

The State of the Monetary Union*

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Abstract

I attempt to answer three questions: How deep is the EMU crisis? How long will it last? What should be the policy priorities? I argue that: (i) the difference in labor market performance between the US and the euro area is one of degree and not of kind; (ii) the economic consequences of the sovereign debt crisis will be mostly gone by 2018, but the political crisis will continue for several more years even if the functioning of the Eurogroup is improved; (iii) enforcing fiscal rules via political arm twisting is a recipe for disaster; (iv) market discipline must instead be brought back, but without financial fragmentation; (v) and limited and conditional Eurobonds are the best way to do so.

This paper offers a personal perspective on the state of the euro area. It is not a comprehensive survey and it does not seek to do justice to all the policy efforts currently underway. It is more opinionated than an academic paper, but more quantitative than an Op Ed.

Section 1 compares the labor market performance of the euro area with that of the United States. Section 2 explains how the euro crisis can be decomposed into three crises: financial, economic, and political. Each one has its own persistence. Financial shocks disappear in about two years, economic shocks take eight years, and political shocks take much longer. Section 3 discusses the case of Greece. Section 4 explains why politicians should not play bad cops forever, why markets are needed to enforce fiscal discipline, and why this requires conditional and limited eurobonds.

1 EMU Labor Markets

I first compare labor market dynamics inside the euro area with those inside the United States.¹ The idea is to use the U.S. as the benchmark for a well-functioning currency area. Well-functioning of course does not mean perfect and this is why an actual benchmark is useful. I consider both employment and unemployment rates.²

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¹I focus on labor markets. For a broader discussion of macro-financial stability, see Lane (2015).

²I start with the unemployment rate because it is the most widely discussed statistic. The unemployment rate is not the best indicator of the labor market, however, because it requires a precise definition of what “actively

1.1 Unemployment

Let me start with unemployment series. Figure 1 shows the evolution of unemployment across U.S. states and euro area countries. The top panel shows the unweighted average of unemployment rates across 50 U.S. states and 15 euro area countries.³ It is defined as

$$\mu_t = \frac{1}{N} \sum_{i=1}^N u_{i,t}, \quad (1)$$

where $u_{i,t}$ is the unemployment rate in country i at time t and $N = 15$ or 50 depending on the currency area. It is clear that the financial crisis of 2008 is more severe but the recovery is faster in the US than in the euro area. The euro area experiences a second recession in 2012 triggered by the sovereign debt crises in the periphery.

The middle panel shows the dispersion of unemployment rates across U.S. states and euro area countries, measured as the cross-sectional standard deviation of unemployment rates

$$\sigma_t = \sqrt{\frac{1}{N} \sum_{i=1}^N (u_{i,t} - \mu_t)^2}. \quad (2)$$

The dispersion series shows that heterogeneity is massively higher across the euro area than across U.S. states. The typical difference in unemployment rates is less than 2 percentage points in the U.S., but it is more than 6 points in the EMU. It is also clear that the crisis has interrupted a 10-year trend towards convergence.

The bottom panel shows the coefficient of variation, defined as

$$cv_t = \frac{\sigma_t}{\mu_t}. \quad (3)$$

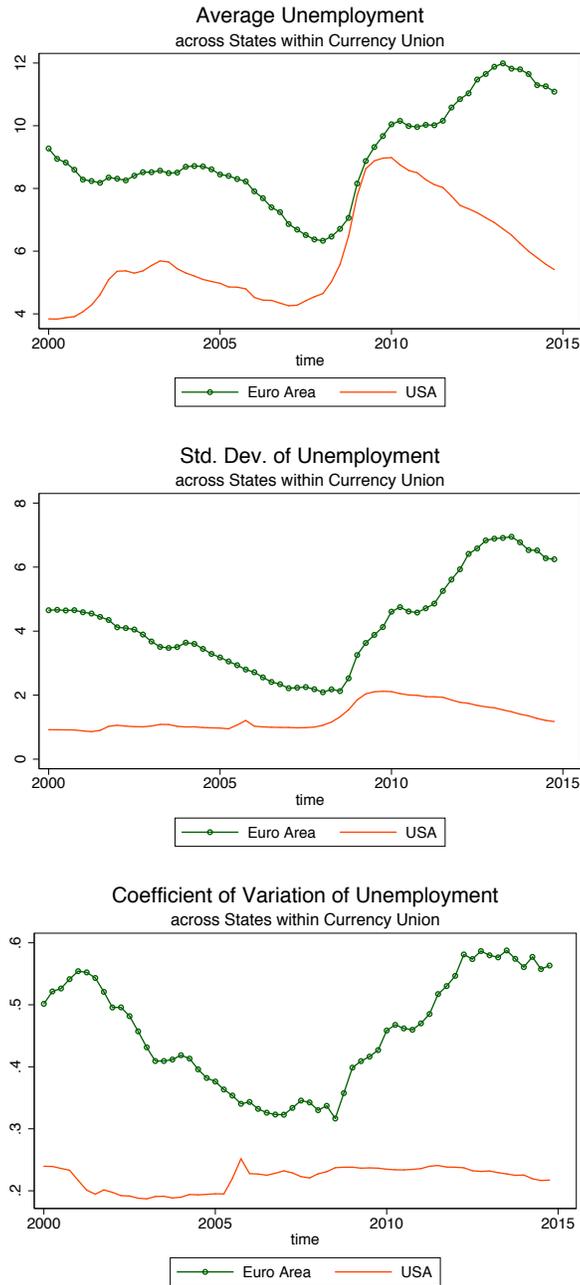
The coefficient cv measures the relative standard deviation of unemployment and filters what can be seen as mechanical changes in the standard deviation σ .⁴ Indeed, we see that cv is relatively stable for the U.S. suggesting that this might be a feature of a reasonably efficient currency union. In the case of the EMU, the break in the convergence trend is even clearer than with σ . The EMU's cv is above 0.5, which is probably not sustainable.

