The 'Sense and Nonsense of Maastricht' revisited: What have we learnt about stabilization in EMU?

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Abstract

This lecture revisits the paper "Excessive deficits: sense and nonsense in the Treaty of Maastricht", co-authored with Giancarlo Corsetti and Nouriel Roubini and published during 1993 in *Economic Policy*.

Revisiting the Excessive Deficit Procedure turns out to be attending a wake. The reforms of the Pact adopted in March 2005 effectively killed it, despite two technical improvements in its design: greater attention is now paid to the cyclically corrected deficit and the stock of public debt figures more prominently alongside the flow of the government deficit.

Four key emasculating changes are the following:

- A deficit in excess of the reference value of 3 percent will now not be deemed excessive if it is the result of unexpected adverse economic events with major negative consequences for government finances. The key missing words are: *outside the control of the Member concerned*.
- A severe economic downturn (which may excuse a violation of the deficit ceiling) is now defined not as a decline in annual GDP of at least 2 percent, but as negative annual GDP growth or 'an accumulated loss of output during a protracted period of very low annual GDP volume growth relative to its potential'.
- Factors that are to be taken into account by the Commission take on a kitchen sink quality: 'implementation of policies in the context of the Lisbon agenda', 'policies to foster R&D and innovation, public investment, pension reform' and '…any other factors which, in the opinion of the Member State concerned, are relevant…'.
- The duration is lengthened of the period within which decisions about excessive deficits have to be made by the Commission and within which the Member State is required to take effective action.

Beyond these formal changes in the Pact, it is now clear to all parties involved that fines will never be imposed on transgressors of the Excessive Deficit Procedure.

I argue that the death of *this* Pact is not a tragedy. While individual nation states are well-advised to adopt intelligent rules for their public debt and deficits to ensure fiscal-financial sustainability of the state and to enhance macroeconomic stability, the case for the supranational imposition, monitoring and enforcement of public debt and deficit rules is weak, except in one respect – one not addressed by the Pact.

Cross-border spillovers (externalities) that arise from unsustainable national fiscal-financial programmes call for a regulatory response, not for macroeconomic debt and deficit limitations.

Cross-border spillovers that arise even when the fiscal-financial programme of the state is sustainable are either irrelevant or not addressed by the new or the old Pact. Free riding on the ECB (an inflation externality) is not a problem because the ECB's mandate and objective function are lexicographic in price stability. It cannot and does not trade off the first, second or higher moments of inflation for those of output (gaps), Interest rate spillovers, which are indeed present in integrated financial markets, are *pecuniary* externalities. Their distributional consequences (higher interest rates benefit creditors and hurt debtors) are not an appropriate EU concern. Efficiency losses due to higher interest rates (through the increased

economic cost of public debt service when taxes are distortionary or subject to collection and compliance costs) are a problem, but lead, given public spending to national taxes being too high and government deficits too low.

Effective demand spillovers in a world with nominal price and wage rigidities can lead to first-order welfare losses. The Pact, in its old or its new incarnation, does not address these issues as it prescribes or proscribes behaviour one country at a time, without reference to economic policy actions and other economic developments in the rest of the EMU or EU. The Pact is not designed to ensure coordinated fiscal policy in the E(M)U, let alone coordinated monetary and fiscal policy in the E(M)U. There is nothing in it that ensures that the E(M)U-wide fiscal stance and fiscal-monetary mix is appropriate given economic developments in the rest of the world and given the monetary-fiscal policy mix in the other key national and regional economies.

From the perspective of the Principle of Subsidiarity, the Pact was therefore subject to both a Type 1 and a Type 2 error. It addressed (albeit ineffectively) matters of national fiscal sustainability and national macroeconomic stabilisation that ought to have been handled at the national level. It failed to address the appropriate Europe-wide fiscal stance and monetary-fiscal policy mix for which a supranational approach might have been desirable.

It will not be missed.

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JEL

A seminal scholarly contribution, like a literary classic, is a work nobody reads any longer. The invitation to contribute to this *Seminal Contributions to the Political Economy of European Integration Seminar Series* therefore evoked mixed feelings. The paper I was invited to revisit, "Excessive deficits: sense and nonsense in the Treaty of Maastricht", co-authored with Giancarlo Corsetti and Nouriel Roubini and published in *Economic Policy* during 1993 (Buiter, Corsetti and Roubini (1993)), was not my first critique of the fiscal-financial norms of the Maastricht Treaty and the Excessive Deficit Procedure (EDP) of the Stability and Growth Pact (SGP). Indeed, I find myself in the unusual position of having co-authored a paper (Buiter and Kletzer (1991a)) criticising the fiscal-financial Maastricht criteria for EMU membership and the Stability and Growth Pact (SGP), before the Maastricht Treaty had been signed (on February 7, 1992) or even drafted, and well before the birth of the SGP in 1997 and its revision/emasculation in 2005. This was possible without time travel because the key fiscal-financial features, and their manifest flaws, were foreshadowed quite accurately in the Delors Report (1989).

The Maastricht deficit and debt criteria were arbitrary and neither necessary nor sufficient for national fiscal-financial sustainability. They would, until the member states had achieved cyclically adjusted budgetary positions sufficiently far below the Maastricht ceilings as to make it highly unlikely that the ceilings would be breached during a downturn, prevent the normal operation of the automatic fiscal stabilisers. They were asymmetric: public debt and deficits could only be too high, never too low.

The Stability and Growth Pact

All the old criticisms of the Pact survive intact, but in this retrospective I want to emphasize two further features. First, the Pact imposes external constraints on national fiscal autonomy to prevent sustainability issues that do not have any clear cross-border externalities associated with them that can be addressed through debt and deficit limits. Second, the Pact is strictly one-country-at-a-time, which means that E(M)U-wide stabilization and fiscal-monetary policy mix issues cannot be addressed.

The essence of the SGP is the commitment of all EU member states to achieve the "*... medium-term objective of budgetary positions close to balance or in surplus…*". This "*… will allow all Member States to deal with normal cyclical fluctuations while keeping the government deficit within the reference value of 3% of GDP*".[1] Under the original 1997 version of the SGP, sanctions can be imposed when the general government deficit exceeds 3 percent of GDP. However, a government deficit exceeding the reference value of 3 percent of GDP is considered exceptional and temporary and not subject to sanctions when it results either from an unusual event outside the control of the Member State concerned and has a major impact on the financial position of the general government, or from a severe economic downturn, defined as an annual fall of real GDP of at least 2%. Sanctions take two forms: naming and shaming (peer pressure) and fines.

