

What difference does Euro membership make to stabilization?

The political economy of international monetary systems revisited

Deborah Mabbett (Birkbeck) and Waltraud Schelkle (LSE)

Corresponding author: Deborah Mabbett, Department of Politics, Birkbeck, University of London, Malet St, London WC1E 7HX. Email: d.mabbett@bbk.ac.uk

Abstract:

For many political economists, the loss of monetary sovereignty is the major reason for why the Southern periphery fared so badly in the Euro area crisis. Monetary sovereignty here means the ability of the central bank to devalue the exchange rate or to buy government debt by printing the domestic currency. We explore this diagnosis by comparing three countries - Hungary, Latvia and Greece – that received considerable amounts of external assistance under different monetary regimes. The evidence does not suggest that monetary sovereignty helped Hungary and Latvia to stabilize their economies. Rather, cooperation and external assistance made foreign banks share in the costs of stabilization. By contrast, the provision of liquidity by the ECB inadvertently facilitated the reduction of foreign banks' exposure to Greece which left the Greek sovereign even more exposed. By viewing the Euro area as a monetary system rather than an incomplete state, we see that what is needed for Euro area stabilization is cooperation over banking union, rather than a fully-fledged federal budget.

Introduction

For many political economists, the loss of monetary sovereignty is the major reason why the Southern periphery fared so badly in the Euro area crisis. In this context, monetary sovereignty means the ability of the central bank to devalue the exchange rate or to buy government debt by printing the domestic currency. Exchange rate devaluation is emphasized by comparative political economists like Hall (2012) and Scharpf (2013) who focus on national political economies that make up the Economic and Monetary Union (EMU)¹. They argue that Southern European economies lack the institutions to restrain wage increases in line with productivity growth, and therefore need exchange rate adjustments vis-à-vis the Northern economies to compensate for the inflation differential if they are not to experience stagnation and mass unemployment. In a widely cited paper, De Grauwe (2011) stresses another aspect of monetary sovereignty, namely that the central bank of a sovereign state can issue the money with which to buy its own government's bonds, while sovereigns within the Euro area cannot create money to buy their own debt. Sovereignty in this sense is valuable because the monetary authority can act as lender of last resort to the government in a crisis.

These scholars find benefits in floating exchange rates and money creation capacity that were not evident to the countries that initiated the process of monetary union in the late 1980s. Their experience had been that floating exchange rates were accompanied by excessive volatility, due to exchange rate overshooting and 'sudden stops' of capital movements. Banking crises occurred much more frequently in the wake of financial

¹ We use 'EMU' here in its popular sense, referring to the union of countries that have adopted the single currency.

liberalisation than during the Bretton Woods era (Babecký et al, 2012: fig.1).² Far from finding a floating exchange rate a useful instrument of adjustment, countries found that it was difficult to manage the rate through monetary policy. Rey (2013) presents evidence that floating exchange rates do not give national authorities control over domestic credit: monetary conditions are subject to a common global cycle, even in developed countries. To receive some stability in the face of such external pressures was and is one of the prime motivations for entering EMU. In this light it is ironic that critics of EMU have responded to the financial crisis by reasserting the benefits of monetary sovereignty.

Rather than mourning a bygone era, it seems more pertinent to ask why EMU has not been able to provide sufficient resources for stabilization to its members, by contrast with European Union (EU) countries outside the Euro area. We focus on stabilization rather than growth, because the latter depends on many factors that cannot be directly attributed to a monetary union. Our account follows the classic analysis of Kindleberger (1973), who traced how regional or global depressions result from the failure of the international monetary system. In the 1930s Depression, banks failed for want of liquidity in a reserve currency, governments were forced into pro-cyclical contraction by a sudden stop of capital flows, and mercantilistic protectionism compounded the effects on world trade (Kindleberger 1973: 292). Successful stabilization in the face of contagious financial panics requires that liquidity is provided to banks and governments, spiraling economic contraction is not precipitated for want of credit, and gains from trade continue to be realized.

² Blanchard (2013) summarizes recent economic research finding that stability is promoted with managed rather than free floating, given that large exchange rate fluctuations are disruptive for the real economy and financial markets.

Applying this analysis to the debate about the Euro, we notice two things. First, exchange rate adjustment could be an element of stabilization if, for example, capital flight is induced by an overvalued currency. But the global financial crisis of 2008 was not caused by currency misalignment, but by a breakdown of lending between financial institutions uncertain about each others' solvency. Stabilization called for massive injections of liquidity into the banking system, and for support for governments hit by the travails of their banks.

Second, small open economies with their own currencies cannot provide these financial resources themselves. They need access to reserve currencies. They might get support from other central banks, and they also can have recourse to official lending. Euro area countries, by contrast, have access to a reserve currency through their banking systems. In the early stages of the financial crisis, this was seen as a tremendous asset. One aim of our discussion is to explain how it subsequently became a liability.

We begin our analysis with a review of the exchange rate regimes in place among the countries of the EU, which forms the basis for our subsequent case selection. This review leaves us with a puzzle. It seems, in 2013, that Euro membership does make a difference to a country's recovery prospects. Yet it makes a difference even compared with countries that did not adjust their exchange rates vis-à-vis the Euro. Several of those countries did not start from a better position: they also had long-standing external imbalances. To unravel these anomalies, we have to trace what happened to monetary and fiscal conditions. This means looking at the Euro area in a different way: not as a fixed exchange rate system but as a supranational monetary system with specific capacities and limitations arising from the provision of liquidity through a single central bank, as well as specific ways of allocating the losses arising from insolvency. Our argument is that the difficulties faced by the weaker Euro

member states do not arise from closing off the possibility of exchange rate adjustment, but from how the burden of reducing indebtedness is distributed between sovereigns, domestic and international banks, households and firms.

To examine in detail how stabilization occurs under different exchange rate regimes, we compare three country cases: Hungary, Latvia and Greece. These comparisons allow us to see how important devaluation was for Hungary's resumption of growth, compared with Latvia, which went through a brutal internal devaluation while maintaining its peg to the Euro. We also explore how relevant the ability to print the domestic currency was for financing the government in Hungary and Latvia, and compare the devastating debt dynamic of Greece.

