

PADRE 2.0:

Politically Acceptable Debt Restructuring in the Eurozone: *

Pierre Pâris
Banque Pâris Bertrand Sturdza

Charles Wyplosz
The Graduate Institute, ICMB and CEPR

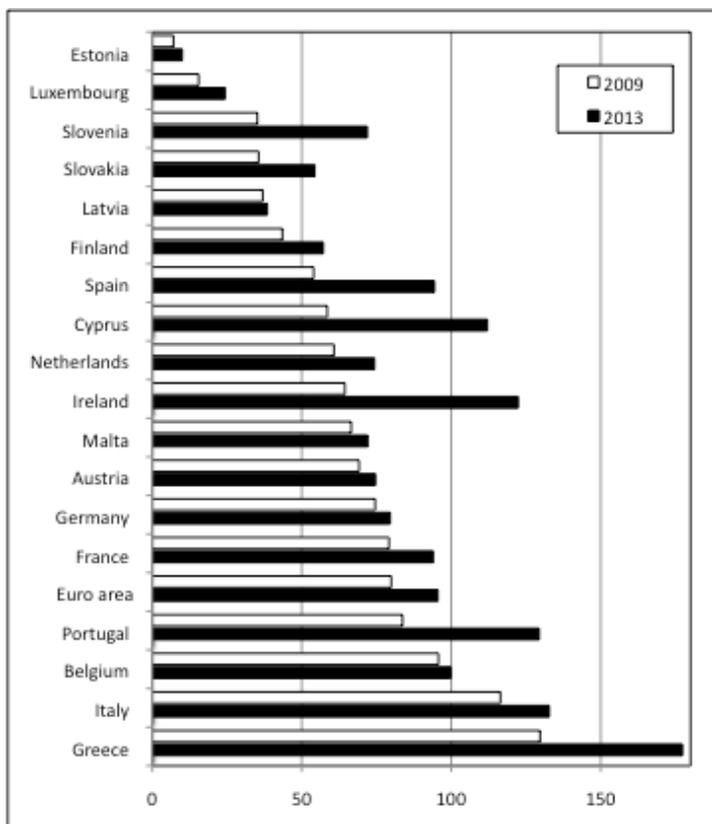
Paper presented at the Annual Lecture in Economics of the Cyprus Economic Society on May 29, 2014.

(*) We gratefully acknowledge numerous comments and suggestions offered at seminars and presentations at CEPR, the Graduate Institute, Geneva, the Geneva Political Economy Seminar, the European Commission, the French Finance Ministry and the Council for Budget Responsibility of Slovakia. We also thank Alan Auerbach, Zsolt Darvas, Jacques Delpla, Colm Forde, Mario Nuti, Jean-Pierre Roth, Cedric Tille and Jeromin Zettelmeyer for enlightening discussions.

1. Introduction

When the crisis started in late 2009, the total debt of the Eurozone countries (the current 18 members, although some were not in the area at the time) stood at 80% of GDP. At the end of 2013, it was 95% of GDP. For some countries, it is much higher, as shown in Figure 1. Five countries now have a debt in excess of 100%, and eight (almost half of all member countries) in excess of 90%. Everywhere, debts have increased faster than GDP; in five countries the increase is about, or larger than 40% of GDP. This is the legacy problem.

Figure 1. Public debts in the Eurozone (18 current members)
(% of GDP)



Source: European Commission, AMECO on line (April 2014)

The legacy problem is very important. First, it means that the crisis is not over. If the 2009 debt ratios were high enough to produce the sovereign crisis, current levels must be looked upon with a high degree of concern, if not urgency. Certainly the crisis was triggered by an exogenous event, the global financial crisis that started in the US and spread across many countries. This was a historical event and one may argue that such momentous events occur rarely, but many other events will occur in the future. Current debt levels represent a major hazard. With interest rate spreads¹ considerably

¹ The spreads under consideration here are the difference between the interest rate on a country's public bonds and the rate on bonds of same maturity issued by the German government.