When it decides that an excessive deficit exists, the Council makes recommendations to the offending Member State and sets a deadline of four months for effective corrective action to be taken. If, after a progressive notice procedure, the Member State fails to comply

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[1]Formally, the SGP consists of three elements (what follows is cribbed with minor modifications from European Commission (2005a)):

- *a political commitment* by all parties involved in the SGP (Commission, Member States, Council) to the full and timely implementation of the budget surveillance process. These are contained in a Resolution agreed by the Amsterdam European Council of 17 June 1997. This political commitment was intended to ensure that effective peer pressure would be exerted on a Member State failing to live up to its commitments.
- *preventive elements* which through regular surveillance aim at preventing budget deficits going above the 3% reference value. To this end, Council Regulation 1466/97 reinforces the multilateral surveillance of budget positions and the co-ordination of economic policies. It foresees the submission by all Member States of 'stability and convergence programmes', which are examined by the Council. The Regulation foresees also the possibility to trigger the early warning mechanism in the event a significance slippage in the budgetary position of a Member State is identified.
- *dissuasive elements* which when the 3% reference value being breached, require Member States to take immediate corrective action and, if necessary, allow for the imposition of sanctions. These elements are contained in Council Regulation 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure.

with the Council's decisions, the Council can decide to impose sanctions, ten months at the latest after the reporting of data indicating an excessive deficit exists.

Sanctions first take the form of a non-interest-bearing deposit with the Commission. The amount of this deposit is determined by a formula consisting of a fixed component equal to 0.2% of GDP and a variable component equal to one tenth of the difference between the deficit as a percentage of GDP in the year in which the deficit was deemed to be excessive and the reference value of 3% of GDP, up to a maximum annual amount of 0.5% of GDP. A deposit can be converted into a fine if, in the view of the Council, the excessive deficit has not been corrected after two years. It is key to note that the ultimate judgement on whether to impose sanctions is be made by the Council, made up of the Ministers of Finance (a cabal of deeply political deal-makers) - not by the Commission (a bureaucratic cabal of former political deal-makers) or through the mechanical application of a numerical rule, as Germany favoured during the discussions leading up to the signing of the Maastricht Treaty in 1992 and again during the discussions preceding the signing of the SGP in 1997. Thus, even under the 'old' pact, the judgement on whether a deficit should be regarded as excessive, is made through a process where the same party is the accused, judge and jury. It only works if the Council is prepared to say that the existing deficits (however large) are actually excessive. The fact that the Council did not do so was the ground for the European Court of Justice not supporting the Commission in its attempts to get the violators sanctioned in 2004, although the Court's decision did give the Commission a (minor) procedural victory.[2]

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[2] The Commission requested a ruling by the European Court of Justice in which it sought:

- annulment of the Council's failure to adopt, despite the Commission's recommendations, decisions establishing that neither France nor Germany had taken adequate measures to reduce their deficits and decisions giving notice to each of those two Member States
- annulment of the conclusions adopted by the Council in so far as they contain decisions to hold in abeyance the excessive deficit procedures with regard to France and Germany and decisions modifying the recommendations.

On the first count, the court ruling recognises the possibility of a de facto suspension of the rules because the Commission cannot bring an action for annulment of a decision as no decision was actually taken. But on the second count, it ruled in the Commission's favour by saying that the procedure by which the conclusions were adopted was incorrect.

The 2005 revision of the Stability and Growth Pact involved two sensible changes and a rather longer list of debilitating modifications (see e.g. European Central Bank (2005)).[3] The sensible changes were (1) greater attention to the cyclically adjusted budget balance, net of one-off and temporary measures rather than to the actual budget balance, and (2) a reference to 'debt sustainability' which suggests that the 'stock' dimension of the public sector's indebtedness would regain some importance in judging the (un)sustainability of the public finances. Following the entry of Belgium, Italy (in 1999) and later Greece (in 2001) into the EMU despite debt-to-GDP ratios of well over 100 percent, the debt stock criterion had effectively disappeared from the SGP process. It is not yet clear, however, how a greater role for the debt stock will be implemented.

The fatal formal weakening of the SGP came from the following modifications of the EDP:[4]

A deficit in excess of the reference value of 3 percent will now not be deemed excessive if it is the result of unexpected adverse economic events with major negative consequences for government finances. The key missing words are: *outside the control of the Member concerned*.[5]

A severe economic downturn (which may excuse a violation of the deficit ceiling) is now defined not as a decline in annual GDP of at least 2 percent, but as negative annual GDP growth or 'an accumulated loss of output during a protracted period of very low annual GDP volume growth relative to its potential'.

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[3] Technically, the revision of the SGP involved "amending Regulation (EC) No 1467/97 on speeding up and clarifying the implementation of the excessive deficit procedure" (Official Journal of the European Union, 7.7.2005, L 174/5 – 174/8).

[4] At the Ecofin Council of November 2003, no sanctions were imposed on France and Germany although it was recognised that both countries had excessive deficits and although the European Commission was in favour of initiating the sanctions process. On July 13, 2004, the Council decided to suspend the operation of the EDP. The European Court of Justice annulled the Council's decision to suspend. The negotiations that followed produced the revision of the implementing rules and procedures of the SGP and the EDP adopted in March 2005, that are described here.

[5] It is true that, since no action is mandated and no effective sanctions are provided, even excessive deficits due to factors that are under the member's control cannot be penalised in such a way as to discourage the member's actions that increase the likelihood and magnitude of excessive deficits.

Factors that are to be taken into account by the Commission take on a kitchen sink quality: 'implementation of policies in the context of the Lisbon agenda', 'policies to foster R&D and innovation, public investment, pension reform' and '…any other factors which, in the opinion of the Member State concerned, are relevant…'.

The duration of the period within which decisions about excessive deficits have to be made by the Commission and within which the Member State is required to take effective action, is lengthened.

