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Summary: I argue that each currency needs a sovereign for stabilizing financial markets and the real economy. Failing this, a currency union would sooner or later decay. Therefore, I explain the ongoing crisis of the Euro area by the lack of a sovereign. The theory of optimum currency does not equip us with sufficient knowledge for overcoming the crisis for it separates money and the state, and gives reason for such reforms like the Fiscal Compact, where fiscal operations ought depend on assessments made by financial markets. I demonstrate that the implementation of this pact will lead to a deeper crisis of the Euro area, and to a deeper split into creditor and debtor countries. I also argue in favor of transforming the currency union into a sovereign currency area, in which monetary and fiscal policies are effectively coordinated between the central bank and a central financial authority in the sense of the concept of functional finance.

Keywords: Euro crisis, optimum currency area, money, functional finance, fiscal compact, system transformation.

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Currency without a sovereign: on the causes of the Euro crisis and its overcoming

The European Union has been looking for ways to reform its institutional structure since 2010 to secure the continued existence of the euro area. However, in view of the large number of official reform proposals, many observers, but also investors have lost the thread and are missing a concept, which goes beyond the requirements of the day. This has a negative impact on the economy of the euro area. High risks in the financial sectors have sharply curtailed lending to the private corporate sector in the crisis-hit countries, and in 2012, the current and expected budget cuts in debtor countries have once again triggered a recession, the second after 2009, throughout the entire euro area, the predicted and feared *double dip*.

It is the aim of this article to explain the risks of the current reform policy. It explores the Fiscal compact signed in March 2012, which, apart from the European Stability Mechanism (ESM), is the most important reform so far, aiming at a consolidation of public finances, whose crisis is considered the cause of the Euro crisis. However, what has been conceived as a fiscal crisis is in reality a balance of payment crisis. This misapprehension has been dealt with in detail elsewhere,[1] so that it will not be referred to any further.

This article offers a technical analysis of the compact's effects on income and employment of the entire Euro area. Insofar, it adds to other technical analyses. But I think this not sufficient. That is why, in contrast to other critical contributions to the debate, this article offers a theoretical focus. My key argument is that a currency is only as strong as the sovereign behind it. The Euro is lacking such authority, and therefore, the Fiscal compact will rather deepen the trouble in which the Euro area is. What the argument means in concrete terms is being explained in the first chapter, in which I critically address the theory of the optimal currency area, which provides the standard arguments for a monetary union, as it stands and how it should be reformed. One of the conclusions this criticism arrives at is, that because of the lack of a sovereign, a monetary union will be permanently divided into creditor and debtor countries and that subsequent fiscal restrictions in debtor countries á la the Fiscal compact will lead to deflationary tendencies with rising unemployment in the entire monetary area.

This conclusion is examined in the second chapter on the basis of the Fiscal compact. Its core is an evaluation of the effects on the aggregated income of the euro area.[2] In contrast to most contributions

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[1] See for example Illing et al. 2012.
[2] Based on its rough results, the analysis was already complete in November 2012. Since then, the EU Commission has revised its prognoses for 2012 and 2013 downwards and its Poverty Report in January 2013 has subsequently confirmed my calculations and fears concerning the effects of the Fiscal compact.

to the debate, I reach a negative conclusion concerning the Fiscal compact with regard to its contribution to overcome the institutional weakness of the euro area. The third chapter focusses on reform plans dealing with the question as to how the monetary union could be transformed to become a "sovereign monetary union". The last chapter contains a summary. The methodological bases of my evaluations are presented in an Annex.

1. Theory of the monetary union

1.1 Why monetary unions fail

Sovereign state and national currency form a "sovereign currency area". The latter is the normal case in the global economy. In contrast, a monetary union combines several nation states without creating a sovereign state. Hence, monetary policy is centralized, whereas fiscal policy is decentralized at national level. However, economic history, in particular recent events, shows that the exceptional case of a monetary union never enjoyed a long life span: either they disintegrated or its members united in a single state. Today, there are still four monetary unions, of which only one - the European Monetary Union (EMU) - consists of developed industrialised nations, all others are made up of developing countries. Within the scope of an advanced political union during the European unification process, original considerations had comprised the centralization of fiscal policy (Werner Plan 1970). However, this plan was dropped during the construction of the EU (Maastricht Treaty 1992). Apart from the EMU, there are currently the two CFA zones in West Africa, supported by the French Ministry of Finance, and the Eastern Caribbean Currency Union (ECCU) with a Central Bank, but also without a political union. The history of monetary unions is also a history of failure: similar to the Scandinavian Monetary Union (1872-1924), the Latin Monetary Union lasted from 1865 to 1914/1926. In 1993, the Rouble zone broke up relatively quickly after the collapse of the Soviet Union and the creation of many successor states. After the dissolution of the joint state, the Czech-Slovak Monetary Union only survived from 31 December 1992 to 7 February 1993. The Dinar vanished following the violent breakup of Yugoslavia in the early nineties. No doubt, different political and economic reasons were also involved in each case, but a common factor is relatively easy recognized: monetary unions are lacking the common state or, in other words, a state union with a central financial authority, which, together with the Central Bank is responsible for the currency and its stability. However, it appears that common Central Bank is obviously less significant than a common state. The Scandinavian Monetary Union, for example, did not have a common Central Bank; however, it was at least based on the political union between Sweden and Norway. Its dissolution in 1905 paved the way for the subsequent end of the Monetary Union.