reduced, the temptation is to think that we are moving into safe territory. This thinking is wholly unwarranted. In 2009, the spreads were minimal, much below current levels. All of sudden they exploded, a convincing case of multiple equilibria. With debts that high, it is easy to shift from a “good” to a “bad” equilibrium when financial market participants realize that a loss of confidence by some participants can rapidly turn into a full-blown crisis. Adverse expectations can become self-fulfilling at any time, as they did in early 2010. Multiple equilibria can also go from bad to good. This was the case when the spreads declined rapidly after July 2012 when the Chairman of the ECB announced he would do “whatever it takes” to reduce them to levels that it considers justified. The spreads reflect two risks: a default risk and a redenomination risk, i.e. the possibility that a country leaves the Eurozone and transforms its debt in euro into a debt into the new currency. The ECB considers as unjustified the risk of breakup of the Eurozone; presumably the remaining spreads reflect the risk of default. Clearly, the sovereign debt crisis is not over.

That very large public debts represent a serious risk of renewed market defiance does not mean that the crisis will necessarily return to its previous acute phase. A plausible policy approach is to aim at gradually reducing public debts through continuing budget surpluses. This would be a lengthy process. For example, assuming an annual nominal GDP growth rate of 3.5%, a country that starts with a debt of 95% of GDP (the value of the Eurozone as a whole) will need 35 years to achieve the official objective of 60% of GDP if it applies the European Commission’s rule of reducing each year the debt by 0.5% of GDP. This would impose quite a constraint on the countercyclical use of the fiscal policy instrument. While it would not mean continuous austerity, the constraint will reduce the ability of governments to deal with idiosyncratic shocks in addition to the complete loss of the monetary policy instrument

This may be a reason why a significant body of literature reports that high public debts have a long-lasting deleterious effect on growth.² The threshold reported in the literature is 90% of GDP for developed countries that borrow in their own currencies while it is only 40% for developing countries that borrow in foreign currencies. De Grauwe (2012) notes that Eurozone countries in effect borrow in a foreign currency, because they do not have their own central banks, which could imply that their threshold is significantly below 90%.

This means that most Eurozone countries must be ready to go through a very long period a slow growth with limited room for countercyclical fiscal policies. More ominously, until their debts are reduced to levels perceived as safe, many countries will face the threat of another round of market pressure. The debt legacy of the early 2010s is overwhelmingly heavy. This is why a carefully managed debt restructuring is a worthwhile option.³

Debt restructuring is often considered as infamous. Part of the reason is that reneging on debt obligations is seen as theft and therefore leads to a loss of reputation. Part of the reason is that it can hurt important creditors such as commercial banks. Yet

² The classic reference is Reinhart and Rogoff (2010), who find that growth slows once the debt passes the 90% threshold. Panizza and Presbitero (2012) challenge the causality link, but Ceccehetti et al. (2011) and Kumar and Woo (2010) find results nearly identical to those of Reinhart and Rogoff (2010).

³ Zenios (2013) develops this logic for the case of Cyprus.

another part of the reason is that it can impose costs on other countries. The PADRE (Politically Acceptable Debt Restructuring in the Eurozone) plan, presented in Pâris and Wyplosz (2014) eschews all of these difficulties. It relies on purchases of public bonds on the secondary market by the ECB.⁴ Although the plan required that these purchases be fully sterilized to avoid any debt monetization and inflationary implications, the direct involvement of the ECB appears to raise concerns of political acceptability. This paper offers an alternative scheme, PADRE 2.0, which mimics PADRE but does not involve the ECB in any meaningful way.

2. The Logic of PADRE

The PADRE plan starts from the acceptance of three over-riding constraints:

- Transfers from low to high public debt countries are not politically acceptable. Several proposals that involve some form of debt mutualization or insurance, ranging from Eurobonds to a fiscal union, have been turned down repeatedly. The same applies to debt write-downs that would impose losses on the ECB or on the European Stability Mechanism (ESM), which hold significant portions of public debts of the most highly indebted governments.
- Debt restructuring that imposes costs on bondholders is economically dangerous and therefore politically unacceptable as well. Commercial banks hold a large portion of their own country's public debts. A sizeable debt write-down could easily bankrupt some banks, which would require public interventions by governments already heavily indebted and therefore unable to carry out such interventions. This would require new loans by other countries, for example through the ESM.
- Debt monetization is a sure way toward eventual high inflation. This runs against the price stability mission of the ECB and it is therefore politically unacceptable.