It has become abundantly clear that, although fines formally remain part of the enforcement instrumentarium of the EDP, fines will in practice never be imposed on transgressors of the EDP. This had been feared and/or predicted by many. Even among the set of non-incentive-compatible sanctions, punishing a country running an excessive government deficit with a fine that *cet. par.* further increases that deficit stands out as truly strange. That leaves peer pressure (naming and shaming) as the only enforcement mechanism for those EU members that are either in the EMU or are out of the EMU but have no wish to join. Only EU members not yet in EMU but wishing to join can be subjected to effective pressure by the EDP's rules, because these are part of the Maastricht criteria for EMU membership. For the rest, the answer to the question 'how many divisions does the Commission have?' can only be: 'not enough'.[6]

To all intents and purposes, this means that the EDP is dead for existing Eurozone members and for EU members that are not currently part of the Eurozone and have no desire to become members. They can, however, be used by existing Eurozone members to delay the entry into full EMU participation by the 13 EU members that are not currently part of the Eurozone. They can also act as a powerful external stimulus towards fiscal-financial

[6] With apologies to Joseph Stalin and Pope Pius XII.

sustainability for candidate EMU members that are eager to join. However, this stimulus disappears as soon as membership is achieved.

If the EDP is now dead, was it ever truly alive (in substance as well as formally)? Does it matter that the EDP is dead?

The case for supranational fiscal rules in a monetary union

The SGP and the EDP were designed to be a supranationally imposed, monitored and enforced set of national fiscal-financial rules - fiscal-financial rules implemented at the level of the individual nation state. For the supranational design and enforcement of the SGP and the EDP to be congruous with the EU's Principle of Subsidiarity, it is not sufficient to demonstrate that there exists a convincing welfare-, efficiency- or fairness- based case for national fiscal rules. It is not even enough to show that the best practicable national fiscal rules are those embodied in the SGP and the EDP. The further argument must be made that such national rules should be externally imposed, monitored and enforced.

For national fiscal stabilisation policy - defined here as rules governing the behaviour over time and across states of nature of the stock of outstanding public debt (and therefore of the sequence of current and contingent future government deficits) - to be a matter of common concern for the EMU members (let alone for all EU members) at least one of the following two arguments must be accepted.

First, there is an externality (cross-border spillover) associated with national government debt and deficits. As we have an Excessive Deficit Procedure and not an Insufficient Deficit Procedure, the SGP appears to be based on the assumption that, in the absence of enforceable external constraints, national government deficits would impose cross-border costs on other Union governments and citizens that are not properly internalised and 'costed' in the national government's cost-benefit analysis of borrowing an additional euro. These externalities can take the form of inefficiencies (so-called technological externalities) or be purely distributional (pecuniary externalities).

Second, even if there are no cross-border externalities from excessive deficits, there may be paternalistic/maternalistic reasons for compelling the national authorities to 'do the right thing'. In this case, excessive deficits are excessive only because they hurt the welfare of the issuing national government and its citizens. This requires that a least some EU national governments are deemed not to know what their true interests are or that they are judged to be incapable of acting in their own interest without the assistance of externally imposed constraints. Although the Principle of Subsidiarity would seem to imply that there is no room for such paternalism in the EU, the desire to save the fiscally incontinent from themselves is deeply rooted in the mind-set of Brussels and Frankfurt and in some of the national capitals.[7]

What are the externalities from national government deficit financing? The literature (see e.g. Buiter and Kletzer (1991a), Artis and Winkler (1998, 1999), Allsop and Vines (1996), Uhlig (2002) and European Central Bank (2004))suggest the following:

1. Cross-border spillovers that arise from *unsustainable* national fiscal-financial programmes. This includes the following:
    a. Cross-border contagion effects from the presence of sovereign default *risk*.

[7] Historically, a key albeit unstated objective of the (mainly Dutch and German) drafters of the original fiscal-financial Maastricht criteria was to keep Italy (and perhaps also the two Iberian nations) out of the EMU. It was clear, for instance, that Italy could not possibly meet the letter or spirit of the debt criterion (the stock of gross general government debt cannot exceed 60 percent of annual GD). The escape clause from the debt criterion (Article 104c2(b)) "whether the ratio of government debt to gross domestic product exceeds a reference value, unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace" had to be worked brutally hard to let Italy in with a debt-GDP GDP ratio of 116.7 percent at the end of 1998. Belgium, of course, had an even higher debt-GDP ratio then (119.6), but the pace of the reduction in Belgium's debt-GDP ratio was then, and continues to be, significantly higher than Italy's. The fiscal rules failed to achieve the unstated objective, as they failed to achieve most of the stated objectives.

b. Spillovers from actions undertaken by other EU governments, by the EU institutions or by the ECB to forestall a sovereign default in the E(M)U.[8]

c. Spillovers from the actual occurrence of sovereign default – the realisation of the default risk.

2. Cross-border spillovers that arise even when the fiscal-financial programme is sustainable and default risk, let alone actual default, is not an issue. This includes the following

    a. inflation externalities due to the response of the ECB to movements in Eurozone-wide interest rate, inflation and output and to changes in the effective exchange rate of the euro, driven by national deficit financing policies.

    b. Interest rate spillovers (through changes in default risk-free interest rates) driven by national government deficit financing policies.

    c. Suboptimal (excessive?) effective demand spillovers caused by (1) a lack of coordination among the national fiscal authorities of the Eurozone and (2) a lack of coordination between the 12 national fiscal authorities in the Eurozone and the ECB. There can be no presumption that the monetary-fiscal policy mix in the EMU area as a whole (given the monetary-fiscal policy mix in the rest of the world) is optimal in the absence of formal or informal coordination. A supranational agency monitoring and enforcing a set of EMU- (or EU-) wide rules is one mechanism for achieving such cooperation and coordination.

Externalities arising from unsustainable public debt.

As regards externalities that arise from the risk or realisation of unsustainable public debt, it is helpful to start from first principles. A fiscal-financial programme is sustainable if

[8] The ECB is an EU institution, but one that is *sui generis*. In what follows `EU institutions‘ includes the Brussels, Luxembourg and Strasbourg institutions, but not the Frankfurt one.

it does not create insolvency risk or default risk for the sovereign.[9] Sovereign default, like all default, is the breach of a contractual obligation. Sovereign default is, other things being equal, more serious than private default because one of the essential and defining roles of the state (managed and represented by the government of the day) is to ensure that contractual obligations are enforced throughout its jurisdiction and that when they are not, orderly procedures for the arbitration and resolution of breach of contract disputes are in place. Government default may weaken the respect for contractual obligations throughout the polity.

