal policy or structural adjustment. Therefore, in England the gold standard was seen as only one part of a classical liberal program that consisted of stable money, balanced budgets and free factor movements – the Gladstonian Trinity.
2.2 EURO

In contrast to the introduction of the classical gold standard, the euro area was set-up and planned as an island of monetary standardization within a world of by and large flexible exchange rates and free capital movements. Arguments in favor of euro introduction were mainly political. The introduction of the euro was part of a process toward a European political union. As for the gold standard, economic arguments included benefits from lower transaction costs and a reduction of uncertainty in finance and trade (see De Grauwe 2009).

While countries on the gold standard held on to their domestic currencies, joining the euro area meant to abandon them. To allow for a credible and irreversible introduction of the euro, the European Union (EU) set-up several institutions and did not rely on one-sided commitments of governments to a standard at a point in time. On the one hand, only EU members were allowed to be part of the euro area. Members of the euro area have a common legal basis that they agreed on by joining the EU. On the other hand, the EU introduced institutions to guarantee 1) free trade, 2) stable money and 3) balanced budgets in the 1990s – the very ingredients of the Gladstonian Trinity.

First, the Single Market Act guaranteed free factor movement within the euro area. Second, the ECB was supposed to guarantee monetary stability by its 2 percent of inflation rule. Therewith the ECB provided more stability than most members were used to before the introduction of the euro. Third, the Maastricht treaty, including its no-bail-out clause, and the Stability and Growth Pact were supposed to keep the currency area stable, and contribute to balanced budgets and sustainable finance.

While the euro area is not an optimum currency area, economists maintained that, for example, increased trade would help make it one after its formation (Frankel and Rose 1998). The idea was that as soon as business cycles are fully synchronized, an independent “one-size fits all” monetary policy would be able to address shocks. Here is another difference with respect to the gold standard where monetary policy was completely ruled out. The ECB can respond to potential shocks. But its policy affects all countries. As long as the euro area is an imperfect currency area, the way the euro area was set up, shocks needed to be addressed by domestic reforms and fiscal policies.

3 POLICY CREDIBILITY AND GOVERNMENT BORROWING COSTS

While the institutional framework of the euro area differs to a large extent from that of the gold standard, until 2007 the decline in government borrowing costs within
the euro area mirrors that of the classical gold standard period. During this period, the euro like the gold standard provided some policy credibility. But policy credibility hinges on sustainable fiscal policies and low inflation expectations.

### 3.1 CLASSICAL GOLD STANDARD

The period of the classical gold standard (1880–1913) was characterized by a relatively high degree of international integration, freedom and stability. Close links between international financial centers allowed for substantial capital market integration and international convergence under the classical gold standard.

Giving up monetary sovereignty reduced inflation expectations, and exchange rate stability can be argued to have lowered transaction costs and uncertainty (Obstfeld and Taylor 2003). Consequently, adherence to the gold standard brought down borrowing costs for governments before World War I. In Figure 1, I illustrate the convergence of European government bond yields. Because, for example, Germany, France and Italy credibly maintained convertibility over longer periods without changing parities in the respective period, they can be considered to be the core members of the gold standard. The core members were able to refinance at rates only little above the risk-free British consol rate (Bordo and Rockoff 1996).
Figure 2a: Debt to GDP in Core: 1880–1912

Data: IMF Public Debt Database

Figure 2b: Debt to GDP in Southern Europe: 1880–1912

Data: IMF Public Debt Database
The relatively low long-term interest rates in Britain and other core gold standard countries allowed for substantial capital flows from rich to poor countries that contributed to growth in emerging markets (Schularick and Steger 2010). Even though Russia did not join the gold standard until 1897, Figure 1 shows that Russian bond yields fell as well. And with the turn of the century even interest rate spreads of Southern Europe (here: Spain) declined substantially. Until 1912 all European government bond yields converged.

According to Huerta de Soto (2012), the gold standard “curbs and limits the arbitrary decisions of politicians and authorities. It disciplines the behavior of all the agents who participate in the democratic process.” Figure 2 certainly illustrates that countries that adhered to the gold standard for a long time, the core countries, had lower debt to GDP ratios. In contrast, the Southern and Central and Eastern European countries that were no permanent members of the gold standard, had high levels of debt. So even though there was no fiscal pact between governments, politicians were restricted in fiscal policies.

But the gold standard itself did not provide a safeguard against sovereign debt problems. Investors had easy access to information on political events or data. Therefore, trust in and reputation of policy drove bond yield convergence. In fact, sustained budget deficits were incompatible with low borrowing costs for governments and with the gold standard. Not surprisingly, countries with high debt to GDP ratios faced higher yields even if they were on gold. (Flandreau and Zumer

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**Figure 2c: Debt to GDP in Central and Eastern Europe: 1880–1912**

[Graph showing debt to GDP for Austria and Russia from 1880 to 1910.]

*Data: IMF Public Debt Database*
2004). Similarly, emerging markets were only able to borrow long-term and at declining rates on international markets as long as news and macroeconomic fundamentals were in order (Mauro et al. 2008, p. 10–25).

Among the core countries of the gold standard, debt to GDP ratios differed but converged and had a downward trend as average GDP growth exceeded fiscal deficits. Yet, the ability to raise taxes, economic development and its future prospects may have had a greater impact on the credibility of government finances than the respective stock of debt (Sylla and Wallis 1998).

### 3.2 EU 1996–2007

EMU policy credibility was established by EMU institutions (Porterba and Reuben 2001, Hallerberg and Wolff 2008). Fiscal and monetary harmonization, for example, via the Maastricht Treaty, suggested stable finance and macroeconomic convergence in the near future (see Côté and Graham 2004). Thus, within the euro area capital markets integrated substantially from 1996 onwards when countries tried to fulfill the Maastricht convergence criteria to be ready for euro introduction.

Because expected returns were higher in the European periphery, German savings were, for example, reallocated particularly to Southern Europe. The high interest rates in Southern Europe started to fall toward the German interest rate level. Given investment in Southern Europe until 2006, GDP and wages grew much faster in the periphery economies of the euro area than in, for example, Germany (Figure 3). The capital flows from the EU core countries to the EU periphery were followed by an increase of exports relative to imports. Large intra-European trade and investment imbalances built up (Schnabl and Zemanek 2011). The financial integration was reminiscent of that under the classical gold standard.

Because all euro area economies were considered to have irreversibly introduced the euro (and to adhere to its principles) and macroeconomic convergence was expected banks as well as regulators did not discriminate between government bonds of different countries. Figure 4 illustrates that the introduction of the euro and the abandonment of the national currencies went along with a convergence of European sovereign bond spreads. Only a small spread over the German bund remained. The degree of convergence is quite comparable to the last period of the classical gold standard.

Some may argue that monetary unions in general may reduce the perceived default risk of its member states if investors anticipate that once a member country is in trouble it will be bailed out by other countries or the central bank (Bernoth et al. 2004). With the political commitment and institutional integration in mind, this may have contributed to the convergence of government borrowing costs. The no-bail-out clause may not have been credible.
Figure 3: Wages in Europe: 1999–2012

Data: IMF, International Financial Statistics

Figure 4: Government Bond Spreads in the Euro Area (over German Bunds)

Data: IMF, International Financial Statistics
Additionally, the low world interest rate environment which fed unsustainable credit booms in Southern Europe as well as the new EU member states may have contributed to a perception of convergence and fiscal policy credibility. During the boom period growth rates in the periphery economies of the euro area were artificially high. The credit boom has hidden increases in fiscal spending and put a downward bias on debt to GDP ratios, suggesting more convergence than there really was. Not surprisingly, during the boom period from 2002 to 2006 bond yield differentials in the EMU largely depended on factors such as international risk and the prospects of convergence in, for example, debt to GDP ratios (see e.g. Codogno et al. 2003).

The importance of expectations about the economic performance for fiscal policy credibility can be particularly well documented for the “new” member states of the EU. Even though the Central and Eastern European countries did not become members of the euro area in the late 90s, a similar process as in the “older” member states took place when they opened up capital markets and improved macroeconomic stability in anticipation of EU membership.

For the new member states of the EU, joining the EU meant subsequently participating in EMU. The Central and Eastern European countries accepted the common institutions that were thought to guarantee sustainable fiscal policies. This contributed to an “EU halo effect” on bond yields in Central and Eastern Europe.
Government borrowing costs fell substantially when EU membership was decided (Luengnaruemitchai and Schadler 2007).

During the boom period of the 2000s the catch-up process in Central and Eastern Europe gained extra momentum. Given catch-up expectations, factors that allowed for substantial growth, such as ECB interest rates, had a larger impact on bond yields than current fundamentals (Ebner 2009). Like in Southern Europe buoyant capital inflows and excessive foreign borrowing were reflected in high rates of credit growth and large current account deficits (Égert et al. 2006, Hoffmann 2010). This is particularly true for countries with fixed exchange rates to the euro. The hard pegs, like the gold standard or the euro, seem to have provided additional credibility (Figure 5).

