

The misfortunes of virtue*

By [Christophe Blot](#)

** This text summarizes the outlook produced by the Department of Analysis and Forecasting for the euro zone economy in 2012-2013, which is available in French on the [OFCE web site](#)*

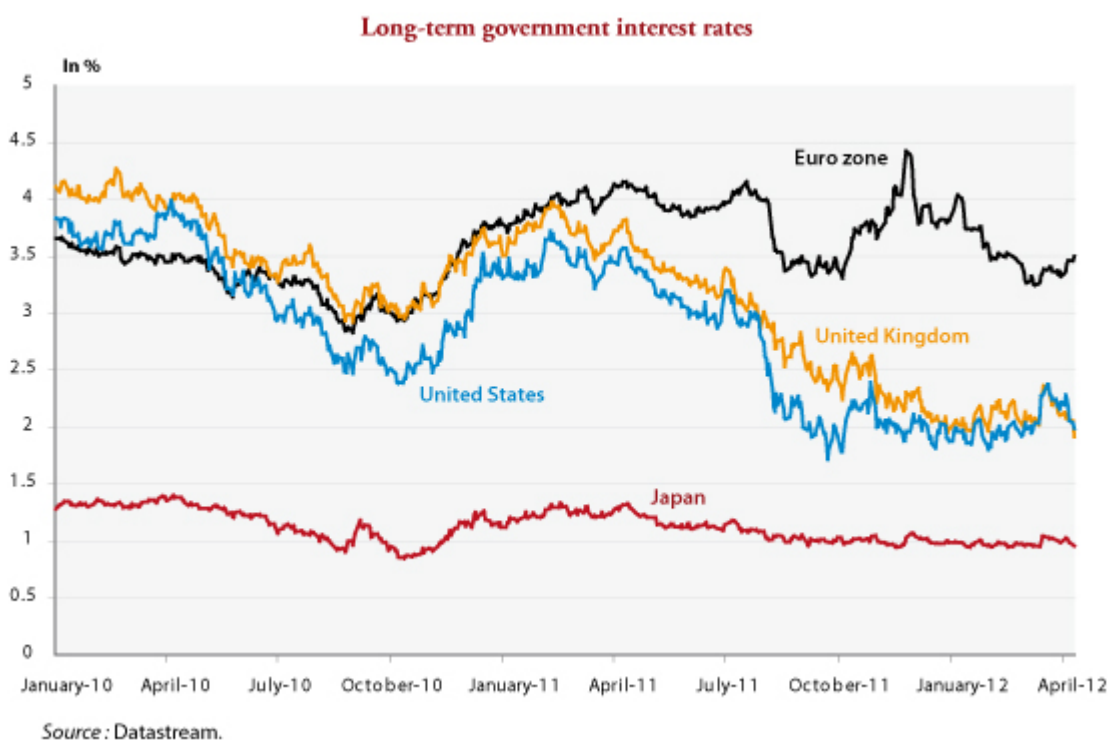
The euro zone is still in crisis: an economic crisis, a social crisis and a fiscal crisis. [The 0.3% decline in GDP in the fourth quarter of 2011](#) is a reminder that the recovery that began after the great drop of 2008-2009 is fragile and that the euro zone has taken the first step into recession, which will be confirmed in early 2012.

The fall in the average long-term government interest rate in the euro zone seen since the beginning of the year has come to a halt. After reaching 3.25% on 9 March, it rose again due to new pressures that emerged on Italian and Spanish rates. Indeed, despite the agreement to avoid a default by Greece, Spain was the source of new worries after the announcement that its budget deficit had reached 8.5% in 2011 – 2.5 points above the original target – and the declaration that it would not meet its commitments for 2012, which has reinforced doubts about the sustainability of its debt. The Spanish situation illustrates the close link between the macroeconomic crisis and the sovereign debt crisis that has hit the entire euro zone. The implementation of fiscal adjustment plans in Europe, whose impact is being amplified by strong economic interdependence, is causing a slowdown or even a recession in various euro zone countries. The impact of synchronized restrictions is still being underestimated, to such an extent that governments are often being assigned targets that are difficult to achieve, except by accepting an even sharper recession. So long as the euro zone continues to be locked in a strategy of synchronized austerity that condemns in advance any resumption of activity or reduction in unemployment, the

pressure will not fail to mount once again in 2012. Long-term public interest rates in the euro zone will remain above those of the United States and the United Kingdom (see the figure), even though the average budget deficit was considerably lower in 2011 in the euro zone than in these two countries: 3.6% against 9.7% in the US and 8.3% in the UK.

To pull out of this recessionary spiral, the euro zone countries need to recognize that austerity is not the only way to reduce budget deficits. Growth and the level of interest rates are two other factors that are equally important for ensuring the sustainability of the public debt. It is therefore urgent to set out a different strategy, one that is less costly in terms of growth and employment, which is the only way to guarantee against the risk that the euro zone could fall apart. First, generalized austerity should be abandoned. The main problem with the euro zone is not debt but growth and unemployment. Solidarity must be strengthened to curb speculation on the debt of the weaker countries. The fiscal policies of the Member states also need to be better coordinated in order to mitigate the indirect effects of cutbacks by some on the growth of others [1]. It is necessary to stagger fiscal consolidation over time whenever the latter is needed to ensure debt sustainability. At the same time, countries with room for fiscal manoeuvre should develop more expansionary fiscal policies. Finally, the activities of the European Central Bank should be strengthened and coordinated with those of the euro zone governments. The ECB alone has the means to anchor short-term and long-term interest rates at a sufficiently low level to make it possible both to support growth and to facilitate the refinancing of budget deficits. In two exceptional refinancing operations, the ECB has provided more than 1,000 billion euros for refinancing the euro zone banks. This infusion of liquidity was essential to meet the banks' difficulties in finding financing on the market. It also demonstrates the capacity for action by the monetary authorities. The portfolio of government debt

securities held by the ECB at end March 2012 came to 214 billion euros, or 2.3% of euro zone GDP. In comparison, in the United States and the United Kingdom, the portfolio of government securities held by the central banks represents more than 10% of their GDP. The ECB therefore has significant room for manoeuvre to reduce the risk premium on euro zone interest rates by buying government securities in the secondary markets. Such measures would make it possible to lower the cost of ensuring the sustainability of the long-term debt.



[1] See “He who sows austerity reaps recession”, [OFCE note no. 16](#), March 2012.

Europe's banks: leaving the zone of turbulence?

By [Vincent Touzé](#)

The 2008 crisis almost endangered the entire global financial system. Thanks to support from governments and central banks, the banking sector has recovered and once again appears to be solid financially. In the aftermath of the crisis, the public finances of the Southern euro zone countries – Portugal, Italy, Spain and Greece – and Ireland (the “PIIGS”) have, in turn, been severely weakened. Greece was forced to suspend payments, and the risk of default is still hanging over the others. Since early 2011, bank liabilities in these economies have become a significant concern of the financial markets. Despite good stress tests, this fear intensified in August 2011. European banks then entered a new period of turmoil, and the European Central Bank was forced to lend them more than 1,000 billion euros for 3 years at a rate of 1% in order to avoid a major credit crunch.

As part of their investments abroad and through their foreign branches, Europe's banks hold liabilities from the PIIGS countries through lending to the banking sector, to the public sector (sovereign debts and credits) and to households and private non-bank enterprises. France is one of the countries that is most heavily exposed to the PIIGS (public and private sectors combined), with a total commitment by the banking system in the third quarter of 2011 of about 437 billion euros (see table), or 21.9% of GDP. Germany's exposure, at about 322 billion euros (12.5% of GDP), is smaller. The exposure of the UK banking system is comparable and is valued at 230 billion euros, or 13.3% of GDP. In comparison, the Japanese and US banks hold little debt: 59 billion euros (1.4% of GDP) for Japan and 96 billion (0.9% of GDP) for the United States. In the course of the financial crisis, Europe's banks have pulled

back from these countries (1). According to the statistics of the Bank for International Settlements (Figure 1), the reduction in exposure was most pronounced in Greece (-55% since Q1 2007) and lowest in Portugal (-15%). Divestments of the debt of Spain (-29%), Italy (-33%) and Ireland (39%) have been comparable and are at an intermediate level compared to the previous two.

Guarantee funds can be drawn on if a bank goes bankrupt, but generally their provisions are insufficient to support a "big" bank in difficulty. According to the principle of "too big to fail", the state must intervene to avoid bankruptcy. Possible avenues of action include acquiring some of the bank's capital, nationalizing it by refloating it, or facilitating its long-term refinancing through the purchase of bonds. A bank failure has to be avoided at all costs, because it is frequently accompanied by panic, with collateral damage that is difficult to predict or contain. The mere fact that a State announces credible support for a bank or a banking system is often sufficient to avert a panic. If the States were to come to the rescue of the banks in the case of the Greek default, the macroeconomic implications of a 50% default on all private and public debts seem relatively minor, since it would require, for example in the case of France, a cost of around 17 billion euros, an amount that is much less than 1% of GDP (see table). By contrast, a 50% default of all the PIIGS would require 220 billion euros in support from France (11% of French GDP). The macroeconomic cost beforehand might seem high, but it is not insurmountable. Unfortunately, the spontaneous failure of one or more PIIGS would lead to an uncontrollable chain reaction whose overall macroeconomic costs could be considerable.