Apart from these deep institutional ‘rule of law’ or ‘destruction of social capital/trust’ externalities (which are likely to be contained within the jurisdiction of the defaulting government and do not represent true cross-border spillovers), government default is first and foremost a distributional policy choice in a many-sided distributional conflict. It sets the owners of the sovereign debt (typically the older generations) against current and future tax payers (typically the younger generations, including current and future wage earners) and against current and future beneficiaries of public spending programmes (likewise mainly citizens and residents).[10]

The bargaining involved in the resolution of this conflict need not be efficient. Costly delays can be the result of wars of attrition between badly and asymmetrically informed parties. Third party intervention in such conflicts must be timely and well-designed for it not to make matters worse. The long list of attempts (most of them unsuccessful) by the IMF to prevent sovereign default or to achieve a least-cost sovereign debt default work-out, provides a salutary reminder of the risks associated with external, including supranational, interventions in sovereign debt defaults.

[9] A government is solvent if its outstanding debt (valued at face value or at notional prices that do not reflect default risk) does not exceed the present discounted value (using default risk-free discount rates) of current and future primary (non-interest) surpluses.

[10] The owners of the public debt are likely to be both citizens and residents of the nation whose sovereign is defaulting, although some of the debt will be held by foreign private and institutional investors. Tax payers and beneficiaries of public spending are likely to be both citizens and residents of the country whose government defaults.

Implicit bailout commitments by other E(M)U governments, by the EU institutions or by the ECB are unlikely, unnecessary and undesirable. The EU institutions (other than the EIB) have no independent fiscal or quasi-fiscal resources and no serious resources of any kind with which to effect a bail-out. The Treaty specifically rules out bail-outs by all the above-mentioned parties. The (positive) argument that EU solidarity/cohesion makes a bail-out of a fiscally challenged EU government by another EU government likely is unconvincing as it would be a huge electoral liability for the government providing the bail-out. States and municipalities belonging to monetary unions possessing a much stronger sense of common national identity and citizenship (in the US and Canada, for instance) routinely fail to bail each other out.[11] The (normative) argument that EU solidarity/cohesion ought to imply a 'joint and several' attitude and approach towards the sovereign debt of its 25 member states find little resonance, even in the most Communitarian (or should that be Communautairian?) constituencies.

Possible contagion effects of national sovereign default call for a regulatory response in the E(M)U Member States, limiting the maximum permitted exposure by systemically important financial institutions (e.g. commercial banks that play a key role in the payments and settlement systems) to the debt instruments of any sovereign. It does not call for binding macroeconomic borrowing constraints of the Maastricht/SGP variety.

The statement that bail-outs of defaulting governments, either by other E(M)U member governments or by the ECB, are highly unlikely may appear to be at odds with the small differentials among the yields on the euro-denominated sovereign debt instruments of the E(M)U member states. A full treatment of this issue is beyond the scope of this paper, so

[11] The reason states or muncipalities in the USA do not come to each other's rescue when one of their number faces default, is not that they confidently expect the Federal Government to help. The Federal government has consistently taken a ‚you break it, you own it' approach to (near-)insolvent states, as the recent experience of California illustrates. When municipalities default, neither the State government nor the Federal government can be expected to provide financial relief.

a few brief remarks will have to do (see e.g. Bayoumi, Goldstein and Woglom (1995), , Codogno, Favero and Missale (2003) and Bernoth, von Hagen and Schuknecht (2004)).

It is indeed possible that the low sovereign spreads reflect (at least in part) the market's perception that a sovereign default in the E(M)U would either be prevented by or followed by a bailout. Even if this is the market's perception, it does not follow that the market is correct in its assessment of the likelihood of a bail out. Furthermore there are other, and in my view more convincing, explanations of the small sovereign spreads.

First, the sovereign yield spreads in the E(M)U while small are non-zero and of the 'right' sign. For instance, the 10-year government bond spreads vs Bund was 31bps for Greece and 30bps for Italy on July 4, 2006. Second, there has been no sovereign default in the EU15 since (West) Germany defaulted on its internal public debt in 1948, along with its currency reform. Markets, better at hindsight than foresight, may therefore underestimate the likelihood of a default. Third, at least since 2001, there have been two world-wide financial market anomalies: long risk-free real rates of interest have been very low, and credit spreads of all kinds have been extraordinarily low. Recent small sovereign risk spreads in the E(M)U are at least in part a manifestation of these global anomalies. Fourth, as argued by Buiter and Sibert (2006), the operating procedures of the ESCB when it conducts its Repo operations (by buying or selling collateralised debt instruments), implies a subsidy to issuers of low quality (higher default risk) sovereign debt which will depress market spreads.

To conclude: national fiscal sustainability is a necessary condition for national economic stability. In is in the enlightened self-interest of every European nation to design and implement fiscal-financial programmes that are sustainable.[12] There is no convincing case that the cross-border spillovers/externalities from unsustainable fiscal-financial

[12] For an analysis of a number of alternative national fiscal rules and institutions see Kopitz and Symanski (1998), Buiter and Grafe (2004) and Wyplosz (2005).

programmes are important enough to require internalisation through supranational institutions, rules or actions.

Externalities from excessive deficits when sustainability is assured.

As regards externalities that occur even when unsustainability and the risk or reality of sovereign default are not an issue, a few short comments will have to suffice. The 'free riding on the ECB' argument holds that more expansionary fiscal policy (identified rather sloppily with larger national government deficits) by any national government will boost inflation throughout the monetary union, forcing the ECB to be more contractionary throughout the union. The costs of disinflation are not all borne by the government causing the inflationary impulse. Fiscal policy will be too expansionary (see Allsop and Vines (1996), Artis and Winkler (1998, 1999), Eijffinger and de Haan (2000), Uhlig (2002)).

This argument only holds when the central bank's objective function penalises the output gap as well as deviations from price stability. However, the ECB's objective function is lexicographic in price stability: the primary objective is price stability and only without prejudice to (i.e. subject to) that price stability objective, can it support all the other objectives of the EU.[13] The ECB does not trade off price stability for anything else. Free riding on the ECB is therefore not possible as long as the Governing Council sticks to its mandate.

Other than through its effect on EMU – wide inflation, expansionary national fiscal policy has cross-border effects through its effect on EU-wide default risk-free real and nominal interest rates. Such interest rate spillovers are of limited policy relevance, although

[13] In line with Article 105(1) of the Treaty (Consolidated Version) (European Union (2002)), "The primary objective of the ESCB shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community as laid down in Article 2. The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, …".

much is made of them in both the technical literature (see e.g. Beetsma and Uhlig (1999) and Wyplosz (2005)) and in the policy debate (see e.g. Casella (1989)).