But borrowing costs were not fully independent of the state of fiscal policy. I shall illustrate this by turning to the new EU member states with flexible exchange rates that also agreed to join EMU at a later stage. On the one hand, also Polish, Slovak and Czech government borrowing costs fell substantially with the announcement of EU membership. Given the catch-up expectations, fiscal policy was credible. On the other hand, countries that were known to go through large election cycles like Hungary did not benefit from falling borrowing costs even though they also became members of the EU and adopted the same institutions (Figure 6).

The development of Czech, Polish and Slovak government bond yields is comparable to those of Russia and Austria-Hungary in the 1880s–90s. While Russia and
Austria-Hungary floated against the gold standard currencies until they went on gold in the late 1890s, strong links to gold standard countries, capital account openness and fiscally conservative policies allowed them to borrow at declining rates in international markets. In Figure 2, fiscal prudence shows in falling debt to GDP ratios in Russia from 1884 to 1910 and in the Austrian-Hungarian Empire after the 1890s.

4 SOVEREIGN DEBT PROBLEMS AND POLITICAL COMMITMENT

As the political commitment to the gold standard was one-sided, countries had the choice to either abandon the peg when debt problems became severe or to cut spending and reform rapidly. In the euro area, the general political commitment of the European countries allows countries to hold on to the euro but delay reforms.

4.1 GOLD STANDARD

When it comes to the European experience with the gold standard, Flaundreau et al. (1998) provide an extensive analysis which I shall heavily draw on in this part. They suggest that the ability of countries to adhere to the gold standard largely depended on price movements and fiscal policies.

Because a country on gold did not give up the national currency but rather made it convertible to gold or gold-backed currencies, it was always possible to decouple the national currency from gold in times of crisis. Unlike the major European economies (with falling debt to GDP ratios) that were permanent members of the gold standard, the Southern as well as Central and Eastern European countries went on and off gold. Table 1 provides an overview.

Price movements are an important explanation. Until 1896, the gold standard was rather deflationary because growth in the core countries could not be matched by adequate gold discoveries (Figure 7). Additionally, events such as the Baring crisis contributed to a rise in international volatility in the 1890s as growing risk aversion made British investors discriminate more than before between different borrowers. Consequently, countries that had accumulated high levels of government debt faced fiscal adjustment problems as the deflationary tendencies increased expected future debt to GDP ratio even more and borrowing costs went up.

During the 1880s and early 1890s this was particularly a problem in Southern Europe (Figure 2) but also in, for example Argentina, where deflationary pressure and an increase in borrowing costs undermined central bank independence and with it the credibility of the gold standard. As the commitment to the gold standard was one-sided, countries had to cope with problems by themselves. Britain did not
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Data: Reinhart and Rogoff (2011). 1 means that the country is on the gold standard in the respective year.
Figure 7: Inflation in Europe: 1880–1912

Data: Reinhart and Rogoff (2011), Averages for France, Germany, Greece, Finland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, UK, Austria, Belgium, and Denmark

Figure 8: Number of Countries on the Gold Standard: 1880–1913

Data: Reinhart and Rogoff (2011)
bail-out Argentina or Portugal in the 1890s. Instead, there was the option of rapid reform and austerity, or dropping out.

Now, going off gold usually meant that investors lose money because of a subsequent devaluation of the national currency. They would be hesitant to finance future debt. Thus, there was an incentive to stay on gold, which made necessary reforms and prudent policies. Yet, in 1890–1, Portugal went off gold when pressure on government finances was immense and sustained deficits were out of sight. Portugal devalued the currency and defaulted on external debt. Also Greece was only able to stay on gold for a short period (Flandreau et al 1998) (Table 1).

As a result of deflationary pressure, the number of countries on the gold standard stagnated until the late 1890s (Figure 8). Figure 7 signals that after 1896 inflation was on average positive. Then the gold standard started to spread again to further countries (Figure 8). Giving up monetary nationalism was less costly for countries with higher debt to GDP ratios. Even the countries of Central and Eastern Europe, which were far less developed than the rest of Europe, were able to go on gold during the more inflationary period. The gold standard contributed to a fall in borrowing costs and helped finance their catch-up process in Central and Eastern Europe (Flaundreau et al. 1998).

4.2 EURO AREA AND THE NEW EU MEMBER STATES

Price movements and fiscal problems in the euro area periphery also rendered adhering to the euro’s principles difficult. In 2006, the economies of the euro area periphery (Spain, Portugal, Ireland, Greece and Italy) as well as of the “new” EU member states started to “overheat”. Inflation picked up. Consequently, the ECB raised interest rates to rein in inflation. The interest rate increases dampened the macroeconomic outlook and thereby the stability of the markets in both the periphery of the euro area and the new member states. Asset prices and credit growth stagnated.

Finally, the sudden-stop after the Lehman collapse and the following “Great Recession” turned the world of finance on its head. In the periphery economies of the euro area, credit and housing booms went bust. The US subprime market crisis of 2007–8 contributed to an increase in risk aversion around the world. When liquidity in the large capital markets dried up, emerging markets faced substantial capital outflows and depreciation pressure. The following crisis was followed by large scale bail-outs of private and public banks, and enterprises that put an additional burden on debt to GDP ratios. The bursting bubbles in the euro area periphery disappointed Europe’s prospects of a quick macroeconomic convergence.
Consequently, investors started to discriminate more between different government bonds. The bond spreads reached pre-EMU levels (Figure 9). Discrimination did not only depend on debt to GDP ratios. Otherwise Germany should face greater state financing problems than Spain (Figure 10). But as expectations about future developments, tax revenues or the sustainability of current account balances were revised for the crisis economies, they pushed up government borrowing costs (Barrios et al. 2012, Aßmann and Boysen-Hogrefe 2012).

Huerta de Soto (2012) argues, “the arrival of the Great Recession of 2008 has […] further revealed to everyone the disciplinary nature of the euro: for the first time, the countries of the monetary union have had to face a deep economic recession without monetary-policy autonomy.”

Indeed, in theory, without monetary policy at hands, holding on to the euro makes necessary credible reforms e.g. on labor markets and conservative fiscal policies to regain confidence of markets and lighten up future growth prospects. For instance in Greece the bursting of the bubble revealed that growth during the 2000s was unsustainable. Negative growth rates and declining tax revenues put a drag on fiscal sustainability. Borrowing costs rose.

A tremendous degree of tax evasion and rigid labor markets limit the scope of action for governments to lean against the fiscal drama and prevent the quick
adjustment and rebound of the Greek economy. Therefore, for the Greek government public spending cuts were the only solution. This is particularly hard in a deflationary environment that adds to the debt mountain. In Greece spending cuts may not have been conducive to lowering deficits as growth slowed down further and a downward-spiral set in (De Grauwe and Ji 2013). Here, the European experience with the gold standard and euro are similar once more. With deflationary pressure or sustained negative GDP growth, governments are in a trap when debt mountains slide out of hands. As the level of debt to GDP continues to increase, fiscal policy lost its credibility.

If Greece was on the gold standard, it would probably cut the ties to gold, devalue the domestic currency and default on external debt like Portugal in 1890–1. In contrast, the members of the EMU feel obliged to stick to the euro. If this was the full truth, the euro would be a stronger engine for reform than the gold standard ever was. Greece would have to do what it can to liberalize labor markets quickly and get rid of bureaucracy that prevents setting up companies, or otherwise sink in chaos.

But the commitment to the euro is not one-sided. There is a general political commitment to the euro and the European integration process. Therefore, e.g. the
ECB is pushed into a role of a government financier until credible reforms lighten up growth prospects of the countries in the southern periphery. Additionally, governments in stronger countries provide fiscal help for crisis economies. As many expected, when a crisis hit, the no-bail-out clause was completely ignored.

While adhering to the euro prevents a rapid shut-down of the public and private sector, the bailout mechanisms can also be argued to dampen the immediate adjustment pressure. By accepting the ongoing erosion of the institutions that gave credibility to the euro in the first place, politicians may make necessary additional institutional integration. Therefore, in the future the euro will likely become less a proxy for the gold standard than it already is.

In contrast, the new member states of the EU were forced to adjust much faster to the crisis events. With the capital flight, currencies in countries with flexible exchange rates depreciated and foreign denominated debt increased. More interestingly, the Baltics went through a process of rapid internal devaluation to be able to keep the peg to the euro. Decisive spending cuts and labor market reforms were credible signals. Borrowing costs in the Baltics quickly declined below those of Greece or Spain. The economies rebounded quickly. Estonia introduced the euro during the crisis. This signals that it is not the euro itself that forces reforms but the political commitment to the principles of a currency union and sustainable fiscal budgets. This commitment is tested whenever a boom turns bust which can reveal seemingly sustainable budgets to be unsustainable.