Turning finally to identifying the missing elements in the provision of stabilization in the Euro area, we draw on the updating of Kindleberger's hegemonic stability theory provided by Eichengreen (1987) and De Long and Eichengreen (2013), and argue against the latter's criticism of Germany's unwillingness to act as hegemon. While the ECB lacks a sovereign, Germany lacks a central bank, and this limits the capacity of either to provide stability. The collective resources of the IMF and the EU, augmented by some bilateral assistance, were adequate for stabilizing EU countries outside the Euro area. The explanation is not that these countries benefited from exchange rate adjustment or were able to create money to buy their own debt. Rather, beggar-thy-neighbor behavior by *banks* was avoided by obtaining cooperation from the home states of foreign banks. We conclude that a banking union with a collective resolution fund would do much to close the gap in capacity for stabilization that we observe between the Euro and non-Euro EU members.

How have countries with different exchange rate regimes fared in the crisis?

At the time the financial crisis broke, in October 2008, there were 27 states in the EU, of which 16 used the Euro (Estonia joined in January 2011). The remaining states were free to allow their currencies to depreciate against the Euro. However, several did not. Bulgaria, Latvia and Lithuania joined Estonia in seeking to maintain a fixed parity with a view to eventual Euro entry (Latvia joined the Euro in 2014). The Danish Krone also hardly moved against the Euro, appreciating very slightly. Sweden and the Czech Republic allowed their currencies to depreciate against the Euro in 2008-09, but subsequently their currencies floated up again (overall, between 2008 and 2012, the Swedish Krona *appreciated* by 10%, while the Koruna fell by less than 2%). The UK Pound fell sharply 2007-2009, but by 2012 had almost returned to its 2008 value. This left just three EU countries where there has been a sustained exchange rate depreciation: Hungary (-13% between 2008 and 2012), Poland (-16%) and Romania (-17%).³

Table 1 shows GDP growth over the period 2008-2012 for countries in each of the three groups: those that held their currencies fixed, those where a depreciation at the onset of the crisis was reversed, and those that have had a sustained depreciation. Growth figures for the worst-performing Euro members are also shown for comparison. The modal country experience is a fall in GDP of around 5%, and it is found in three of the four regime types. The worst economic performances are found in the Euro and fixed-rate countries, an observation that seems to lend support to the argument that exchange rate adjustment is an important policy tool.

³ AMECO data: annual average national currency exchange rates against the Euro.

Table 1: Real GDP growth 2008-2012

Euro members		Non-Euro fixed rate		Temporary deval'n		Sustained deval'n	
Greece	-19.9	Bulgaria	-2.6	Czech Rep	-1.6	Hungary	-5.6
Ireland	-3.9	Denmark	-3.6	Sweden	5.8	Poland	12.4
Italy	-5.8	Latvia	-9.2	UK	-1.0	Romania	-5.0
Portugal	-5.7	Lithuania	-5.2				
Slovenia	-8.3						
Spain	-5.0						

Source: AMECO; own calculations

However, as of June 2013, one gets another picture from looking at recent and forecast GDP growth (table 2). Here it is clearer why commentators see the Euro as a problem. All the non-Euro members are expected to show positive growth over the period 2012-14. More generally, many of the non-Euro countries experienced a sharp decline in GDP in 2008-2010 but then got onto a trajectory of recovery, while the weaker members of the Euro area still show no signs of recovery, except Ireland. In other words, being out of the Euro did not prevent economic decline, but it did allow countries to recover. Again, however, we notice a difficulty: there is no general difference between the countries that held their parity with the Euro and those that had either temporary or sustained exchange rate adjustments. Looking at Latvia, for example, the fixed exchange rate strategy might be said to have imposed high costs 2008-12, but there is clearly a strong bounce-back in progress.

Table 2: Projected real GDP growth 2012-2014

Euro members		Non-Euro fixed rate		Temporary deval'n		Sustained deval'n	
Greece	-3.6	Bulgaria	2.6	Czech Rep	1.2	Hungary	1.6
Ireland	3.3	Denmark	2.4	Sweden	4.0	Poland	3.3
Italy	-0.6	Latvia	8.1	UK	2.3	Romania	3.9
Portugal	-1.8	Lithuania	6.8				
Slovenia	-2.0						
Spain	-0.6						

Source: European Commission, DG EcFin, Estimates and projections as of May 2013

For political economists who adhere to the discourse of maintaining institutional comparative advantage, the missing variable which explains this pattern of results is the capacity for domestic adjustment. Ireland managed a substantial 'internal devaluation', as did Latvia and Lithuania among the fixed-rate outsiders. But table 3 shows that this 'competitiveness story' does not help us to understand the different fates of the countries in the crisis. The real exchange rates of most of the Southern Euro members have depreciated significantly, if not quite as much as Ireland. Furthermore, their primary current account positions have moved near to balance (IMF 2013e Box 1.3).

Table 3 highlights two relevant observations. First of all, some Euro area and fixed rate countries have substantially improved their real exchange rates in the last few years, despite their nominally fixed rates. Second, nominal exchange rate adjustment is of limited utility in promoting competitiveness: Latvia and Lithuania have seen larger real adjustments than two of the countries that devalued, Hungary and Romania.

Table 3: Real exchange rate change, 2008-2012

Euro members		Non-Euro fixed rate		Temporary deval'n		Sustained deval'n	
Greece	-10.5	Bulgaria	17.5	Czech Rep	-0.2	Hungary	-9.0
Ireland	-19.4	Denmark	-0.8	Sweden	7.9	Poland	-16.9
Italy	1.2	Latvia	-15.4	UK	4.6	Romania	-8.1
Portugal	-6.5	Lithuania	-10.3				
Slovenia	2.8						
Spain	-10.7						

Source: DG Ecfm quarterly competitiveness report, REER based on unit labor costs (total economy)

Critics who hold that Euro membership produces fundamental competitive misalignments have another argument up their sleeves, however. It is that the weaker Euro member states accumulated imbalances in the 2000s which heightened their vulnerability to the financial crisis and left them having to undergo a long painful structural adjustment to return to growth. This argument proposes that non-Euro states have been able to return to growth faster because they did not start from a position of long-standing external imbalance (and thus accumulation of external indebtedness), which Euro membership facilitated.

Again, the data do not support the argument. Financial markets were very liquid before the crisis, and they financed external imbalances even when there was some exchange rate risk (table 4). In other words, non-Euro countries also increased their indebtedness, and some had housing bubbles. Table 4 identifies the countries which had accumulated the greatest external debt between 2000 and 2008 (measured as the cumulated current account deficit as a share of GDP). We do indeed find that some Euro members accumulated large imbalances, but not all. Greece takes the prize for the largest accumulated deficit, but only

just, from Latvia and Bulgaria. It is clear that the financial markets were ready to lend regardless of Euro membership or currency regime.