First, interest rate spillover effects are likely to be small, even for the larger EU governments, because the relevant financial markets extend beyond the boundaries of the EMU and the EU and consist of the entire set of integrated global financial markets. Second, if there are material interest rate spillover effects, they should be associated equally with private sector financial deficits as with public sector financial deficits. Do the existing channels providing external finance to private agents in financial deficit, fully internalise the externalities associated with recourse to external financing? Third, interest rate spillovers are textbook examples of pecuniary externalities or spillovers operating through market prices. Like any other price change, a change in interest rates alters incentives, conveys information and redistributes income between those with net long and short positions in the object whose price has changes. Unless the markets are distorted, interest rate changes do not in and of themselves cause any efficiency losses.[14]

Cet. par. higher interest rates are bad for borrowers and for capital formation and good for creditors and for saving. Changes in interest rates cause redistributions of income and wealth between debtor and creditor nations and between debtors and creditors within the same national jurisdiction. This is not, in my view, a legitimate concern of either national governments or supranational agents. It is how the market is supposed to work. There is also no presumption that the best real or nominal interest rate is the lowest possible one. Those concerned about government deficits raising interest rates and crowding out saving and investment must first make the case that the EU is saving and investing too little. Demonstrating that is by no means straightforward and requires a large number of contestable and controversial positive and normative assumptions.

[14] Even if the borrowing government is large in the global financial markets and exploits its monopoly power over interest rates, there will be no efficiency loss if there are sufficient lump-sum taxes and transfers (see Buiter and Kletzer (1991b)).

It is true that when taxes are distortionary, and/or when a higher marginal tax rate brings with it increasing and strictly convex tax administration and compliance costs, a higher interest rate will, if there is a positive stock of public debt outstanding, cause real efficiency losses even if the financial markets are efficient. In this case the pecuniary externality interacts with a distortion to create what amounts to a technological externality with efficiency implications.

However, the implications of distortionary taxes and tax administration and compliance costs in a financially integrated world with many countries/governments each of which cares only about national economic welfare can be rather surprising, as shown in Buiter and Sibert (2005). Starting (realistically) from a situation with positive outstanding stocks of public debt they show that, without cooperative behaviour by the fiscal authorities, the public bad (negative externality) associated with high marginal tax rates will be 'oversupplied': non-cooperative distortionary tax rates will be too high and public sector deficits and debt *too low*. The key insight is that the externalities are not interest rate externalities or debt externalities, but (distortionary) tax externalities. These externalities happen to be transmitted through interest rates, when there is a non-zero stock of debt outstanding; the externality is negative if there is a positive stock of debt outstanding. Negative externalities lead to overprovision of the 'public bad' – in this case distortionary taxes – and non-cooperative equilibrium government deficits are too small.

Without claiming universal applicability for this *prima facie* paradoxical result, it does provide a necessary reminder that the policy implications of cross-border transmission through interest rates set in system-wide integrated financial markets are by no means obvious.

The SGP and policy coordination.

In a world with nominal wage and price rigidities and demand-determined output, effective demand spillovers are not just pecuniary (distributional) externalities but are more akin to the technological externalities that create the potential for welfare-improving non-market interventions/solutions. Unfortunately, the SGP is completely useless as a policy coordination device. It influences and constrains each individual country's fiscal policy without any reference to economic conditions in other countries, inside or outside the E(M)U. A country's prescribed or proscribed fiscal policy actions under the SGP and EDP are not made contingent on past, present and expected future fiscal actions of other E(M)U area members, or on those of the ECB and the other EU central banks. Nor does the SGP take account of any other past, current and anticipated future economic developments in the E(M)U area as a whole, such as the behaviour of E(M)U-wide output, employment, and inflation or the effective exchange rate of the Euro. The SGP is therefore not designed to produce an E(M)U wide fiscal stance that 'adds up' and makes sense given the monetary policy stance of the ECB and the other EU area central banks and given economic developments (including monetary and fiscal policies) in the rest of the world.[15]

This property of the SGP - its blindness to the implications for an E(M)U member's fiscal financial policy of the behaviour of the other E(M)U states and of the ECB - makes sense only when fiscal actions undertaken by individual member countries do not produce cross-border spillovers that affect other members of the union. Of course, without such international spillovers there is no rationale, for externally imposed, monitored and enforced fiscal rules in the first place, other than paternalism.

Has the SGP contributed to the sustainability of national fiscal-financial programmes and to macroeconomic stability in the E(M)U?

[15] A cute proposal for the efficient distribution of the appropriate E(M)U-wide government deficit across 12 (25) member states using tradable deficit permits is provided by Casella (1999). Unfortunately, it falls foul of the same political economy obstacles that killed the SGP: the absence of a credible enforcement mechanism to deter would-be transgressors.

I have argued that the supranational imposition of the fiscal-financial rules of the SGP is hard to justify by appealing to the most commonly proffered cross-border externalities or spillovers. Effective demand spillovers and the problem of achieving an appropriate E(M)U-wide monetary-fiscal policy mix are areas where coordination and cooperation are likely to be helpful (although coordination and cooperation do not necessarily require supranational enforcement). Unfortunately, the SGP is, by design, incapable of ensuring E(M)U-wide fiscal policy coordination, let alone coordination of fiscal *and* monetary policy. Could it have contributed (paternalistically) to enhanced fiscal-financial sustainability and macroeconomic stability in the individual E(M)U members?

As regards sustainability, I believe that the SGP has made a contribution, but only where its prescriptions were incentive-compatible for the target country, that is, aligned with that country's domestic policy objectives. In practice this has meant that the SGP has made a contribution to sustainability only in EU members desiring to become full members of the EMU. As regards the contribution of the SGP to limiting any negative cross-border spillovers associated with government deficits even when the fiscal-financial programmes are sustainable, the tentative evidence that the Pact has not in practice provided enough room for the automatic stabilisers to operate properly (see e.g. Briotti (2004), Barrell and Pina (2004),), is relevant. If the Pact was indeed at times a binding constraint on increases in government deficits during the downturn of the cycle, it must have reduced the magnitude of any negative interest rate spillovers.

It does, however, appear unlikely that either the sustainability dimension or stabilisation policy implications of the Pact have made any appreciable difference to the performance of those countries (like the UK, Denmark or Sweden) that were not and are not interested in joining the monetary union. It has also made no lasting difference to the performance of the 12 countries that have joined EMU, once they had been given the green light for EMU membership.