looking for a job” means. I then consider the employment rate, defined as the number of people working divided by the population who could be working. The employment rate is conceptually the best indicator, but it is somewhat difficult to obtain harmonized series for the euro area.

³U.S. states exclude DC because its employment to population ratio is not comparable to the ratio in other states since many people commute to work in DC. Euro area countries exclude Cyprus, Malta, Latvia and Lithuania because of lack of data and/or late entry. All these countries joined the EU in 2004. Cyprus and Malta then joined the eurozone in 2008, Latvia in 2014, and Lithuania in 2015. Estonia, on the other hand, has no missing data and is included in the euro area sample.

⁴For instance, suppose that region 2 always has 20% more unemployment than region 1. If $u_1 = 5\%$, then $u_2 = 6\%$. Now suppose a large recession hits the currency union but without creating large imbalances. We would have $u_1 = 10\%$, then $u_2 = 12\%$. In this case σ will register an increase but we would not want to interpret it as an increase in heterogeneity since it is simply a consequence of the aggregate shock. It is easy to see that cv does not change.

Figure 1: Unemployment in the Euro Area and the U.S.



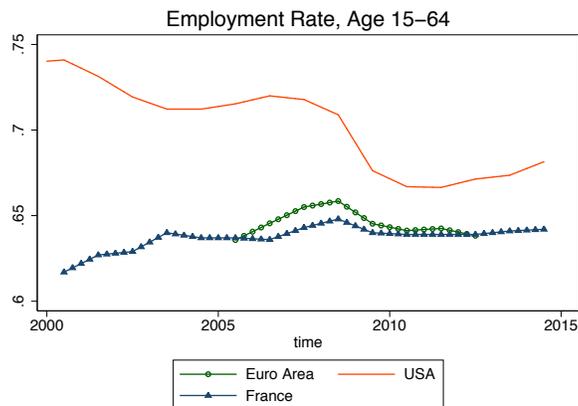
1.2 Employment

The unemployment rate is the most widely discussed statistic but if we want to think about inefficiencies in the labor market more broadly, one should look at the rate of employment, the number

of people working divided by the population that could be working.⁵

Figure 2 shows the employment rates of all individuals aged 15 to 64 in the US, the euro area, and France. Availability is limited for the euro area data and France provides a useful benchmark since it is always close to the median of the eurozone.

Figure 2: Employment Rate among 15-64 Years Old



Differences between Europe and the U.S. appear smaller when we consider employment rates instead of unemployment rates. The drop in employment in the U.S. is severe and long lasting and the recovery is weak, unlike with the unemployment series, suggesting that workers may have become discouraged. The decline in U.S. employment also pre-dates the 2008 recession, as discussed in [Moffitt \(2012\)](#), suggesting structural, not cyclical issues. In Europe, on the other hand, employment rates have declined less, although they started from a lower level on average. Many European countries' employment rates appear to be on an improving trend, often as a result of structural reforms, such as pension reforms.⁶ In France, for instance, pension reforms have led to more employment *and* more unemployment among older workers.

⁵Unemployment benefits, disability, retirement, and many other policies vary across countries and can induce changes in how we define and measure unemployment. The employment rate, on the other hand, is simpler to define and more encompassing, but demographics differ across countries so it is better to compare employment rates of similar age groups.