This financial crisis is also hitting the life insurance companies, right in the midst of a period of reform in prudential regulations. The banking sector has just managed to come up to Basel II standards and will steadily have (until

2019) to adopt Basel III (2), while the insurance industry is changing rapidly towards Solvency II (3). These two regulatory reforms are leading to an increasing need for capital just as the financial crisis is undermining balance sheets and putting greater pressure on capital ratios. While equity capital can be used to withstand a financial crisis, at the same time regulations can compel recapitalizations in very difficult refinancing conditions. This is an undesirable pro-cyclical result of the prudential regulations.

The risk of a default on payments by some PIIGS has made financial analysts pay particularly close attention to the solvency and profitability of European banks. However, the results of the stress tests (4) on the European banks published in mid-July 2011 were considered good. The hypotheses used are far from being optimistic. In the euro zone (and respectively in the other countries), they point to a fall in the growth rate of 2 points (2.4 points respectively) in 2011 and 2 points (1.9 points respectively) in 2012 compared to a reference scenario. In the euro zone, this entry into recession (-0.5% in 2011 and -0.2% in 2012) would be accompanied by higher unemployment (0.3 point in 2011 and 1.2 points in 2012), a lower inflation rate (-0.5 point in 2011 and -1.1 points in 2012), a sharp drop in property prices, a rise in long-term rates as well as discounts on sovereign debt (5) of up to 30%. The objective of this “stressed” scenario is to test the capacity of the banks to be able to maintain a “core Tier 1” ratio greater than 5% (6). Under these extreme assumptions, only 8.9% of the 90 banks tested achieved a ratio that was below the 5% ceiling that would trigger a de facto recapitalization to meet the target (7). The four French banks succeeded on the stress tests without difficulty, as they maintain high ratios: 6.6% for Societe Generale, 6.8% for the Banque populaire-Caisse d'épargne, 7.9% for BNP Paribas and 8.5% for Crédit Agricole. The countries where failures were observed include Austria (1 bank), Spain (5 failures) and Greece (2 failures). In view of

the stress tests, the European banking system could therefore be considered as capable of withstanding a major economic crisis.

After the second aid package to Greece on 21 July 2011, and with ongoing pressure on the other sovereign debts, worry seized the stock markets, and European bank stocks fell sharply from August to December 2011 (Figure 2). These stock market changes were in complete contradiction with the positive results of the stress tests. There are three possible ways to interpret the reaction of the financial markets:

- An actual crisis would be much sharper than the hypotheses of the stress tests;
- The stress test methods are not adequate for estimating the consequences of a crisis;
- The markets get swept up in the slightest rumors and are disconnected from basics.

For now, with respect to the most pessimistic forecasts, it does not seem that the stress test hypotheses are particularly favorable. However, they have weaknesses for assessing systemic financial crisis, in that each bank does not include in its assessment the damage brought about by the application of the scenario to other banks or the consequences for the credit market. There is no feedback from the financial interconnections. Moreover, the economic crisis can greatly increase the default rates of private companies. This point may have been underestimated by the stress tests. Note also that the tests are performed at an internal level, which can also lead to different assessments of the consequences of certain scenarios. In addition, the stress tests evaluate the financial soundness of the banks, but de facto, a bank, although solvent, can see its stock price fall in times of crisis for the simple reason that its expected profitability decreases. Most importantly, the runaway financial markets are due to the lack of a consensus on the decisions taken within the European Union on finding a definitive solution to the debt crisis but also to the fact that the statutes of the

European Central Bank prohibit it from participating in public debt issues. These uncertainties reinforce the volatility of the stock price of banks that are particularly exposed to PIIGS, as evidenced by the strong correlation between CDS on private banks and on sovereign debt in the euro zone (8).

With the beginning of a solution on Greek debt, the stock market listings of European banks have been rising since January 2012. Hopefully the agreement of 21 February 2012 on Greek sovereign debt will calm the storm that hit the bond markets. The operation provides that private investors agree to give up 107 billion euros of the 206 billion of debt they hold and that the euro zone States agree a new loan of 130 billion. The agreement is a swap of debt. The old bonds are exchanged against new ones at a discount of 53.5% of the face value (9) and at a new contractual interest rate. The write-down was not a surprise for the banks, which have already set aside provisions for the losses. The operation was a clear success (10), as 83% of the holdings were voluntarily offered for exchange on 9 March (11). The level of participation was increased to more than 95% by carrying through a compulsory exchange with creditors who had not responded positively to the operation (collective action clauses for debt held under Greek law). After this exchange, the European states, the IMF, and the ECB will hold "more than three-quarters of Greek debt" (12), which means that any new crisis of Greek sovereign debt would have little impact on private investors. A new source of uncertainty comes from the CDS that were taken out for the purpose of hedging or speculation ("naked CDS"). Initially, the International Swaps and Derivatives Association (ISDA) (13) announced on 1 March that this exchange was not a "credit event". On 9 March, it revised its judgment (14). The ISDA now believes that the collective action clauses are forcing owners to accept the exchange, which constitutes a credit event. The Greek default on payments is a legally recognized event, and the CDS are thus activated. According to the ISDA, the net exposure of CDS to Greece would amount to only 3.2 billion

dollars. To estimate the overall cost of the CDS for the financial sector, the residual value of the bonds would have to be subtracted from that amount. Given the inability of Greece to resume growth, the sustainability of its remaining debt is not guaranteed, and the risk of contagion persists. In any event, the public debt of the Southern euro zone countries and Ireland are now considered risky assets, which is a factor that is weakening the European banking sector. In this respect, since late March the recent rise in interest rates on Italian and Spanish public debt has provoked a decline in the stock prices of European banks (Figure 2).

The ongoing financial crisis is weakening the banking sector in the euro zone, which could lead it to reduce its exposure to risk: a major credit crunch is thus to be feared. The latest ECB survey covering 9 December 2011 to 9 January 2012 (15) with regard to the lending conditions set by banks is not very reassuring. Tighter conditions are expected by 35% (against 16% last quarter) of banks on business loans and by 29% (against 18% last quarter) of banks on consumer loans. In light of this prospect, on 21 December 2011 the ECB conducted a long-term refinancing operation. This was a huge success, with 489 billion euros in credits granted to the banking sector. The funds were loaned at 1% for a period of 3 years. Although it is still difficult to assess the impact of this measure, ECB president Mario Draghi said in February that this injection of liquidity had clearly avoided a major credit crunch. On 29 February 2012, the ECB launched a second long-term refinancing plan (16). The subscription was very substantial, with 530 billion euros disbursed. It is therefore reasonable to think that a credit crunch will be avoided.

In conclusion, the banking sector's escape from the zone of turbulence depends on four key factors:

- 1) Only a long-term return to growth across the euro zone as a whole will make it possible to consolidate the public purse and reduce the number of business failures (17), thereby de

facto reducing banks' exposure to the risk of default, with responsibility incumbent on the European governments and the ECB to identify and implement the "right" policy mix and the appropriate structural measures.

2) The Greek State is insolvent; this failure in public finances must not be allowed to spread to other economies, since the banking crisis is also a test of the strength of financial solidarity in the euro zone, and it remains to be seen whether the Germans are more inclined to support Spain or Italy in case of a risk of default than they were with Greece.

3) The banking crisis has brought to the fore the procyclical effects of the prudential regulations, which need to be corrected.