It is my position that, once the only EU members not in the EMU are out by choice rather than necessity, fiscal sustainability is 'made at home' and the countercyclical use of the automatic fiscal stabilisers is no longer constrained by the Pact. This is supported for the 15 old EU members by Tables 1, 2 and 3. In the UK (outside of EMU and happy with its open-ended opt out) the SGP was ignored as long as the British government was in compliance. When the general government deficit exceeded the 3 percent reference value in 2003, in 2004 and (almost surely) in 2005, despite rather robust growth in 2003 and 2004, the SGP became an irritant, but not in any way a restraining influence on the UK authorities willingness and ability to run budget deficits.

The Netherlands, in EMU but deeply attached to the SGP (perhaps the Pact's genesis in Maastricht and Amsterdam contributes to this attachment), reacted with shock to its transgression of the 3 percent reference value in 2003 and (over-)reacted with a severe and pro-cyclical fiscal tightening which reduced the deficit to 2.1 percent of GDP the next year. France and Germany are both in their fourth successive year of non-compliance with the 3 percent ceiling. Italy is in year three of its non-compliance. Embarrassment among one's peers in Ecofin or in the Eurogroup is an especially weak deterrent if one has company. The confrontation between the enforcement of the letter and spirit of the SGP and the domestic political agendas of the three largest continental EMU members was resolved by the capitulation of the Commission and the emasculation of the operating rules of the SGP reported earlier.

As a final illustration, note the contrast between the three most highly indebted countries at the time of the collapse of ERM1: Belgium, Italy and Greece. All three are EMU members, Belgium and Italy since 1999, Greece since 2001. Belgium has consistently and persistently applied a sustainability-targeted fiscal policy, reducing its debt-to-GDP ratio by more than 40 percentage points in 12 years. The sequence of primary surpluses, averaging well over 5 percent of GDP, is remarkable.

Italy had a period of sizeable primary surpluses between 1995 and 2000. Since then, as a member of the Eurozone, Italy has indulged in a marked relaxation of its fiscal stance. EMU brought lower interest rates and a much lower interest bill on Italy's sovereign debt. The government spent this windfall. With highly unfavourable longer-term fiscal fundamentals (driven by demographics and pension obligations), the current stability of the debt to GDP ratio at just under 110 percent disguises a vulnerable position. Since it joined EMU, the SGP has not been a constraint on the Italian fiscal authorities.

Greece's position today is even more vulnerable than Italy's. With the debt-GDP ratio at around 110 percent, its financial deficits are growing and its primary surpluses have vanished altogether and turned into deficits again. An increase in interest rates, either because of an increase in the global risk-free rate and/or through an overdue increase in the Greek sovereign risk premium, could produce a drastic cumulative worsening of debt and deficit. Market confidence was not boosted by revelations of how the Greek authorities of the day systematically underreported both deficits and debt during Greece's qualifying years for EMU membership and in the period 2001-2004. It is hard to discern any substantive influence of the SGP on the true evolution of Greece's fiscal-financial circumstances both before and since it joined EMU, and only a cosmetic influence before January 2001.

All these examples provide support for the "consolidation fatigue" and "reform fatigue" literature, which provides both game-theoretic and behaviourist underpinnings for the view that one would expect countries to relax painful fiscal consolidation and structural reform efforts once in EMU (see e.g. Sibert (1999), Sibert and Sutherland (2000), European

Commission (2005b), Hughes Hallett, Lewis and von Hagen (2004), Hughes Hallett and Lewis (2006) and Hughes Hallett, Richter and Chen (2006)).

With the SGP out of commission as promoter let alone guarantor of fiscal sustainability, it is key that financial markets not be impeded in whatever contribution they can make to encouraging fiscal restraint. As pointed out earlier, interest rates are very similar on the euro-denominated sovereign debt instruments of the 12 Eurozone central governments, even for remaining maturities of 10 year and over. This is surprising because by 'fundamental' criteria (such as public debt burdens and capacity to generate primary surpluses) different Eurozone governments appear to represent significantly different degrees of default risk. Anne Sibert and I, in a recent paper (Buiter and Sibert (2006)), offer a contribution to an explanation of this anomaly, based on the way the Eurosystem (the ECB and the 12 national central banks of the Eurozone) treats the sovereign debt instruments of the Eurozone central governments when these are offered as collateral for Repurchase Agreements (Repos) and other forms of collateralized borrowing.

As regards macroeconomic stabilisation at the national level, it is true that the SGP permits unbridled anti-cyclical behaviour of the government deficit, provided the average, structural or cyclically adjusted position of the deficit is sufficiently far below the 3 percent ceiling to prevent this ceiling from becoming a binding constraint during a cyclical downturn. It is not clear whether, for all 15 EU members, a budget *'close to balance'* over the cycle does provide enough leeway for the automatic fiscal stabilizers to operate fully. Clearly *'...or in surplus* ' will always provide enough room. It is of course true - almost tautologically - that there exists a general government debt-to-GDP ratio low enough and a structural government financial surplus-to-GDP ratio high enough to permit the automatic fiscal stabilisers to operate in an unconstrained manner and with room left for the occasional discretionary fiscal stimulus. For many E(M)U members, however, the initial debt-to-GDP ratio and the actual structural deficit were too high to permit even the automatic fiscal stabilisers to operate freely and effectively while respecting the numerical bounds of the SGP (see e.g. Hughes Hallett and McAdam (1996), Eichengreen and Wyplosz (1998), Buti and Ongena (1998), Van den Noord (2000), von Hagen (2002), Barrell and Pina (2004)).

The problem with the SGP as regards macroeconomic stabilisation is that it does not provide incentives for necessary (but politically unpopular) restraint during the upswing to create room for desirable (and popular) expansionary measures during the downturn. Not only are the two SGP deficit rules not forward-looking, they are not even backward-looking. Except through the (small) interest component of the government deficit, there is no link between the history of past deficits and the government's current and future ability to run deficits: the SGP deficit rules are (almost entirely) 'memoryless'. This problem could be overcome by replacing or augmenting the deficit constraint with a debt constraint.[16] A smaller deficit today ensures a lower stock of debt tomorrow. This makes tomorrow's debt ceiling easier to meet and thus permits a larger deficit tomorrow. Proposals to this effect have been discussed and proposed in Hughes Hallett and McAdam (1996) and in Fatas et. al. (2004). An example of an explicitly forward-looking 'permanent balance rule' can be found in Buiter and Grafe (2004). Such sophisticated and analytically demanding rules cannot be captured in one or two fixed numbers. They could, however, provide the common analytical framework used by a national 'fiscal policy committee', along the lines proposed by Wyplosz (2005) and Fatas et. al. (2003).

