Gaps in the Institutional Structure of the Euro Area

by

Christopher A. Sims, Princeton University

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CHRISTOPHER A. SIMS

I. INTRODUCTION

The Euro was created at a time when the conventional view was that a central bank could control inflation by controlling the money supply and that fiscal policy's interaction with monetary policy took the form of attempts to get the central bank to finance government debt. With a sufficiently firm and independent central bank, this view considered that financial markets would force discipline on fiscal policy. By creating a strong, independent central bank at the European level, facing multiple country-level fiscal authorities, the threat of political pressures for inflationary finance would be lower than with individual country central banks.

We are learning that this formerly conventional view was largely mistaken. Here are three aspects of central banking and inflation control that this view missed.

Essential fiscal backing: An independent central bank charged with controlling inflation will take actions that require responses from the fiscal authorities. If those responses are not forthcoming, the central bank cannot control inflation. A fragmented collection of fiscal authorities has less incentive than a unified fiscal authority to recognize the actions required of it and respond appropriately.

Inflation as a cushion: While there are historical examples of uncontrolled hyperinflation and episodic high inflation that represent institutional failures, moderate inflation and deflation can play an

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important role as fiscal shock-absorbers. They in fact regularly play such a role in advanced economies. The Euro institutions as originally constructed entailed abandonment of this shock-absorber at the country level, with outright default the only potential replacement.

The fiat money lender of last resort: The combination of a treasury that issues fiat-currency debt and a central bank that can conduct open market operations provides a uniquely powerful lender of last resort. The Euro as originally structured seemed to require the elimination of national-level lender of last resort functions for central banks, without creating as strong a replacement at the European level.

Having discovered these gaps through experience, what options are there going forward for the Euro area? Few at the time of the Euro's creation realized, in my view, that they were abandoning an effective lender of last resort function and accepting periodic outright government default on debt as part of the new monetary regime. One way forward would be to require people to recognize that these are the consequences of the Euro. Proceeding in this direction would entail changes in ECB operational methods and would require harsh measures in countries struggling with temporary fiscal problems. It would amount to reproducing the essential features of the gold standard. It is not clear to me that, once these consequences were fully and widely understood, continued adherence to the Euro would remain politically viable.

An alternative would be to fill in the institutional gaps in the original Euro framework. At a minimum, this would require a new institution with at least some taxing power, able to issue debt and to buy, or not buy, the debt of Euro area governments. Such an institution would of course have to be subject to democratic control. This is a daunting prescription from a political point of view. It obviously cannot be done overnight, yet financial markets may not wait for such institutional change to evolve.

I elaborate these points in what follows. Most of what I say below has been said before by other commentators, as well as by me, and I do not try to cite them systematically.

II. Fiscal-monetary interactions

In papers in the 1990's several authors[1] put forth macroeconomic models in which government interest-bearing debt was treated explicitly as denominated in domestic currency. This framework brought out the symmetry in the roles of monetary and fiscal policy in determining the price level. At the time it was seen as in conflict with mainstream views and considered controversial. These models did not treat the case of multiple fiscal authorities and one central bank directly, but from their perspective, problems with the EMU framework were clear (Sims, 1999).

One of the main insights from this approach is that every monetary policy action has fiscal implications and requires a response from the fiscal authorities if it is to be effective. For example, when a central bank raises interest rates, attempting to restrain spending and inflation, it automatically increases the interest expense component of the government budget, so that if there is no change in other expenses or in tax revenue, the deficit increases. This results in new debt being issued to cover the deficit, thus more debt, thus even larger interest expense. Unless there is at least eventually a fiscal response, reducing non-interest expenditures or increasing taxes, the result is increased inflation, the opposite of the effect the central bank was trying to achieve. In countries where inflation is high and interest expense a large proportion of the budget, this need for a fiscal response to monetary tightening is apparent to policy-makers and may, where fiscal inertia is inescapable, lead to monetary policy that is passive or ineffective. In most rich countries, though, deficits arising from interest rate changes have, historically, eventually produced the needed fiscal response.