⁶See [Autor \(2015\)](#) for a discussion of recent trends in the U.S. labor market.

Figure 3: Employment Rates in the Euro Area and the U.S.

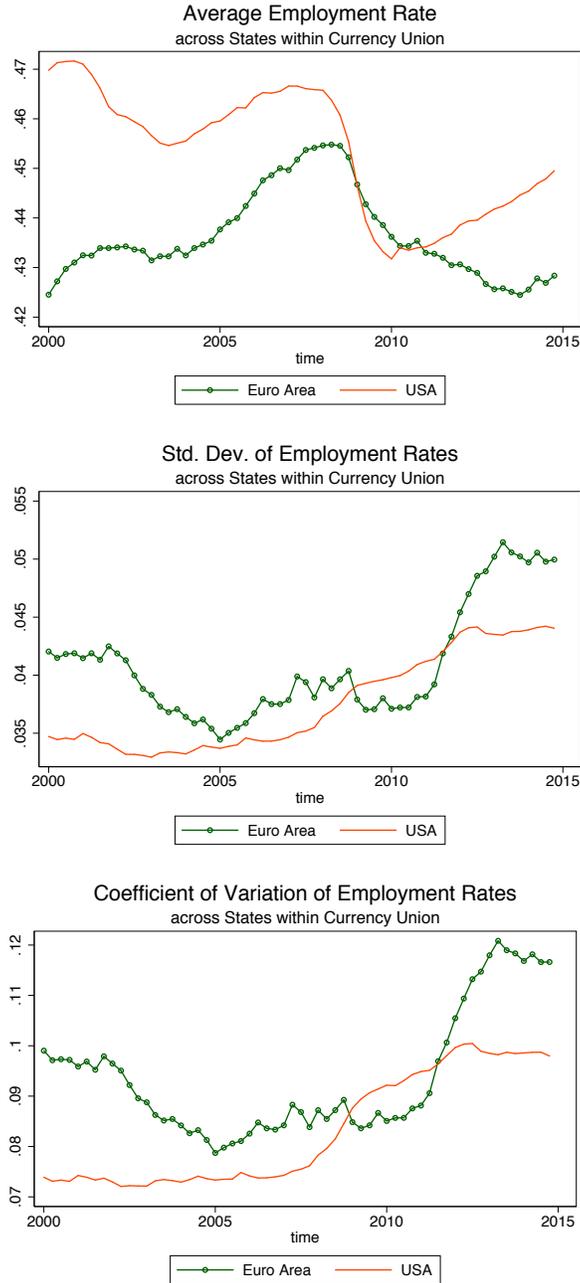


Figure 3 uses total employment rates without controlling for differences in the age structure of the population.⁷ The top panel shows the average employment rate across states and countries.⁸

⁷Figure 2 is based on the best, most directly comparable data. Unfortunately, these data are not always available for all countries and all years so I have to use total employment rates instead. These are not harmonized in the same way and can be sensitive to demographic changes.

⁸This is a simple average so it is not the same as the aggregate employment rate for the currency union.

The middle panel shows the standard deviation and the bottom panel the coefficient of variation. The definitions are the same as in equations (1)-(2)-(3) except that I use $e_{i,t}$ the employment rate, instead of $u_{i,t}$.

Qualitatively, we see the same features as with unemployment, namely a more persistent slump and more dispersion in the euro area than in the US. Quantitatively, however, the differences are smaller and the coefficient of variation increases significantly in the US as well.

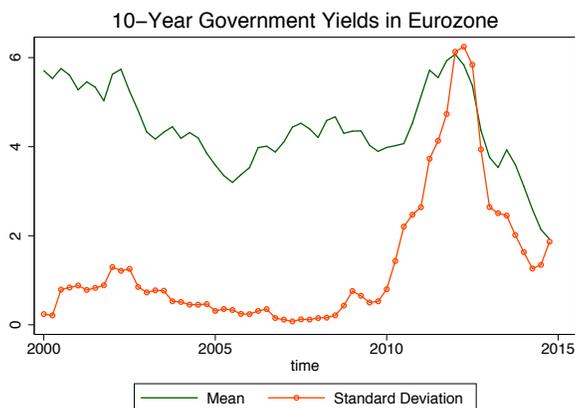
To paraphrase Darwin, I conclude that the difference in macroeconomic performance between the US and the euro area, significant as it is, is one of degree and not of kind.⁹

2 A Tale of Three Crises: Finance, Economics, and Politics

The European crisis is in fact the sum of three crises, unfolding over different time frames. These differences confuse the commentators and lead to widely misleading predictions such as “now that the acute financial crisis is over, surely the economies will rebound”, or “now that unemployment rates are finally falling, surely the worst is over”.