The PADRE plan rests on seven mostly novel ideas:

- Given these constraints, public debts cannot be written down. They will have to be served in full. The only possible restructuring must therefore take the form of a rescheduling without any reduction in the present value of existing debts. This is formally the same as a gradual debt reduction through sustained budget surpluses along with debt rollover as existing bonds mature.
- At the same time, large amounts of debt traded on bond markets represent a lasting threat of renewed self-fulfilling crisis through multiple equilibria. Sizeable amounts of bonds must be withdrawn from the markets.
- Dealing with the legacy of a historical crisis, often following years of fiscal indiscipline, requires a one-off approach.
- One solution is for governments to sell some of their assets, including state ownership of firms or real estate. In most cases, however, the value of these assets is too limited to make a difference and asset sales are politically difficult.

⁴ A similar idea was developed in Nuti (2012).

- All member countries hold an untapped asset: future seigniorage receipts. This does not mean that the ECB inflation objective should be changed. With inflation close to but below 2%, the present value of seigniorage income is probably sufficient to finance a deep restructuring through long-term rollover of existing bonds. In other words, future income from seigniorage can be securitized once.

- Solving the legacy problem is in the interest of all Eurozone member countries. Indeed, the crisis has shown that the very existence of the euro as we know it is under threat. In addition, crises impose costs on all member countries in the form of an economic slowdown or an outright recession, which creates political tensions and deep anger among citizens that undermines acceptance of the euro and sometimes even of the European Union. Even low public debt countries stand to benefit from a collective plan of debt restructuring.

- The moral hazard of a painless debt restructuring must and can be dealt with through an appropriate covenant. The covenant can even become the main instrument to achieve fiscal discipline in all Eurozone member countries, an objective that has been and remains elusive in spite of the many reforms of the Stability and Growth Pact.

3. PADRE in Practice

3.1. The Procedure

The value of public debts of the 18 member countries is expected to reach by end 2014 about € 9,400 billion. For illustration purposes, we consider the case when half of all these public debts, some € 4,700 billion, are to be treated. The plan involves the four steps graphically described in Figure 2.

The first step involves a Eurozone agency – to be discussed in Section 3.4 – that purchases all maturing debts until it has acquired a total of € 4,700 billion. For reasons that will soon be clear, its purchases of a country bonds are proportional to the country’s share of the ECB capital, as indicated in Table 1. For instance it will acquire an amount of €127 billion of Austrian debt, which is 2.77% of € 4,600 billion.

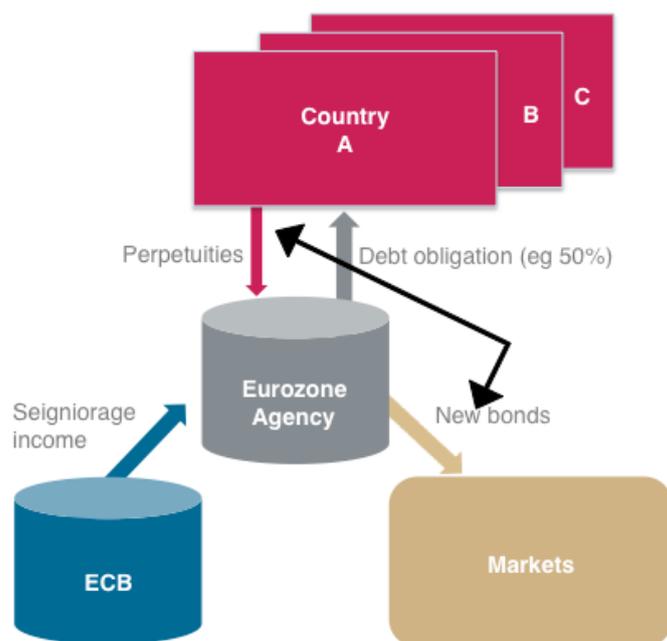
Table 1. ECB shareholding keys

Austria	Belgium	Cyprus	Estonia	Finland	France
2.77%	3.46%	0.19%	0.25%	1.78%	20.24%
Germany	Greece	Ireland	Italy	Latvia	Luxembourg
26.86%	2.79%	1.59%	17.84%	0.39%	0.25%
Malta	Netherlands	Portugal	Slovakia	Slovenia	Spain
0.09%	5.68%	2.53%	0.99%	0.47%	11.82%

Source: ECB

In the second step, which chronologically comes first, the agency issues its own debt to be able to carry out the first step. Much as bond purchases are spread over time according the maturing of national bonds, the agency borrows progressively as needed.