In a monetary union the inflationary impact of a failure of fiscal policy to respond to monetary tightening is, in any one country, diluted. A deficit that is large relative to a country's own economy, may be small relative to the monetary union as a whole, so that its inflationary impact is not so apparent to the country's lawmakers. The fragmented fiscal authority therefore weakens the incentives for fiscal response to monetary policy actions. Furthermore, *every* country in the union must make the

[1](Woodford, 1995),(Leeper, 1991), (Sims, 1994), (Cochrane, 1998), Sims (1997), among others.

appropriate fiscal response to monetary policy actions if monetary policy actions are to be effective.[2]

It was in recognition of this potential problem that the Maastricht treaty included limits on countries' debts and deficits at the outset of Euro zone membership. These limits were extended to ongoing members in the Stability and Growth Pact, with provisions for penalizing failure to heed the limits. These provisions were an effective sanction against a country deliberately trying to pass its fiscal burden onto other countries. But it should have been clear from the start that countries usually run large deficits when unpredictable events depress their economies, and that monetary union would not eliminate such unpredictable events. It was implausible that countries in economic distress due to events beyond their control would be "punished" by the Eurozone, and in fact many of the member countries have been in violation of the criteria without facing sanctions.

Now several large EMU members are facing such fiscal distress that financial markets are pricing their debt to include substantial default risk. New attempts are being made to enforce fiscal discipline, aiming to convince markets that default risk is minimal. But the fact that previous measures meant to eliminate default by enforcing fiscal discipline have proved ineffective makes it difficult to convince markets that this round of disciplinary measures will be different.

III. THE INFLATION CUSHION

Based only on debt and deficit accounting, several countries outside the EMU appear in worse shape than those inside the EMU that are facing default-risk discounts on their debt, yet these outside countries (the US and the UK, for example) are not facing large default-risk discounts. This is not a mystery. A country that issues mainly domestic-currency-denominated interest-bearing debt and that has a fiat-money currency need never default. Its interest-bearing debt promises delivery only of government-created fiat money, which is always available. This does not

[2]This assumes that countries pay attention only to their own debts and deficits. If some country were (implausibly) to tax and spend so as to control the union-wide level of debt rather than the country's own debt, then monetary policy could be effective even if some other countries did not respond.

mean that there is no risk to the debt, only that there is no risk that the issuing government cannot deliver what it has promised to pay. The value of the promised payments may be higher or lower than expected if inflation is higher or lower than expected over the term of the debt. This is sometimes thought of as partial default, but it is quite different. When default is in prospect, the contract terms of the debt are going to be violated. Investors do not know how much of the value of their investment they will lose, or when, and the loss in value is likely to be sudden. Furthermore, it may be unclear which investors will lose. A government may, for example, simply postpone payment of principal on a particular issue of debt that comes due at an inconvenient time, or it may instead announce changed payment terms on many or all outstanding debts. In the same configuration of current debt and expectations about future taxes and expenditures, a country with fiat-money debt presents much less uncertainty to investors than a country issuing debt in a currency it cannot itself produce.

Fluctuating fiscal conditions therefore tend to produce fluctuating price levels and exchange rates in countries that issue own-currency denominated debt. In an earlier paper (2001) I calculated the yearly unanticipated gains and losses to holders of US debt during 1950-1990. These fluctuated between losses of $40 billion and gains of $60 billion — non-trivial as a proportion of budget deficits at the time — and between $\pm 6\%$ as a percentage of the debt's value. Substantial losses to debt-holders cushioned the effects of the oil crises of the 1970's, for example.

In the US as in other countries there is a single central bank and multiple sub-national governments with their own powers to tax, spend, and issue debt. But there are substantial flows of resources between US states via the federal government's budget, and much of this flow offsets local economic shocks. Federal taxes rise and fall with local incomes, while most federal expenditures do not, and some, like unemployment insurance and Medicaid, tend to increase when local income declines. The corresponding cross-national fiscal flows in Europe are much smaller and probably less cyclically sensitive.

Joining the Euro meant that countries gave up the cushion of country-specific inflation impacts on debt burden, without replacing that cushion with any corresponding Europe-wide system of fiscal transfers. Outright

default on government debt can at least partially replace the inflation cushion, but it is a clumsy and costly replacement.