Table 4: Cumulative current account imbalances, 2000-2008 (in % of GDP)

Euro members		Non-Euro fixed rate		Temporary deval'n		Sustained deval'n	
Greece	-119	Bulgaria	-103	Czech Rep	-35	Hungary	-68
Ireland	-19	Denmark	25	Sweden	61	Poland	-32
Italy	-8	Latvia	-111	UK	-19	Romania	-66
Portugal	-89	Lithuania	-75				
Slovenia	-21						
Spain	-58						

Source: AMECO

We have shown that GDP contracted sharply in most EU countries after the financial crisis, particularly those which had accumulated large external imbalances. Falling GDP has the potential to induce a downward spiral in a heavily indebted country: the debt/GDP ratio increases (an increase in leverage), but deleveraging is required in response to the change in financial conditions. An imperative of stabilization is to reverse the decline in GDP so that deleveraging can occur through income growth. The alternative is to write off and restructure debt, but this amplifies the liquidity crisis into a solvency crisis. In particular, it can induce a further contraction in GDP by undermining the solvency of the banking system.

In the following discussion, we look at the process of stabilization as it unfolded inside and outside the Euro area. Our aim is to establish how the international monetary system worked: in particular, why official external lending supported successful stabilization programs outside the Euro area but not inside it. Stabilization in the context of official

lending has a specific meaning: it refers to the restoration of financial market access for solvent borrowers, particularly the sovereign. Stabilization does not mean that a country's economic problems are over: sectoral imbalances may persist and growth may be sluggish, but it does mean that these problems are not being exacerbated by the monetary regime.

What do country experiences tell us about stabilization inside and outside the Euro area?

In the previous section, we showed that exchange rate regimes seem to make a difference to EU countries' GDP trajectories, although this difference cannot readily be mapped on to changes in real exchange rates or 'competitiveness'. We take a closer look in this section that is, of necessity, selective. Leaving aside the countries which undertook temporary depreciations, we take one country case from each of the regimes we identified. For the Euro area, we take Greece: if we can show here that the country's crisis has been made worse by the limitations of Euro area stabilization, it applies *a fortiori* to others. For the fixed-rate countries, we take Latvia, and from those that undertook depreciation we choose Hungary. All three are exemplary cases for our focus on how resources for stabilization were provided under different exchange rate regimes, as all three required very high levels of external assistance.

Hungary

Hungary was the first of our three countries to call for international financial assistance, in October 2008. Hungarian government bonds suffered a sharp sell-off by non-residents, leaving the government facing failed auctions and a financing gap. The country had a high level of external debt, private as well as public, and was therefore vulnerable to the freeze on lending emanating from abroad. The Forint was allowed to depreciate, so the central

bank did not suffer a loss of reserves from defending the currency, but this did not resolve the liquidity problem. Furthermore, currency depreciation threatened the solvency of the domestic non-bank sector, which was exposed in foreign currency-denominated debt. Its income flows, in Forints, were mismatched with its liabilities, in Swiss Francs and other currencies. Insolvency of households and firms would impose losses on the banks (IMF 2008: 4).

The sharp fall in GDP in 2009 led to a worsening of the government's financial position. Economic contraction may be good for rebalancing the current account, but it is bad for government finances, both in flows (tax receipts decline) and stocks (the ratio of debt to GDP rises even with stable debt). Hungary's government deficits in 2009-10 were substantial (over 4% of GDP) and debt ratios rose somewhat, but not explosively. So long as the external market was closed to Hungarian government debt, the government faced a financing gap, as there was limited domestic capacity to take up government debt. The government bond market was illiquid, but the government was not insolvent. The central bank could buy (more) debt, but if it created money to do so, it risked triggering a further slide in the Forint, which threatened corporate and household solvency.

The international lending program addressed these problems with a loan of €20 billion (including €12.5 billion from the IMF and €6.5 billion from the EU) to the Hungarian central bank (MNB⁴). This enabled the MNB to meet private sector liquidity needs as well as financing the government deficit and refinancing public debt falling due (IMF 2011: 19, Box 1). The provision of budgetary support by external agencies was necessary because the supposed benefits of monetary sovereignty - unlimited money creation by the central bank

⁴ MNB: Magyar Nemzeti Bank.

and currency depreciation – brought with them significant risks to the stability of the financial system. .

It remained that private external flows could undermine the program. In the worst-case scenario, official lending could be consumed by a sustained withdrawal of creditors from Hungary. As the head of the IMF mission, Anne-Marie Gulde, put it in an interview: ‘If the banks weren’t willing to roll over their loans, recapitalize their subsidiaries and more generally maintain their exposure to the region, it would have been difficult to avert a systemic crisis, even with the loans provided by the IMF, the European Union, [..etc]. In fact, those funds would have served only to bail out the private sector, replacing private debt by public sector debt, and done little to help the countries back on their feet, if we hadn’t acted.’ (IMF 2009a) The action in question was the Vienna Initiative, or more formally the European Bank Coordination Initiative (EBCI), which aimed to ensure that the large foreign banks operating in Central and Eastern Europe maintained their presence in the region.

On the IMF’s account, the EBCI addressed a ‘collective action problem’ for banks: if some banks withdrew, they would trigger an economic decline which would increase the credit risk faced by those banks remaining (Berglöf, in IMF 2009a). Other commentators have amplified this account, showing that there was also a collective action problem for national regulators, both home and host. Home governments had injected funds to recapitalize their banks and this was accompanied by pressure to sustain their home lending. There was a risk that beggar thy neighbor policies would be pursued by home states, through regulatory requirements that the banks they were supporting should reduce the exposures of their CEE subsidiaries (Kudrna and Gabor 2013: 560). Banks also sought protection from host state regulators and governments, for example against restrictions on the repatriation of profits

and possible discriminatory actions by host states concerned to protect their own banks, which governments were having to support (Epstein 2013: 5-9). Epstein argues that subsidiaries of foreign banks had an interest in signaling that they would not 'cut and run' and thus jeopardize their long-term investment in a profitable economic region. They made much of their wish to maintain their presence, to avoid 'fire sale' losses and to position themselves for a future recovery.