However, this technical correction does not address the enforcement issue: even with a debt rule, fiscal restraint required when the debt ceiling is a binding constraint will still be unpopular. Pressures to violate the debt constraint will be present. That the debt rule credits past surpluses against the need for future deficits is helpful, but does not eliminate the

[16] The interest component of the deficit means it has a small measure of memory, given by the product of the interest rate and the change in the stock of debt. The primary deficit is completely memoryless.

problem of the lack of external sticks and carrots for fiscal restraint. What sanctions will be imposed, and by whom, if a country violates a debt ceiling?

Conclusions

I would have liked to end this lecture with the exclamation: "the Pact is dead! Long live the Pact".[17] I cannot do so, as only the first half of the exclamation would be true: the Pact is dead and nothing has taken its place.

For EMU members and for EU members that neither are nor wish to be part of the Eurozone, there currently is not even a minimally effective operational supranational mechanism for encouraging fiscal-financial sustainability and macroeconomic stability. Surveillance and Broad Economic Policy Guidelines are good because they employ large numbers of economists, but they achieve little else.

I am not convinced that the death of *this* SGP and EDP is a tragedy. Price stability throughout the EMU is a fact because of the reasonably effective (albeit utterly procedurally non-transparent) monetary policy of the ECB. Steps can be taken to enhance the ability of financial markets to discipline sovereign borrowers prone to excessive debt or deficits through a greater responsiveness of sovereign risk premia to visible hints of unsustainability. Fiscal-financial sustainability will continue to be 'home-made'. Apart from the international financial markets and the ratings agencies (both of which tend to act pro-cyclically), there are no external sticks or carrots that can be brandished or dangled by Brussels or Frankfurt to make fiscal restraint more incentive-compatible to politicians with an overwhelmingly domestic agenda and constituency.

Nation states will continue to pursue macroeconomic stabilisation using the fiscal tools at their disposal without serious attempts at international fiscal coordination, either at

[17] See Begg and Schelkle (2004) for an earlier use of this exclamation.

the E(M)U level or globally. This is regrettable, as I believe there could be gains from such fiscal coordination, as indeed there could be from broader coordination between fiscal and monetary authorities in Europe and in the global arena (say between the G3, China and India), but it is the way things are. There can be no fiscal co-ordination within Europe because there is no supranational fiscal authority in the EU and because coordinating the fiscal policies of 25 nation states using intergovernmental channels and procedures would be a logistic nightmare.

Even if there were a single fiscal authority in Europe, either through cooperation and coordination or through the creation of a supranational European fiscal authority with independent revenue raising and borrowing powers, coordination of monetary and fiscal policy in Europe would be problematic. The ECB fears that coordination and cooperation would be a smoke screen for loss of independence. This fear is probably not without justification, as Eurogroup members, (notably the French and German Finance ministers) frequently and inappropriately lecture the ECB on its duty to stimulate demand in the Eurozone. At the same time, and with equal lack of restraint or judgement, members of the ECB's Governing Council lecture the Eurozone Finance and Economy ministers on the need for fiscal restraint and the urgency of structural reforms of labour and product markets. Both fiscal policy and structural reform are outside the mandate and the competence of the ECB. Coordinating those fiscal and monetary authorities would truly be like herding cats.

Even if Europe were to speak with a single coordinated fiscal and monetary policy voice, there can be no fiscal and monetary policy co-ordination with the US, because fiscal policy in the US is not made by anyone or by any agency. US fiscal policy 'just happens'. Budgetary actions emerge from the Bermuda triangle of the White House, the Senate and the House of Representatives, mysteriously and often unexpectedly and with long, variable and uncertain inside lags. Because no individual or agency is responsible for and has authority over US fiscal policy, there can be no coordination between fiscal and monetary policy in the US.

In Japan, the monetary and fiscal authorities are only just learning to speak to each other. The two largest BRICS countries, India and China do not yet have the monetary and fiscal instruments required for market-based domestic macroeconomic management and for international monetary and fiscal policy coordination. India is closer to achieving this than China.

When Europe fails to co-ordinate monetary and fiscal policy within the EMU or the EU, she is in a position similar to that of the other key global players in the monetary and fiscal policy game. The problem for Europe and for the world is that the correction of the global imbalances that have been building up over the past decade will be more abrupt and painful than it would have been with a more cooperative and coordinated approach to monetary and fiscal policy.

It is ironic that the Stability and Growth Pact did not in any way address the problem of achieving the correct E(M)U-wide fiscal stance and the appropriate E(M)U-wide monetary-fiscal policy mix. This is the one area of fiscal-financial and monetary policy where there is a strong and straightforward case for co-ordinated action at the level of the EMU and the EU as a whole. From the perspective of the Principle of Subsidiarity, the Pact was therefore subject to both a Type 1 error and a Type 2 error. It addressed (albeit ineffectively) matters of national fiscal sustainability and national macroeconomic stabilisation that ought to have been handled at the national level. It failed to address the appropriate Europe-wide fiscal stance and monetary-fiscal policy mix for which a supranational approach would have been desirable.