The financial crisis is violent and short lived. Figure 4 shows the mean and standard deviation of yields on 10-year government bonds within the EMU. The sovereign debt panic starts in 2010 and peaks in 2012. By 2014 it is essentially over.

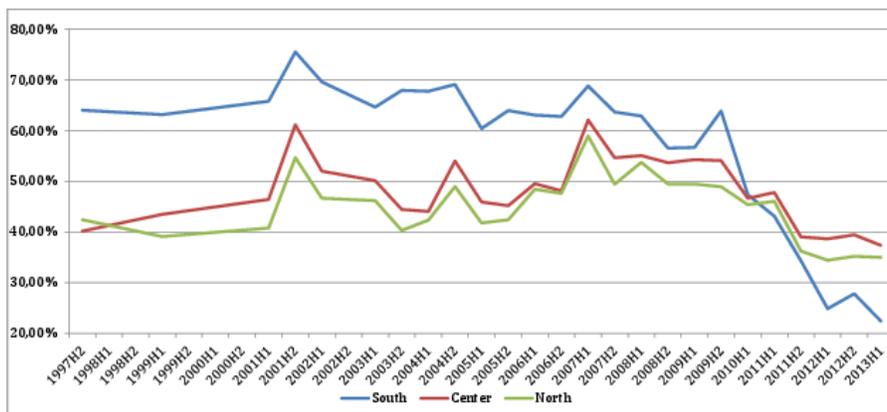
Figure 4: Sovereign Rates in the Euro Area



The economic crisis is much slower than the financial crisis. We have seen earlier (Figure 3) that employment rates have barely begun to recover. What this means is that the worst in terms of employment is likely to happen after the end of the financial panic.

⁹Yes, this is a paraphrase of Darwin.

Figure 5: Trust toward the European Union (E.U. 15)



Source: Figure 5 in Guiso et al. (2015)

The political crisis is slower still. Figure 5 is from Guiso et al. (2015). It shows a continuous decline in trust towards the European Union from 2010 to 2013. This decline is unlikely to be reversed any time soon. This means that the worst distrust towards the EMU is likely to happen when the economic recovery is under way. It's not when unemployment increases the most that the political crisis is the most acute. It is after.

Table 1 quantifies these intuitions by comparing the persistence of financial, economic, and political shocks. The specification includes country fixed effects, time dummies, and two lags of the endogenous variable:

$$y_{i,t} = \rho_1 y_{i,t-1} + \rho_2 y_{i,t-2} + \eta_i + \zeta_t + \epsilon_{i,t},$$

where y is either the yield on the 10-year government bond, the employment rate, or the unemployment rate.¹⁰ The estimates shows that the half life of the interest rate spreads is about 2 years (9 quarters). In other words, if a country experiences an increase of its rate of 100 basis points relative to the euro area average, then 2 years later we expect a spread of about 50 basis points. Financial distress is somewhat persistent. For the employment rate, however, the half life is about 8 years (33 quarters). Economic distress is much more persistent than financial distress.

A formal test of the persistence of political shocks is hampered by data availability, but Figure 5 makes it clear that they are even more persistent than economic shocks.

This simple analysis suggests that the economic consequences of the sovereign debt crisis will persist until 2018 and that the political consequences will persist longer. Timing delays between the three crisis explain otherwise absurd situations, as in the case of Greece.

¹⁰The fixed effects pick up permanent differences across states. The time effects control for any shock that hits all states at the same time.

Table 1: Persistence of Financial Distress versus Economic Distress.

	Euro Area			USA	
	Yields	Empl.	Unempl.	Empl.	Unempl.
AR(1)	1.39	1.13	1.33	1.28	1.53
t-stat	42.32	32.12	40.38	69.12	94.23
AR(2)	-0.47	-0.15	-0.35	-0.31	-0.61
t-stat	-14.39	-4.20	-10.34	-16.96	-38.86
Observations	790	830	842	2900	2900
Sum of AR	0.921	0.978	0.985	0.971	0.919
Half-Life (quarters)	9	33	48	25	9

3 The Greek Debacle

The Greek economy has experienced an economic disaster. Greek people have suffered tremendously. The country is left with massive unemployment and a crushing debt overhang. Everyone seems to have an opinion about what needs to be done with Greece's economy and its pile of sovereign debt. But these opinions are mostly arbitrary and often based on incomplete or inconsistent reasoning.