Figure 2. The four steps of PADRE



The third step sees the agency swap the national bonds that it has acquired against zero-interest rate perpetuities issued by member governments. Quite clearly, this amounts to wiping out half of Eurozone public debts.⁵ Importantly, a covenant, described in Section 4. , is attached to the perpetuities. Note that the agency will be making losses. In steady state, once its purchases are completed, it serves interest on the € 4,700 trillion that it has borrowed but it receives no interest on the same amount of perpetuities that it holds. At current interest rates, the losses are of the order of € 160 billion every year.

The fourth and last step is designed to plug this hole. Each member country formally instructs the ECB to transfer its profits, determined according to normal practice, not to itself but directly to the agency.⁶ Since each country receives a share of ECB profits equal to its capital key, the fourth step involves a transfer from member governments to the agency that exactly matches the third step's transfer in the opposite direction. This effectively eliminates any transfer across countries.

⁵ A possible variant is presented in Section 5.

⁶ In practice, the ECB profits are transmitted to national central banks, which then transfer their profits to their own governments according to national law. This allows national central banks to finance their own expenditures. Various arrangements can be imagined to finance national central banks within the plan. The critical requirement is that member governments must irrevocably abandon their shares of seigniorage income.

What does the plan achieve? First it removes from the markets half of public debts. The specter of a renewed bout of Sovereign Debt Crisis is eliminated. Interest rates in the affected countries should instantaneously decline and the fragmentation of financial markets would come to an end.

Second, most countries recover the possibility of conducting counter-cyclical fiscal policies. The five-year period of economic stagnation would be over, if only because borrowing costs in the crisis countries would diminish markedly.

Third, no bondholder is being hurt. Indeed, the agency acquires maturing bonds at face value. Quite to the contrary, bonds that currently trade at a discount because of the risk premium associated with a probability of default would gain in value. The corresponding windfall profits could and should be taxed away to insure fairness.

Fourth, there is no transfer across countries. The plan is designed to ensure that, country by country, the amount of debt reduction is exactly equal to the present value of seigniorage transferred to the agency. Governments will have to make up for this loss of revenue either by cutting spending, or by raising taxes, or any combination of both. Under the requirement that there be no transfer across countries and that no bondholder make any loss, a no-default restructuring implies that future generations must eventually pay the legacy debts in full.

Fifth, while seigniorage is used to finance the debt restructuring, there is no inflation impact. The ECB is only involved at the stage of distributing its realized profits. It remains free to determine and implement its inflation objective. There is no monetization of the debts, and no monetary financing of deficits either, since the plan only involves future seigniorage profits that would be anyway distributed to governments.

3.2. The Outcome

Table 2 shows the effect of a withdrawal of half of Eurozone debts. It is based on estimates for end 2014 by the European Commission. The first two columns display the starting position before the plan. The next two columns show how the € 4.715 billion reduction of the debt total is distributed among member countries using their ECB capital shares. The situation after debt restructuring appears in the last two columns. Even though it is massive, the restructuring does not fully bring some country debts to a comfortable level: the debt to GDP ratio of Greece is still above 100% of GDP and it is close to 80% for Italy and Ireland. All the other countries have debts lower than 60% – marginally above in Cyprus. This suggests that more may be done for Greece, and possibly Italy and Ireland. Of course, the 50% debt withdrawal is just an example.

The table also shows that three countries (Estonia, Latvia and Slovakia) would end up with a negative public debt, because they start with a low level. How can that be? Simply, they would issue bonds that would be directly purchased by the agency and swapped like all the others into a zero-interest rate perpetuity. In that way, they would benefit from the same advantage – the swap – and the same cost – transfer of seigniorage income to the agency. They would receive cash that they could use to

invest at market rate, thus generating income that exactly compensates for lost seigniorage.