Table 1
General Government Budget Balance of Eurozone Member States, EU15 and EU25
(% of GDP at market prices)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Austria	-4.2	-5.0	-5.2	-3.8	-1.9	-2.4	-2.3	-1.5	0.1	-0.4	-1.2	-1.0	
Belgium	-7.3	-5.0	-4.3	-3.8	-2.0	-0.7	-0.4	0.2	0.6	0.0	0.1	0.0	
Finland	-7.3	-5.7	-3.7	-3.2	-1.5	1.5	2.2	7.1	5.2	4.3	2.5	2.1	
France	-6.0	-5.5	-5.5	-4.1	-3.0	-2.7	-1.8	-1.4	-1.6	-3.2	-4.2	-3.6	
Germany	-3.1	-2.4	-3.3	-3.4	-2.7	-2.2	-1.5	1.3	-2.9	-3.8	-4.1	-3.7	
Greece	-13.4	-9.4	-10.2	-7.4	-4.0	-2.5	-1.8	-4.1	-6.1	-4.9	-5.7	-6.6	
Ireland	-2.7	-2.0	-2.1	-0.1	1.1	2.4	2.4	4.4	0.8	-0.4	0.2	1.4	
Italy	-10.3	-9.3	-7.6	-7.1	-2.7	-2.8	-1.7	-0.6	-3.2	-2.7	-3.2	-3.2	
Luxembourg	1.5	2.7	2.1	1.9	3.2	3.1	3.5	6.0	6.1	2.1	0.2	-0.6	
Netherlands	-2.8	-3.5	-4.2	-1.8	-1.1	-0.8	0.7	2.2	-0.2	-2.0	-3.2	-2.1	
Portugal	-8.9	-6.6	-4.5	-4.0	-3.0	-2.6	-2.8	-2.8	-4.2	-2.8	-2.9	-3.0	
Spain	:	:	:	-4.9	-3.2	-3.0	-1.2	-0.9	-0.5	-0.3	0.0	-0.1	
Eurozone	:	:	:	-4.2	-2.6	-2.2	-1.3	0.2	-1.9	-2.5	-3.0	-2.7	
Denmark	-3.7	-3.2	-3.1	-1.9	-0.5	0.2	2.4	1.7	2.6	1.4	1.0	2.3	
Sweden	-11.6	-9.3	-7.0	-2.7	-0.9	1.8	2.5	5.1	2.5	-0.3	0.2	1.6	
UK	-8.0	-6.8	-5.7	-4.3	-2.0	0.2	1.0	3.8	0.7	-1.6	-3.3	-3.1	
EU15	:	:	:	-4.2	-2.4	-1.6	-0.7	1.0	-1.2	-2.2	-2.9	-2.6	
EU25	:	:	:	:	:	-1.7	-0.8	0.8	-1.3	-2.3	-3.0	-2.6	

Source: Eurostat

Table 2
General Government Consolidated Gross Debt of EU15 Member States
(% of GDP at market prices)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Austria	61.8	64.7	69.2	69.1	64.7	64.8	67.5	67.0	67.0	66.7	65.1	64.3	
Belgium	137.9	135.9	134.0	130.2	124.8	119.6	114.8	109.1	108.0	105.4	100.0	95.7	
Finland	55.9	58.0	57.1	57.1	54.1	48.6	47.0	44.6	43.6	42.3	45.2	45.1	
France	45.3	48.4	54.6	57.1	59.3	59.5	58.5	56.8	56.8	58.8	63.2	65.1	
Germany	46.9	49.3	57.0	59.8	61.0	60.9	61.2	60.2	59.6	61.2	64.8	66.4	
Greece	110.1	107.9	108.7	111.3	108.2	105.8	105.2	114.0	114.4	111.6	108.8	109.3	
Ireland	95.1	89.6	81.8	73.3	64.5	53.8	48.6	38.3	35.9	32.4	31.5	29.8	
Italy	118.7	124.8	124.3	123.1	120.5	116.7	115.5	111.2	110.9	108.3	106.8	106.5	
Luxembourg	6.8	6.3	6.7	7.2	6.8	6.3	5.9	5.5	6.7	6.8	6.7	6.6	
Netherlands	79.3	76.4	77.2	75.2	69.9	66.8	63.1	55.9	51.5	51.3	52.6	53.1	
Portugal	59.1	62.1	64.3	62.9	59.1	55.0	54.3	53.3	53.6	56.1	57.7	59.4	
Spain	58.4	61.1	63.9	68.1	66.6	64.6	63.1	61.1	56.3	53.2	49.4	47.0	
Eurozone	65.6	68.4	73.1	74.6	74.3	73.6	72.2	69.6	69.3	69.2	70.4	70.8	
Denmark	81.1	77.4	73.2	69.7	65.7	61.2	57.7	52.3	48.0	47.6	45.0	43.2	
Sweden	:	73.9	73.7	73.5	70.6	68.1	62.7	52.8	54.3	52.4	52.0	51.1	
UK	45.4	48.6	51.8	52.3	50.8	47.7	45.1	42.0	38.7	38.2	39.7	41.5	
EU15	:	66.4	70.8	72.6	71.0	68.9	67.9	64.1	63.1	62.5	64.0	64.3	
EU25	:	:	:	:	:	67.5	66.7	62.9	62.0	61.4	63.0	63.4	

Source: Eurostat

Table 3
General Government Primary Budget Balance of Eurozone Member States, EU15 and EU25
(% of GDP at market prices)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Austria	0.1	-0.9	-0.9	0.4	2.0	1.4	1.3	2.1	3.8	3.1	2.0	1.7
Belgium	3.8	4.6	4.9	5.1	6.0	6.8	6.6	6.9	7.2	6.1	5.7	4.8
Finland	-2.8	-1.5	0.3	1.1	2.7	5.1	5.3	10.0	7.9	6.5	4.5	4.0
France	:	:	:	-0.1	0.7	0.9	1.4	1.7	1.6	-0.2	-1.3	-0.8
Germany	0.2	0.9	0.3	0.3	0.9	1.4	2.0	4.7	0.4	-0.5	-0.7	-0.6
Greece	-2.0	3.1	1.0	3.1	4.2	5.3	6.5	4.0	3.7	2.2	0.6	-0.4
Ireland	3.9	4.1	3.3	4.4	5.3	5.7	4.7	6.4	2.4	1.0	1.5	2.5
Italy	2.8	2.1	3.9	4.4	6.7	5.2	5.0	5.8	3.6	3.2	2.4	2.0
Luxembourg	1.9	3.1	2.4	2.3	3.6	3.4	3.8	6.2	6.5	2.6	0.8	-0.9
Netherlands	3.4	2.3	1.7	3.8	4.1	4.1	5.1	6.0	3.3	1.1	-0.3	0.4
Portugal	:	:	:	1.4	1.3	0.9	0.4	0.4	-1.2	0.3	0.0	-0.1
Spain	:	:	:	0.4	1.6	1.2	2.4	2.4	2.6	2.6	2.8	1.9
Eurozone	:	:	:	1.4	2.5	2.5	2.9	4.2	2.2	1.2	0.6	0.6
Denmark	3.6	3.4	2.7	3.6	4.2	4.6	6.3	5.3	6.3	4.5	3.8	5.1
Sweden	-5.7	-2.9	-0.3	3.8	5.3	7.4	7.1	9.2	5.7	2.8	2.3	3.2
UK	-4.9	-3.4	-2.1	-0.6	1.7	3.8	3.9	6.6	3.1	0.3	-1.3	-1.1
EU15	:	:	:	1.3	2.5	2.9	3.3	4.8	2.5	1.2	0.4	0.4
EU25	:	:	:	:	:	:	3.2	4.6	2.4	1.0	0.3	0.4

Source: Eurostat

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