5 SUMMARY

Inspired by Huerta de Soto (2012), the paper sheds some light on similarities and differences of the institutional framework of the classical gold standard and euro that affect government debt financing and the way in which countries react to crisis. I have argued that giving up monetary nationalism and committing to the rules of either the gold standard or euro theoretically restricts the scope of state action. Therefore, the euro – like previously the gold standard – provided some (fiscal) policy credibility and contributed to substantial capital market integration and low government borrowing costs in Europe until 2007.

Huerta de Soto (2012) suggests that the common currency – like the gold standard – forces painful adjustment processes and spending cuts upon its members. But in this paper, I have emphasized that neither the gold standard, nor the euro itself force reforms and spending cuts upon countries that face unemployment and severe debt problems. The political commitment to the international currencies determines the willingness to reform or e.g. cut spending. I have argued that the
institutional set-up of and therefore the political commitment to the classical gold standard and the EMU give very different incentives to deal with crisis and to implement credible reforms.

If countries wanted to adhere to the gold standard in times of crisis, credible policies and reforms – perhaps as recently implemented in the Baltics – were urgent. Otherwise, they had to leave the gold standard. When Portugal faced major budget problems and deflationary pressure in 1890–1, the government abandoned the gold standard, devalued the currency and defaulted on debt (Flaundreau et al. 1998).

In a similar way as Portugal during the 1890s, currently the southern periphery countries of the euro area have to cope with sovereign debt problems and negative growth rates. Debt levels and fiscal policies that seemed sound during the credit boom of the 2000s became unsustainable. But in contrast to the period of the classical gold standard there is a general political commitment of the euro area countries to Europe’s integration process and the euro. The exit of a country from the euro seems even more (at least politically) costly.

In contrast to a return to monetary nationalism, holding on to the euro prevents a rapid shut-down of the public and private sector. But competitiveness, debt or unemployment problems have to be addressed by other means than nominal devaluation. Credible reforms e.g. on labor markets and conservative fiscal policies to regain confidence of markets and lighten up future growth prospects become necessary. Unfortunately, such policies are particularly hard to implement in a deflationary environment that adds to the debt mountain as we see it in southern Europe.

Because rapid real devaluation and fiscal austerity were not politically feasible in the crisis economies, the general European commitment to the euro has forced the ECB and other bail-out institutions to continuously intervene in bond markets and set-up fiscal transfer packages or guarantees. The bail-outs have relieved the immediate adjustment pressure and provided additional incentives to hold on the euro for both the creditor (senders) and periphery debtor countries (recipients). Therefore, – so far – over the course of the crisis the euro has become less a “proxy for the gold standard” than it was before, and the EMU faces major problems.

While I concur with Huerta de Soto (2012)’s assessment that a return to monetary nationalism is unlikely to be an accelerator of market friendly reforms in the crisis economies, the often discussed move towards fiscal union seems to be even more problematic and risky. Fiscal union might undermine the credibility of the euro area as a whole if, for example, permanent fiscal transfers provide incentives to further delay fiscal consolidation efforts, postpone important (e.g. labor market) reforms and preserve structural distortions.
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The aim of this paper is to clarify the issue of debt in highly leveraged economies (Europe and USA in particular) and point-out unintended consequences of the effort of easy monetary policy to mitigate the negative impact of deleveraging on the real economy and financial markets. The expansionary monetary policy has not initiated any significant recovery of investment in highly indebted developed countries due to the ongoing restructuring of these economies. But on the other hand, there was a flow of funds into emerging economies accompanied by easing of their monetary policy. That resulted into a pro-cyclical investment in capital assets, growth in demand for commodities and rising real estate prices.

This model of global economic growth is not sustainable, because the growth in emerging economies has been supported by increasing levels of debt. The currently admired rapidly growing emerging economies therefore may slow down unexpectedly while developed economies, including Europe, have not lost their entire luster.

**INTRODUCTION**

Lately, especially in the context of the continuing crisis in the Eurozone, it has become popular to view negatively the economic prospects of developed economies, and Europe in particular. The aim of this article is to show some of the mistakes...
in these considerations. Claims of hopelessness of the European economy are in particular in the longer term highly doubtful.

Optimism about the currently rapidly growing economies may not be quite as appropriate as it is common to believe. It is rather difficult to separate the cyclical unsustainable drivers of growth from sustainable improvements in the economy. Both phenomena are in fact closely interrelated. Justified expectations of future economic growth in the economy can encourage new investment and lending in a potentially excessive quantity, and thus sow the seeds of future trouble. Even justified expectations of growth may therefore destroy themselves, and in particular so in the environment of easy monetary policy that facilitates easily available and cheap external financing. At the same time one can often observe the opposite tendency to interpret cyclical overheating of an economy, accompanied by unsustainable growth in debt and asset prices as a healthy long-run growth. In this article we therefore try to provide some relevant data, and point out and explain some of the cyclical patterns in the global economy.

In response to the financial and economic crisis, which escalated in 2008 with the collapse of the investment bank of Lehman Brothers, major central banks all over the world loosened their monetary policy. Figure 1 shows a gradual reduction of interest rates by central banks in the developed world (U.S., euro area, Japan, Switzerland). The expansionary stance of monetary policy is further emphasized by special measures such as asset purchases called quantitative easing.
One of the implicit objectives of the monetary policy easing was to support ability of borrowers in developed economies to service their obligations by reducing the cost of debt. Yields on debt did indeed decline significantly since 2008 (although to a lesser extent, in the special case of some Eurozone countries, where the trend was somewhat mitigated by uncertainty about the political response to Eurozone issues). However, these measures also had unintended consequences. Some segments of borrowers in developed markets with the capacity to increase their obligations took on more debt. An example of these developments may be the growth of student loans and auto-loans in the USA. While the housing market in general stagnated, the investment in multi-unit residential housing projects rose as investors expected that the revenues from rent will be higher than the yield from financial assets that had been artificially lowered by monetary policy. Similarly, expansionary policy stance in the Eurozone (albeit in a more limited extent due to policy uncertainty in dealing with weakest Eurozone members) has contributed to the growth of asset prices in those euro area countries considered to be safe havens – such as real estate prices in Vienna.

Monetary policy response had varying effects on developed and emerging economies. In the more indebted developed economies, it failed to start growth of investment due to the ongoing economic restructuring and deleveraging, which showed-up in weak demand for new loans. In contrast to the majority of developed economies, global monetary easing triggered a rapid growth of debt and investment in emerging markets. Inexpensive liquidity provided by central banks in developed markets resulted in financial flows to emerging markets, as investors sought for yield in an environment of compressed interest rates by the loose monetary policy. The monetary authorities in emerging economies also contributed to a better availability of credit, when they reacted by easing of their own policy stance to the appreciation of their local currencies.

In contrast, central banks in countries exporting commodities were among the first that started to hike their policy rates after 2008 (for example Australia or Chile). However, the higher yields subsequently made the local currencies more attractive among investors driving their appreciation. Later on, in connection with the start of a decline of (some) commodity prices, the central bank of Australia recently started an easing cycle of its monetary policy.

**DIVERGING DEVELOPMENTS OF DEBT IN THE WORLD**

Different economic development in individual countries after the recent global financial crisis can be illustrated by the change of volume of domestic credit to the private sector relative to the GDP between 2007 and 2011 (see Figure 2).
Developed economies that experienced a significant increase of debt before the financial crisis generally experienced the fastest decline in the volume of outstanding volume of external financing relative to GDP. A significant decrease was recorded by countries with a recent history of a real estate bubble (Ireland, Estonia), or (also, at some time) financial centers (the United Kingdom and Iceland). Slower reduction of private debt was also reported, for example, by USA and Germany.

On the contrary, less leveraged entities in emerging economies generally had greater capacity to increase their indebtedness. They acted rationally by increasing demand for loans in response to more accessible and cheaper sources of financing. This is also obvious in the aggregate data. The highest rate of growth of debt in the sample was recorded by the countries in Southeast and East Asia. This region thus experienced a further significant period of an increase in debt level since the Asian crisis in the late nineties. The debt level also increased in other rapidly growing economies, which are generally supposed to have promising economic prospects (e.g. Turkey), and some countries in Central and Eastern Europe (e.g. Poland and Serbia).

In developed indebted economies, the decline of debt was inevitable for several reasons. First, many investment projects, which could be a source of demand...
for new loans, are generally unprofitable when the economy must eliminate over-capacity from earlier overproduction of physical investment. The evolution of debt also faces the limited capacity of borrowers to further increase their obligations and rising risk aversion among creditors. A gradual decline in debt is thus in a sense a healthy indicator of the ability of borrowers to restructure and consolidate their past investment strategies. However, deleveraging debt too fast could be destructive for borrowers because they could soon become illiquid and insolvent, which in turn could have negative implications for the economy as a whole. However, any policy of gradual deleveraging can be misused in favor of prolonging a period of existence of a rigid financial sector unable to finance new entrepreneurial projects that could jump-start economic growth.