Table 2. The case of a 50% write-down

	Initial debt (2014)		Debt reduction		Post-restructuring debt	
	€ billion	% of GDP	€ billion	% of GDP	€ billion	% of GDP
Austria	241	74.2	131	40.3	110	33.8
Belgium	394	100.5	163	41.6	231	58.9
Cyprus	19	121.1	9	57.0	10	64.1
Estonia	2	10.2	12	62.2	-10	-52.1
Finland	121	61.3	84	42.7	37	18.6
France	2026	96.2	954	45.3	1072	50.9
Germany	2186	77.2	1267	44.7	920	32.5
Greece	322	177.0	132	72.3	190	104.7
Ireland	204	120.8	75	44.4	129	76.3
Italy	2117	133.7	841	53.1	1276	80.6
Latvia	10	39.1	19	75.2	-9	-36.1
Luxembourg	12	25.4	12	24.5	0	0.9
Malta	5	71.7	4	57.2	1	14.4
Netherlands	464	75.2	268	43.4	196	31.8
Portugal	213	126.0	119	70.5	94	55.6
Slovakia	43	57.9	46	62.7	-4	-4.8
Slovenia	27	74.6	22	61.5	5	13.1
Spain	1024	98.7	557	53.7	466	45.0
Eurozone	9430	95.9	4715	47.9	4715	47.9

Source: Debt and GDP at end 2014: forecasts from *Ameco on line*, European Commission.

Why would the low debt countries participate in the scheme anyway? The simple answer is that it does not cost them anything in present value terms while it solves the Sovereign Debt Crisis that loom over the stability of the Eurozone. Yet, participation in the plan cannot and should not be compulsory and a number of countries might be uninterested in the PADRE plan.

As an example, consider the case when, by mutual agreement, countries with an initial debt of 80% of GDP or less do not participate in the plan. This would keep ten countries out: Austria, Estonia, Finland, Germany, Latvia, Luxembourg, Malta, the Netherlands, Slovakia and Slovenia. Relative to the base case, this alternative has two main features. The total write-down is much smaller and the debt reducing effect on the participating countries is less sizeable, but the difference remains modest. The reason is that the ten opting-out countries own 39.5% of the ECB capital while their public indebtedness amount to 31.6% of the total Eurozone level. This also means that total available seigniorage income is reduced more than proportionately to the debts.

This illustrates that the PADRE plan is amenable to a large number of variants that all achieve its goals as stated above. Indeed, at the limit, interested countries could do it on their own. They would each create an independent agency that would receive

seigniorage income and operate the swap. However, this would raise credibility issues, including those examined in Section 4. . The more countries join in, the more credible is the undertaking.

Table 3. The case of a 50% write-down limited to countries with initial debt above 80% of GDP

	Initial debt (2014)		Debt reduction		Post-restructuring debt	
	€ billion	% of GDP	€ billion	% of GDP	€ billion	% of GDP
Austria	241	74.2	0	0.0	241	74.2
Belgium	394	100.5	151	38.5	243	61.9
Cyprus	19	121.1	8	52.8	11	68.3
Estonia	2	10.2	0	0.0	2	10.2
Finland	121	61.3	0	0.0	121	61.3
France	2026	96.2	884	42.0	1142	54.2
Germany	2186	77.2	0	0.0	2186	77.2
Greece	322	177.0	122	67.0	200	110.0
Ireland	204	120.8	70	41.2	134	79.6
Italy	2117	133.7	779	49.2	1338	84.5
Latvia	10	39.1	0	0.0	10	39.1
Luxembourg	12	25.4	0	0.0	12	25.4
Malta	5	71.7	0	0.0	5	71.7
Netherlands	464	75.2	0	0.0	464	75.2
Portugal	213	126.0	110	65.3	103	60.7
Slovakia	43	57.9	0	0.0	43	57.9
Slovenia	27	74.6	0	0.0	27	74.6
Spain	1024	98.7	516	49.8	507	48.9
Eurozone	9430	95.9	2641	26.9	6789	69.0

Source: Debt and GDP at end 2014: forecasts from *Ameco on line*, European Commission.

3.3. Is Seigniorage Income Big Enough?

The plan assumes that seigniorage income is sufficient to finance the restructuring of € 4,700 billion of debts, nearly half of the Eurozone GDP. This question can be decomposed into two parts: is the present value of seigniorage large enough? Does the time profile of seigniorage income match the financial needs of the agency? The answer to the first question is likely to be positive; the answer to the second question is negative.