As terrible as Greece's depression might be, the right question to ask is: how much could we have avoided with better policies? The answer depends on how far back we start.

During the boom: reckless policies. If we go back to the pre-crisis period, we find that most of the Greek drama would have been avoided with sensible policies. In [Martin and Philippon \(2014\)](#) we estimate the causes of the crisis in each Eurozone country using a quantitative and consistent model. We find that Ireland was brought down by reckless bank lending, Spain by the sudden stop, and Greece (mostly) by reckless government spending during the boom years. Greece's disaster could have been avoided if Greek governments had behaved differently before 2007. In that sense, and since Greece is a democracy, one can argue that it is first and foremost responsible for its own

demise.

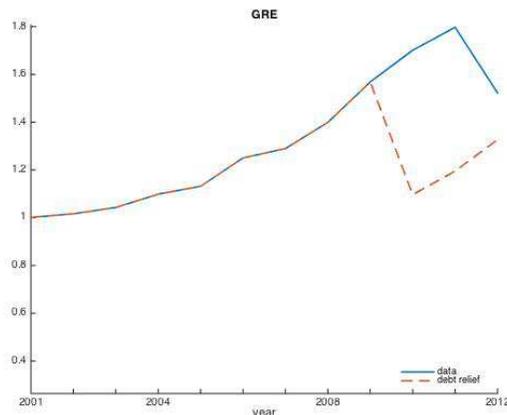
But we – governments, households, investors – all make mistakes, and this is why policy makers have devised mechanisms (such as debt restructuring) to deal with the consequences of these mistakes. A more directly relevant question is then: how badly was the Greek crisis handled? Or in other words, starting from 2009/2010, how much better could the Greek situation have been?

After 2009: only bad options. The first thing to recognize is that, given how unbalanced the Greek economy was in 2009/2010, some major crisis was inevitable. As [Blanchard \(2015\)](#) explains, “Even before the 2010 program, debt in Greece was 300 billion euros, or 130% of GDP. The deficit was 36 billion euros, or 15½ % of GDP. Debt was increasing at 12% a year [...] Had Greece been left on its own, it would have been simply unable to borrow. Given gross financing needs of 20–25 % of GDP, it would have had to cut its budget deficit by that amount. Even if it had fully defaulted on its debt [...] it would have had to cut its budget deficit by 10% of GDP from one day to the next. These would have led to [...] much higher social cost than under the programs, which allowed Greece to take over 5 years to achieve a primary balance.”

The point to keep in mind here is that Greece was bound to experience a major recession even if all the policy choices after 2009 had been well made. Unfortunately there were some major policy mistakes, most importantly related to the banking sector and the sovereign debt restructuring. Regarding the banking sector, the main policy mistake (and, I would argue, the mother of all the issues plaguing the euro area) was not to build a banking union *before* the crisis. I will come back to this point later, but what matters here is that Greece cannot be blamed for this mistake.

Regarding sovereign debt sustainability, the problem is that Greece’s debt restructuring was hampered by the risk of contagion. It was obvious in 2010 that Greece’s debt was not sustainable but the current firewalls (ESM, OMT) did not exist back then. Some observers advocated an early debt restructuring, coupled with strong fiscal consolidation, but the perceived risk of contagion made it difficult to implement. Eventually, in 2012, Greece’s debt was reduced by approximately 100 billion euros. This was unfortunately too late – much of the macroeconomic damage was done.

Figure 6: Actual and Counter-Factual Debt Dynamics in Greece



Note: the counter-factual is based on an early restructuring scenario. See [Philippon \(2015\)](#).

Since an early restructuring was prevented by fears of contagion (legitimate or misguided, this is beside the point), I have argued ([Philippon, 2015](#)) that it is not fair to ask Greece to pay for the consequences of the delay. If one accepts this idea, then it follows that one should consider an alternative history – with an earlier debt restructuring – as a benchmark for Greece’s debt negotiation. When I simulate the path of the Greek economy assuming an ‘early debt relief scenario’, I find that it is significantly better than the actual path in terms of GDP, employment, and debt dynamics. Based on these calculations, I argue that it would be fair to lower Greece’s required primary surplus by about 1.5%.¹¹

The 2015 tragedy The word “tragedy” has been over-used to talk about Greece’s economic disaster. I do not use it to describe what happened between 2009 and 2013 because I don’t see think that it sheds any light on the issues. There were only bad choices, mistakes were made, but it’s far from obvious that there were better alternatives available in real time.¹²

What happened in 2015, however, does have a tragic flavor. The Greek people were led to believe that they could get a better deal if only they elected a different government. Instead, they got a worse deal, in all respects.