The IMF took a leading role in the EBCI, as it wished to avoid substituting decreasing commercial funding with official assistance. It had a track record of seeking rollover commitments from international banks, for example in Turkey and Brazil (Barkbu et al 2012: Table 3). The *quid pro quo* was that IMF/EU program conditions protected the interests of foreign banks (Nitsche 2010: 11). In some countries, official lending and commercial bank commitments were closely coupled. In Hungary, the link was loose: the IMF/EU program agreed in November 2008 preceded the formal agreement by banks in May 2009. The banks' commitments were rather general: to maintain their overall exposure to Hungary and to meet requirements for additional capital as necessary. Six major banks signed the communique, from Germany, Belgium and Italy as well as three from Austria, which were in terms of nationality the largest creditors. As Table 5 shows, they did maintain their presence in 2009: foreign claims fell only slightly. Foreign parent banks stepped up funding of their Hungarian subsidiaries during the crisis (IMF 2011: Box 1). Subsequently, however, foreign banks have exited Hungary, gradually but distinctly. Table 5 also shows that banks from the most exposed country (Austria) increased their relative presence (until recently). This pattern - that the banking system of the most exposed state becomes more exposed - is also evident in our other case studies (see Tables 6 and 7 below). It suggests that there is

indeed a collective action problem for banks, and that those that are most exposed internalize the externalities of withdrawing, while the least exposed free-ride by exiting.

Table 5: Bank exposures to Hungary

	2008	2009	2010	2011	2012
Total foreign claims ..in % GDP	111.6	96.5	99.2	83.0	82.4
..% change Dec-Dec	12.2	-2.5	-14.8	-15.3	-5.1
Share of Austrian banks	24.0	24.8	26.7	28.1	25.5*

*Figure for March 2013, due to missing data for Sept-Dec 2012.

Sources: own calculations based on BIS Quarterly Reviews Statistical Annex, Table 9B: Consolidated foreign claims of reporting banks - immediate borrower basis; GDP in \$US: World Bank (<http://data.worldbank.org/indicator/NY.GDP.MKTP.CD>)

How was a downward spiral of indebtedness and contraction avoided, and stabilization achieved? Three elements were important. First, the banking system imposed limited costs on the Hungarian sovereign. While bank recapitalization was envisaged, the eventual costs do not even appear as a separate item in the IMF's analyses. Emergency lending from the government to the banks in 2008 was repaid. It was Hungary's good fortune that other sovereigns bailed out the foreign-owned banks.

The second element was that government expenditure growth had to be reined in, but expenditure was not cut in nominal terms. There was no collapse in domestic demand arising from fiscal retrenchment. Here we do see a benefit of devaluation: not only was no 'internal devaluation' through public sector wage-cutting needed, but also devaluation had the effect of writing down Forint-denominated government debt. Devaluation was good for government finances.

However, it was bad for households. Households had taken out loans in foreign exchange to evade high domestic interest rates, and devaluation increased the burden of this debt, from 42% of GDP in 2008 to 55% of GDP in early 2009 (IMF 2013a: 20, Box 2). The forex debt problem was not universal but nonetheless significant: it affected roughly 800,000 households, or 20 percent of the total (IMF 2012: 110).

This brings us to the third element in Hungary's stabilization: the imposition of some adjustment costs on foreign banks. Despite sharp criticism from the official lenders, Hungary introduced a special levy on banks in June 2010. The IMF responded by suspending its program (Kudrna and Gabor 2013: 557). The government followed this up with a program in late 2011 under which, during a 5 month window, customers could repay their mortgages at a preferential exchange rate, roughly 30 percent below market rates. This time it was the turn of the European Commission to protest, abetted by an unfavorable assessment by Austria of the effect on banking sector stability. At first the government's response was intransigent, but it eventually settled for a compromise that enabled banks to set off some of the costs of mortgage redemption against the bank levy. Nonetheless, the tax burden on the financial sector in Hungary remains exceptionally high, the treatment of foreign exchange loans to households and small businesses is still not fully resolved, and the banks are holding high levels of non-performing household debt (European Commission 2014: 32-33).

In summary, the financial crisis did not destabilize Hungarian sovereign finances to a high degree because costs were borne by other governments and by banks themselves, as well as falling on households. It would be wrong to portray the policy mix as progressive: mortgage relief has been criticized as poorly targeted, as only wealthier households could

repay with a one-off payment. Households have also suffered the expropriation of their pension assets, raided by the government to prop up its finances (IMF 2013a: Box 1). It also remains that Hungary's sovereign access to financial markets is by no means secure. Nonetheless, as of 2014 the IMF's job was done: it has bridged the crisis and seen market access restored.

Latvia

Latvia sought financial assistance shortly after Hungary. Its problems took a different form. The country's vulnerabilities were in the private financial sector, not the public sector, which had exceptionally low debt. In November 2008, the government was forced to take over the country's largest deposit bank, Parex Banka, after a run on deposits. This came at a time when governments throughout the EU were guaranteeing their banks, and Parex was vulnerable because it lacked a foreign parent (Anderson 2008). Levels of non-resident deposits were relatively high, and these deposits proved the most footloose, falling by 30% in the 12 months from August 2008 (IMF 2013b: 12). Furthermore, there were risks of a sharp credit contraction elsewhere in the banking system, as banks operating in Latvia were affected by the freezing of wholesale funds markets.

A central issue in the design of Latvia's stabilization program was its membership of a fixed exchange rate regime, ERM II (Lütz and Kranke 2013). The rules for Euro accession require countries to maintain membership of ERM II for two years (along with other conditions) although this would have allowed the exchange rate to move by plus or minus 15% around the central parity. The approach taken by the Latvian authorities since 2005 was to fix the Lats to the Euro with only a narrow (1%) fluctuation band. Some IMF officials took the view that Latvia should leave ERM II when the crisis broke (Lütz and Kranke 2013: table 3).

Officials had pointed out in an Article IV consultation in 2007 that Latvia's persistent current account deficit suggested that the Lats was overvalued. Yet restoration of competitiveness does not seem to have been their most pressing concern in advocating depreciation; rather, as in Hungary, the IMF was concerned that official financing would be consumed as private investors fled the country. Maintaining a fixed exchange rate meant offering favorable terms to retreating investors. By contrast, a lower value for the currency would make them think again and indeed help to lure them back as liquidity was restored in the world financial system.