Present value estimates

Since it pays interest on bank deposits, the ECB raises seigniorage mainly on the currency – a liability bearing no interest – that it issues at virtually no cost. In any year, the flow of income that accrues to the Eurosystem is measured as the increase in currency in circulation. For many reasons, the evolution of the amount of newly issued currency varies a lot from year to year. It is possible, however to estimate reasonably well its future average evolution under plausible assumptions.

The volume of currency tends to grow steadily along with economic activity and it tends to decline when interest rates rise. Over the indefinite future, we assume that the Eurozone will grow at a constant rate and that the interest rate will be constant. Thus we ignore business cycles, which are not a concern here as they approximately even out over the long run. We use the procedure and estimates of Buiter and Rahbari (2012) who assume an income elasticity of 0.8. We also need to make assumptions about the GDP growth and inflation rates.

For real GDP growth, we assume a reasonably conservative range of 1% to 2%. The assumption about inflation is important because the plan emphatically rejects money financing. The ECB should not be tempted, or pressed, to produce more currency to raise seigniorage revenues. We close this door and assume that inflation remains indefinitely at 2%, the average achieved in the Eurozone over its first ten years of existence.

These assumptions allow us to simulate the average evolution of currency in circulation over the indefinite future. Of course, no one expects real growth and inflation to remain constant forever. To a first degree of approximation, the results are acceptable as long as the actual values of these variables fluctuate around assumed values.

In order to compute the present discounted value of seigniorage over the indefinite future, we need to make an assumption about the nominal interest rate. The relevant rate is the one that the agency will face when borrowing. One reasoning is that the natural real interest is 2%. With inflation at 2%, this means a nominal rate of 4%. Another reasoning looks at the past. Over the sample period 1957-2013, the average realized real long-term interest in Germany has been 3.6%, and 0.6% for OECD Europe over 1971-2013. During the pre-crisis Eurozone period (1999-2007), the average real rates have been 2.8% and 0.7% for these two areas, respectively. Even without considering the secular stagnation hypothesis (Summers, 2013), these numbers suggest a steady state nominal interest rate of 3% to 4%. We experiment in this range, assuming in each case that the interest rate remains constant over the indefinite future.

Table 4 presents the present value of seigniorage that the Eurosystem would generate under these assumptions.⁷ As expected, a higher economic growth rate increases seigniorage income because it raises the need for currency. An increase in the interest rate lowers income because future earnings are more heavily discounted and this effect is powerful.

⁷ Under the assumptions that the real growth rate γ , the inflation rate π and the interest rate i are constant, the stock of currency will grow at an annual rate of $\mu = \gamma + \pi - i$, where $\alpha = 0.8$

as explained above. Then the present value of seigniorage income is $S = \frac{C_0 \mu}{i - \mu}$, where C_0 is the pre-restructuring stock of currency (taken to be the March 2014 level of € 916.5 billion). Note that if the interest rate i is less than the annual money growth rate μ , the present value S is infinite.

The results are reassuring, but not completely so. For a reasonable economic growth of 1.5%, if the interest rate is 3.5%, the ECB income vastly exceeds the cost of debt restructuring. A slightly higher interest rate of 4% only generates an income of about €4000 billion, which is insufficient to finance the 50% debt restructuring considered in the base case. Note that when the nominal interest rate is approximately⁸ lower than the nominal growth rate, the present value of seigniorage is infinite because the issuance of new currency grows faster than the discount factor. All in all, while an adverse scenario cannot be excluded, most plausible configurations indicate that the present value of seigniorage is large enough.

Table 4. Estimated present value of seigniorage revenues (€ billion)

		Annual real growth rate		
		1%	1.5%	2%
Nominal interest rate	3%	14380	Infinite	Infinite
	3.5%	3899	11001	Infinite
	4%	2265	3949	9317

Source: Authors' calculations.

Note: these estimations assume constant inflation (2%), growth and interest rates over an infinite horizon. It is based on an initial stock of currency in circulation of € 916.5 billion, as measured in March 2014.

Time Profile

Every year, the agency will make annual losses equal to the interest that it pays on its borrowing since it will not receive any income on the perpetuities that it will hold. These costs will grow as it purchases bonds at maturity. With an average maturity currently of 7 years, the costs will build up early on. On the other hand, seigniorage income will grow slowly as nominal growth gradually raises the demand for currency. What makes seigniorage income sufficient is that an annual nominal growth rate of, say, 3.5% leads to a doubling of GDP every 21 years. The resulting time profile of the agency costs and income is shown in Figure 3 in the case of an interest rate of 3.5% and a real growth rate of 1.5%, the central case in Table 4. Where the present value of seigniorage (€ 10,000 billion) vastly exceed the value of the debt write-down (€ 4,700 billion).