The size and development of external funding may serve as a useful signal to identify unsustainable developments in the economy. However, it is neither the only nor perfect indicator, which could without any adjustments provide perfect results comparable across countries.

If the factors outlined below did not influence the outcome, the decrease of the level of debt in more developed economies would be even faster and the increase of risks associated with rising debt level in emerging economies would be even more obvious. Consequently, the asymmetry of evolution of debt levels between heavily indebted developed economies and fast-growing countries would be even more pronounced.

In highly indebted economies the process of deleveraging and reduction of the volume of assets in the banking sector and financial markets might have been hampered by a number of factors.

Accumulation of debt. Some highly indebted borrowers can be forced to continue increasing their overall level of debt due to their limited ability to service their obligations in the hope of improved economic situation in the future, which (as they may hope) could help them to repay their obligations.

This approach of hoping for better economic times may also be shared by the lenders who may hope that improved economic conditions may support the ability of their debtors to repay their obligations and may be thus incentivized to provide them with additional funding in order to prevent their immediate bankruptcy. This approach is obviously not fully optimal in the sense that it may help sustain companies that primarily accumulate losses and use the assets in a less efficient way. This tendency of credit institutions to lend more to the existing and more important borrowers may result in an implicit restriction of lending to new projects or small businesses that might have been the source of future economic growth.
Also governments (and political and monetary authorities) may have incentives to wait and hope for an improvement of the economic situation. Governments may have an incentive to keep at least the facade of a healthy financial sector in order to maintain a structure that provides a demand for government bonds. Reduction of cost of financing by expansionary monetary policy in general reduces the costs of the above outlined soft approach by lenders to their key borrowers.

Even if the expansionary monetary policy may in the long run contribute to a decline in relative debt levels through the growth of the price level or an increase in real economic performance, there are other implications involved, too. There is a more pronounced risk of a rise of debt level in new specific segments (such as auto loans in the U.S.). Consequently, the decline of debt level may be lower.

Reporting the loans relative to the GDP is useful because it gives the absolute volume of external financing in relation to economic output, and therefore to the ability of borrowers to create value to repay the debt. However, it should be emphasized that the increase in credit activity tends to promote economic activity in general; therefore, the relative indicator may have a lower growth dynamic compared to the rise of absolute volume of the debt.

Among other restrictions of the explanatory power of the indicator is the fact that it includes only external financing received by the private sector – i.e. that debt of central governments and municipalities is not included. This may be particularly important during the boom phase of the economic cycle when, for example, local governments tend to take on external funding to finance investment projects of sometimes dubious efficiency and returns. An example of such a development in the past was in Spain and now probably in China.

Even more important weakness of the indicator is that it includes by definition only official data on external financing. However, at the time of boom, alternative channels of external financing usually develop and the so-called shadow banking gains in importance. The cross country analysis may therefore require adjustment of the data for specific developments affecting the situation in the individual countries. An example might be the growth of alternative investment products in China or contingent liabilities of municipalities, whose exact scope and future volume is due to the nature of their origin virtually unknown.

External financing in countries exporting commodities grew seemingly more slowly due to the temporarily more favorable economic situation – economic activity could have been financed to a greater extent from retained earnings or increasing wages. However, these countries became more vulnerable to the negative impact of the decline of prices of cyclical commodities, which is a source of income of the debtors to repay their obligations.
DIVERGING DEVELOPMENT IN INVESTMENT ACTIVITY

The decline in the share of capital investment relative to the total economic output after 2008 can be observed in developed countries which had experienced growth in debt and construction boom financed by credit growth, i.e. in the USA and Ireland (see Figure 3). For example, the share of investment to total GDP exceeded 25% in Ireland at the top of the boom. In 2011, it declined to a level of 10%.

Similar rapid decline in the volume of investment cannot be observed in some other countries that have also experienced the burst of the real estate bubble. The reason for this can be traced to the lenders who have kept providing funding for projects to be completed in the hope that eventually it will be these projects that will be successfully sold.

In contrast, an increase of investment was recorded by a number of emerging economies. Lending activity and (for example in China) policies to promote investment contributed to this upsurge. China in particular maintains a long-term, very high level of investment to GDP – that is each year there is a flow of new projects into the economy that need to be utilized in a productive, useful, way. Similarly, the increased volume of investments was observed in a number of rapidly growing economies due to growth of the debt or demand for export commodities (e.g. Mongolia and Southeast Asia).

Australia has almost managed to maintain its pre 2008 level of investment. Due to its commodity export orientation, Australia is an outlier among advanced developed economies, which otherwise recorded a significant decline in the share of investment to GDP after 2008.

“Appropriate” share of investment to GDP, which would indicate that investment in the economy is in line with the longer-term preferences of consumers and the economy is not overheating, cannot be reliably and precisely determined. Its calculation would require planning the outcomes of socio-economic processes that affect whether the project will be effectively utilized or not. Investments are never by themselves good or bad. However, a significant deviation of this indicator compared to what in this context is considered as approximately appropriate by the observer, may indicate an unhealthy trend – i.e. inappropriate volume and structure of investment, which in the future will be difficult to use efficiently to produce goods and services demanded by consumers and subsequently to generate returns to repay loans received to finance this investment.

Economically, appropriate volume of investment (approximately indirectly also indicating their undistorted structure) is variable over time. The ability to use investment projects in production of goods and services that people demand changes over time. Even an unchanged share of investment to GDP, which in the past the economy was able to efficiently absorb, may lead to suboptimal outcomes...
if the economy becomes oversaturated with investment projects from the past. Rapidly growing economies during a limited time period may afford to absorb a higher share of investment in GDP.

Investment projects may turn out to be inappropriate if the demand for goods or services that were supposed to be produced by production plants generated by the investment projects, suddenly declines. For example, investments in mines, accommodation for miners and other service sectors of the economy may prove to be improper if there is a drop in demand for the key commodity.

Not only a rise of investment but also of consumption or exports may be a sign of an unhealthy economic development. Consumption may be unsustainable for two reasons.

(1) The increase in consumption can be facilitated by pro-cyclical growth of credit to finance household consumption, such as in the U.S. before the crisis in 2008 in case of the mortgage and other loans.

(2) The increase in consumption can be supported by higher wages resulting from the rising investment activity.

In either case, there are other components of GDP growth, which reduces the value of investment indicators in relation to GDP, even if the economy may suffer from unhealthy and unsustainable developments.
The unprecedented nature of the current investment boom in China is illustrated by the Figure 4. The investment cannot be even compared with a real estate and investment bubble in Japan at the end of 1980s and in Southeast Asia during the 1990s. All of these regions experienced during some period an increase in investment activity, supported by growth in debt (domestic loans and cross-border capital flows). The individual economies were eventually not able to successfully absorb the inappropriate investment structure and both Japan and Southeast Asia subsequently experienced an economic downturn.

Japan (at that time economically more advanced than China is today) reached a peak of share of investments to GDP at the turn of the 1980s at the level of a third of GDP. During the following stagnation lasting nearly a quarter of century, the share of investment to GDP, despite (or perhaps because of) the various investment incentives, decreased in Japan to 20 % of GDP. Similarly, in Southeast Asia, the share of investment reached the maximum level at the time of the most intense and least sustainable economic boom. For example, in Malaysia and Thailand the share of investment exceeded during several years the level of 40 % of GDP. However, even these relatively poorer (and therefore requiring a higher share of investments) economies were not able to constantly successfully absorb such a high volume of new investment projects. Therefore, there was a decline of economic activity and restructuring of the previous inappropriate investment projects.
Even in comparison with these past examples of investment booms, the investment activity in contemporary China is truly impressive. The share of investment has not decreased under 40% over the period of the last 10 years, even in the post-crisis year of 2008, when the Chinese government promoted investments by specific programs and measures.

Despite the growing economic output in China and the associated reduced need for extensive growth and big scale investments in increase of traditional production capacities, the agents in the economy have to try to find efficient usage for the ever higher stock of newly completed investment projects. The efficiency of usability of individual projects therefore decreases. The utilization of many projects in the production process is only seeming deceptive, short-term and unsustainable – e.g. only because of the protracted but unsustainable investment cycle. For example, the prolongation of construction boom and increased demand for steel keeps operating steel mills that should perhaps have never been built. This leads in the economy to piling up of inefficiencies that will become fully obvious only when there is a more pronounced slowdown of the economic and investment activity.

REAL ESTATE MARKET

The developments in the property market have become one of the key features of the economic and financial crisis in Europe. The growth of real estate prices and construction activity supported by the rising credit activity was a principal cause of the pre-crisis boom in a number of Euro area countries. Subsequently, the consequences of the burst bubble stalled further economic activity.