Perhaps success stories can provide a stronger intuitive understanding for the argument: the success of the US Dollar started after the loose confederation of England's former colonies - institutionally definitely comparable to the EU - had been transformed into a union with central government following the victorious 1787 Revolutionary War. And it did not do any harm that the New England States, the Mid-Atlantic States and the South had a very dissimilar "stability culture" with different levels of public debt.[3] It appears as if in particular these differences forced a strong fiscal central government if one wanted to avoid the failure of the new union after only a few years.[4] The implementation of the Dollar as the common currency and its rise to the world reserve currency

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[3] Which also applies to today's United States, which is still not regarded as an optimum currency area.
[4] Actually it was only after the end of the Civil War that a state regulated monetary system was installed.

followed the highs and lows of forming the union, in which the foundation of the Federal Reserve System in 1913 was another milestone. Another example is the German-German Monetary Union: the Deutschmark (DM) did not lose its position as a reserve currency when it was introduced in the GDR in July 1990, as the political unification took place in October 1990 - three months after the DM had been introduced in the GDR. The Belgium-Luxembourg Monetary Union was a success story because Luxembourg was only an appendix to Belgium, and the Belgium Central Bank and the Ministry of Finance were easily capable of covering claims on Luxembourg. A positive conclusion can be drawn from all this: the necessary condition for a sovereign currency is a state, which backs this currency with its taxable capacity. However, in the European Monetary Union, the states with the largest taxable capacity - in particular Germany - reject such an assumption of responsibility - very similar to what the less indebted member states of the early US initially did in 1790 in respect of the highly indebted member states, only to finally veer their opinion after all.[5]

1.2 *A critical view on the theory of optimum currency area*

The fact, that Europe introduced a single currency without a sovereign, shows a way of thinking that separates state and markets. This way of thinking characterises many economic theories, which can be subsumed under the term 'market fundamentalism', which also includes the theory of the optimum currency area (OCA). The OCA theory has influenced the thinking of many economists - both of supporters and critics of the introduction of a single currency in Europe.[6] The theory was developed in the 1960ies in order to address the question concerning the necessary number of currencies in the global economy and the conditions for the merger of regional currencies to form a single currency. It is insofar not a theory of the monetary union: its criteria may equally be applied to nation states with their own currency and several regions as to the monetary cooperation between states or indeed to a monetary union.

Traditional criteria for an optimum currency area are flexible labour markets[7], open commodities markets[8] and diversified production structures[9]. Krugman[10] as well as Bayoumi and Eichengreen[11] believed that these criteria would not be fulfilled in Europe and were therefore sceptical towards the introduction of a common currency. There is no sovereign (government) to find in the early thinking about an OCA. Later considerations added fiscal transfers, hence, give a feeling of the presence of some government. De Grauwe's criticism postulated that a currency area could only then be optimal, if a system of fiscal transfers would ensure a balance of asymmetric shocks, which the markets alone would not be able to achieve.[12] Hence, he refers implicitly to a striking characteristic of the OCA theory, namely the absence of a state in its capacity as politico-economic and sovereign player; the latter concerning the enforcement of using a certain currency. According to De Grauwe, government action would only be required if the currency area was *not* functioning

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[5] Worth reading is J. J. Ellis' fact-filled essay "The Dinner" in his book on the founder generation of the USA, which might also interest our politicians; Ellis 2002.
[6] Compare the leading textbooks on European integration: de Grauwe 1994; Baldwin, Wyplosz 2009, chapter 11; Wagener Eger 2009, chapter 14.6.
[7] Mundell 1961.
[8] McKinnon 1963.
[9] Kenen 1969.
[10] Krugman 1991.
[11] Bayoumi, Eichengreen 1993.
[12] See de Grauwe 1994; similar also Kenen 1969.

optimally. Then, however, one has to conclude: fiscal transfers are superfluous if this optimality exists or if it can be achieved by reforming the markets or if the common currency would subsequently compel private agents and the governments to adjust their behaviour to the optimality conditions ((as Frankel und Rose[13] assumed). However, if government action is unnecessary, how does money get into the economy and who ensures that it is used?

Here, we enter a different realm of the interplay between the state, the private agents and money. Goodhart[14] argued that the OCA theory was the spatial characteristic of a theory - the so-called metallism - used by the majority of contemporary economists to explain the nature and development of money. This term probably traces back to Schumpeter[15] but the theory itself has more far-reaching roots. According to metallism money is a commodity, which can also be produced privately having the characteristic of a *numeraire* in market transactions. Money is created by market-based transactions and does not precede them. Each form of money and its use is able to develop and can be completely independent of the existence of a state. (In their textbook on European integration, Baldwin and Wyplosz explicitly explain the introduction of a common currency by stating that money would be in a position to reduce the costs of barter transactions.[16]) From there it is only a small step to claim that money for market-based transactions would work better without state intervention, which only would disturb the function of relative prices as measure of shortage. Applied to the practice of structuring a monetary union, it seems to be natural to separate the monetary from the fiscal sector and to structure the monetary union in such a way that the central bank is exclusively responsible for price stability, whilst the decentralized fiscal policy has to ensure a balanced budget. That way, it shall be ensured that state influences do not disturb the functions of money in the market economy.