The first 6 months of the new Greek government, following the elections of January 2015, have been a complete disaster. In 2014 the real GDP of Greece grew for the first time since 2007, by

¹¹The early debt relief has the same size as the eventual debt relief of 2012, but it happens 2 years earlier, in 2010. At the time I wrote the piece, the program called for a primary surplus of 4.5% and I argued that it should be lowered below 3%. The exact number is uncertain and depends on a number of assumptions. One can make it larger by arguing that Greece should be compensated for the accumulated welfare losses (high unemployment, low GDP). One can make it smaller by arguing that Greece should have known the constraints and limitations of the eurozone. My general point is that this calculation provides a useful starting point for thinking about what a fair debt relief should be. It is not an arbitrary number and it can be explained to voters in Greece as well as in creditor countries.

¹²Looking back at the Greek debacle of the past 12 months, I think that the main political mistake was not to offer Greece a clear path for debt relief in the Fall of 2014.

0.8%. Greece managed to issue bonds at 3.5%. Unemployment was falling and the Greek GDP was forecast to grow by 2.5% in 2015. Thanks to erratic and irresponsible policies, Greece's growth forecast has been revised down to just 0.5 percent and unemployment will be significantly higher than it would have been.

The tragedy comes from the clash between the economic and political dynamics described earlier. Grexit might have made sense in 2008, but not in 2015. From 2005 to 2009, Greece accumulated a current account deficit of 57.6% of GDP. Closing that gap required an increase in exports and a decrease in imports, which is difficult and painful to achieve without a devaluation. So one could reasonably argue that an exit followed by a massive default and devaluation made sense at that time.¹³ But in 2015, the adjustment was done, painful as it was, and bygones should be bygones. A sensible policy would had been to focus on improving the economy going forward.

The 2015 elections and the ensuing negotiations, however, had nothing to do with economics. It was pure political theater on both sides. Mr Tsipras won the elections and successfully destroyed his political opponents, inside Syriza and outside. He is the only politician left standing and is assured to be the head of the country for at least a few years. Apart from that, his tenure as prime minister has so far been a failure.

On the other side, there was a clear desire in Germany to punish the new Greek government and teach a lesson to other populist movements in Europe. There are good reasons to fight populism and demagogy in Europe, but the idea that this is best done by imposing humiliating conditions in a Troika program seems literally insane to me.

4 Concluding Remarks

To conclude I would like to use the evidence presented above to offer some perspective on what is needed to improve the monetary union. I will argue that:

1. The European project is not doomed;
2. The political crisis will continue;
3. The Eurogroup should be reformed;
4. Markets, not politicians, need to play the bad cops;
5. The best solution is to introduce limited and conditional eurobonds.

Let me explain these ideas in more detail. The first point to take away from Sections 1, 2 and 3 is that the structural problems of the euro area are more severe than the ones facing the United States, but that the differences are not nearly as large as what is commonly argued. In particular, these problems are solvable and the idea that the whole project is doomed is nonsensical.

¹³This was not my opinion. I believed that Greece would be better off staying in the euro zone. But the point here is that one could reasonably argue both cases.

The second point is that political risk and distrust will continue for a long time.¹⁴ They will not dissipate simply because unemployment comes down. It is therefore important to plan for several years of political instability.

So what should be done?

Keep cool and continue building the banking union. Firstly, policy makers need to keep a cool head. This might sound obvious but the hysterical discussions surrounding the Greek crisis show that there is no lack of stupid ideas and bad policy advice. There is also a large supply of wisdom-after-the-facts from economists and policy makers who did not see the real estate bubble and failed to anticipate both the mortgage crisis and the sovereign debt crisis. I find most annoying the “eurozone-is-not-an-optimal-currency-area” arguments that repeat commonplace ideas without providing any actual insight. The interesting question is: what does it take to have a stable currency area? In my view the traditional approach missed the most important piece: the banking union. Forget labor mobility, a common language, or even a federal budget.¹⁵ A banking union is the one piece of financial architecture that should have been built before the crisis. Véron (2007) asked in 2007 whether Europe was ready for a banking crisis. How many others saw that critical point? Thankfully the banking union is under way and should be supplemented by a capital market union (Véron and Wolf, 2015).

Thankfully the banking union is well under way, even though building it after the crisis is incomparably more difficult than building it before, for the same reason that insurance contracts should be signed under the veil of ignorance and not after an accident. Complementing the banking union with a capital market union is also a perfectly sensible and useful project.