Not only the relative level of debt, but also property markets behaved differently after 2008 in some more indebted developed economies in comparison to the emerging economies. This different trend is more surprising than it might seem, because before 2008 asset prices had been largely influenced by similar factors in most countries. Property prices had been rising, and given the prevailing global optimism, the volume of construction, too, had been growing in most countries. There was thus a considerable case for price correction and a similar pattern of price development across countries. However, the different intensity of expansionary monetary policies of central banks, different development of debt level, as well as different intensity of economic recovery contributed to a different trend in prices of real estate across countries since 2008 (see Figure 5).

Property prices (as shown in Figure 5) fell in Ireland by more than 40% from the maximum values at the peak of the recent real estate boom. The decline in prices due to the burst of the real estate bubble, although weaker, was also recorded in the
USA. The slower decline of real estate prices in the U.S. compared to Ireland can be explained not only by the less intensive pre-crisis construction boom (at least at the national average), but also by the more intense and unambiguous expansionary monetary policy after the bubble burst.

While housing prices generally declined in countries that have undergone a burst of a real estate bubble around 2008, in many areas of the world there was an early and significant recovery of prices growth. Norway outside the EU, due to the structure of its economy and of the local property market, experienced a rise in real estate prices by a third since 2008. Rapid convergence of economic output, population growth and urban lending activity contributed to the appreciation of real estate in Turkey. Similar price developments were recorded in Malaysia, a commodity exporter and a close neighbor of China.

A specific example of the growth of real estate prices may be in some member states of the Eurozone, which did not have to deal with the unoccupied stock of real estate created during the boom before 2008 and which also do not face a deep recession. Moreover, investment into real estate is incentivized in these countries by loose monetary policy of the central bank, which leads investors to search for yield in these alternative investment opportunities. An example of such a development may be some segments in Germany or Austria.

Source: BIS
Being another specific case, the growth of real estate prices recovered quickly after 2008 in another group of advanced leveraged economies even if they had recorded price and construction growth before 2008 (such as Australia, Chile, and to some extent Canada). The reason for the growth is the export of cyclical commodities, which after a brief decline after 2008, have in recent years supported the general economic activity and optimism in those countries.

Like the other indicators, it should be noted that the price of real estate is only an indirect indicator of imbalances in the economy. Development of real estate prices must be interpreted in the context of other processes in the economy, which can help to predict more accurately whether the developments in the property market are merely a result of an artificial and temporary stimulus, and therefore unsustainable, or whether it is based on more fundamental changes in the economy. For example, is the growth of prices associated with a rapid increase in the volume of loans for purchase of housing? Does the credit growth merely temporarily boost a wave of urbanization and creation of new households? Is the overall optimism in the domestic market supported by cyclical demand for export commodities that may decline during a downturn?

A price by itself may not fully reflect the imbalance in the market or the improper developments in the structure of the total volume of the stock of existing real
estate. In terms of an analysis of the ability of agents in the economy to productively utilize the available stock of real estate, other indicators are important too: the volume of empty capacity, the volume of new construction, quality and geographical structure of real estate supply, etc.

**Better ability of supply to respond** to growing demand by increasing real estate construction may largely suppress the effect of increasing provision of e.g. mortgage loans on real estate prices, but gradually, it may cause a greater imbalance in the volume of non-utilized capacity. An example of such a development can be the comparison of the property markets and prices in Hong Kong and China. Real estate prices in China, especially in larger cities, increased in recent years due to rising use of mortgage loans, but mainly due to cyclically favorable general economic sentiment and efforts of a household to invest bank deposits bearing low interest into the real estate market. However, due to the unprecedented construction boom, the volume of capacity available increased significantly, which somewhat limited the rise of prices. In contrast, in Hong Kong, the volume of new construction could not respond to the growing demand in the same way due to the more limited space available for construction and due to less explicitly pro-investment policy in comparison with local governments in Mainland China. Given that both economies are increasingly interconnected, the growth in property prices in Hong Kong may reflect in a single number the imbalances of both rising prices and rising available (empty) capacity in Mainland China due to higher construction, which creates concerns about growth of unoccupied capacities. The cumulative growth in property prices in Hong Kong reached almost 200 % during the recent three year period (see Figure 6).

**THE INCREASE OF REVENUE FROM THE PRODUCTION OF CYCLICAL RAW MATERIALS**

As illustrated by the Figure 7, in the last decade a number of countries producing raw materials experienced an unprecedented increase in rent from natural resources in relation to GDP. This development could theoretically be explained by the growing concentration of production in these selected countries or growing scarcity of commodities. Rising prices tend, however, to encourage the opening of new extraction sites or motivate to find savings of the use of the specific raw materials. Therefore the rising Chinese demand (and investment cycle) can be seen as a key reason for the increase of raw material production and revenues.

The increase is obvious particularly in the case of smaller specialized commodity exporters such as Zambia or Mongolia. There it has increased during the decade from 20 % to almost half of GDP. It should be noted that the absolute value of
revenue from the production of raw materials grew even at a faster pace, because the increase of revenues from raw material extraction was instrumental in the financing of other economic activities, thus increasing the value of GDP, which is the denominator of the ratio.

The growth of rents, however, was also clear in the case of much larger and more sectorally diversified economies. Values of the relative indicator grew in these economies despite a parallel growth in other sectors of the economy, whose development was partially facilitated by the revenues from the commodity exports (Australia, Brazil, Chile).

**POTENTIAL IMPLICATIONS OF THE EMERGING ECONOMIES INVESTMENT SLOWDOWN FOR THE GLOBAL ECONOMY**

So far, the investment boom and growth of commodity demand has contributed to rising economic activity in the global economy, and more so in the specific countries and regions which managed to benefit from it most. However, as it has already been mentioned, unsustainable artificially low cost of debt, the subsequent increase in debt, or other unsustainable incentives have also contributed to this growth. It is therefore
appropriate to ask what may happen when these temporary growth drivers weaken. Among other things, it may show that growth in many emerging countries that were supposedly an example for ailing Europe was by far not as favorable as it had seemed.

In terms of developments in financial markets and the possible spread of the contagion, the investment by foreign entities in financial assets in China was relatively limited. The negative impact on the global financial markets could thus be primarily limited to psychological contagion rather than losses due to direct exposure to troubled assets. However, global investment in e.g. corporate and public debt in emerging markets in general has risen. Therefore, in the case of a protracted slowdown in emerging economies, some borrowers could get into trouble, which could generate losses for global financial investors.

**Indirect negative impact on the demand for financial assets** in the world could result from a lower amount of funds that can be used by investors from rapidly growing emerging economies to purchase assets in global financial markets.

This development could have two distinct causes. (1) The decline in the value of portfolio owned by these investors due to losses from their investments in assets in their domestic economies or in other rapidly developing economies (e.g. in the case of Chinese households – for example the real estate or structured investment products that serve as an alternative allocation of savings in the conditions of artificially low interest rates on deposits). (2) Another cause could be a decline in available funds for investment due to reduced savings that the households or corporates can generate, should there be a cyclical decline in wages or corporate profits. The drop of volume of this source of demand could subsequently have a negative impact on the prices of global financial assets.

Because of these interconnections it is therefore necessary to consider the impact of a slowdown in emerging economies on the real economy in other countries. The decline in demand for exports by emerging economies may result in increased unemployment and a decline in profitability of companies, impairing the ability of borrowers to service their debt, and thus lead to a reduction in the quality of loan portfolios and the value of financial assets.

**NEGATIVE IMPACT ON THE REAL ECONOMY DUE TO LOWER DEMAND FOR EXPORTS FROM EMERGING ECONOMIES**

Figure 8 illustrates the increase of the share of exports to China relative to the GDP of the exporting countries over the period of the past decade. Consequently, the sensitivity of these economies to a potential decline in Chinese demand for their exports has risen.
In general, it is of course virtually **impossible to precisely distinguish** the extent of the permanent and **sustainable components of growth** in the emerging economies from **unsustainable drivers of growth** such as pro-cyclical investment. The development of export activity cannot itself be considered as a primary indicator of overheating (or unsustainable development) in the exporting economy. However it can gain better explanatory powers in the context of other signs of other potentially unsustainable developments in the target countries of export – such as unsustainable debt growth, growth in the share of investment in GDP, or the rapid growth of mining cyclical commodities.

**Bigger economic size and longer geographic distance** from the importing country have a natural tendency to lower the share of exports to the particular country on its GDP. This applies for example in the case of comparison of exports to China from South Korea and from the much smaller economy of Mongolia, or from Germany and from geographically much nearer Vietnam. However, in parallel with the increasing size of an economy and its distance from the export target country, the intensity of indirect exposure to adverse economic developments in the export target country (for example China) via exports to third countries which themselves also export to the target economy (China), generally rises.
Generally, it is necessary to take into account other factors in an analysis of aggregate indicators of the share of exports to the GDP of exporting countries and its implications for the exporting countries:

- extent of exposure to the target country through exports to third countries,
- intensity of value added generated per unit of exports,
- sensitivity of domestic economic activity to the adverse economic developments in importing countries, respectively the ability of entrepreneurs in exporting economies to find an alternative use for the factors of production, should they remain unused as a result of loss of export demand.