Against the history of money we are familiar with, the assumption that money had developed from private exchange processes is doubtful, to say the least. In fact, history lets us believe that money was long used before market economies existed. Historically documented examples to support this assumption are the Anglo-Saxon *wergeld*[17], which was used as a socially accepted and required atonement and compensation if a man was murdered (mentioned in *Lex Frisionum*, the "Law Code of the Frisians" from the 8th Century, and also applied in Saxon law), or monetary payments to avoid blood revenge.[18] Goodhart[19] also argued that money developed from the attempt of the ruler to make the tax payments of his subjects more efficient. This implies that he had to force his subjects to make tax payments only in the currency issued by him. Indeed, no ancient coin with the imprint of a private issuer has been found so far. Those coins were minted in mint presses owned by the sovereign. Some definitions in the monetary language world refer to the origin of money: the term "legal tender" describes the legal requirement to use a certain type of money; in almost all countries, the national currency is the statutory means of payment; in some countries (Hungary for example) its name is even fixed in the constitution. Another term – "Seigniorage" – describes the ruler's income from minting coins, namely the difference between production cost and the nominal value of the coin. Paper money was used for the first time 1,000 years ago in China and 600 years ago in Italy, solely for the purpose of financing the war expenditure of the ruler. So, the theory of money alternative to metallism explains money as a social convention and not from being a *Numeraire*-commodity trade between private

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[13] Frankel, Rose 1998.
[14] Goodhart 1998.
[15] Schumpeter 1994 [1954], S. 288.
[16] Baldwin, Wyplosz 2009, S. 316.
[17] Grierson 1977, S. 19-21.
[18] As it seems to be common in today's Europe in some regions of Albania
[19] Goodhart 1998

agents. To this alternative approach belongs Knapp's state theory of money[20] and modern chartalists[21] including J. M. Keynes.[22]

Today, Seigniorage means the interest income from privately holding coins and bank notes, which is paid by the Central Bank to the treasury of the sovereign (Ministry of Finance).[23] This clearly shows that the monetary and fiscal functions of the state cannot be separated. However the independence of a Central Bank has been designed institutionally, looking at it from a functional point of view, it becomes clear that it cannot act independently of the sovereign. The derivation of money from the sovereign right is also based on Knapp's The State Theory of Money or chartalism. According to Keynes "all civilised money […] is chartalist". Modern Chartalists point out that paper money in form of a loan is a social convention and no *Numeraire*-commodity.

1.3 *Institutional problems of a monetary union*

Due to the fact that a monetary union does not have a sovereign, it has to tackle institutional problems, which a sovereign currency area is not exposed to. One of the problems is the *division into creditor and debtor states*. In an initial phase, the common currency and the unified monetary policy of the central bank lead to a convergence of risk premiums on medium and long-term interest rates, as the so far regional financial markets merge into one common financial market - even if structural and developmental differences between the regions remain, whose effects on the cross-border economic relations of a region are normally alleviated by their own currency. The most important reason for interest convergence is the omission of the exchange rate risk for investors.[24] However, the differences between individual states in respect of their fundamental risk factors (e.g. institutions) as well as levels of economic development (measured, e.g., by wage cost differences) do not disappear; hence, the convergence of risk premiums triggers private capital flows, which lead to continuous current account deficits and to non-sustainable private creditor-debtor positions. When the financial markets are recognising the lack of sustainability of debtor positions the common market once again fragments into its regional components. Interest convergence is replaced by a phase of interest divergence. When there is no central fiscal authority, which could counter the resulting loss of stability of debtors, for example by vertical transfers from the central authority to the regions or by horizontal fiscal transfers between the regions. An example applying to both in a sovereign currency area is the German common task to improve the regional economic structure, which was and is still used to transfer billions of Euros from West to East Germany.

A second problem is the *lack of central coordination.* Once an external shock has exposed the lack of sustainability of the private creditor-debtor positions, a monetary union has no central authority, which is able to coordinate the fiscal rescue operations with the monetary operations of the central bank. In a sovereign currency area this authority is the ministry of finance, who assumes the leadership in the common defence. The rescue operation for the US financial system 2008 has demonstrated this, when the US Ministry of Finance took over the leadership in the joint rescue actions with Federal Reserve

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[20] Knapp 1924

[21] Among other Goodhart 1998; Fontana 2003; Lavoie 2011

[22] "all civilised money […] is chartalist"; Keynes 1935, page 4.

[23] In the euro area, national central banks own the ECB; however, they themselves are in turn the property of the nation states.

[24] Whereby also the so-called "risk sharing" argument has to be considered (Mundell 1973; McKinnon 2002)

Bank. Fiscal leadership is not at least justified by the public ownership of a central bank, which might need government capital injections in a very severe crisis. In contrast, in a monetary union, the central bank has to negotiate with the national ministries of finance, which prior to this must have reached agreement. In a crisis situation, which requires quick action, this has to affect a transfer of leadership to the Central Bank. The most recent example is the unilateral declaration by the European Central Bank on 6 September 2012 to buy unlimited quantities of bonds of crisis countries with periods of up to three years to keep interest rates down - on the condition that the country submits itself to a fiscal reform programme. Hence, the central bank also assumes the responsibility to decide how a fiscal crisis is managed and how its costs are spread via national budgets onto tax payers and voters - all competencies of a sovereign government.

A third problem, already mentioned above, is the only limited ability of a Central Bank, to appear as a *Lender of Last Resort* (LOLR) in case of a private financial crisis or a financial crisis of a Member State. A Central Bank cannot collapse in a sovereign monetary system, because its losses are part of the state budget deficit covered by the Ministry of Finance via taxes (= capital increase) or the dispensation with revenue of seigniorage. As Goodhart said: '[…] what stands behind the liabilities of the Central Bank is not the capitl of the Central Bank but the strength and taxing power of the State'[25]. However, if this condition of economic and taxing power does not exist it is also possible for a Central Bank to collapse.[25]