The European Commission disagreed, and they were backed by Sweden and the Latvian government itself. Some IMF officials apparently concurred (Åsland and Dombrovskis 2011: 43), probably because they appreciated how comprehensively the economy was already 'Euro-ized', with a startling 70% of deposits and 90% of loans denominated in foreign currency (IMF 2009b: 10). Devaluation would present the same problems of 'balance sheet mismatch' (income in domestic currency, debt servicing expenditure in foreign currency) that had faced Hungarian borrowers, but in a more extreme form. Furthermore, by contrast with Hungary, more than half of Latvian government debt was denominated in foreign currency (IMF 2013b Table 4). There were no quick wins to be had from devaluation and issuing domestic currency.⁵

A major problem was how the fixed exchange rate could be defended without inducing a sharp domestic monetary contraction. The central bank can restrain demand for foreign exchange by restricting the supply of liquidity to the banking system (for example, by raising

⁵ Indeed, public debt dynamics were worsened by the depreciation of the Euro against other currencies, particularly in 2010, as some debt was denominated in dollars and Swiss francs (IMF 2013b Table 6).

the collateral requirements for banks borrowing from the central bank). If depositors sought to take funds out of the country and the central bank could not supply forex, banks would need cross-border interbank credit. If interbank credit was not available, banks would have to sell assets, presumably at 'fire sale' prices (Bindseil and Winkler 2012: 32). Latvian banks had substantial foreign assets, amounting to some 45% of GDP. However, the IMF noted that 'the market value of these assets and the ability to realize these quickly in the current international financial environment has come into question.' (IMF 2009b: 6) In short, to prevent fire sales, the central bank should provide forex, obtained by international borrowing.

To this effect, the European Commission, the IMF and the Nordic countries made a very large commitment of funds. Moreover, the Danish and Swedish central banks extended swap lines to Riga, based on their own access to ECB and Federal Reserve funds.⁶ As with Hungary, it was important to Latvian stabilization that foreign banks did not sharply reduce their exposure, but there were substantial falls in 2009-10 and thereafter (Table 6). There was an attempt to bring the four largest foreign-owned banks operating in Latvia (one Danish, one Finnish and two Swedish banks) into the framework of the EBCI. They signed a commitment in September 2009, but the EU-IMF loan had been agreed in December 2008. Nitsche (2011) suggests that bilateral commitments were more important in the Latvian case than the multilateral EBCI framework, with the Swedish government playing a major role.

⁶ See Allen and Moessner (2010 Graph 7.1) for the array of swaps in place in 2008-09.

Table 6: Bank exposures to Latvia

	2008	2009	2010	2011	2012
Total foreign claims ..in % GDP	140.7	92.1	96.8	87.7	72.4
..% change Dec-Dec	6.8	-23.5	-19.2	-16.0	-2.5
Share of Swedish banks	57.3	64.3	66.6	69.5	71.9

Sources: see table 5

By the beginning of 2009, the Bank of Latvia was no longer having to make net sales of foreign exchange (IMF 2009b: Fig 3), but a severe contraction of credit occurred anyway, as table 6 shows. The fiscal side of the story was also highly contractionary. Primary expenditure was cut in nominal terms in successive years from 2008 to 2011, falling by 13% over the three years. Particularly striking was the cumulative reduction of one-third in public sector remuneration (IMF 2013b, Table 3). The shrinkage of the economy produced high primary fiscal deficits (5.9% of GDP in 2009 and 5% in 2010). The government debt-GDP ratio soared from 7.8% of GDP in 2007 to 39.7% by 2010, largely because of economic contraction but also due to bank recapitalization costs amounting to some 4.5% of GDP (IMF 2013b, Table 4). Many Latvian households saw a substantial fall in their real incomes, including those directly affected by fiscal cuts affecting public sector employment and social security payments.

Why did this curtailment of demand not produce the downward spiral of a depressed domestic economy under sovereign financial constraints, whereby shrinking GDP produces deteriorating public finances, more fiscal contraction and deeper depression? Part of the answer is that Latvia is very small and very open compared with the Southern Euro

countries. It was possible for Latvia to have an export-led recovery. Furthermore, while the fall in GDP inevitably produced an adverse change in public debt, the low initial level of debt combined with the availability of full finance from official sources meant that interest payments remained modest. Only a small primary surplus was needed for sustainability. Latvia stayed out of the financial markets for an extended period, returning in December 2012 with a bond issue, for which it incurred only a small spread. The very high level of program finance available to Latvia meant that questions about market confidence never unsettled the recovery. In the end, €3bn of the program funds were not required (IMF 2013b: Box 1).

Finally, as in Hungary, foreign banks shared some of the losses arising from their inflated property-related lending in Latvia. In 2009, Prime Minister Dombrovskis proposed that the liabilities of mortgage holders to lenders should be limited to the current value of the property, which would have had the effect of writing down banks' mortgage loan portfolios. The response from Sweden was quick and unforgiving: the government threatened to withhold a €1bn credit tranche in 2010 (Lütz and Kranke 2010: 25). Negotiations ensued and a compromise was reached which limited the recourse of banks where borrowers were declared bankrupt.⁷ It is estimated that the four major Nordic parent banks wrote off €900m in bad loans to Latvian households (Kudrna and Gabor 2013: 559). While this is a non-trivial amount (4.5% of 2012 Latvian GDP), governments in the parent states protected their banks from greater losses by coordinating a policy to maintain exposure, backed up with cooperation between central banks. This ad hoc cooperation arguably saved Latvia's small, open economy from entering a downward spiral.

⁷ Limited recourse restricts the ability of banks to claim from the borrower the difference between the value of the loan and the value of the collateral.

Greece

Greece comes last in our chronological narrative, and indeed the delayed onset of crisis is important in understanding how Euro membership made a difference to stabilization after the financial crisis. ECB policies initially protected Greece, along with other highly-indebted Euro economies, from the impact of the financial crisis. The dire state of Greek public finances was well-known, but only when the ECB signaled that exceptional liquidity support would come to an end did the crisis erupt. In the discussion below, we explain why it is to be expected in a currency union that stresses appear in the form of a sovereign debt crisis, rather than a banking crisis.

It is important to acknowledge the success of the ECB, in the immediate aftermath of the failure of Lehman Bros, in maintaining liquidity in the Euro area banking system (Schelkle 2012: 46-49). The key policy was to allow banks to obtain finance from the central bank at a low borrowing rate, limited only by their ability to post eligible collateral. The ECB also broadened the range of eligible collateral ('qualitative easing' as Buiter (2008) termed it). The effect was that, as transactions between banks declined, transactions between banks and the ECB increased. This in turn supported bank lending to the non-financial private sector (households and corporations). Giannone et al (2012: 3) estimate that the effect by 2011 was that industrial production in the Euro area was 2% higher, and the unemployment rate 0.6% lower, than it would have been in the absence of the ECB's measures.