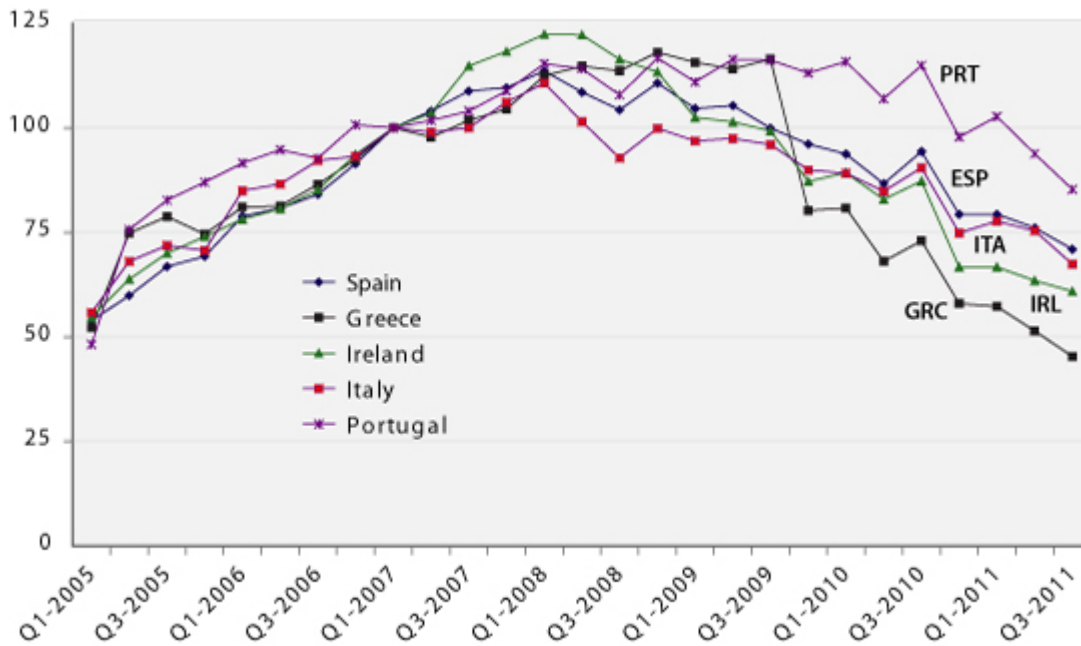
4) The maneuvering room of governments as first responders in a crisis has become very limited due to their massive debt. If there is a new major shock, the ECB could have no other choice but to be the lender of last resort.

Exposure of the national bank sector to the PIIGS 3rd quarter 2011 (billion euros)

Creditor country	DEU	FRA	GBR	JPN	USA
SPAIN					
Bank	44,3	25,0	13,4	2,9	13,0
Public sector	18,6	19,1	4,3	7,0	3,7
Private non-bank sector	50,7	57,9	48,0	7,5	17,0
Total	113,6	102,0	65,7	17,4	33,7
GREECE					
Banks	0,7	0,4	0,7	0,2	0,9
Public sector	8,0	5,1	1,5	0,1	1,0
Private non-bank sector	4,5	28,3	6,0	0,5	2,3
Total	13,2	33,8	8,2	0,8	4,2
IRELAND					
Banks	14,1	6,9	12,7	1,1	6,4
Public sector	2,0	1,8	3,3	0,5	1,3
Private non-bank sector	55,6	11,7	80,8	12,2	23,2
Total	71,7	20,5	96,8	13,9	30,8
ITALY					
Banks	28,4	26,3	5,5	1,9	6,8
Public sector	31,4	58,1	6,0	17,5	7,2
Private non-bank sector	42,4	178,6	31,7	6,3	9,3
Total	102,1	262,9	43,3	25,7	23,3
PORTUGAL					
Banks	6,2	4,4	2,3	0,1	1,1
Public sector	5,6	3,8	1,2	0,3	0,6
Private non-bank sector	9,4	10,0	13,0	0,6	1,8
Total	21,2	18,2	16,5	1,0	3,5
TOTAL PIIGS					
Banks	93,6	63,0	34,6	6,3	28,2
Public sector	65,6	87,9	16,3	25,4	13,9
Private non-bank sector	162,6	286,5	179,6	27,1	53,6
Total	321,8	437,4	230,4	58,8	95,6
% of GDP	12,5	21,9	13,3	1,4	0,9

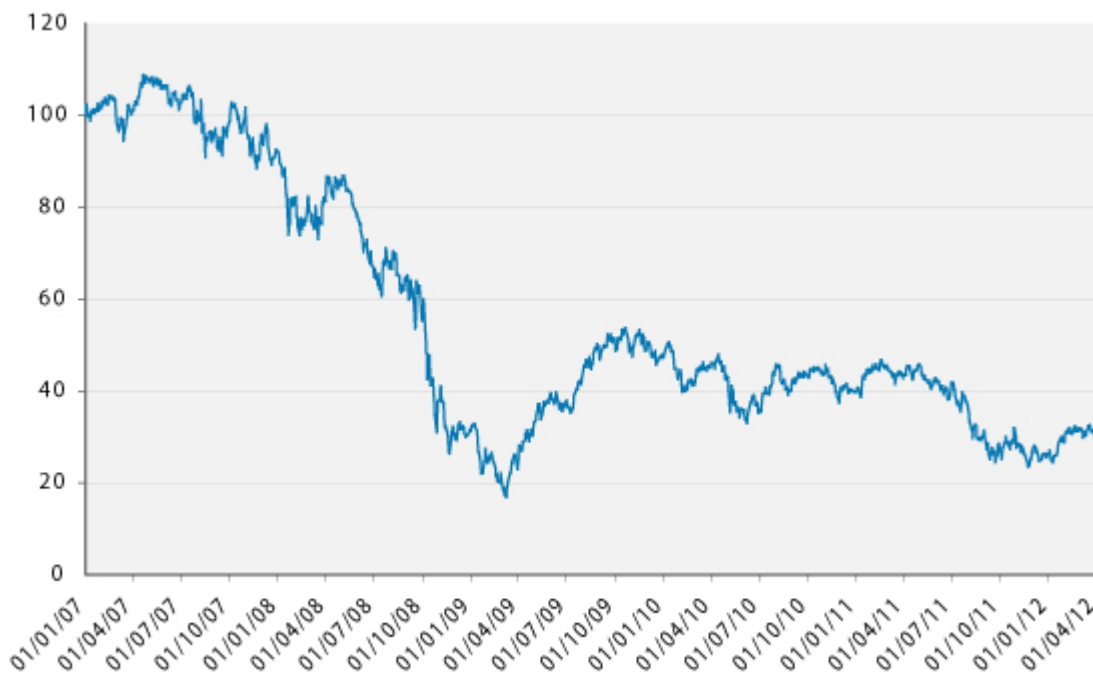
Sources : Banque des règlements internationaux – Consolidated banking statistics / ultimate risk basis – and author's calculations.

Graphique 1. Foreign debt held by European banks (Base 100 = 1st quarter 2007)



Source : Banque des règlements internationaux – Consolidated banking statistics /ultimate risk basis – and author's calculations.

Figure 2. Stock market index of European banks (base 100 = 1 January 2007)



Sources : Datastream (FTSE World Europe Banks).

[1] Note that a financial depreciation (capital loss) on the balance sheet value of assets in the PIIGS implies an automatic reduction in the exposure to these economies.

[2] http://www.bis.org/speeches/sp100921_fr.pdf

[3]

http://ec.europa.eu/internal_market/insurance/solvency/background_fr.htm.

[4] *European Banking Authority*, 2011, http://stress-test.eba.europa.eu/pdf/EBA_ST_2011_Summary_Report_v6.pdf.

[5] European Banking Authority (2011), *Methodological Note – Additional guidance*, June 2011.

[6] The minimum level required by Basel II for the Core Tier 1 ratio is only 2%, which rises to 4.5% under Basel III (in force in 2013). This ratio measures the proportion of risk-weighted assets covered by equity capital.

[7] For a bank whose ratio falls to $x\%$, the recapitalization requirement corresponds to $(5\%-x)/x\%$ of post-shock equity capital. Hence if $x=4\%$, the recapitalization requirement would correspond to 25% of the equity capital.

[8] “The correlation between interest rates on public debt and on private debt will make it difficult to resolve the sovereign debt crisis in the euro zone”, *Flash marchés*, Natixis, 14 March 2011 – N° 195, <http://cib.natixis.com/flushdoc.aspx?id=57160>.

[9] For example, each old bond with a face value of 100 euros is exchanged for a new one worth 46.5 euros. The EFSF guarantees 15 euros and the Greek state 31.5 euros.

[10]

<http://www.minfin.gr/portal/en/resource/contentObject/id/baba4f3e-da88-491c-9c61-celfd030edf6>.

[11] In light of the holders of public debt who are not subject to Greek law and who are refusing to take part in the operation, the deadline of 9 March (see

<http://fr.reuters.com/article/frEuroRpt/idFRL6E8F540020120405>) was put off to 4 April and then to 20 April. The Greek state considers that this refusal to exchange will not be sufficient to block the operation, as, given the collective action clauses, voluntary or required participation amounts to at least 95.7%. With regard to the recalcitrant investors, the Greek state has the choice of waiting a little longer, meeting its contractual commitments (continued reimbursement of the face value and interest as initially scheduled), make a new exchange offer (but this must be equitable with respect to those who accepted the previous offer) or default, with the risk of pursuit in the international courts.

[12] Olivier Garnier, "Comprendre l'échange de dette publique grecque", *Le Webzine de l'actionnaire – Analyses*, Société Générale, 13 March 2012, <http://www.societegenerale.com/actiorama/comprendre-l%E2%80%99echange-de-dette-publique-grecque>.

[13] http://www.isda.org/dc/docs/EMEA_Determinations_Committee_Decision_0103201202.pdf.

[14] <http://www2.isda.org/greek-sovereign-cds/>

[15] The Euro Area Bank Lending Survey, 1February 2012, http://www.ecb.int/stats/pdf/blssurvey_201201.pdf.