1.4 Restrictions of fiscal policy in a monetary union

About 70 years ago, Abba P. Lerner published his work on Functional Finance: 'The central idea is that government fiscal policy, its spending and taxing, its borrowing and repayment of loans, its issue of new money and its withdrawal of money, shall all be undertaken with an eye only on the results of these actions on the economy and not to any established traditional doctrine about what is sound or unsound.'[26] This requires four commenting remarks: *firstly,* functional financial policy serves to combat unemployment or inflation by adjusting public spending and revenue. Which alternative the state will choose in each of these situations depends on the marginal costs of raising taxes in relation to the marginal costs of an increase in the seigniorage. The costs of a tax increase are in general based on tax avoidance of private persons and/or on increased expenditure of tax collection. In contrast, a seigniorage increase may itself contribute to inflation. *Secondly,* functional financial policy refers to a sovereign currency. Lerner focussed on the central government of the United States as issuer of the US Dollar and not on individual federal states. Therefore, functional financial policy does also not include debts in a foreign currency. "Sound Finance" is the fiscal policy concept, which a government has to consider in case of predominantly foreign currency debt. *Thirdly,* Lerner's concept of government does include both monetary and fiscal functions, whereby the central bank is not necessarily a government department. However, the concept aims at coordinating both functions; the independence of the Central Bank must then be understood on the basis as to how it uses its instruments and not in respect of the targets it is setting, which would be the responsibility of the sovereign.[27] The issuance of treasury bonds would have to be accompanied by the central bank by using its monetary instruments. And *fourthly,* behind the concept of a functional financial policy is the assumption that a

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[25] Similar also Buiter 2008. An example for this is the history of the Second Bank of the United States, which collapsed as the Central Bank, because unlimited borrowing after the Napoleonic Wars in Europe raised doubt on the solvency of the banks, and the government was not prepared, to compensate capital losses.

26 Lerner 1943, S. 39.
[27] Refers here to Keynes' rejection of an attempt by the British Labour Party in 1932 to take parliamentary influence on money policy; see Bibow 2001.

state, whose debts are predominantly in its own currency, cannot go bust, as it is able to issue new paper money for repaying any loans or to increase taxes or by being refunded its interest payments as seigniorage.

The general conclusion is that the functional fiscal policy approach provides a concept for an optimal budget policy for monetary sovereign states, which makes them independent of exaggerations by the financial markets. By offering low-risk investment options it able to contribute to the stability of the financial markets. In contrast, on joining a monetary union, a state is downgraded to the level of a provincial government, which can only engage in fiscal deficit policy if financial markets are prepared to finance them.[28] This is the reason for the observation that public debt of Euro country is debt in a foreign currency. Fiscal policy in a framework of a monetary union would lose its ability to take action, which all monetary sovereign states have, namely financing via seigniorage. Rather: the convergence of inflation rates in the Member States may even reduce governments' scope for manoeuvre to finance their budgets, as done in the past, from seigniorage. This leaves only tax increases and spending cuts as alternatives for balanced budgets, whereby the choice of instrument depends on the respective marginal fiscal costs: in view of income and employment, this choice may also have a suboptimal effect. In times of crisis such a restriction of options has detrimental effects because fiscal policy would have to contribute to the stabilisation of income and demand via fiscal deficits. The next section will demonstrate the consequences of 'sound finance' – the typical framework for fiscal policy in a monetary union.

2. The economic consequences of the Fiscal compact

2.1 Starting position

The adoption of the EU Fiscal compact in March 2012[29] in connection with a reform of the preventative and corrective arm of the Stability and Growth Pact[30] is considered an important step to tackle the Euro crisis. Its planned implementation in 2013 comes up against a critical situation in the euro area, which is characterised by a division in creditor and debtor states and a recession in most Member States. The figure below describes this division since the beginning of the global financial crisis on the basis of running yields of 10-year government bonds for 12 Euro countries compared to the long-term trend of the EMU average yield. In 2012 too, the trend (bold curve), in spite of fiscal adjustment programmes, does not show any deviation from about four percent achieved in 2002. Below the trend are the yields for six creditor countries (Austria, Germany, Belgium, France, Finland and The Netherlands). The figure therefore depicts a redistribution of the Seigniorage between creditor and debtor countries. In respect of Germany, I have estimated the crisis-specific profit from interest at ca. 50 to 70 billion Euros, based on the assumption of a fresh emission of 6-year government bonds of about 600 billion Euros in 2011.[31]

The both sides of the picture look very similar. But here is big institutional difference: prior to the introduction of the single currency, devaluation risks for individual countries pushed their risk surcharges upwards. This reflected exactly the alternative, which each government still had, when it

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[28] Palley 2011.

[29] European Council 2012 a. The compact has been ratified by all EU countries which the exception of the United Kingdom and the Czech Republic.
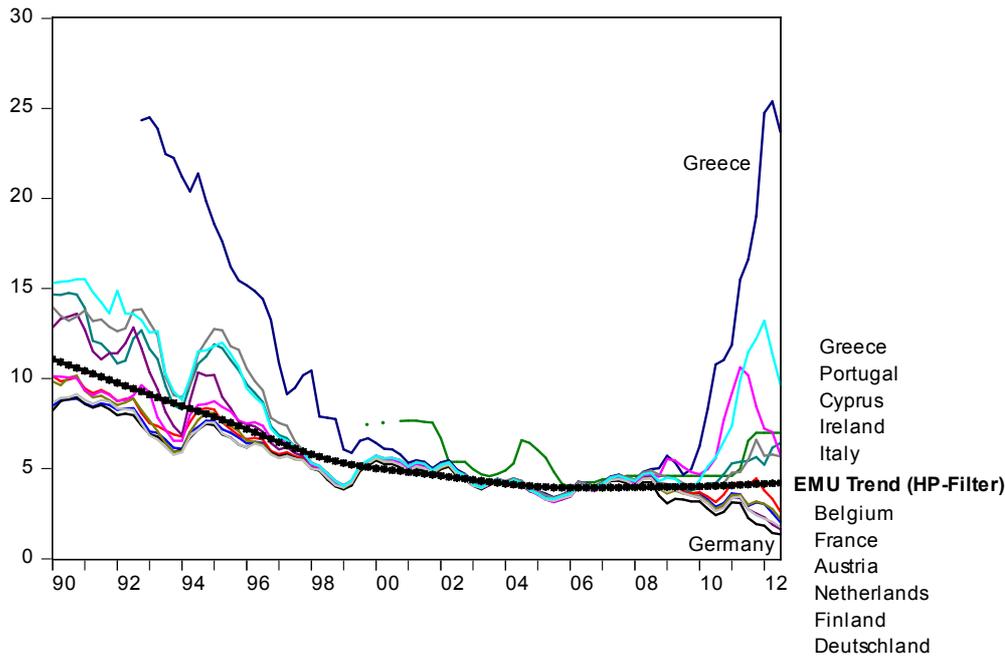
[30] European Commission 2012 c.