Against this backdrop, an IMF team visited Greece for its regular Article IV consultation in May 2009. Their report completely fails to predict the storm to come, providing instead an amiable account of debates with the Greek authorities about the lack of space for a more expansionary fiscal policy and the desirability of postponing a planned tax cut. The report

notes that the Debt Office had been 'agile' in placing over €50bn of government debt – 21% of GDP – 'with some shortening of terms to limit costs' (IMF 2009c: 11). The only other source of concern was the exposure of Greek banks to Southeast Europe, where they had high loan-to-deposit ratios and relied heavily on parents' funding. IMF staff argued that financial protectionism - curtailing operations in SEE to protect the banks' domestic position - should be avoided and noted approvingly that Greek banks were participating in the Vienna Initiative. The report did not ignore Greece's startling long-term fiscal problems. Echoing regular EU projections, the imminent decline in the working age population and the parameters of the pension system produced very adverse projections several decades forward (IMF 2009c: 27-28). Without policy changes, the government would be insolvent. However, it was not illiquid, and this meant that it would be able to 'trade its way out of trouble' with policy reforms.

It may seem surprising that the liquidity of Greek sovereign debt was not in question in mid-2009, given that there was no prospect of the ECB directly supporting the market for government bonds. The explanation is that the banking system was lending freely to the sovereign, and there was, at that time, no reason to expect this process to end. As Gabor (2012) has documented, the collateral policies of the ECB gave financial institutions no reason to be wary of Greek debt. European banks kept on expanding their exposure until the end of September 2009. In fact, the equal treatment of sovereign debt in the Euro area for the purpose of both central bank and private 'repo' transactions was promoted in pursuit of financial market integration. Banks were willing holders of Greek debt so long as they could pledge it to the ECB in return for valuable cash (Blundell-Wignall 2012: 217). To quote the IMF: 'the liquidity assistance by the ECB (repos) had been, and will continue to be

for the near term, of major assistance to Greek banks and, indirectly, to funding the sovereign. Interlocutors agreed that without these monetary accommodations, Greek financing pressures would have been considerably higher.’ (IMF 2009c: 20) The ECB rendered government debt into cash even if it did not buy government debt. In this equal treatment of all participating sovereigns, the ECB is a cooperative institution.

All this changed at the end of 2009. The ECB began to discuss its exit strategy, indicating that its discount window might close to lower grades of bonds (Trichet 2009). This would affect Greece, which had just a single ‘A’ rating at the start of 2009. Even though Greek bonds remained eligible at the ECB’s discount window, markets anticipated that they could become ineligible and took fright. Bondholders had not concerned themselves with Greece’s fiscal soundness when the window was open, but a change of monetary policy opened up the prospect of default. Alarm bells were raised when the newly elected Greek government raised the planned deficit for 2009, from 3.7% in spring to 12.5% in autumn (Jones 2012: 60). There had been plenty of notice of problems with Greek fiscal statistics, compiled in a Eurostat report in 2004 and reiterated publicly several times since then. Statistical problems were also clearly flagged in the IMF’s 2009 report. Financial markets – and the European Council - had ignored these concerns but, as ratings became critical, they suddenly paid attention.

Table 7 shows how banks’ reductions in their exposure to Greece turned from a trickle into a flood in 2010. Compared with Hungary and Latvia, these exposures were heavily weighted towards the public sector, and this was where the sharpest falls occurred.⁸ We also see that

⁸ In December 2007, some 43% of banks’ exposure to Greece was to the public sector, compared with 27% in Hungary and 5% in Latvia. This had fallen to 24% by Dec 2011 and 7% by Dec 2012 (BIS Quarterly Reviews, Table 9C).

French banks (which had the largest exposure) and German banks withdrew but not as fast as others.

Table 7: Bank exposures to Greece

	2008	2009	2010	2011	2012
Total foreign claims ..in %GDP	88.4	69.1	50.1	40.7	23.2
..% change Dec-Dec	-1.9	-12.5	-31.9	-26.0	-51.5
Share of ..French banks	26.7	31.8	33.0	33.1	36.6*
..German banks	14.2	19.1	21.1	27.7	29.0*

*Sept 2012, due to apparent error in the data for Dec 2012.

Sources: see Table 5

In April-May 2010, the Greek government sought program financing from the IMF and the EU. The EU had no scheme in place, and assembled its contribution to the Greek Loan Facility (GLF) through hasty bilateral agreements with member states. It sought contributions in proportion to Euro members' shares of GDP (which correspond to their paid-up shares of ECB capital). The first program for Greece addressed the country's loss of market access for its sovereign debt, as well as establishing a Financial Stability Fund to support Greek banks.

The financial problems facing Greece had their origins in fiscal imbalances to a larger extent than in Ireland and Spain, where a systemic banking crisis was the central problem. However, the structure of liquidity provision in the Euro area means that both public and private imbalances emerge as sovereign debt crises. It matters little whether the 'original sin' is public or private, as Pisani-Ferry et al (2013) explain. The received view is that

countries in the Euro area could not suffer a balance of payments (BoP) crisis, but this is incorrect. A BoP crisis can happen, in the sense that public and private entities seeking credit can find that parties will not lend to them because of the country they belong to (Pisani-Ferry et al 2013: 9). Banks can overcome the loss of confidence of external creditors, however, by making use of liquidity support from the ECB. So long as this support remains in place – which in practice it has, although its form has changed over time⁹ - the BoP crisis appears only when the sovereign can no longer issue bonds at sustainable costs. This happens whether or not the original problem is excessive public or private borrowing.

The first lending program envisaged that stability would be restored by 2012 or 2013, but, as the Greek economy contracted, its debt dynamics became unstable. Moreover, it is noticeable that the evolution of its debt burden between 2009 and 2012 was startlingly adverse, for reasons not related to its primary imbalances. Adding together the outturns under the first program (2010-2011), the accumulated primary deficit was 7.1% of GDP, while the debt ratio increased by more than 40% of GDP (Table 8). It was economic contraction and high real interest rates that made Greece's public debt-GDP ratio balloon.

⁹ Heavy reliance by Greek banks on Emergency Liquidity Assistance (ELA) is particularly evident by 2012 (Pisani-Ferry et al 2013: 14)

Table 8: IMF analysis of Greece's debt dynamic

	2008	2009	2010	2011	2012
<i>Change in public sector debt/GDP ratio of which:</i>	5.2	16.8	18.6	22.7	-13.1
Debt-creating flows: primary deficit	4.8	10.4	4.8	2.3	1.5
Debt dynamics 1: real interest rate	0.3	2.6	4.5	5.6	6.0
Debt dynamics 2: GDP growth	0.2	3.6	6.6	11.2	11.0
Bank recapitalization, PSI sweeteners	0.0	0.0	0.0	0.0	37.9
Residual - incl debt relief	-0.3	0.3	2.2	2.8	-70.9

Source: IMF 2013c Annex Table AI.1

The second rescue program with its considerable debt write-down provided much less relief to Greek public finances than the 'haircut' on private bond holdings of 70% would lead one to expect. Table 8 shows the effect in 2012: restructuring reduced the debt/ GDP ratio by 71%, but this was reduced by half (38%) due to the requirement to recapitalize domestic banks, and cover other 'sweeteners' (the term is the IMF's) in private sector involvement (PSI). By 2012, Greek sovereign debt had ceased to be part of the diversified portfolios of international banks, and became concentrated in Greek banks. Results from bank stress tests conducted in 2011 revealed that, of the €76.3 bn of Greek debt held by banks in August 2011, 63% was held by Greek banks, amounting to 212% of their core tier 1 capital (Blundell-Wignall 2012: 211).¹⁰ In other words, PSI forced mainly Greek banks to write down Greek public debt, and when the insolvent banks had to be recapitalized out of the second rescue loan, this support ended up on the Greek government's books.