[16] http://www.ecb.int/press/pr/date/2011/html/pr111208_1.en.html.

[17] "Les entreprises après la crise", Colloquium Banque de France, 28 June 2011, http://www.banque-france.fr/fileadmin/user_upload/banque_de_france/publications/Bulletin-de%20la-Banque-de-France/Bulletin-de-la-Banque-de-France-etude-185-2.pdf

Towards a major tax reform?

By [Guillaume Allègre](#) and [Mathieu Plane](#) (eds.)

Taxation is more at the heart of the current election campaign and public debate than ever before. The economic and financial crisis, coupled with the goal of rapidly reducing the deficit, is inevitably shaking up the electoral discourse and forcing us to confront the complexity of our tax system. How do taxes interact with each other? What are the effects? How are they measured? What kind of consensual basis and constraints does taxation require? How should the tax burden be distributed among the economic actors? How should social welfare be financed? Should we advocate a “tax revolution” or incremental reform? The contributions to [a special “Tax Reform” issue of the Revue de l’OFCE – Débats et Politiques](#) aim to clarify and enrich this discussion.

The first section of the special issue deals with the requirements and principles of a tax system. In an introductory article, [Jacques Le Cacheux](#) considers the main principles that should underpin any necessary tax reform from the viewpoint of economic theory. In a historical analysis, [Nicolas Delalande](#) emphasizes the role of political resources, institutional constraints and social compromises in drawing up tax policy. [Mathieu Plane](#) considers past trends in taxation from a budgetary framework and analyzes the constraints on public finances today. In response to the problem of imported carbon emissions, [Eloi Laurent and Jacques Le Cacheux](#) propose the implementation of a carbon-added tax.

The second section deals with the issue of how the tax burden

is distributed among households. [Camille Landais, Thomas Piketty and Emmanuel Saez](#) respond to the important article by [Henri Sterdyniak](#) in which he recommends a “tax revolution”. [Clément Schaff and Mahdi Ben Jelloul](#) propose a complete overhaul of family policy. [Guillaume Allègre](#) attempts to shed light on the debate over France’s “family quotient” policy. Finally, [Guillaume Allègre, Mathieu Plane and Xavier Timbeau](#) propose a reform of taxation on wealth.

The third section concerns the financing of social protection. In a sweeping review of the literature, [Mireille Elbaum](#) examines changes in the financing of social protection since the early 1980s, and considers the alternatives that have been proposed and their limits. [Eric Heyer, Mathieu Plane and Xavier Timbeau](#) analyze the impact of the implementation of the “quasi-social VAT” approved by the French Parliament. [Frédéric Gannon and Vincent Touzé](#) present an estimate of the marginal tax rate implicit in the country’s pension system.

Must balancing the public finances be the main goal of economic policy

By [Henri Sterdyniak](#)

The financial crisis of 2007-2012 caused a sharp rise in public deficits and debt as States had to intervene to save the financial system and support economic activity, and especially as they experienced a steep drop in tax revenues due to falling GDP. In early 2012, at a time when they are far from having recovered from the effects of the crisis (which cost them an average of 8 GDP points compared to the pre-

crisis trend), they face a difficult choice: should they continue to support activity, or do whatever it takes to reduce public deficits and debt?

[An in-depth note expands on nine analytical points:](#)

- The growth of debt and deficits is not peculiar to France; it occurred in all the developed countries.
- France's public bodies are certainly indebted, but they also have physical assets. Overall the net wealth of government represented 26.7% of GDP in late 2010, or 8000 euros per capita. Moreover, when all the national wealth is taken into account (physical assets less foreign debt), then every French newborn has an average worth at birth of 202 000 euros (national wealth divided by the number of inhabitants).
- In 2010, the net debt burden came to 2.3% of GDP, reflecting an average interest rate on the debt of 3.0%, which is well below the nominal potential growth rate. At this level, the real cost of the debt, that is, the primary surplus needed to stabilize the debt, is zero or even slightly negative.
- The true “golden rule” of public finances stipulates that it is legitimate to finance public investment by public borrowing. The structural deficit must thus be equal to the net public investment. For France, this rule permits a deficit of around 2.4% of GDP. There is no reason to set a standard for balancing the public finances. The State is not a household. It is immortal, and can thus run a permanent debt: the State does not have to repay its debt, but only to guarantee that it will always service it.
- The public deficit is detrimental to future generations whenever it becomes destabilizing due to an excessive increase in public spending or an excessive decrease in taxation, at which point it causes a rise in inflation and interest rates and undermines investment and growth. This is not the situation of the current deficit, which is aimed at making

adjustments to provide the necessary support for economic activity in a situation of low interest rates, due to the high level of household savings and the refusal of business to invest more.

– For some, the 8 GDP points lost during the crisis have been lost forever; we must resign ourselves to persistently high unemployment, as it is structural in nature. Since the goal must be to balance the structural public balance, France needs to make an additional major effort of around 4 percentage points of GDP of its deficit. For us, a sustainable deficit is about 2.4 GDP points. The structural deficit in 2011 is already below that figure. It is growth that should make it possible to reduce the current deficit. No additional fiscal effort is needed.

– On 9 December 2011, the euro zone countries agreed on a new fiscal pact: the Treaty on Stability, Coordination and Governance of the European Monetary Union. This Pact will place strong constraints on future fiscal policy. The structural deficit of each member country must be less than 0.5% of GDP. An automatic correction mechanism is to be triggered if this threshold is exceeded. This constraint and the overall mechanism must be integrated in a binding and permanent manner into the fiscal procedures of each country. Countries whose debt exceeds 60% of GDP will have to reduce their debt ratio by at least one-twentieth of the excess every year.

This project is economically dangerous. It imposes medium-term objectives (a balanced budget, a debt rolled back to below 60% of GDP) that are arbitrary and are not *a priori* compatible with the necessities of an economic equilibrium. Likewise, it imposes a fiscal policy that is incompatible with the necessities of short-term economic management. It prohibits any discretionary fiscal policy. It deprives governments of any fiscal policy instrument.

– As the rise in public debts and deficits in the developed countries came in response to mounting global imbalances, we cannot reduce the debts and deficits without addressing the causes of these imbalances. Otherwise, the simultaneous implementation of restrictive fiscal policies in the OECD countries as a whole will lead to stagnating production, falling tax revenues and deteriorating debt ratios, without managing to reassure the financial markets.

– A more balanced global economy would require that the countries in surplus base their growth on domestic demand and that their capital assumes the risks associated with direct investment. In the Anglo-American world, higher growth in wage and social income and a reduction in income inequalities would undercut the need for swelling financial bubbles, household debt and public debt. The euro zone needs to find the 8 GDP points lost to the crisis. Instead of focussing on government balances, the European authorities should come up with a strategy to end the crisis, based on a recovery in demand, and in particular on investment to prepare for the ecological transition. This strategy must include keeping interest rates low and public deficits at the levels needed to support activity.

The new European treaty, the euro and sovereignty

By [Christophe Blot](#)

On 2 March 2012, 25 countries in the Economic and Monetary Union (EMU) adopted a new treaty providing for greater fiscal discipline. The treaty became an object of dispute almost before the ink was dry [1], as Francois Hollande announced that, if elected, he would seek to renegotiate it in order to emphasize the need to address growth. There is no doubt that a turnabout like this on a treaty that was so fiercely negotiated would be frowned upon by a number of our European partners. The merit of strengthening fiscal discipline in a time of crisis is, nevertheless, an issue worth posing.

So how should we look at this new treaty? Jérôme Creel, Paul Hubert and Francesco Saraceno have already demonstrated [the potential recessionary impact of the rules it introduces](#). In addition to these macroeconomic effects, the treaty also fails to deal with an essential question that should be at the heart of the European project: sovereignty.

In 1998, one year before the launch of the euro, Charles Goodhart [2] published an article in which he raised a peculiar feature of the Economic and Monetary Union (EMU) with respect to monetary theory and history. Goodhart recalled that a currency is almost always inextricably bound up with the expression of political and fiscal sovereignty. However, in the context of the EMU, this link is broken, as the euro and monetary policy are controlled by a supranational institution even though they are not part of any expression of European sovereignty, as fiscal policy decisions in particular remain decentralized and regulated by the Stability and Growth Pact. Goodhart concluded that the creation of the euro portends tensions that will need careful attention.

The current crisis in the euro zone shows that this warning was well founded. The warning makes it possible above all to consider the crisis from a different perspective – a political one. The issue of the sustainability of the debt and compliance with rules in effect masks the euro's underlying problem, its "original sin": the single currency is doomed if it is not based on fiscal and political sovereignty. If there are any exceptions to this, they consist of micro-states that have abandoned their monetary sovereignty to neighbours that are far more powerful economically and politically. The euro zone is not the Vatican.