Reforming the Eurogroup. The Greek crisis has exposed deep flaws in the functioning of the Eurogroup. It needs to become more accountable, more transparent, and more efficient. A possible solution is to merge the position of ECFIN commissioner with that of president of the Eurogroup. At the same time, the enforcement of fiscal discipline should be entrusted to an independent division within ECFIN.¹⁶ Bénassy-Quéré and Ragot (2015) discuss the flaws of the European semester and propose to empower the network of independent fiscal committees that already exist in each country. We also need a euro-area chamber within the European parliament where euro-area issues would be discussed and where the president of the Eurogroup would be confirmed and heard on a regular basis.

¹⁴I mean political in a broad way, not only the behavior of elected officials but also the degree of trust by citizens in the European institutions, as studied by Guiso et al. (2015) among others.

¹⁵For the U.S., Yagan (2014) find that despite migration flows that were in principle large enough to provide full insurance, migration has provided only 7% insurance: the 2006 residents of the average local area have borne 93% of the area’s idiosyncratic labor demand shock during the Great Recession.

¹⁶The commissioner is in charge of enforcing the Stability and Growth Pact and of reviewing its fiscal and macroeconomic surveillance legislation (six-pack) and budgetary rules (two-pack). It is important that these tasks be separated from the debates inside the eurogroup. On the other hand, the informational and administrative requirements are fundamentally similar so it seems more efficient to keep all the activities within ECFIN.

More markets, less politics. The externalities that exist in a currency union create the need for strict fiscal discipline among member states. The difficult issue is how to impose this discipline effectively. [Bénassy-Quéré \(2015\)](#) explains clearly how the logic of the Maastricht treaty proved faulty, and the Greek debacle shows that we should not rely on finance ministers to impose discipline on each other. The political dynamics are simply too poisonous. They will destroy Europe if we do not find a better solution.

Imposing mechanical balanced-budget rules like in the United States is not an option since we do not have a federal budget or a common pool of safe sovereign debt. Countries need to retain some fiscal discretion simply because there is no fiscal discretion anywhere else in the system.¹⁷

We need instead to bring back market discipline. It would have been much better for everyone if the markets had told the Greek government that their economic plans made no sense, instead of other finance ministers.

Markets are neither stable nor particularly smart, and they impose discipline too late and too abruptly. They have, however, one fundamental advantage over politicians: they punish but they do not humiliate. Traders vote with their feet, they do not want to teach lessons, they do not seek revenge. One can complain that markets forget too quickly, but in this case I would argue that this is a critical advantage.

The fundamental challenge, then, is to revive market discipline without creating the risk of sudden stops ([Merler and Pisani-Ferry, 2012](#)). This is why we need to reopen the eurobonds debate.

Eurobonds, or at least Eurobills. Eurobonds were widely discussed in 2010 and 2011 but they were not implemented, probably because they were not the right choice as a crisis management tool. The combination of ESM and OMT did the job. But the lively debates that took place at the time were nonetheless insightful.¹⁸ Here is a quick summary of what most participants agreed on:

1. A currency union needs a *shared* safe asset. That safe asset should not be the bonds of one particular member because this could trigger episodes of sudden stops and flight to safety. The price of a safe asset should increase in bad times, providing cheap funding to its issuers precisely when it is most needed.¹⁹
2. A shared safe asset would be very useful for banking regulation and for the conduct of monetary policy. The banking aspect is particularly important in my opinion. Banking supervision cannot continue to treat all sovereign debt as risk free. On the other hand, it would make no sense for the euro area to simply give up its safe assets. The solution is to treat individual sovereign debt as risky *and* to introduce new safe assets at the same time.

¹⁷See [Bénassy-Quéré and Ragot \(2015\)](#) for a discussion of the aggregate fiscal stance in the euro area.

¹⁸Four proposals were discussed in details: [Delpla and von Weizsäcker \(2010\)](#), [Bofinger et al. \(2010\)](#), [Brunnermeier et al. \(2011\)](#), and [Hellwig and Philippon \(2011\)](#). See also [Corsetti et al. \(2015\)](#).

¹⁹The price of a safe asset should increase in bad times, or, equivalently, its required rate of return should fall. This provides cheap funding to the issuer of safe assets precisely when it is most needed. This obviously works well in the United States. But in Europe investors flew from relatively risky sovereigns towards safer ones precisely when the former needed cheap funding.