An analysis of these trends therefore needs to make use of, preferably, the most detailed data. At the same time, however, predictions of human action on the basis of these data can be only approximately accurate. This does not however mean that such approximate estimates should not be made at all, because the implications of developments in the global economy through a number of indirect interconnections may be significant for the economic prospects of the particular country.

Regarding the estimates of future developments in commodity-exporting countries, it is important to notice that the quantity demanded and the prices of commodities might have evolved differently in the case of specific commodities.
due to their specific use in the rising (and unsustainable) level of investment in rapidly growing economies. Comparison at the aggregate country level can therefore conceal some important structural characteristics. For example, demand for iron ore used to produce steel may decline more (and more persistently) than the demand for commodities of “everyday” use, such as oil. Implications of investment activity slowdown will therefore differ in case of extraction of specific raw materials. The differences, however, can occur also at the level of individual production sites which will face different cost structure in the context of falling prices. Some production sites with higher marginal costs of production will therefore have to be closed down, while others do not.

The following figure (No. 9) shows the changing structure of the export orientation of Germany between 2007 and 2011. Exports to some troubled Eurozone countries and Iceland fell sharply. In contrast, German companies managed to export more to countries that have been already mentioned in this text in connection with pro-cyclical drivers of economic activity: the recent increase in debt, investment growth or rising income from the export of commodities. The continuation of this trend of change of geographical structure of German exports is therefore rather questionable.

CONCLUSION

The prospects of developed economies including Europe should not be underestimated, at least not to the extent it has recently.

A notion that an economy or a region is poised to be a rising star of the next century is often rather short-lived. Optimism about economic prospects is in itself often a result of unsustainable drivers of economic activity, laying the seed of a subsequent slowdown.

In this paper, we argue that the efforts of central banks to support the ability of borrowers in highly indebted advanced economies to service their obligations and the related expansionary monetary policy in the world (indirectly) contributed to the increase in debt, pro-cyclical investment and commodity boom in a number of currently fast-growing emerging economies.

The nature of this growth and its drivers – artificial incentives to invest resulting from the artificially lowered price of external financing – raise key questions about the sustainability of this growth.

Some slowdown of the fast-growing economies is currently considered inevitable. However, the scale and intensity of this deceleration can be, in case of individual countries, difficult to estimate because such an assessment would require
detailed data on the level of individual decision-making of economic entities, and furthermore the ability to analyze this complex data appropriately.

In spite of this ever-present uncertainty, in general, the countries that have so far benefited the most from the unsustainable cyclical developments in the fast-growing economies could lose again the most, should the growth in emerging markets decelerate. It may be of course difficult to separate the relative share of contribution of sound and fundamentally sustainable processes from pro-cyclical investment. However, in general, in the case of slowdown of investments in emerging economies, steel exports may generally suffer more than agricultural commodities.

Even the deepest social crisis cannot weaken the natural desire of people in less rich regions of the world for improving their welfare. Therefore, the process of economic catching-up – the so-called real convergence – is set to continue (if it is not stalled by some serious obstacles). However, the idea that the future will be the brightest in countries that have recently achieved dynamic economic growth due to rise in debt, rising share of physical investments, or rising exports of cyclical commodities, may turn out to be over-optimistic. Consequently, the attention may soon move away from the supposedly hopeless Europe towards economic risks in completely different parts of the world.
Debt has become one of the most topical issues today. Inability to repay debt threatens not only (but mainly) the living standard of European countries but also, for example, the existence of the Eurozone itself. Eurozone stands in the centre of discussion; the ability to adopt euro is examined especially by the Maastricht criterion (i.e. The Stability and Growth Pact) of government deficit and debt. Governmental programs usually refer to reducing of deficits and debt; government finance is under the intense supervision of international institutions or media, etc. This creates the impression that only government finance can be a source of turmoil as a consequence of financial mismanagement.

This can hold true to some extent. Government cannot get more resources than citizens can provide in the form of current or future taxes (government debt). More resources for government mean less for private units; hence the financial situation of government and the private sector must be very closely linked. This interconnection comes to mind especially when we talk about the ability of economic actors to repay their own debt and government debt simultaneously. So from this perspective, excessive government indebtedness can be a source of serious problems because of the reduction of private income.

Even if the main source of the current debt crisis can be considered the monetary sphere, we will examine also the influence of the fiscal or institutional environment. In other words, this discussion will bring us to the related question of the mutual relation between government and private debt; is there any trade-off between private and government debt? So, we check not only the level of indebtedness in Europe, but also distribution of debt across society, dynamics of 

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indebtedness and types of debt. We try to determine if the way goods and services are financed plays some role.

But let’s take a step back; before proceeding to questions mentioned above we have to start from the beginning, i.e. statistics that guide an economic policy. As Mark Twain stated “Facts are stubborn things, but statistics are more pliable.” Even if statistical recording of debt seems to be unexceptionable, Twain’s quotation can be undoubtedly applied also in this case. As Greece’s statistics showed almost 10 years ago, incentives to run debt out of the official “debt” definition can be very strong especially for governments. This definition should be provided first.

**STATISTICAL RECORDING OF DEBTS**

Macroeconomic policy relies on statistics. Definitions of indicators are thus crucial for the ability of these indicators to show a proper “snapshot” of the reality. Government indebtedness is usually assessed by the Maastricht criterion defined as sum of:

- currency issued by government and deposits accepted by government units (especially the case of Italy, UK, France, Ireland or Germany)
- short-term and long-term bonds (prevailing way how government deficits are financed)
- loans (significant mainly in Greece, Iceland, Ireland as a result of crisis, but also in Portugal, Hungary or Germany)

It is evident that the official definition of government debt does not cover all liabilities either in the form of other contractual financial obligation (e.g. derivatives, credit loans or outstanding amounts in the form of taxes, social contributions, etc.) or liabilities in relation to the public corporations (government units acting as owners) which are usually highly subsidised by governments and sometimes also deeply indebted. Exclusion of these liabilities is questionable and it gives rise to creative measures to eliminate some liabilities out of the debt.¹

To avoid at least some controversies, in the following analysis we expand the definition of debt by trade credits and advances on the liability side of institutional sectors. This approach is not daring; a similar extension is among changes proposed by the European statistical authority Eurostat because of the tendency to

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¹ The most popular example happened in Greece where government statistical office in cooperation with a private investment bank developed a derivative instrument that had, in fact, loan nature. Therefore, not only debt was undervalued, but also government deficit due to the different statistical treatment of interest paid on derivatives and loans. But it is worth mentioning that the incentives to “evade rise in debts” is still at work.
hide debt, for example, in the form of overdue liabilities outside of “official indebtedness”. Reasoning behind this is that it will make picture of indebtedness more complete. So, we apply the extended definition in the analysis of indebtedness of non-government sectors.

In the following analysis, we use the term “government” as it is usually understood – debt of all units considered as government units. As for “private debt,” we consider the debt of non-financial corporations engaged mainly in production of goods and non-financial services, households (oriented especially on consumption) and non-profit institutions serving households (providing goods and services on the non-market basis). So, we do not take into account the debt of financial institutions that are dominant providers or financiers of debt; government and private indebtedness thus represent an estimation of the total debt position of these sectors to the financial sector.

**GOVERNMENT AND PRIVATE DEBT: A SHORT THEORETICAL INTRODUCTION**

Debt stands in the centre of the current monetary system. In general, development of both government and private debt can be driven by fiscal or monetary conditions; even if it is impossible to clearly separate them, we try to examine the importance of the fiscal factors in the indebtedness dynamics with attention paid to the ways consumption in the economies is financed. We briefly check if these financing practices have some impact on the distribution of debt across society.

After the Second World War, some level of covariance among the debt-issuing behaviour of government and private borrowers has been observed (Friedman, 1987). Many theoretical concepts seem to be helpful to explain this phenomenon. As Barro (1974) indicates, private borrowers can understand government debt as substitutes of their own debt. Reasoning behind this assumption is that government debt can be paid only at the expense of private borrowers (fiscal or monetary taxes).

If this assumption were correct, then the general public should be very well aware of the consequences resulting from government debt and its interconnections with the disposable income of private subjects; it is also assumed that the general public is able and willing to react to the existence of government bonds. Last but not least, if government debt would be really understood as a substitute of private debt, government debt (mostly bonds) could not be taken as a part of the wealth of non-government bond-holders.
From the lenders’ perspective, government and private debt may not be perceived as being close substitutes. Among the reasons belongs the different ability to repay debt and related differences in riskiness; also expected (and realized) returns on these assets play an important role. So, from the lenders’ perspective the substitutability is clearly restricted. This can lead to several situations like adverse selection or crowding out effect, i.e. the situation in which investors tend to prefer government debt; thus the ability of private units to receive external resources is limited. Further important interconnection of government and private debt can be through the impact on interest rates.