The renegotiation of the treaty or the opening of new negotiations with a view to the ratification of a European Constitution is not only urgent but vital to the survival of the European project. Beyond the overarching objectives of growth, employment, financial stability and sustainable development, which, it must be kept in mind, are at the heart of European construction, as is evidenced by their inclusion in Article 3 of the [Treaty on the European Union](#), any new negotiations should now address the question of Europe's political and fiscal sovereignty, and therefore, by corollary, the issue of the transfer of national sovereignty.

It should be noted that this approach to the implementation of European sovereignty is not inconsistent with the existence of rules. In the United States, most states have had balanced budget rules since the mid-nineteenth century, prior to which a number of them had defaulted (see C.R. Henning and M. Kessler [3]). However, these rules were adopted at the initiative of the states and are not included in the US Constitution. There are, however, ongoing efforts to include a requirement in the Constitution for a balanced budget at the federal level. [For the moment, these have not been successful, and they are being challenged](#) on the grounds that this would risk undermining the stabilizing power of the federal budget. In the United States, before the crisis the resources of the

federal state accounted for 19% of GDP, compared with an EU budget that does not exceed 1% of GDP and which must always be balanced, and therefore cannot be used for of macroeconomic adjustments. In the US, the stabilization of shocks is thus handled through an unrestricted federal budget, which offsets the poor responsiveness of local fiscal policies that are constrained by the requirement for balance. While the euro zone must surely find its own way, the fact remains that the euro should not be an instrument in the hands of the European Central Bank alone: it must become a symbol of the political and fiscal sovereignty of all the euro zone's citizens.

[1] It will only take effect, however, after a ratification process in the 25 countries. This could be a long and uncertain process, as Ireland has announced that it will hold a referendum.

[2] See "The two concepts of money: implications for the analysis of optimal currency areas", *Journal of European Political Economy* vol.14 (1998) pages 407-432.

[3] "[Fiscal federalism: US history for architects of Europe's fiscal union](#)", (2012) Peterson Institute for International Economics.

The citizen must be the

foundation of any industrial policy – even a free market one

By [Sarah Guillou](#)

The purpose of industrial policy is to direct productive specialization towards sectors that are deemed strategic for well-being or economic growth. This means recognizing that productive specialization is important for growth. But what criteria should be used to determine the importance of a given sector? The argument developed here is that there are no sound criteria that do not refer to the collective preferences of present and future citizens.

There are a limited number of theoretical principles for justifying an industrial policy and demonstrating its effectiveness. From the defence of nascent industries (List, 1841) to support for basic industries that generate externalities for growth, the theoretical arguments set out very limited conditions for the exercise of policy. The international legal framework is also very stringent, especially for European Union countries whose authorities are concerned primarily with creating a level playing field for all EU companies and keeping control over payments by the State.

The limited space for industrial policy

In this limited space, the exercise of industrial policy has struggled to find reasons to exist. Even though a movement of “normalization”, dear to Dani Rodrik, currently seems to be affecting the study of industrial policy (see Aghion et al., 2011), it is still not part of “normal” policy in the same way as monetary, fiscal, or trade policy, for example. Industrial policy is exceptional policy resulting from exceptional

circumstances. It is in the definition of this term “exceptional”, of its nature and its temporality, that industrial policy derives its legitimacy. Even recently, exceptional circumstances, both political and economic, have served as strong grounds for industrial policy, whereas they actually conceal policies to promote employment and satisfy electoral objectives. Illustrations of this include businesses set up to rescue factories, from Lejaby lingerie units to SeaFrance, as well as announcements of regulations on plant closures when a buyer exists. Even though these interventions have the benefit of reducing information asymmetries between the players by offering mediation that is often useful, they are not really part of industrial policy.

The only “authorized” industrial policy today that is consistent with the institutional and legal framework of Europe and America is one that meets the conditions inherited from liberal doctrine on state intervention in the functioning of the economy. One may wish that the rules on intervention were re-defined – which by the way, would bring a little more transparency into state practices – but the ambition of this note is both more modest and broader. This note aims to show that, even within the minimalist framework of the free market approach, industrial policy must be defined in accordance with a social project that engages the productive specialization of the economy.

As a general principle, liberal doctrine considers competition to be the most efficient process for allocating resources. In other words, competition is the best system for maximizing wealth creation. Indeed, it is supposed to foster emulation between the players and motivate them to increase their productivity and performance; to allow the eviction of inefficient activities that waste poorly exploited resources; and, finally, to ensure equality and freedom among the players with respect to market entry, and thus the free exercise of economic activity. Liberal economic theory thus envisages only

very specific situations for the exercise of industrial policy.

In this framework, state intervention is justified (i) to restore competitive conditions concerning transparency of information; (ii) to support investment in activities that generate positive externalities, such as R&D, or conversely to discourage activities that generate negative externalities, such as pollution, and (iii) to support activities that are considered strategic. Note that these are precisely the three justifications that underpin the European Union's policy on industry and competition. It should be noted above all that while the last two reasons do indeed call for an industrial policy, they demand a higher principle of a political nature that invokes the collective preferences of present and future generations.

Encouraging the externalities that arise from R&D spending does not of course necessarily reflect a political choice. Indeed, the underlying economic logic might be sufficient: the externalities from R&D include a boost in productivity induced by the diffusion of knowledge, which benefits society as a whole. This increased productivity provides additional growth that fuels the creation of jobs and wealth. It is indeed this economic dynamic that is emphasized by the European authorities, including the European Commission (see Buch-Hansen and Wigger, 2010; EC, 2011), just as it underpins American policy on subsidies for R&D (Ketels, 2007). The policy decision to support R&D and more generally investment in human capital can thus be based simply on economic logic.

Any policy that is intended to guide specialization involves society's future

Nevertheless, this logic is not enough: once we have accepted that investment in R&D is needed, then it is necessary to decide how to ensure that public resources, which are scarce and whose opportunity cost is rising as debt mounts, are

invested in the wisest way. The definition of industrial policy must be based on a set of political (and legal) guidelines that are precise enough to lead business to invest in technology whose returns are inherently uncertain. For example, companies do not spontaneously tend to invest in clean technologies. Incentives need to be created that induce them to adopt sustainable development pathways, as is shown by the results of Acemoglu et al. (2011).

In general, any policy that aims to guide specialization involves the future of society: directing the production process towards sustainable development and environmental protection is a decision that will ensure the sustainability of resources, the quality of life and technological innovation. Directing capital towards strategic technologies, such as biotechnology, nanotechnology or space, is a necessity in light of the heavy investments – the fixed costs – that are associated with their development, given that mastering these technologies is essential to society's future well-being. Finally, investing in human capital, a prerequisite to any policy to support R&D, is a way not only to improve people's living standards and quality of life and to qualitatively strengthen their ability to adapt to technological change, but also to ensure the strength and sustainability of democracy (Glaeser et al., 2007).

A commitment to a policy of support for investment in research and education is of course widely shared by political leaders, as it is a general feature of a progressive vision of society, or, in short, a certain vision of social welfare. And a package of measures to meet the objectives of a policy to support R&D in France does clearly exist: the research tax credit for the country's "competitive clusters"; in this respect, France is often seen as a driving force in terms of its industrial policies. But the purpose evoked to justify these measures is to ensure competitiveness, and not specifically economic growth *per se*.

Nevertheless, the selection of promising technologies and investment in the specializations of the future demands that politics takes precedence, as it must take a stand on the technological future of society, including in matters of protection, security, health and the environment. Ultimately, even a free market industrial policy assumes political choices that correspond to a vision of society. And it is in the name of this social vision that the expenditure associated with industrial policy can be justified. The justifications related to the economic mechanisms set the constraints, but policy choices must set the goals. The expression of collective preferences during the forthcoming electoral processes requires that the technological implications of policy proposals be expressed as clearly as possible.

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Is government expenditure in France too high?

By [Xavier Timbeau](#)

Since 2005, France has vied with Denmark for first place in terms of government expenditure as reported by the OECD. Since the ratio of "government expenditure" to GDP reached 56.6% in 2010, it has been necessary, according to a widely held view, to "deflate" a State that is taking up "too much" space in the economy. First place would thus be, not a badge of honour, but a sign that we have reached an unsustainable level of "government expenditure". Since, moreover, it is essential to reduce the public deficit, the path ahead is clear: reducing public spending is the only way to bring public finances under control. But this simplistic analysis is wrong.

This analysis is based on a poor use of the statistics on [government expenditure reported by the OECD](#) and flows from an

inadequate understanding of what the term “government expenditure” means. This term, it must be recognized, can be confusing.