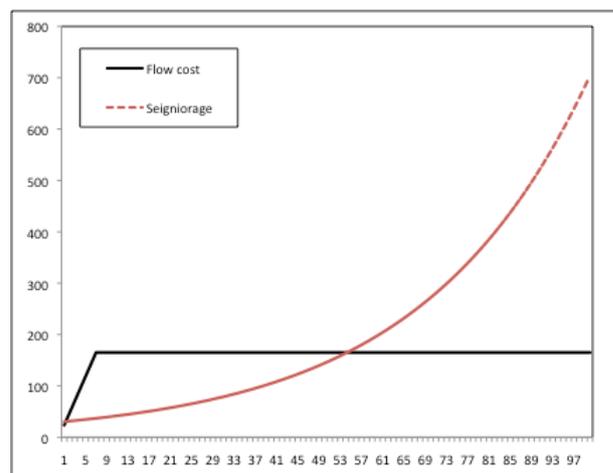
According to this simulation, the flow of income seigniorage will not make up for the agency's debt service for about 50 years. A possible solution is for the agency to purchase bonds more gradually, limiting its purchases to its resources. An alternative is to borrow enough to match the difference between cost and income. Each solution has its drawbacks.

With the first solution, debt reduction will be slow. This represents a risk to the credibility of the plan. With bonds very slowly withdrawn from the market, the risk of a renewed crisis will remain elevated for several decades. Borrowing to plug the gap,

⁸ Approximately because the assumed income elasticity of money demand is less than 1.

on the other hand, further raises debt-servicing costs. Under the same simulation assumptions, the cumulating borrowing surcharge adds debt of up to 11% of Eurozone GDP, which peaks around Year 25 (see **Error! Reference source not found**.Figure 4 below). While significant, this additional burden is unlikely to tip the balance of the plan.

Figure 3. Time profile of Agency income and spending



Note: The simulation assumes debt maturity of 7 years, a real growth rate of 1.5%, inflation at 2% and a nominal interest rate of 3.5%.

3.4. The Agency

Which agency can undertake this task? Its mandate is purely technical: it acquires pre-set amounts of public bonds on secondary markets, it borrows to cover its costs, and it implements the covenant described in Section 4. . For this last task, it must be completely independent from governments. It would also be desirable to avoid a change in the Treaty, which opens up the risk of politicization of the plan and of the agency. To that effect, the best is to entrust this responsibility to an existing institution.

A natural candidate is the ECB. It is independent, it is allowed to purchase bonds on the secondary markets, and it is known for strictly adhering to its mandate. This is the route chosen in the PADRE plan. Appearances matter, however. Large-scale acquisition of public bonds could be seen as the first step towards monetization, which is strictly forbidden, for good reason. In addition, should seigniorage be found at some point as insufficient, pressure could rise on the ECB to tolerate more inflation. Finally, implementing the covenant is bound to generate political resistance. It is not desirable to expose the ECB, whose core mandate is elsewhere, to the hazards of official enforcer of fiscal discipline. This is the reason why the PADRE plan leaves the ECB aside. Using its profits as collateral for the agency borrowing does not affect its mission in any way.

The other natural candidate is the European Stability Mechanism (ESM). It is allowed to buy public bonds in the (primary and) secondary markets and its mission is to “provide stability support through a number of financial assistance instruments to

ESM Member States which are experiencing, or are threatened by severe financing problems.” Its financing is achieved by borrowing on financial markets, with a capital that notionally exceeds its lending capacity. This all fits well with the PADRE plan. There are, however, a number of features that need to be adjusted, with legal requirements to be determined. First, the ESM only lends in emergency situation and only to countries that have a EU-IMF program under way. In addition, its lending capacity is currently capped at € 500 billion. These restrictions need to be changed. A reinterpretation of “threatened by severe financing problems” would be required. The Memorandum of Understanding with the European Commission, which is a condition for any loan, could take the form of the covenant described in the next section. Finally, it always can be decided to raise the lending capacity, even though the size of PADRE is of an entirely different scale. The main objection to entrusting the ESM with the task is that its governance structure is in the hands of member governments, which reduces its independence. This is why the covenant would have to be very tightly specified.