**GOVERNMENT AND PRIVATE DEBT: MUTUAL RELATION**

First, we will examine if there is a pure statistical relation between both types of debt on the basis of simple correlation. Based on data provided by Eurostat, correlation between government and private debt in the European Union tends to confirm the hypothesis of a mutual negative relation; the correlation amounts to \(-0.49\), i.e. acceleration in the rise in private debt is accompanied by a slowing trend in government indebtedness and *vice versa*. The degree of the statistical relation is not insignificant.

At the end of 2011, total indebtedness of European governments to EU-GDP reached 85.2 %, i.e. increase about 21.5 percentage points in the last decade. Indebtedness of non-government sectors (households, non-financial and non-profit institutions) reached 97.2 % of GDP which means a rise of more than 20.4 percentage points during the same period. So, in the chart 1, indebtedness of these non-government sectors grew similarly but private debt stays at higher level.

Similar development can be identified in the case of the Eurozone. Relative indebtedness of governments of the Eurozone to EU-GDP reached 88.8 % in 2011, i.e. an increase of 17.5 percentage points in the last decade. Debt of non-government sectors touched 92.4 % of GDP which means a rise of more than 20 percentage points in the last decade. So, in the chart 2, indebtedness of these non-government sectors grew more rapidly till 2008. During the crisis, government debt has almost caught up to the level of non-governmental debt.

Correlation in case of the Eurozone shows also quite a high degree of mutual relation \((-0.45\). It is difficult to explain this situation by emergence of the crisis; prior to 2007, the correlation reached an even higher level \((-0.53\). It should be noted that in both the EU and the EA, the amount of government debt was (highly) exceeded by the level of private debt; but with relative debt, governments in the
Chart 1: Indebtedness in the EU, debt as % of GDP

Chart 2: Indebtedness in the Eurozone, debt as % of GDP

Source: Eurostat
Eurozone countries were higher by about 8 percentage points before the pre-crisis period compared to the European Union as whole.

From the dynamics of private indebtedness, it is clearly evident that private indebtedness departed from a lower level in 1995 than government debt. Then the rate of private debt growth exceeded that of government debt and the level of both deviated. In other words, while the rise of government debt was more or less in line with the rise of GDP (thus relative indebtedness did not change significantly in the EU or Eurozone as whole), this does not apply to private debt surpassing the rise of GDP and resulting in very high level of debt.

Just recall that the same denominator was used for both shares, i.e. GDP. So, we can easily calculate the total debt burden (except financial institutions) relative to the GDP. Chart 3 displays the trend of total indebtedness in the EU and the EA from 1995. A quite slow rise before 2005 is followed by a strong rise after 2007. At the end of 2011, the level of total indebtedness in both groups of countries reached more than 180 % of GDP.

Naturally, mutual netting in private sectors and between government and private sectors are not taken into account in these statistics. But keeping in mind that debt was provided by financial institutions or that government bonds are held mainly by the same corporations, we can take these shares as a strong approximation of total relative indebtedness. This data reveals the inconvenient truth that
debt reaching such a high level is in fact unpayable. This is evident if we realize that we would need to abstain from consumption and investment for two years to repay all debt, governmental and private.

A rise in indebtedness can be driven by many factors: monetary, demographical, psychological, etc. The aim of this paper is not to describe all factors standing behind high indebtedness, but to check if there is any fiscal link between government and private debt. In other words, we try to see if the way goods and services are provided and financed (privately or by government) does affect the distribution of debt across society, especially between the sectors of government and households, or whether another factor prevails.

**CASE OF CONSUMPTION**

Institutional background can have an important impact on the distribution of debt across the society and this can constitute a possible “fiscal” link between government and private indebtedness. As an example, we can take higher education. If higher education is more or less financed by households (if tuition-fees are imposed), then this arrangement can result in a higher level of households’ indebtedness (student loans). On the other hand, if educational service is provided for free (in fact it is financed by taxes), this can tend to increase government indebtedness. The same holds true also for other services.

Sectoral structure of indebtedness thus can be more or less impacted by way of consumption financing, a task standing usually out of the attention of analysts. In general consumption is the main activity of households; at the same time, it represents about 70 percent of GDP. Investment expenditures of households especially take the form of purchases of houses; it amounts usually to about 5 percent of GDP. Lower level of investment is just the reflection of the fact that purchased houses are not usually newly built and thus have no direct impact on GDP calculating new goods and services provided.

So, first we check “pass-through” of government revenues to final consumption on the basis of share of total government revenue to the GDP and government consumption expenditure to the GDP. The difference between these indicators gives us the information (in percentage points) which part of total government revenue is used for other purposes than for consumption (collective or individual). The abbreviation TE represents “total expenditure” of government, TR “total revenue”; CE “consumption expenditure” and the formula TE-CE shows the portion of revenue not devoted to consumption.
On average, government revenue represent about 45 percent of GDP in the EU. The highest share can be found in Norway (57.9 %), Denmark (56), Finland and Hungary (53.9), Sweden (51.4) and France (50.8). The lowest “pass-through” of government expenditure to consumption shows Austria, Finland, France and Greece, where government revenue is thus used for other than consumption purposes. We can look at this situation from another perspective based on the question – which part of individual consumption is paid directly by households (see chart 5). The highest share of private resources directly participating in individual consumption can be identified in Greece (89.1 %), Latvia (88), Bulgaria (87.9), Cyprus (87.1), Portugal (83.1), and Poland (84.4). The lowest shares of private resources occur in Sweden (69.2), Denmark (69.5), Netherlands (71.1), and Finland (73.7).

As a next step, we can put these findings together with the level of taxation of households approximated as a sum of taxes and social contributions (quasi-taxes) without the amount unlikely to be collected. The higher the level of this taxation and the lower “pass-through” of government to consumption, the more
pressure is put on private “budgets” and on the rise of private indebtedness. The highest taxation can be found notably in Sweden, Denmark, France, Belgium and Finland, i.e. in countries with low level of households’ participation in financing of consumption. At the other end of the scale are countries like Baltic countries, Greece, Spain, and Slovakia, where a larger part of consumption is paid by households.

These results seem to fit the theoretical considerations that lower taxation should correspond to higher consumption paid directly by consumers. This relation depends mainly on the behaviour of the governments, but we should take into account the type of consumption expenditure, collective or individual. Individual consumption expenditure is devoted directly to households’ consumption; but collective expenditures take the form of cost on the general public services, defense, safety or economic affairs.

If the revenue of governments is spent mainly for the purpose of collective consumption, individual consumption expenditure of government must be suppressed or missing revenues should be substituted by government debt. The

Source: Eurostat
The following chart shows the shares of government consumption expenditure to total government revenues\(^2\) (green line, rhs) and the shares of individual and collective expenditure on total revenue of the government sector (blue and red columns, lhs).

From this perspective, we can analyse government revenues “pass-through” to the consumption with relation to actual consumption of households. The highest share of government revenues devoted to individual consumption can be found in Netherlands, Iceland, Lithuania, Slovakia, Sweden and Spain. But, government revenues are used mainly for individual consumption almost in all countries with some exceptions. The share of collective expenditure in total government consumption expenditure prevails in Cyprus (most indebted government sector in Europe), Latvia, Slovakia, and a very high share of collective consumption can be identified also in Greece, Czech Republic, Hungary or Bulgaria.

\(^2\) It is to be noted that revenue does not cover revenue from government bond issues.
So, to compare all these statistical data we can conclude which part of resources (as % of GDP) is drained from the households’ budgets and which part of government expenditure (as % of GDP) is “put back” to households’ consumption. The following chart shows the difference between these two variables for 2011.

The highest degrees of outflows from households’ consumption as a result of compulsory levies and behaviour of governments can be found in Austria, Italy, Finland, Denmark, France, Luxembourg and Norway. In contrast, the lowest extent can be identified in Lithuania, Latvia, Ireland, Romania, Slovakia and Spain. Are these results in line with the indebtedness of households? Let’s look at the following chart displaying shares of private and government debt in relation to GDP.

The relation between level of taxation, “pass-through” of government expenditure to individual consumption and indebtedness of households seems to fit to the conclusion found by Friedman (1981) as mentioned above. The correlation seems to be very weak also in the European countries (correlation coefficient about 0.1). So, even if there can be found some relation between government behaviour and households’ indebtedness, other factors play more a important role in the dynamics of the households’ indebtedness.
Private units are in a very different position from governments; they do not have legal permission to impose additional taxes to repay debt. Government, on the contrary, can take this measure to repay debt, as can be seen nowadays in Cyprus. But, the ability to repay government debt can decrease the ability of tax-payers to repay their own debt. It is evident that there is no easy way to repay both types of debt. It appears that government indebtedness is in fact private indebtedness, so the difference is rather formal than actual.