What is called “government expenditure” combines, on the one hand, collective expenditures (e.g. from maintenance of the security forces to public administration and the fight against poverty) and, on the other, insurance-related transfer expenditures. This transfer spending covers pension insurance and health insurance. These are individualizable in the sense that we know the direct beneficiary of the expense (which is not the case for administrative expenditures, for which the benefits are diffuse), and they are funded by contributory schemes: to qualify for coverage, it is necessary to have contributed. In most countries, the pension system is almost completely contributory, in the sense that the relative level of benefits for individuals of the same age is related to their relative contributions. The rate of return on the contributions (which relates the expected present value of the flow of pension benefits to the present value of the contributions) is comparable to that obtainable over a long period by capitalizing savings. The minimum pension payment, family benefits and survivor benefits might seem to deviate from this contributory principle, but in practice these “benefits” compensate for short careers that have been interrupted by the accidents of life and do not differ much from a contributory scheme. With regard to health, another pillar of the modern welfare State, the contributory aspect is mitigated by the redistribution effected by a contribution that is proportional to income and an expense that depends on age and not much on income (with the exception of daily allowances). When health care provision is universal, some people benefit without having contributed, but these cases are marginal and do not alter the quasi-contributory character of our health systems.

Depending on the country, the pooling of transfer expenditures

takes various organizational forms. It may be done inside the company, within sector-wide organizations, or by management and trade union bodies or it may be mediated by central government. The particularity of France is that social protection is mainly organized through the State's intermediation. This is not the case in other countries like the United Kingdom, the United States or Germany. Even unemployment insurance, which is handled by management/union bodies, is treated by the national accounts as pertaining to the public sector, and UI contributions are considered compulsory levies (automobile insurance premiums, although imposed on anyone who uses the roads, are not classed as levies).

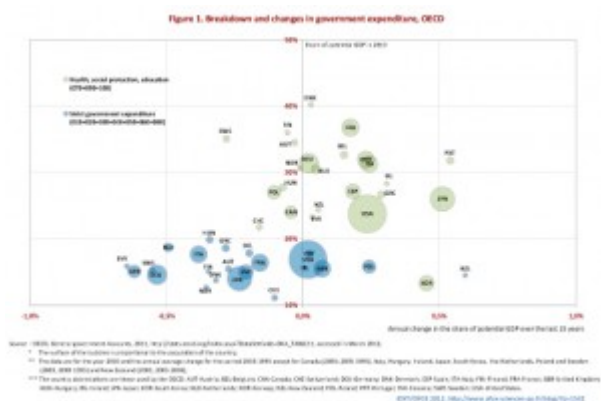
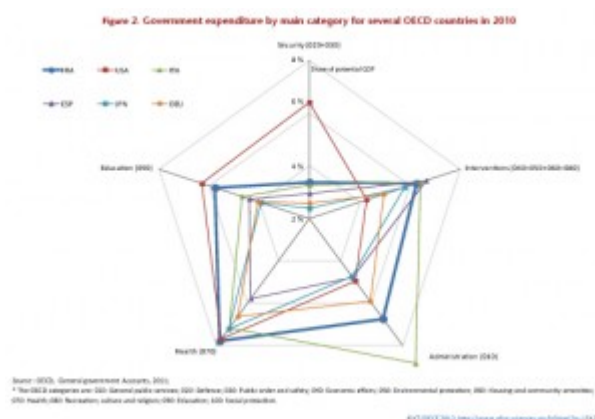


Figure 1 shows the unique position of France. In 2010, “government expenditure” in the strict sense (that is to say, not individualizable, such as domestic and foreign security, administration, miscellaneous expenditure on interventions) represented 18.2% of the country’s GDP. In terms of this “strict government expenditure”, in 2009 France ranked 10th among the OECD countries (see also Figure 2). If the “competition for being thin” covered only expenditure in this narrower sense, France would be relatively average compared to other bigger-spending countries like the United States, Portugal and Italy. Moreover, unlike the UK, the US or Ireland, over the last 20 years France has cut “strict government expenditure”, in a rather unexpected demonstration of fiscal control.

Figure 1 also shows that there is not great variation among the OECD countries with respect to the hard core of “government expenditure”. A developed country needs security, public administration and expenditure on interventions. It is difficult to compress this kind of State spending; the difference between the State with the largest expenditure (Hungary) and that with the smallest (Switzerland) is 8 GDP points. If we limit ourselves to large States, the gap is smaller (a difference of 3.6 GDP points between Japan and Italy). In contrast, with respect to “government social expenditure”, the differences between countries are major: the gap between Korea and Denmark is 27 GDP points, and, among the major countries, 13 GDP points between the United States and France. This makes France, along with Denmark, Sweden, Austria and Finland, a country where “government social expenditure” in relation to GDP is high.



Can we conclude from these data that the French system of social protection is more generous than in other countries? And that this is the cause of an unsustainable public debt (Figure 3)? Can we say that the system is too generous and that we must reverse the course of the past 20 years by reducing the share of social spending in GDP? No, the data tell us only one thing: that social welfare, health and education in France are dispensed directly by the State, which provides funding for these through the tax system. In other countries, intervention by the State (or by local authorities) may be just as massive (for instance, by defining

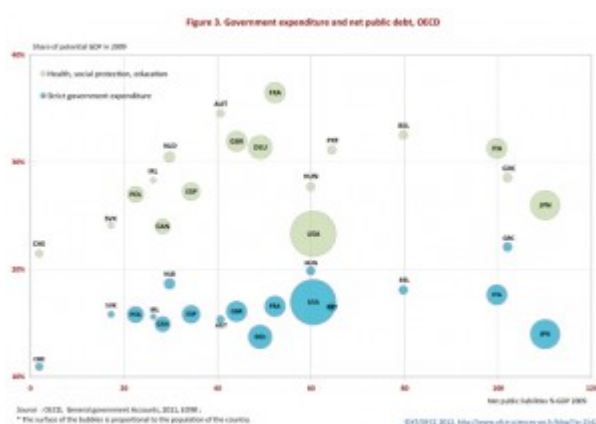
specifications for education, prices of treatments or medications, or obligations to take out health or retirement insurance), but the performance of the service or the distribution of the benefit may be delegated to a non-public entity. In some countries, only a portion of health or retirement coverage is mandatory, and individuals are then “free” to choose the level of spending they want. This freedom is relative, as people can be steered by tax incentives (instead of “government expenditure”, we speak of a “tax expenditure”, since it implies a shortfall in tax revenue for the State) or by necessity.

Total spending on health care and education is, for example, higher in the US than it is in France, relative to GDP, although the share directly distributed by the State is lower. How is it that expenditures deemed characteristic of a welfare State are higher in a more individualistic society? Are tax incentives and social norms being taken sufficiently into account? Another example: the introduction of the premium and the discount (*surcote* and *décote*) into the French pension system has changed individual incentives, and therefore individual returns (towards greater “actuarial neutrality”). But this did not affect the GDP share of “government expenditure” on pensions. In the future, the establishment of long-term care insurance may increase “government social expenditure” by a few GDP points. The right question is not the legal personality of the distributing entity, but rather, what are the incentives that individuals perceive, and what kind of inter- or intra-generational support will this long-term care insurance involve.

A social system must be judged on the rights it confers and the duties it entails, and thus on the extent to which it is more contributory or more solidarity-oriented and redistributive. To this end, we need to look at the benefits and the levies, as well as the implicit or explicit guarantees given in case of a shock to the private or public institutions

that provide the benefits. A private system can be very redistributive (when the pricing of certain risks is prohibited, when there is a full State guarantee), and a public system can be very contributory and more neutral from an intergenerational perspective than a private system, as illustrated by Swedish pensions.

A simple review of the aggregate data is not enough to settle this debate, which is why the argument that cutting “government social expenditure” on the grounds that it is higher than in any other country simply makes no sense.



Figures in.pdf:

[Figures_government_expenditures](#)

He who sows austerity reaps recession

By the Department of Analysis and Forecasting, headed by [X. Timbeau](#)

This article summarizes [OFCE note no.16](#) that gives the outlook

on the global economy for 2012-2013.

The sovereign debt crisis has passed its peak. Greece's public debt has been restructured and, at the cost of a default, will fall from 160% of GDP to 120%. This restructuring has permitted the release of financial support from the Troika to Greece, which for the time being solves the problem of financing the renewal of the country's public debt. The contagion that hit most euro zone countries, and which was reflected in higher sovereign rates, has been stopped. Tension has eased considerably since the beginning of 2012, and the risk that the euro zone will break up has been greatly reduced, at least in the short term. Nevertheless, the process of the Great Recession that began in 2008 being transformed into a very Great Recession has not been interrupted by the temporary relief of the Greek crisis.

First, the global economy, and especially the euro zone, remains a high-risk zone where a systemic crisis is looming once again. Second, the strategy adopted by Europe, namely the rapid reduction of public debt (which involves cutting public deficits and maintaining them below the level needed to stabilize debt), is jeopardizing the stated objective. However, since the credibility of this strategy is perceived, rightly or wrongly, as a necessary step in the euro zone to reassure the financial markets and make it possible to finance the public debt at acceptable rates (between 10% and 20% of this debt is refinanced each year), the difficulty of reaching the goal is demanding ever greater rigor. The euro zone seems to be pursuing a strategy for which it does not hold the reins, which can only fuel speculation and uncertainty.