[31] Please see my article "Why Germany must let her crisis gains flow back into the Euro area". http://www.hubert-gabrisch.com (comments and viewpoints) (posted 14.01.2013).

borrowed in its own currency: higher interests on government bonds were returned to the national budget via the income from interest of the national central bank. This is no longer an option in the current situation at the right side of the figure. The government of a debtor county must either increase income from taxes or cut public spending which affects demand - both with consequences for the real economy.

Diagram 1: Quarterly yields of ten-year sovereign bonds in percent since 1990

Source: European Commission 2012 b (Eurostat), interest rates according to convergence criterion; own depiction

This fiscal adjustment process already began 2010/2011 throughout the EU, triggering contractionary effects in the Euro area in 2012. According to figures of the Statistical Office of the European Communities (Eurostat)[32] the aggregated economic output in the Euro area - the real Gross Domestic Product (GDP) - fell, compared to the first quarter, by 0.2 percent in the second quarter of 2012. Compared with the second quarter 2011, the decrease by 0.5 % was even higher. A closer look reveals the actual dramatic development: debtor countries with high interest burden are more affected by deteriorating economic prospects, which makes it more difficult for them to achieve the required fiscal surplus, to reduce public debt and also to ensure long-term sustainable debt in the private sector. The result: rating agencies see no reason to improve their risk assessment, so that the debt burden of the national budgets does not decrease substantially. Both the public and the private sector in debtor countries are at risk of sliding into a Ponzi scheme, where the revenue for paying back loans is no longer sufficient, new loans are not granted and therefore assets have to be sold at lower ('fire')

[32] See http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-06092012-AP/EN/2-06092012-AP-EN.PDF (accessed 14.01.2013).

market prices. The result of public and private asset and debt reduction is a possible deterioration of financing conditions for real economy investments in debtor countries, whilst in creditor countries refluxes of capital lead to an improvement in financing conditions. This too might result in strengthening the divergence of the economic output between the Euro Member States. With decreasing economic activity, increased unemployment, and low inflation pressure, a functional fiscal policy for the entire monetary union would entail an increase of the aggregated budget deficit (for 'technical demontration', see the methodical Appendix).

2.2 The effects of the compact on public households and economic activity

In contrast, the Fiscal compact demands a balanced budget, and also a reduction of the level of public debt, which in effect means even budget surpluses in the crisis. These are its most important provisions:[33] *Firstly,* the national budget of a contractual party has to be balanced or to show a surplus. This rule is considered satisfied if the annual balance of the structural budget does not show a deficit that is higher than 0.5 percent of the Gross Domestic Product. Members of the Euro area have to ensure that the structural deficit is lower, and in extreme cases must even develop into a surplus if the level of public debt is above the 60 percent limit of the Stability and Growth Pact. How the budget will be adjusted in respect of individual Euro countries and the Euro area in precise terms, depends on the calculations of the Commission and its negotiations with each individual country. In doing so, "exceptional circumstances" of the country have to be considered, for example a serious recession. *Secondly,* a possible difference between the debt limit of 60 percent and a higher level of debt has to be reduced annually by a twentieth of the current difference. At first glance, this suggests a declining burden of the debt reduction for years. However, at second glance this can only apply if the economic output is constant. However, a decline in the economic output to be expected as a result of budget cuts would weaken the assumed degressive effect. Fulfilment of the second provision may lead compliance with the first provision (no addition of provisions).

Table 1 below provides an overview of the expected budget adjustment for the individual countries and the euro area as a whole. The first column lists the actual fiscal deficits of each individual country and the entire Monetary Union and follows the projection of the European Commission from autumn 2011 (Cyprus, Malta and Luxembourg are not included). The second column shows the structural deficits, the way they were ascertained by the Commission. The difference between both columns is the cyclical deficits and other budget components. Concerning the entire Euro area, the Commission calculated for 2012 an increase of the cyclical deficit of 1.2 percent GDP, which means that the euro area was already in a downturn. The third column contains the public levels of debt in percent GDP in 2012. Column four refers to the gap between the 60- percent criterion of the Stability and Growth Pact and the level of debt in 2012. Empty cells mean that the public level of debt is below the reference value. The fifth column depicts the budget cuts in a consolidation period of five[34] years based on the deficit of the structural budget 2012. The sixth column shows the reduction of the level of debt in accordance with the second provision, also for the first five years

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[33] European Council 2012 a.

[34] The specifications for the correct arm of the Stability and Growth Pact contain a three-year adjustment period (European Commission 2012c); at this point already, I assume an extension based on "exceptional circumstances".