3. Avoiding moral hazard is a priority but we should recognize that moral hazard is already present in the current system and we should look for an improvement, not a first best solution. I would also argue that providing *some* insurance (as in the form of eurobonds quotas) is likely to *reduce* moral hazard by making the no-bailout option more credible. There will always be a bailout option, pretending otherwise is foolish. But we can minimize the set of circumstances where bailouts take place.²⁰

I view the blue/red bond proposal of [Delpla and von Weizsäcker \(2010\)](#) as the most elegant solution. Had Europe implemented a banking union together with the Delpla & von Weizsacker proposal, there would not have been a crisis at all. After the crisis, however, the legacy debt makes the transition a lot more difficult.

A less ambitious proposal is to introduce eurobills, as proposed by [Hellwig and Philippon \(2011\)](#).²¹ The idea is to mutualize the short end of the yield curve – to avoid fragmentation of the money markets – but not the long end – to maintain market discipline. The same logic that was later applied to the OMT, and it worked exactly as predicted.

The main difficulty with issuing eurobonds is the timing. It is much more difficult to agree on eurobonds today than it would have been feasible before the crisis. As [Tirole \(2015\)](#) explains “it is not in the self-interest of healthy countries to accept joint-and-several liability, even though they realize that they will be hurt by a default and thus will ex post show some solidarity in order to prevent spillovers.”²²

The key points of Tirole’s analysis are as follows:

1. Once sovereign risk profiles become too asymmetric, eurobonds cannot be sustained simply by a mutual insurance motive;
2. Private loans are essential for incentives and eurobonds should not cover all the financing

²⁰There will always be a bailout option. Pretending otherwise is foolish. But we can minimize the set of circumstances where bailouts take place. As long as a crisis is not too systemic, it should be possible to let a country default on its debt. But this threat is credible only if the risks are somewhat limited. Having access to a quota of safe debt is a way to ensure that a state can sustain its primary activities even in a crisis.

²¹[Hellwig and Philippon \(2011\)](#) argue: “The joint issuance of long-term bonds requires a level of trust that does not currently exist among European governments. We have therefore proposed the creation of "Eurobills", or joint issuance of short-maturity Euro-area debt, as a way to reconcile long-term discipline and short-term stability. The creation of such a market for a highly liquid, safe Euro assets, similar to T-Bills in the U.S., would enable countries to refinance a given amount (e.g. 10% of GDP) of short term debt at guaranteed, low interest rates. Countries would however have to finance their remaining long-term debt without protection. The continued renewal of guarantees could be tied to the implementation of sustainable fiscal policies.

There are three fundamental reasons to focus debt guarantees at short maturities. First, by guaranteeing only a small fraction of all outstanding debt, but a large fraction of the part that needs to be rolled over at any point in time, Eurobills offer the best "bang for the buck" against liquidity and rollover risks. Second, short-term debt facilitates monitoring. The renewal of guarantees gives the guarantor countries a lever to exert pressure on debtors to implement reforms. This lever is not available to long-term bondholders. Third, Eurobills do not undermine market discipline because they do not protect against long-term solvency risk. In fact Eurobills would likely improve market discipline, since market discipline works best when markets are liquid and interest rates accurately reflect the true fundamental risks. Rollover and liquidity risks instead blur the connection between fiscal decisions and market interest rates.”

²²“By contrast, in a more symmetrical, mutual-insurance context, contractual solidarity in the form of joint liability is optimal provided that country shocks are sufficiently independent, spillovers costs sufficiently large, liquidity needs moderate, and feasible sanctions sufficient.”

needs of countries.

The first point explains why the political economy of eurobonds after the crisis is so difficult. As long as we only focus on sovereign risk, the current system based on ex-post ESM intervention is the only equilibrium.

We could wait for a new veil of ignorance to descend across the Continent, but this might be a long wait. In the meantime, shocks will arrive from inside and from outside, crises will happen, and the Monetary Union will remain fundamentally fragile. Alternatively, we could broaden the negotiation to monetary policy, banking regulation, and economic governance. This might create the space for a deal that includes limited eurobonds or eurobills together with the gradual strengthening of the no-bail-out clause by adjusting the prudential requirements on sovereign debt.²³ In the long run, we would move to a blue/red debt market where markets would help enforce fiscal discipline.²⁴

²³This may not happen quickly and we may continue for a while with the current setup, based on ESM and OMT, which is a de facto eurobill. But this setup lacks legitimacy and it puts too much responsibility on the central bank.

²⁴Eurobills could be issued by euro area countries directly, or by a future euro area treasury. See the five presidents' report [Juncker et al. \(2015\)](#). This is also compatible with the creation of a budget for the euro-area, which I do not discuss here.

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