IV. Lender of last resort

We know from historical experience that asset markets occasionally undergo liquidity crises. Financial contracts, especially loan contracts, are never complete. That is, they specify payment obligations that in come circumstances are impossible, without specifying in detail what those circumstances are or what payments will be made when those circumstances arise. When individual contracts run into such circumstances, they are renegotiated or are taken to bankruptcy court. But some assets — bank accounts, treasury bills, AAA-rated private short-term debt for example — and some credit markets — interbank lending, for example — are relied on for liquidity. People assume these assets can be sold or these credit markets can be drawn on at very short notice without penalty. When widespread doubts arise about these sources of liquidity, payments can not be made on time, and doubts about ability to pay promptly become contagious, to the point where formerly liquid markets cease to function. In such situations, a large institution with unquestioned ability to pay may be able to step in, lending freely and undoing the panic and contagion. Sometimes large private banks have played such a role, but a private entity, no matter how large, cannot be totally immune to doubts about its own solvency. A central bank that issues fiat money can make loans denominated in fiat currency without any risk that its liabilities (reserve deposits and currency) might not be payable on demand, since they are only promises to pay fiat money.

Many commentators on the current situation in the Euro zone have argued that the default premium on interest rates paid by southern European countries reflect a confidence crisis that could be ended if the ECB set a floor on the value of sovereign debt from those countries. Nonetheless some other commentators, often from Germany, argue against such an ECB action, on the grounds that it would be inflationary. The US Federal Reserve system more than doubled the size of its balance sheet in late 2008 without creating, as yet, any substantial inflation. Most (though not all) monetary economists do not believe this creates much inflation risk. If above-target inflation were to emerge, the Federal Reserve could dampen it by raising the interest it pays on reserve deposits as well as by

selling off some of its more liquid assets. Probably most of the German critics of the notion of the ECB as lender of last resort for Euro area sovereign borrowers see this as inflationary for the same reason that some critics of the US Federal Reserve policy worry about a threat of inflation in the US. The balance sheet expansion "creates money", which is seen as inherently inflationary. Those who see the US policy as not posing much inflation risk rely on the fact that the reserve deposit liabilities that the policy has created pay interest, and can be made to pay higher interest if necessary. This makes them quite different from non-interest-bearing "money". When non-interest-bearing money in the hand of the public expands beyond what people desire to hold for transactions purposes, there is a strong incentive to spend down the excess balances in an attempt to exchange them for assets that provide a return. But interest-bearing reserves may themselves be an attractive investment. They can expand without creating inflationary pressure.

Nonetheless, the German skeptics of a lender of last resort role for the ECB have a point, because the Federal Reserve has clearer fiscal backing than does the ECB. If it becomes necessary to raise interest rates on reserve deposits, the cash flow of net central bank earnings is likely to decline or even become negative. This would not happen if the Federal Reserve had a balance sheet like what it had before 2008, with assets mainly short term treasury obligations. Those are such close substitutes for reserve deposits that their rates are likely to move closely with reserve deposit interest rates. But with the expanded balance sheets of the central banks, returns on their assets will no longer necessarily move in parallel to the rate on reserve deposits. In the case of the ECB, sovereign debt assets could default. For both these reasons, future monetary tightening could require the central bank to ask for a capital injection from the treasury. For the ECB, there is no one treasury to respond. There is a formal "capital key", a set of proportions according to which countries of the Euro zone are required to share in providing capital to the ECB when needed. But if this were required, Germany would bear a large part of the burden, and it would be clear that German fiscal resources were being used to compensate for ECB losses on other countries' sovereign debts.

So an ECB initiative to set a ceiling on rates paid on some countries' sovereign debts would not necessarily be inflationary. But for it not to be inflationary, there would have to be a commitment from the Euro area as

a whole, and from Germany in particular, to provide fiscal backing for the ECB if necessary. The backing might not need to be invoked if the commitment were perceived to be there, but if it were invoked, it would be an implicit fiscal transfer, which might be politically unpopular and would raise moral hazard issues. It could not be left as a precedent that an insolvent country gets bailed out by the ECB, which in turn is bailed out by the treasuries of the rest of the EMU. Some form of cross-Europe fiscal discipline would be needed.