We concluded that the relation between “fiscal” behaviour of government and private indebtedness is rather weak, so what stands behind the dynamics of households’ indebtedness? The following chart shows types of loans giving us the

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3 It should be recalled that fiscal taxes are not the only form government can get additional sources. The other possibility is to impose an inflation tax, i.e. to decrease real value of disposable income and debt by accelerating monetary emission.
preliminary answer; the prevailing purpose of loans taken by households is to purchase a dwelling. Few exceptions can be seen in Denmark, Hungary or Cyprus.

Because a dwelling is the main factor of households’ indebtedness, we also have to take other circumstances into account not only institutional division of consumption financing; the structure of the housing market and development of property prices especially play their roles. First we check the relation of households to the assets (dwellings), i.e. if these assets are privately owned, rented or provided by the state (social housing). It is worth mentioning that the definition of social housing is not yet strictly settled, so the comparability of data can be questionable.

The situation in housing by countries is indicated in the following chart. Privately owned dwelling dominates; the range of social housing provided by the state vary significantly across the European countries. The highest share of social housing is provided in Netherlands (32 % of total housing), Austria (23), Denmark (19), Sweden, UK (both 18) and Czech Republic (17).

It can be seen that owning houses through mortgages is spread differently across Europe. There is a group of countries with a high level of mortgages like Netherlands,
Switzerland and UK; on the other hand, the group of countries with a lower share is Hungary, Greece and Denmark, even if, for example, in Hungary most dwellings are privately owned.

The property structure affects the share of housing costs in total disposable income, as is indicated in the following chart. The highest share of housing cost (measured in PPP) can be found in Denmark, in a country with a very high level of households indebtedness, and the same holds true for Netherlands and Germany.

Thus, housing costs can be identified as an important factor affecting the level of indebtedness. Last but not least, we have to look at the development of property prices having impact on the nominal level of debts. Property prices are one of the most important channels of monetary policy. The higher the price of the dwelling, the higher the nominal value of loans needed be taken to purchase this dwelling (and the higher share of housing costs on the disposable income). Total volume of loans increases overall money in the economy, which, as a result, influences prices in the economy.

Source: Eurostat
Unfortunately, analysis of property prices faces the problem of data availability. Data are provided by different countries in different forms, and to make these data comparable we transform them to long-term indexes that show the rise in property prices in pre-crisis period from 2000 to 2008. The following chart shows indexes modified in this way for countries with available data in satisfactory length.

In the Eurozone, on average, the property prices have risen by 50% in this period. For example in Austria the rise of prices was very modest, and it was accompanied by a quite low level of housing debt on GDP (35%). But a similar level of debt can be found in Greece, where the rise in prices was much more significant. A similarly striking rise was recorded also in the UK, where the level of housing debt on GDP is much higher (85%). But it is also worth mentioning that the rise in property prices is linked to the rise in GDP which itself tends to lower the relative indebtedness.

But because the pace of indebtedness’ rise deviates across countries, in spite of the general rise in GDP, it is evident that the intensity of the rise is certainly
affected also by many other factors like migration, demographic structure of the society or other factors like popularity of the country as a tourist centre. As was indicated above, property prices lead us back to the monetary factors, which are very important in this respect. Very low real interest rates connected with monetary integration have driven the indebtedness in all sectors of the societies (Rybachek, 2011).

We can thus conclude that the analysis does support the hypothesis mentioned at the beginning of the paper that the mutual relation of government and private debt is rather weaker. But we did not deal with different incentives of private and government debtors to behave prudently; it is evident, behaviour of “government” debtors generally tends to be more spendthrift. So, even if it cannot be denied that institutional background plays a role in the distribution of debt across society, monetary conditions seem to be most important for the trend of the indebtedness

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4 Or from the other perspective, different incentives of private and “public” producers to provide goods and services at possibly lower level of costs.
in all sectors nowadays. As a result of loose monetary policy, level of debt reached the level at which this debt is unredeemable.

**NATURE OF DEBT MATTERS**

What makes us conclude that current debt cannot be paid off? In the system of ever rising inflation, money supply must expand to avoid deflation that could supposedly harm the economy. Because money is created almost exclusively in form of new debt (loans), rise in quantity and nominal values of debt is necessary to meet the target of monetary policy – inflation of prices. Based on this approach it is often claimed that governments often have to run debt to keep economies growing. Lack of tax revenues (relative to expenditures) can be substituted (mainly) by government bonds. If government bonds are purchased by banks on the primary market, new monetary means of payment are created.

Ever rising money supply and inflation periodically results in serious structural problems (misallocation) connected with crisis (relocation of scarce resources). The impact of never-ending money emission on production structure is only one part of the problem; not least, the nature of debt comes into play. Debt can be understood in two ways; debt that will be repaid by revenues generated by the activity financed by debt can be called “productive”. Debt that must be repaid out of revenues gained in other activities can be called “unproductive”. Consumer loan is a typical example of “unproductive debt”; in this case, we can increase current consumption only to the cost of future consumption.

On the contrary, productive debt have the capacity to provoke a rise in the GDP due to its intended positive impact on productivity. Thanks to this relation, a rise based on productive debt has more potential to be sustainable; in contrast, a boom resulting from unproductive debt does not because it is just a shift of future consumption to current consumption without direct impact on the productive capacity of the economy. So, we now investigate the relation of debt to the most popular indicator of economic performance, i.e. GDP.

Following chart shows the correlations between private and government debt with GDP (in terms of percentage changes to previous period in 1996–2011). The general nature of private and government debt is quite obvious from this chart. While private debt generally shows a positive relation to GDP in almost all countries, the same holds true for government debt but in negative term. On the one

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5 White (2012)
This data confirm “debt background” of GDP growth in the fiat monetary regime; on the other hand, government debt usually has the nature of unproductive debt.

Official statistics do not provide the information about which type of government expenditures was financed by debt. But we can estimate the type of expenditure covered by debt simply from the share of government investment on total government expenditure, as indicated in the following chart (13).

Only about 5% of total expenditures have the form of gross capital formation, i.e. investment into infrastructure, etc. So, we can assume that most of government debt has the nature of unproductive debt. If we look at individual countries before 2008, the highest share of investment can be found in new EU-countries like Romania, Lithuania, Estonia, and Bulgaria. Between old countries, top spots are occupied by Spain, Luxembourg, and Greece. In these countries, investments took mainly the form of transportation investment (Spain) or general economic affairs like institutional arrangement (Greece). This fact opens another question
about productiveness of investment expenditures that goes beyond the topic of this text.

We can cautiously say that government debt (being mostly unproductive) can be repaid in fact only by higher future taxes, no matter if these have fiscal (direct or indirect taxes) or monetary nature (inflation). This unproductiveness of government debt inevitably makes the ability of private units to repay their own debt lower, even if this debt of households is mostly productive. We can conclude that the level of current government debt and the “contagion effect” just mentioned makes the debt (in most “developed” countries) unredeemable.

CONCLUSIONS

The current level of debt is not only unpayable, but it is an interesting research topic opening the door for several theoretical solutions. It is commonly expected to repay debt in a traditional way, i.e. to follow the pattern indicated in the agreement between debtors and creditor without any impact on current price level. But the volume of debt reaching two-year income (measured by GDP) makes this solution unfeasible. Secondly, debt can be forgiven (debt relief). Even if there are many
historical experiences with this practice, this does not seem to be probable because of the negative impact on the financial sector.

Debtors could also refuse to repay debt; this measure would significantly harm confidence which is vital for the current banking system; that would destroy the relations between economic actors. In our opinion, this path will not be chosen. For government, there is the possibility to impose additional fiscal taxes. As was already mentioned, additional taxation would negatively impact the ability of private sectors to deal with their own debt, so this cannot in no way solve the general indebtedness problem.

The last possibility seems to be more probable also with respect to current measures taken by policy-makers; nominal value of debt can be lowered by the price level movements, i.e. inflation. The effect is very similar to imposing fiscal taxes but inflation will lower all debt in nominal terms, not only those of government. Even if this solution can be the most preferred by policy-makers, it can have huge potential to disrupt the European economies due to depreciation of savings and the well-known calculation problem.

It is evident that there is no ideal “exit” strategy offering an economically painless solution. But for the future, we should draw many lessons. Mainly, the natural break for unsustainable rise of indebtedness is a drop in prices (deflation). To reject the process of sound deflation means to stick economies in the inflation trap with an ever rising level of debt and periodically repeating a debt crisis followed by “the inflation therapy”. And just monetary factors drove the indebtedness in the last decades due to inflationary policy (targeting a narrow price segment of consumer prices) and low interest rates.

**SOURCES**


**DATA SOURCES**


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