¹⁰ Banks in other countries also tended to hold high proportions of their own country's sovereign debt, but not to such high percentages of their capital: next after Greece were Italian and Spanish banks, holding own country sovereign debt to the tune of 161% and 152% of core tier 1 capital, respectively (Blundell-Wignall 2012).

Bindseil and Winkler (2012) note more generally what the Greek case illustrates in its most extreme form: the costs of salvaging the banking system soar when banks provide a channel of finance to the government. The absence of central bank financing for sovereign debt produces a 'diabolic loop' whereby sovereign debt restructuring damages the financial soundness of banks, and this in turn imposes further costs on the sovereign (De Grauwe 2012: 117).

This would not have happened if the write-down had come while foreign banks were still heavily exposed to Greek debt, but by 2012 they had off-loaded most of their holdings. Tables 5-7 showed that Greece experienced a larger reduction in foreign bank exposures than Hungary and Latvia, even before the final blow of debt restructuring. In the end, ECB liquidity provision allowed foreign banks to cut their losses, leaving the Greek government, firms and households bearing most of the burden of reducing indebtedness.

Reluctant hegemony or counterproductive cooperation?

In this section we ask: what are the missing resources for stabilization in the Euro area, and how might they be provided? Following Kindleberger, we consider three aspects of stabilization of a monetary system: (i) provision of liquidity by a lender of last resort; (ii) resolution of solvency issues affecting the sovereign or the banking system; and (iii) redressing fundamental imbalances and averting protectionism.

Emphasizing that the provision of stability is a public good, susceptible to free-riding, Kindleberger (1973) argued that hegemonic leadership is needed, a role played for many years by the United States. Eichengreen (1987) revisited Kindleberger's account and argued that cooperation, rather than hegemonic leadership, has historically provided the basis for

stabilization. Revisiting Kindleberger again in the light of the Euro crisis, DeLong and Eichengreen (2013) suggest that the Euro area lacks a central bank willing to act as a lender of last resort to sovereigns, while the one country with the capacity to engage in a countercyclical fiscal policy, Germany, is unwilling to do so. Germany is a potential hegemon which 'still thinks of itself as steward of a small, open economy' (DeLong and Eichengreen 2013: 10).

We have shown that international assistance was needed by Hungary and Latvia to provide liquidity to the banking system, recapitalize banks and provide funds to the government. This assistance took the form of loan programs led by cooperative institutions: the IMF and the EU. Kindleberger (2000: 216) doubted that loan programs alone could provide stability because of their finite-ness: 'Amounts agreed in advance are almost certain to be too little, and they tip the hand of the authorities to the speculators.' However, in the Hungarian and Latvian cases, speculation did not swallow the resources of the loan program because international banks did not rush to the exit, divesting themselves of currency and government bonds.

Importantly, this was achieved at least in part because of the cooperation of the home states of these banks. It is tempting to see Sweden as the deep-pocketed regional hegemon in the Latvian case. But the ability of the Swedish central bank to support its banks (including their international operations) was itself the product of cooperation between central banks, through the extension of swap lines. Similarly, banks with subsidiaries in Hungary were supported by the ECB's provision of liquidity. Some of these banks also required capital injections from their home states, and international cooperation ensured

that these states were barred from insisting that their banks concentrated their lending at home and reined in their international operations.

Institutionalized cooperation was also evident in averting protectionism. The EU was active in insisting on the maintenance of nondiscriminatory internal market norms, particularly in the first phase of the crisis when many states adopted fiscal stimulus programs. However, Eichengreen and Temin (2010) argue that the EU lacks the institutions to address fundamental imbalances, because it has no way to insist on demand expansion by surplus states, which means that the burden of adjustment always falls on deficit countries. While Eichengreen and Temin see this as a problem of the Euro area, it is actually an issue for all states with heavy trade dependence on the German economy. We can see that this failing in the EU's institutional design did not prevent stabilization in Hungary and Latvia, although it may condemn them to low growth in the medium term.

Turning to Greece, we found that the provision of liquidity to the banking system appeared early on to be an attractive feature of Euro membership. By contrast with Hungary and Latvia, no international assistance was needed to maintain liquidity: Greek banks had direct access to the ECB. However, as the solvency of the government and the banking system (held in a close embrace) came into question, a loan program was needed. Furthermore, Kindleberger's dictum was repeatedly borne out: finite resources tipped the hands of the authorities to the speculators. The markets repeatedly took the view that the resources of the European Financial Stability Fund (EFSF) and subsequently the European Stability Mechanism (ESM) were inadequate, a view no doubt reinforced by the well-publicized resistance of the contributing states, led by Germany. As Kindleberger predicted, the deep pockets of the central bank were needed to quell speculation: in 2012 Governor Draghi

announced a program that promised, under certain conditions, to buy in secondary markets unlimited amounts of bonds issued by governments under siege. Furthermore, the ECB would not claim seniority for its bond holdings should a government default.¹¹ This speech had a self-fulfilling reassuring effect on financial markets and no action was required, as of 2013, despite the fragile legal basis for this bond-buying program.

However, the ECB cannot itself be the hegemonic provider of stability, just as the Federal Reserve was not the hegemon in Kindleberger's account. Rather, the Fed could intervene because the US Treasury stood behind it, ready to indemnify its losses (Schelkle 2012: 41). The ECB has very limited own-capacity to absorb losses: its capital base amounts to a mere €10.5 bn. Further losses would have to be absorbed by subscribing governments, and they have resisted establishing a common fund to indemnify ECB losses. In this light, the ECB appears as a lonely institution, creating money without the backing of a state (Goodhart 1998: 420, 424-25).