V. The path forward

Most central banks are active in the market for their own countries' government debts. The Federal Reserve, until recently treated the interest rate on Federal Funds (interbank loans of reserve deposits) as its target and implemented the target by buying and selling US treasury securities in the open market. The ECB has also used an interest rate target. At first it implemented the target not through buying and selling sovereign debt, but by offering loans with such debt as collateral, in repurchase agreements. It did not attempt to set separate rates on the debt of different countries, and since banks could use all such debt as collateral on similar terms, interest rates on the debts of different countries converged. This was a convenient way to make monetary policy in terms of a single target rate, while obeying the letter of the treaty restriction that the ECB not buy EMU government debt. But this led banks to put large amounts of such debt on their balance sheets, threatening financial stability, and as default premia on these debts have emerged, the ECB has intervened more directly, lending freely to banks to avoid fire sales of the bank debt holdings and taking some Eurozone sovereign debt onto its own balance sheet.

Thus the ECB is already in a position where its balance sheet could be affected by default of a large Eurozone country, already in a position where politically difficult fiscal backing could be required to avoid an inflationary outcome. The vision of some of the original signers of the Maastricht treaty was that sovereign debt default of Eurozone members would invoke no ECB response and that market discipline, without ECB intervention, would force fiscal responsibility on Eurozone governments. To implement this vision, ECB operational procedures would have had to be different. They would have had to avoid providing Euro liquidity on

Eurozone debt collateral. Their open market operations would have had to take a different form, using other assets.

It is true that the EMU and the ECB could revert to this vision, making clear to all its members that sovereign default will generate no ECB reaction and that there is no lender of last resort in the Euro zone. To moderate the effects of defaults, the EMU would then be likely to set itself up as a kind of bankruptcy court, as is already happening in the case of Greece. But this seems an unlikely resolution of the current crisis, for two reasons. One is that this vision would return Europe to something akin to the gold standard, with no lender of last resort, no inflation cushion against extreme shocks, and an implicit Euro zone bankruptcy court exacting sacrifices from delinquent debtors. It is not clear that the member nations thought this was what they were signing up for, or that, once the implications of this regime become apparent, that nations now in fiscal and economic distress would see it as worthwhile to stick with the Euro. The other reason is that reverting to this vision will not help with the current crisis, because of the situation of the ECB and the European banking system. The implicit fiscal commitments and/or implicit inflation threats are already there.

My own best guess is that the ECB will in the end support the value of the debt of the large southern tier countries. If so, the earlier this commitment is made clear, the less costly it is likely to be. It is possible, though not at all certain, that such a commitment would in itself allow the southern tier countries to stabilize their fiscal situations, so that the commitment would in the end require little or no fiscal backing. But whether or not the ECB requires explicit fiscal backing, this episode will have made clear that to be viable the EMU requires Euro area fiscal coordination to avoid free-rider problems and inflationary pressures. It should also be clear, though, that the fiscal coordination should include at least the beginnings of a mechanism to share the consequences of adverse shocks across Eurozone members.

If the ECB is not to be put in the position of enforcer of fiscal discipline, there needs to be a Euro bond market where it can undertake country-neutral monetary policy open market purchases and sales. An expanded Euro stability fund, empowered to purchase (or decline to purchase) Euro area sovereign debt, financed by the issue of Euro bonds, could provide

the needed bond market. Ideally it should have some taxing power, perhaps via a surtax on the VAT. An alternative arrangement would have the fund backed by capital injected by Euro area governments, but this would raise the prospect of political negotiation over new capital injections in future crises. In either case, this would be a powerful institution and would need some form of democratic political accountability.

So there is some reason for optimism. If the ECB does continue to intervene strongly enough to prevent an attack on the debt of the large southern tier countries, it will force confrontation of the need for fiscal coordination. Though confronting the need will not automatically lead to the necessary institutional change, it seems to me that there is reason to hope that the political effort and innovation required will be forthcoming.

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DEPARTMENT OF ECONOMICS, PRINCETON UNIVERSITY
E-mail address: `sims@princeton.edu`