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Table 1: Effects of the Fiscal compact on the national budgets of EMU countries

	Budget deficits (financial surplus (+)/deficit (-) in percent GDP for 2012		Level of debt		Reduction of the structural deficit to 0.5 percent of GDP in 5 years[a]	Maximum reduction of the level of debt in percent GDP over a period of 5 years
	(1)	(2)	(3)	(4)	(5)	(6)
	Actual	Structural deficit	2012 in percent GDP	Exceeding the 60-percent threshold		
Germany	-1.0	-0.7	81.2	21.0	0.2	4.8
Belgium	-4.6	-4.0	99.0	39.0	3.5 *(0.7)*	8.8
Estonia	-1.8	-1.7	6.0		1.2 *(0.2)*	
Ireland	-8.6	-8.0	117.5	57.5	7.5 *(1.5)*	13.0
Greece	-7.0	-29	160.0[b]	100.0	2.4 *(0.5)*	22.6
Spain	-59	-4.2	73.8	13.8	3.7 *(0.7)*	3.1
France	-5.3	-4.0	89.2	29.2	3.5 *(0.7)*	6.6
Italy	-2.3	-1.3	120.5	60.5	0.8 *(0.2)*	13.7
Netherlands	-3.1	-1.8	649	49	1.3 *(09)*	1.1
Austria	-3.1	-2.7	73.3	13.3	2.2 *(0.4)*	3.1
Portugal	-4.5	-2.4	111.0	51.0	19 (0.4)	11.5
Slovenia	-5.3	-3.8	50.1		3.3 *(0.7)*	
Slovakia	-49	-4.4	47.5		39 *(0.8)*	
Finland	-0.7	0.3	51.8		0.0	
EMU-17	-3.4	-2.0	90.4	30.4	1.5 *(0.3)*	69

[a] *average annual values in brackets*
[c] *after the debt cut in the rescue package for Greece*
Sources: European Commission 2012a for debt data and European Commission 2012 b for budget data (Ameco database) respectively; own calculations.

The effects on production are estimated by using the income multiplier model (see the Appendix for method and data) and presented in Table 2.[35] The implementation of the first provision of the Fiscal compact in a medium-term adjustment period of five years (2013 to 2017) should by 2017 have led to a reduction of the real Gross Domestic Product of the Euro area by a total of ca. 2.6 percent compared to the starting year 2012. However, an even larger withdrawal effect by demand could be the application of the second provision. Based on the first five years of the long-term adjustment period, the degressive reduction of the level of debt should have reduced the aggregated economic output to such an extent that in 2017 it would be ca. 11 percent below that of 2012.

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[35] Note that the estimation is exclusively based on fiscal withdrawal effects when all other factors are constant.

Table 2: Assessment of the effects of the Fiscal compact on public budgets and the economic output[a] in the euro area

	2012[a]	2013	2014	2015	2016	2017
Adjustment of the first provision of the Fiscal compact						
Funding deficit (-) resp. surplus (+)[b] Nation state without interest payments in billion Euro	-0.4	28	57	87	115	144
Deficit (-) in structural budget in percent of GDP[a]	-2.0	-1.7	-1.4	-1.1	-0.8	-0.5
GDP at market prices 2012 in billion Euro	9,538	9,489	9,440	9,391	9,342	9,294
Rate of change of GDP in percent	1.2	-0.51	-0.52	-0.52	-0.52	-0.52
Adjustment of the second provision of the Fiscal compact						
Reduction of the level of debt (degressive) in percent of GDP[a]		-1.5	-1.4	-1.4	-1.3	-1.3
Net lending/borrowing nation state without interest payments in billion Euro	-0.4	145	279	403	519	626
GDP at market prices 2012 in billion Euro	9,538	9,292	9,069	8,867	8,682	8,513
Rate of change of GDP in percent	1.2	-2.6	-2.4	-2.2	-2.1	-1.9

[a] 2012: Figures of the Commission
[b] Sum of structural budget balance, cyclical balance plus other positions.
*S*ources: European Commission 2012 b; calculations by the author (see also Appendix).

The recession triggered by the Fiscal compact would of course differ from region to region. Hence, one has to fear that the existing division between creditor and debtor states will deepen, which will affect both the real economic development and the risk surcharges for government bonds.

This is a calculation in case of a rigid implementation of the program. However, a program with such effects is hardly to realize, and it looks now – the end of 2013 -, that the chance of following all the provisions is impossible. This is good news, but the sad is that not-implementing enlarges the institutional chaos in the European Union and undermines the thrust into the ability of policies to tackle problems in a substantial and conceptual way.

3. On overcoming the Euro crisis

A substantial and conceptually convincing reform path would create E(M)U institutions, which allow a monetary and fiscal policy from a macroeconomic perspective. The necessity to make a sovereign Euro out of a half-orphan requires options for a functional fiscal policy in the area of the single currency, which can be coordinated with the monetary policy of the ECB. This is no longer possible at Member State level. The practically irredeemable Fiscal compact does currently not permit to ensure employment in the euro area via coordinated deficit increase and to at least maintain the economic output. However, control and sanction mechanisms for the regional or 'provicial' level of an economic area only make economic sense, if they can be combined with a functional economic policy at central level, as it is the case in sovereign currency areas.

Hence, the Fiscal compact is lacking a superstructure. In an idealised form, this superstructure consists in the creation of a central fiscal capacity, be it as a European treasury or a Ministry of Finance, which

would be the sole partner of the ECB in crisis management instead of the current 17 national finance ministers. As George Soros aptly remarks:[36] "There is a missing ingredient: a fiscal authority. For a fully functioning financial system, you need not only a monetary authority, but also a fiscal authority – a treasury. The US has a central bank and a treasury, and the two of them have dealt with the financial crisis. In Europe, there is only the central bank. The fiscal authority is missing. And everything would be much simpler and function better if a fiscal authority was actually constituted, which requires political action.". However, to achieve this, those functions, which are vital for a sovereign Euro, would have to be transferred from national to European level. The execution of the functions would also have to be democratically legitimized at European level, for example by enhanced rights of the European Parliament. At the centre are three functions of the fiscal authority: (a) prevention of economic imbalances among Member States, (b) securing a single market for government bonds in Euro and (c), yes, the supervision of the compliance with the Fiscal compact and its implementation.