The comparison of Greece with Hungary and Latvia highlights the lack of institutionalized cooperation in the regulation of banking systems in the Euro area. This partly reflects limited foreign ownership: most banking systems in the Euro area are dominated by domestic banks. But it is also striking that more was done to prevent beggar-thy-neighbor policies in the European periphery than in the Euro area. Epstein (2013: 6-9) gives a number of examples of Euro area regulators 'ring fencing' their own banking systems, whereas the Vienna Initiative actively countered beggar-thy-neighbor regulatory behavior towards states outside the Euro area. The integration of Euro area capital markets, reflected particularly in

¹¹ Speech by Mario Draghi at the Global Investment Conference in London, July 26th, 2012. URL: <http://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html> and further spelled out at URL: http://www.ecb.europa.eu/press/pr/date/2012/html/pr120906_1.en.html (accessed January 2nd, 2014).

cross-border holdings of sovereign debt, turned rapidly to disintegration and the re-nationalization of banks' holdings of government debt (Thompson and Jenkins 2013).

Germany was one of the culprits in this re-nationalization (Bloomberg 2013). It can be accused of not showing leadership in maintaining exposures to struggling southern economies, but it was never in a dominant position. As Table 7 showed, French banks were more exposed to Greek debt than German banks. Simulations of partial debt defaults conducted by the IMF (2013d: 37) show France to be the EU country most exposed to losses on sovereign claims generally: it would take some 35% of EU losses, fractionally higher than Germany, followed at some distance by the UK and the Netherlands.¹² It follows that France had the strongest incentives to promote new cooperative institutions, and indeed this is reflected in French initiatives. Germany has resisted the establishment of new institutions, and has contributed (only) in proportion to its size, although ultimately Germany will bear a disproportionate burden if other countries are unable to cover their shares.¹³

In any case, Germany cannot be the hegemon, because it no longer has a central bank. It does not have deep monetary pockets; its contributions must be fiscal, and therefore subject to the constraint of the bond markets. Germany has been concerned not to enter commitments that would jeopardize its credit rating. Furthermore, it has imposed self-restraints that limit its capacity to provide stabilizing resources, notably the 'debt brake' on the government. Fiscal constraints contribute to Germany's dilatory approach to

¹² Their estimates are for losses on claims on Greece of 70%, and Italy, Ireland, Portugal and Spain (20%).

¹³ Program countries are already exempt from guaranteeing bond issues of an emergency fund, and it is recognised that some non-program countries, such as Italy, would not be able to meet their obligations in the event of a large call, for example arising from a systemic collapse of Spanish banks.

recapitalizing its own banking system, which has led in turn to the use of beggar-thy-neighbor regulatory measures to enhance the availability of domestic credit.

The ECB had to depart from the founding expectations of independent central bank behavior. It has taken on the role of lender of last resort (LOLR) to the banking system in an unprecedented way. Its predecessor, the Bundesbank, was reluctant to assume the LOLR role, holding that it should be undertaken by the government (James 2010: 20-21). The ECB has become a post-hegemonic institution in the sense of Keohane (1984), ending Germany's monetary dominance and emancipating itself from being merely a Bundesbank writ large. But the singular independence of the ECB has led it to fight the solvency problems of banks as if they were liquidity problems, because it cannot make fiscal authorities play their role in bank recapitalization. In this light, the missing element in the Euro system is not the absence of a hegemonic member state, but the lack of a collective fiscal backstop for the central bank.

Conclusion

In this article, we have analyzed the Euro area as an international monetary system. We examined the resources of stabilization that the Euro area provides to a country in trouble (Greece), in contrast to EU members that retained an adjustable or fixed exchange rate (Hungary and Latvia). We found that the rules governing EMU's cooperative institutions had unintended aggravating consequences for Greece, while ad-hoc cooperation outside the framework of EMU helped Hungary and Latvia. In other words, the amplification of the Greek crisis was due to the operation of the system, not due to its breakdown in a moment of crisis.

The comparison of three countries showed that Greece's sovereign debt crisis was aggravated, first of all, by the fact that the government was kept afloat by the ECB's liquidity support for Euro area banks. This allowed macroeconomic imbalances to accumulate for another year, compared to Hungary and Latvia. Furthermore, the provision of liquidity turned out to allow capital flight, as foreign banks reduced their exposures. Using the domestic banking system as lender of last resort to the sovereign set up the 'diabolic loop' of bank and sovereign interdependence, once the insolvency of the Greek government became apparent. After Greek sovereign debt was written down, bank restructuring costs were imposed on the Greek budget, further worsening the fiscal position. None of this was the fault of the ECB; the lack of some fiscal back-up for the lonely central bank is to blame.

Hungary and Latvia needed external assistance to provide liquidity to their sovereigns. In neither country could the national central bank 'print money' to buy government bonds because the expansion of the domestic money supply would have created more incentives for capital flight and devaluation. The liquidity and solvency problems of Hungarian and Latvian banks and households were contained by external assistance and cooperation which prevented these problems spilling over to the government in a catastrophic way. In applying the theory of stabilization of international monetary systems, we are open to the finding that a hegemon is needed to provide stability. The European project has been one of building cooperative institutions to restrain Germany's hegemonic power (as DeLong and Eichengreen 2013: 10n acknowledge), and in this it has largely succeeded. In European banking, Germany is just one big player among several. Nor does the German government have the deep pockets of its own central bank.

The alternative advanced by some adherents of monetary sovereignty implies that EMU needs centralized fiscal authority. We showed that a crisis of financial markets became a crisis for sovereigns, but that is not where solutions are to be found. A banking union would separate sovereign risk from banking risk, helping to break the diabolic loop that has affected Greece. Hence, our analysis challenges the view that EMU has to become a more complete state with the creation of a central budget. Specific institutions like a joint resolution fund are required to prevent sudden stops and capital flight within the Euro area. For this to happen, the stronger economies would have to give up their resistance to any joint fiscal liability, but they do not have to embrace a full fiscal union with a central budget.

Critics of EMU show an overblown faith in the economic power of states with their own currencies and central banks. Most states are vulnerable to financial panics and sudden stops in the market for government bonds, as the continued need for central bank cooperation and IMF intervention demonstrate. Joining the euro means obtaining the protection of a reserve currency: this is a resource for stabilization and should make countries less vulnerable than if they maintain their own non-reserve currency. Countries continue to join the euro for this reason. So long as the model of the single sovereign state is held up as the political-economic ideal, EMU will always appear to be in an impasse. What will work economically (a unified budget) is not acceptable politically; what is desired politically (monetary union without a central budget) cannot be made to work economically. By analyzing EMU as an international monetary system rather than an incomplete state, we demonstrate that it does not have to enter this impasse, and can instead create cooperative institutions to provide stabilization.

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