Our forecast for the euro zone points to a recession of 0.4 percentage point in 2012 and growth of 0.3 point in 2013 (Table 1). GDP per capita in the euro zone should decline in 2012 and stabilize in 2013. The UK will escape recession in 2012, but in 2012 and 2013 annual GDP growth will remain below 1%. In the US, GDP growth will accelerate from 1.7% per year in 2011 to 2.3% in 2012. Although this growth rate is higher

than in the euro zone, it is barely enough to trigger an increase in GDP per capita and will not lead to any significant fall in unemployment.

The epicenter of the crisis is thus shifting to the Old Continent and undermining the recovery in the developed countries. The United States and United Kingdom, which are faced even more than the euro zone with deteriorating fiscal positions, and thus mounting debt, are worried about the sustainability of their public debts. But because growth is just as important for the stability of the debt, the budget cuts in the euro zone that are weighing on their activity are only adding to difficulties of the US and UK.

By emphasizing the rapid reduction of deficits and public debt, euro zone policymakers are showing that they are anticipating a worst case scenario for the future. Relying on so-called market discipline to rein in countries whose public finances have deteriorated only aggravates the problem of sustainability by pushing interest rates up. Through the interplay of the fiscal multiplier, which is always underestimated in the development of strategies and forecasts, fiscal adjustment policies are leading to a reduction in activity, which validates the resignation to a worse “new normal”. Ultimately, this is simply a self-fulfilling process.

Outlook for global growth

Annual growth rate (%)	World in the total (1)	2011	2012	2013
OECD	4.2	3.1	3.1	3.8
USA	3.7	1.7	3.1	3.7
ITA	2.4	0.8	1.7	-0.9
ESP	2.8	0.7	-1.5	-0.6
NGD	1.8	1.5	-1.5	0.3
HEL	0.6	1.9	0.1	0.9
UKF	0.5	3.1	0.4	0.8
FIN	0.9	2.7	0.7	1.1
PHI	0.3	-1.1	-2.9	0.2
CAN	0.3	-6.3	-5.3	-0.5
ML	0.3	0.8	-0.6	0.9
EST	15.5	1.5	-8.4	0.3
COR	0.2	0.9	0.7	0.9
SWI	0.5	4.0	0.8	1.6
DNK	0.3	1.1	0.6	1.1
EU-15	19.4	1.5	-8.2	0.4
T2 euro member states	2.7	3.1	3.1	2.1
EU-27	20.8	1.7	-8.3	0.6
COR	0.3	1.9	0.1	1.0
NGD	0.4	1.5	1.1	2.8
Europe	22.9	1.8	-8.0	0.6
USA	20.8	1.7	1.1	2.4
JPN	-6.3	-6.6	1.9	1.0
CAN	1.9	-1.3	1.0	2.3
Industrialized countries	10.5	1.8	1.2	1.5
EU candidate countries (2)	1.5	1.6	1.7	4.3
MS	3.3	4.3	1.1	3.8
Other EU (2)	1.1	3.9	1.7	4.2
COR	11.8	9.2	8.1	8.1
Other Asian countries	13.2	5.6	1.8	6.3
Latin America	8.7	4.0	1.1	3.5
Sub-Saharan Africa	2.3	4.9	1.1	5.3
Middle East and North Africa	4.8	3.1	1.1	3.8
World	100	3.5	1.1	3.4

© Eurostat in cooperation with OECD and IMF, estimated by the IHS
 2) Excludes: Republic of Macedonia and Turkey
 3) Commonwealth of Independent States
 Source: IMF, OECD, Eurostat, IHS, May 3, 2012 (2012 calculations and forecasts)

A carbon tax at Europe's borders: Fasten your seat belts!

By [Éloi Laurent](#) and [Jacques Le Cacheux](#)

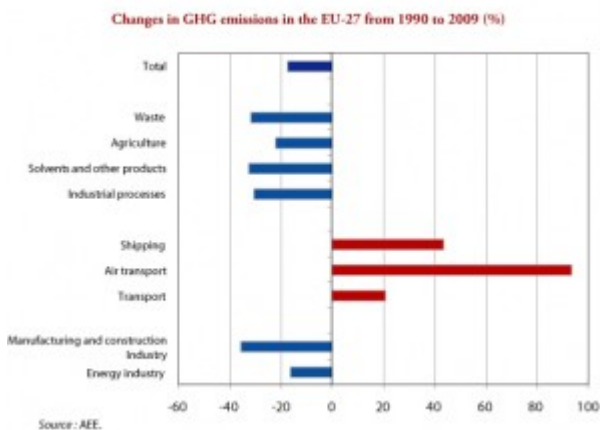
How can the current deadlock in international climate negotiations be resolved? By an optimal mix of incentives and constraints. In the case that currently opposes the European Union and the international air carriers, the EU is legitimately bringing this winning combination to bear by imposing what amounts to a carbon tax on its borders. It is brandishing a constraint, the threat of financial penalties, to encourage an industry-wide agreement that is long overdue among the airlines to reduce their greenhouse gas (GHG) emissions.

The ongoing face-off with the carriers of several major countries, which, with the more or less open support of their governments, are contesting the application of these new regulations on GHG emissions from planes flying into or out of the EU is, from this perspective, a crucial test. It is an issue with considerable symbolic value, as it represents a first: all the airlines serving airports in the EU are subject to the new measure, regardless of their nationality. On March 9th, European officials reaffirmed their determination to maintain this regulation, so long as a satisfactory solution has not been proposed by the International Civil Aviation Organization (ICAO). However, 26 of the 36 member states of the ICAO Board, including China, the United States and Russia, have expressed their opposition to the new European requirement, advising their airlines not to comply. And the

Chinese government is now threatening to block or outright cancel orders for 45 Airbus aircraft, including 10 A380 super-jumbos, if the European measure is not repealed.

Air emissions up sharply

GHG emissions attributable to air transport account for only about 3% of global and European emissions (about 12% of total emissions from transport in the EU). But despite the progress made by aircraft manufacturers in energy intensity, these emissions, which are still modest compared to road transport, have been experiencing explosive growth over the last 20 years, and are rising much faster than those in all other sectors, including shipping (see chart). They must be controlled.



In addition, in most countries, in particular in the EU, airline fuel is not subject to the usual taxation applied to oil products, which obviously distorts competition with other modes of transport.

A robust legal framework

The [new European regulations](#), which took effect on 1 January 2012, require all airlines serving any EU airport to acquire emission permits in an amount corresponding to 15% of the CO₂ emissions generated by each trip to or from that airport. The measure is non-discriminatory, since it affects all airlines flying into or out of European air space, whatever their

nationality or legal residence. This requirement, which is grounded in environmental protection, is therefore fully consistent with the Charter of the World Trade Organization (WTO).

The measure is also of course in compliance with European treaties as well as with the various provisions of international law in the field of civil aviation, as is reiterated in the [judgment of 21 December 2011](#) by the Court of Justice of the European Union, in a case brought by several US carriers challenging its legality. The legal framework for this new provision is thus robust.

Towards the death of air transportation?

The airlines and the governments of the countries that are major emitters of greenhouse gases and that are hostile to this measure justify their outright opposition by arguing its poor timing, given the current economic climate of low growth and rising fuel costs, and its excessive cost, *i.e.* that the resulting rise in passenger air fares would be likely to further depress an already fragile industry.

In reality, the measure is largely symbolic and the cost is almost insignificant. Judge for yourself: according to the [Air France calculator approved by the French environmental agency, the ADEME](#), emissions per passenger amount to just over one tonne of CO₂ for a Paris-New York return trip, and approximately 1.4 tonnes for Paris-Beijing. The current price of a tonne of carbon on the European carbon market on which companies must buy emissions permits, the ETS, is just under 8 euros. The additional cost per ticket thus amounts, respectively to 2 euros for Paris-New York and 1.7 euros for Paris-Beijing! (estimates using [the ICAO calculator](#) are even lower).

Towards a trade war?

Given the current state of the legislation, the threats to

cancel Airbus orders or similar retaliatory trade measures are obviously out of proportion to the economic impact of the tax on the European skies. To fear that this might trigger a “trade war” is also to forget that such a war has already been declared in industry, particularly in the aviation sector (with the multiplication of [more or less disguised subsidies, including in Europe](#), and with the use of [exchange rates as a veritable weapon of industrial policy](#)). Furthermore, agreements or cancellations of orders in this sector are in any case very often influenced by the political context, sometimes for dubious reasons (as in the case of diplomatic reconciliation with relatively distasteful regimes). In this case the cause, the defence of the integrity of Europe’s climate policy, is legitimate.