Apart from horizontal transfers, it is also possible to reduce the adjustment burdens from imbalances between countries participating in the monetary union via vertical transfers. They would stabilise demand and provide investment incentives, which soften, if not even prevent, sharp and rapid booms and contractions on the financial markets - as it is the case in respect of the German regions: even though regional capital inflows and outflows are taking place, they do not pose a problem for the economy as a whole, because balancing mechanisms would prevent exaggerations of the financial markets. Proposals for introducing such a transfer system have been under discussion since 1993; also by the EU Commission.[37] The proposal by a study of the Jacques-Delors-Institute [38] is currently going furthest: during the period of an economic upturn, national budgets shall make contributions to a fund of Euro countries, which would make payments to national budgets in times of crisis, However, a functional fiscal policy expects that rates of contribution and regulations can be changed in case of exception requirements.

In case of serious and long lasting shocks, as they are caused in particular in globalised financial markets, the stability of financial markets depends on the existence of low-risk securities, which are normally issued by the public sector. Asymmetric interest shocks can only be prevented in a currency area, when a uniform market for low-risk securities exists; otherwise, different regional levels of interest would not only weaken the investment appeal of the currency overall, but also result in regionally different real economy effects. Securing a unified market for government stocks requires a joint, coordinated liability for each part of the public debt of a country, which exceeds a previously agreed threshold, as provided by some proposals.[39] However this might be technically set up in detail: in the end, joint liability can only result from the aggregated taxable capacity of the participating countries, even if the issue of Euro bonds shall be initially funded by borrowing from the financial markets or the ECB. Therefore, a European treasury, in order to achieve sufficient "firing power" in agreement with an LOLR function of the ECB, should, if required, also have the right to own yields, which are either generated by a European tax of its own or from payments from national tax revenue.

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[36] Soros 2012, page 10.
[37] SMR 1993; von Hagen, Hammond 1998; on the creation of a Europe-wide unemployment insurance compare. Dullien 2008.
[38] Notre Europe Jacques Delors Institute 2012, page 30 f.
[39] "European safe bonds" according to Brunnermeier et al. 2011; but also INET 2012; Notre Europe Jacques Delors Institute 2012.

4. Concluding remarks

I have argued that the lack of a European sovereign is a fundamental problem for the European single currency, from which other problems derive, for example non-sustainable debtor and creditor positions (= current account imbalances) of the Member States. The financial markets needed ca. eleven years to figure this out - with the result of a regional fragmentation of the common Euro market for government stocks in creditor and debtor markets and huge risks for both sides. However, small regional Euro markets have little appeal for major investors. The deliberations are also intended to show that the theory of the optimal currency area is not a good guideline for the reform debate as it ignores the role of the state whilst putting too much emphasis on market reforms. The aim to let the Euro develop into a sovereign currency cannot be achieved by reform proposals, which are based on market fundamentalist convictions. However, the Fiscal compact, of which it has been said it would be the first step towards a fiscal union, aims at removing the last room of manoeuvre for a functional financial policy. One of the likely consequences consists in the strangulation of the European economy and in a further weakening of the Euro as a reserve currency.

Meanwhile, the idea to place a central "fiscal capacity" at the centre of a reform of E(M)U institutions is rather widespread. In particular those, who have a sceptical attitude towards the EU's ability to reform, may be surprised by the proposal made by a group surrounding European Council President Herman Van Rompuy:[40] A fully-fledged fiscal union would imply the development of a stronger capacity at the European level, capable to manage economic interdependencies, and ultimately the development at the euro area of a fiscal body, such as a treasury office. In addition, the appropriate role and functions of a central budget, including its articulation with national budgets, will have to be defined." It remains to be seen, what the chances are that statements such as the one above made by the EU Council President will actually be realized.

Appendix: Methods and data of GDP estimates

Functional financial policy

As an analytical framework, I use the basic equation for a monetary economy, in which expenditure creates income and thereby also savings from income:

$$Y^d + T + M = C + I + G + X \tag{1}$$

the left side of the equation is the income side, consisting of disposable income Y^d of the private sector, the disposable income of the government T and the disposable income of abroad from the home country's imports M. The expenditure on the right hand side is made up of private consumption C, investments of the private sector I, spending by the government on goods, services and public investments G and expenditure from abroad for exports (domestic goods) X. A conversion of (1) leads to

$$NPS = D + E \tag{2}$$

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[40] European Council 2012 b, page 6.

whereby $NPS = S^p - I$ respectively are the net savings of the private sector. $S^p = Y^d - C$ are the private savings (private households and undistributed profits of the business sector), I stands for private investments, and D is the primary budget deficit of the government with $D = G\text{-}T$;[41] $E = X\text{-}M$ applies to net exports.

Assuming $E = 0$: then the private net savings would be equivalent to the budget deficit. If, under these circumstances, the net savings were positive, the budget deficit D has to be greater than zero. Hence, if the economic situation in general would be characterized by the debt reduction of private households, businesses and banks, because they would try to consolidate their own budget by cutting consumption, investments and increasing their savings, as it can be currently observed in the euro area, the following applies: *ΔNPS > 0*, which necessarily requires *Δ(D+E) > 0*. If E =0 or very low in terms of the GDP - an assumption, which is not far from the EMU reality -, then an increase in E would not do very much for stabilizing production, employment and income. Hence, all that remains is to increase the budget deficit in the entire euro area and not to reduce it as demanded by the Fiscal compact.

The budget multiplier

A restatement of (1) and (2) respectively leads to

$$S^p = D + I + (X - M) \tag{3}$$

whereby S^p and M are functions of the disposable income Y^d. In this case

$$(s + m)Y^d = D + I + X \tag{4}$$

applies.

On the left hand side, s stands for the savings rate or the "propensity to save" of private households and m for the import rate of the national economy ("propensity to import"). On the right hand side, business investments and exports are exogenous, which means they are not determined by domestic income.[42] In this case (both aggregates do not change) the budget multiplier is:

$$\Delta Y^d = \frac{1}{s + m} \Delta D \tag{5}$$

respectively

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[41] Primary deficit: income and expenditure without interest payments.
[42] Exports are determined by the income from abroad; private investments follow the *animal spirits* of businesses.

$$g = \frac{\Delta Y^d}{Y_t^d} = \frac{1}{s+m}\left(\frac{\Delta D}{Y_t^d}\right) \qquad\qquad (6)$$

with g as the real growth rate when both sides are divided by the income in the starting year t. $1/(s+m)$ is the budget multiplier. The budget deficit D is made up of an income-dependent part (cyclical deficit) D^k and a part, which is independent on income (structural deficit) $\overline{D^s}$. The line above the structural deficit symbolizes that it is supposed to be a variable with politically specified valued, as in the Fiscal compact. The multiplier equation for the estimates is

$$g = \frac{\Delta Y^d}{Y_t^d} = \frac{1}{s+m}\left(\frac{\Delta(D^k+\overline{D^s})}{Y_t^d}\right) \qquad\qquad (7)$$

The reader might note that my multiplier is a bit different to the usual concept of expenditure or income multipliers. I use it due to the provision of the Fiscal compact for it calls quite generally for the reduction of the budget deficit and not for expenditure cuts or revenue increases. In practice, a mixture of both cuts and tax increases has to be expected. The budget multiplier is probably in the middle between the effects of the expenditure multiplier usually being higher than the effects of the income multiplier. (The tax rate is included in D and can therefore in case of a budget multiplier not appear twice in the equation in the well-known form (1/(s+m+t)).

Data and assumptions

My estimate of the effects for the period 2013-2018 is based on nominal data of the national accounts and the EU Commission spring forecast 2012 (see Table 3). Figures expressed in Euro for the assessment period are equivalent to prices in 2012, which means they almost reflect real terms. The primary budget is called "general government lending/borrowing". In 2012, the structural budget showed a deficit D of two percent GDP at market prices. This was added by the cyclical budget deficit as well as other components of net lending/borrowing with a surplus.

As expected, the net exports with an average of 1.4 percent between 2004 and 2012 only present a small share of GDP in the euro area. In accordance with equations (1) and (2), private savings were determined by three factors: primary net lending/borrowing, private investments and net exports. As the propensity to safe and import has been volatile for many years, the estimate has been based on average values for the period 2004 to 2012. The savings rate resulted in a value of 0.198. The average import rate for this period was 0.392. With regard to imports, no distinction has been made between export and domestic consumption so that the propensity to import appears slightly inflated and the multiplier slightly too low. The average budget multiplier for the assessment period is slightly below 1.7 (1/(0.198 + 0.392). This value does not appear too high against the background of some current estimates by spending multipliers during recessions - one ought to mention in particular a recent estimate of the IMF[43] − The estimate was based on constant cyclical (and other) components of the entire budget in billion Euros, so that its rate at the Gross Domestic Product increases during the course of a recessive development. At the same time, I am aware of the fact that this assumption causes further inaccuracies of the estimate.

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[43] Batini et al. 2012, in particular Table 2, page 55.

Table 3: Selected macroeconomic aggregates[a] and parameters[b] for the euro area (17 countries)

Aggregate in billion Euro resp. parameter	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gross Domestic Product at market prices $=Y^d$	7,860	8,145	8,564	9,030	9,242	8,922	9,176	9,421	9,538
Net exports of goods and services $= E$	159	120	97	131	86	118	123	138	183
Imports of goods and services $= M$	2,728	2,985	3,362	3,619	3,799	3,168	3,647	4,011	4,169
Gross investments private sector $= I$	1,422	1,499	1,659	1,810	1,807	1,430	1,535	1,.625	1,614
General government lending/borrowing [c] $= D$	15,0	36,9	131,9	206,6	84,9	-314,1	-313,4	-100,3	-0,4
Structural budget $= D^s$	-220	-196	-172	-172	-268	-410	-468	-311	-191
Cyclical budget $= D^k$	-8	-8	51	108	65	-161	-110	-75	-115
Other components[b] $= D-(D^s+D^k)$	243	241	252	270	288	257	265	286	305
Private saving[b]: $S^{pr} = D+I+E$	1,565	1,582	1,624	1,735	1,807	1,862	1,971	1,864	1,798
Private savings rate : $s = (S^{pr}/Y$	0,199	0,194	0,190	0,192	0,196	0,209	0,215	0,198	0,188
Import rate : $m = M/Y$	0,347	0,366	0,393	0,401	0,411	0,355	0,397	0,426	0,436
Multiplier $= 1/(s+m)$	1,831	1,784	1,718	1,687	1,648	1,774	1,633	1,604	1,601

[a] Figures of the Commission
[b] Own calculations based on figures of the Commission
[c] Primary deficit without interest payments
Sources: European Commission (Eurostat) 2012 a; European Commission 2012 b; calculations by the author.

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