The various threats and blackmail attempts being taken up by the pressure groups targeted, in this case air passengers, are intended to sway governments for obtaining short-sighted gains. They are targeting particular countries, foremost among them Germany and Poland, which are currently dragging their feet in accepting the EU Commission’s proposal to accelerate the pace of European emissions reduction by raising the goal of emissions reduction for 2020 from 20% to 30% (compared to 1990 levels). As is their right, on the climate issue Germany and Poland have been following an approach that is in accordance, respectively, with a growth strategy based on exports and an energy strategy based on coal. In both cases, these are national decisions that should not take precedence over the European approach. From the perspective of Europe’s interests, there is therefore no valid reason to yield to these pressures even if some member states become involved.

By confirming its determination, the EU can provide proof that leadership by example on the climate can go beyond simply setting a moral example and lead to actual changes in economic behaviour. The EU can ensure that everyone sees that, despite the impasse at the global level, a regional climate strategy

can still be effective. If its approach is confirmed, the success of the European strategy, which consists of encouraging cooperative strategies under the threat of credible sanctions, would point towards a way to break the deadlock on climate negotiations.

The European Union will, in the coming weeks, be passing through a zone of turbulence (yet another) on the issue of its border carbon tax. It would be legally absurd and politically very costly to make a U-turn now: instead, let's fasten our seat belts and wait calmly for the stop light to change.

Economic policy-making tools for pre- and post-crisis periods

by [Zakaria Babutsidze](#) and [Mauro Napoletano](#)

The worldwide financial crisis has questioned the relevance of economic models that are currently used by central bankers and macro analysts. In contrast, the recent economic events seem to be better described by models featuring boundedly rational heterogeneous agents and wherein markets do not necessarily clear at all times. Agent Based Models (ABMs) are a new class of models that embed all the above features, and therefore qualify as a promising alternative to conventional models.

An economic crisis, such as the current one, is a clear divide between processes before and after it. For instance, economic

policies can be split into two groups: pre-crises and post-crisis policies. While the latter aim at helping the economy to move out of the crises to a more favourable state, the former policies concentrate on averting it.

Currently popular economic models can (to an extent) discuss post crisis policies. These models view economies as closed systems that move along one of (few) balanced equilibria. A modeller can introduce a large external shock in the system that can be interpreted as the crisis and further discuss policies to help the system move back to the previous (or even better) equilibrium. However, there is a problem with these policies. The main assumption of modern mainstream economics is hyper-rational agents, which assumes that economic agents (including households) possess complete information about the future of the economy and by acting rationally on this information the future that was foreseen is actually realized.

Modellers argue that this is reasonable even if we know that people do not optimize. The argument is that due to market selection only the best performing agents will survive. As optimization guarantees the best response to the current situation every agent that is present at the equilibrium has to be behaving "as if" she is optimizing. Notice that this argument rests on the notion of equilibrium and says nothing about how this equilibrium will be reached. Now recall that modellers had to assume a large shock knocking the system out of the equilibrium in order to discuss the crisis. Then the approximation with hyper-rationality cannot properly describe the agent behaviour after crisis.

Concerning pre-crises policies the problems are even greater. Current mainstream models exclude the possibility of generating the crises endogenously. While, it is a known fact that modern economic crises are rarely related to external shocks. They are generated endogenously by the system. They emerge from the factors (like non-price interactions, localized learning processes, outrageous banking and

investment practices etc.) that are directly assumed away from the mainstream modelling. Therefore, these models are inherently inadequate to discuss policies directed to prevention of crises.

We believe that an economic tool that is to be successful in designing economic policy to avert the economic crises requires three characteristics. Firstly, it has to take account of the individual behaviour. Secondly, it has to model the behaviour in a way that is consistent not only with equilibrium, but also with non-equilibrium states. Finally, it has to allow for the possibility of endogenously generating crises.

Currently popular policy making tools fail in at least one of these three respects. Take for example Dynamic Stochastic General Equilibrium (DSGE) models. They represent the workhorse of modern monetary policy. This modelling strategy conforms to the first requirement listed above: DSGE is a micro-founded modelling strategy that replaced previous techniques that were abstracting from individual agent behaviour and thus were prone to Lucas (1976) critique.[\[1\]](#)

Alas, DSGE fails in two other respects. Microeconomic behaviour is based on perfect foresight that requires hyper-rational agents that were mentioned above, and therefore, as argued above, does not describe well agent behaviour during the out-of-equilibrium dynamics. In addition to this, stochasticity of the system allows only for small perturbations and large shocks (such as crises) have to be exogenously injected in the system. Perhaps, these failures are the cause of difficulties that DSGE modelers are having in predicting and managing current crises, as acknowledged by some central bankers ([Trichet, 2010](#); [Kocherlakota 2010](#)).

It is true that DSGE models take into account micro-behaviour as well as institutions (see for example Smets and Wouters 2003), which is the model widely used by European Central

Bank). However, what they fail to take into account is the possibility of endogenous (co-)evolution of these structures, the heterogeneity and non-price interactions among economic agents that can lead the system to breakdown without external interference.

One promising tool for economic policy design goes under the name of Agent Based Modelling (ABM). The characteristics of this approach are discussed at greater length in a recent OFCE [briefing paper by Napoletano, Gaffard and Babutsidze 2012](#). In contrast to mainstream economics (such as DSGE), ABM is more flexible to model relevant processes as dynamical systems of heterogeneous agents who interact through price and non-price channels. The approach treats time as the key variable. This is in contrast to orthodox models. Take the crises again. In mainstream modelling at the moment of crisis new equilibrium becomes known to everyone instantaneously and perfectly rational individuals adjust their choices accordingly. This drives the system to the new equilibrium. In ABM individuals do not get information about new equilibrium to which the system is supposed to converge to and each individual has to navigate in its own way. This feature allows for the plethora of learning processes (which, according to Howitt 2012 are extremely scarce in modern Macroeconomic theory) to be also taken on board.

ABM concentrates on open-ended dynamics and allows for an equilibrium (defined as an ergodic state of the system) as an emergent and optional outcome ([Leijonhufvud 2011](#)). While current mainstream modelling is based on the centralized information processing structure that is fed with all the available information in the system, ABM takes a bottom-up approach that starts modelling realistic micro-foundations (in contrast to DSGE) and analyses the resulting behaviour of the model at upper levels. The dynamics of aggregate variables are the result of complex, continuously (and endogenously) changing micro-structure. This yields substantial advantages

in modelling policy on macro (LeBaron and Tesfatsion 2008), as well as on industry (Chang 2009) and market (Duffy and Unver 2008) levels.

Using Agent Based tools a modeller can specify the agent's micro behaviour and understand how the dynamics of the system leads to the critical state and a subsequent breakdown (endogenously generated crisis). This is a common occurrence in physical systems and Agent Based approaches are routinely used for their analysis. Using such a model the policies to direct the path of the economy away from the critical state can be discussed. From this prospective ABM has clear advantage in discussing pre-crisis policies over orthodox approaches.

Another substantial advantage of the methodology is its easiness to be implemented in a computational environment. Behavioural rules can be passed to the agents in computer simulations and respective outcomes can be observed. This is important for two reasons. Firstly, this makes models easily understandable for policy-makers that are not necessarily proficient in mathematics that current orthodox methods heavily rely on ([Uri Wilenski](#), the developer of the most popular computational environment for ABM – NetLogo, is repeatedly making this point). Secondly, behavioural rules (and other settings) can be easily adjusted to fit the problem at hand. Due to their concern with the equilibrium, mainstream models are less flexible and consequently less appropriate for policy-making.

However, there are disadvantages to the approach. Detailed discussion of approach's shortcomings is presented in the above-mentioned [OFCE briefing paper](#). Here we concentrate on the one that is shared by all non-equilibrium approaches. It is that ABM does not (cannot) provide a comprehensive analysis of all the paths the model allows for. Once you leave the equilibrium, the number of paths an economic system can take become infinite. Therefore, in most of the cases,

comprehensive analysis is not feasible.

While this criticism is relevant in face of commonly accepted practice in economic science, it is irrelevant to the ABM's powers as a policy-making tool. Policy makers are not concerned with all the possible scenarios in all the possible types of economies. They have a very specific problem at hand. They operate in a specific country/region, they are given a very specific initial condition (currently existent in the economy) and they want to achieve a certain well-defined goal with a specific policy tool. Agent Based Modelling gives them the opportunity to fine-tune the model to their specific situation and then analyse the effects of a specific policy instrument. The policy instrument controls one (or very few) parameters of the model. Given a specific market/economy and specific initial conditions exhaustive analysis of these policy tool can be performed and welfare improving (if not optimal) policy can be designed.

Merits of every modelling approach can be debated. But allowing diversity in approaches is bound to make policy discussions more stimulating and is likely to help the discipline avert the crises that are now seen as the crises of the discipline itself (Kirman 2010).

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[\[1\]](#) However, DSGE models downplay the possibility of multiple equilibria. Thus, their ability to overcome the Lucas critique by introducing micro-foundations presents only a limited advantage.