4. The Covenant

The main advantage of the PADRE plan is also its main weakness. The debt restructuring is so painless and so well organized that it generates a serious moral hazard issue. The very ease with which the legacy issue is dealt with could encourage some governments to rebuild the to debts and ask for another restructuring. For the plan to be politically acceptable and economically justifiable it is essential therefore that it guarantees that it is a one-off solution to a legacy of unique historical circumstances, the Great Financial Crisis and the Sovereign Debt Crisis. However, fiscal indiscipline has existed in a number of countries for decades and the Stability and Growth Pact has been unable to establish discipline as intended. The PADRE plan must therefore also deal with endemic fiscal indiscipline.

The plan is structurally a one off because it securitizes a large proportion of all future seigniorage income, which means that there will not be enough left to finance more restructurings. Yet, that may not be enough to deter moral hazard. This is why an integral of the plan is a covenant that all participating countries must sign and that is to be enforced with no uncertainty whatsoever. The covenant consists of three parts. The first one lays out conditions that must be respected. The second includes an enforcement mechanism and the third one is an explicit commitment to respect the Treaty’s no bailout clause, understood as banning any lending to member countries by any country or collective institution such as the ECB or the ESM.

Upon joining the plan, participating countries agree that their public debts will never exceed a threshold. A logical threshold is the post-restructuring debt ratio *plus* some margin to leave room for counter-cyclical policies. As an example, Table 2 indicates a post-restructuring public debt of 51% of GDP for France. The covenant would set a ceiling of 61% of GDP, providing a 10% room for maneuver to deal with adverse shocks.⁹

⁹ This is well within what is needed to deal with normal macroeconomic shocks. Larger shocks are only likely to be the result of banking crises. Limiting the probability and size of banking crisis is therefore properly seen as part and parcel of fiscal discipline. This calls for adequate regulation and supervision. A full-fledged banking union is the proper response.

Enforcement rests on automatic, gradual market pressure. If a country breaks its debt ceiling, the covenant requires that the agency swaps the perpetuities that it holds against this country into a normal interest-bearing bond. It works as follows. In the example of France, if the debt rises to 62 % of GDP, i.e. 1% above the ceiling, the Agency must automatically swap an amount of perpetuities equal to 1% of French GDP into bonds and sell them on the bond market. The public debt is now of 63% of GDP. If it grows by another 1% of GDP, the agency swaps and sells another 1% of perpetuities, and so on, with no end in sight. This escalating enforcement mechanism should unmistakably raise concern in the markets and lead to a quickly rising risk premium. The rising interest rate would not just apply to the swapped-back bonds but also to any new bond issued by the government to finance its on-going deficits and to rollover its maturing bonds.

The combination of automatic and gradual swaps and of what is sure to be a rapid non-linear market reaction should soon elicit adequate adjustment on the part of any delinquent government. The government is likely to soon market access. At this stage, the no-bailout clause would come into force. A delinquent government could apply to the IMF for support, which would include conditions to bring back the debt well below the covenant ceiling.¹⁰ If the government defaults on its debt (partly or in totality), the agency will remain protected by the stream of future seigniorage revenues. Indeed, the covenant also specifies that the ECB not be allowed to divert back its dues to any government unless it is so allowed to by the agency, which must certify that it has been repaid in full for the costs of the country's debt restructuring.

It is essential that the covenant does not include any escape clause whatsoever. The agency must never be in a position of making any decision. The swaps back into bonds must be absolutely automatic and the agency should not be allowed to lift its right to receive seigniorage income until the debts are fully repaid.

An important by-product of the covenant is the restoration of the no-bailout clause. Wyplosz (2013) argues that this clause was the only economically robust tool to enforce fiscal discipline in the Eurozone. Its effective dismissal at the outset of the Greek crisis has left the monetary union relying on the Stability and Growth Pact, which has failed, and will fail again, because it violates national budget sovereignty. This means that, one way or another, the credibility of the no-bailout must be reestablished, which is difficult to do given the way it was summarily dismissed when it became politically inconvenient. The covenant offers such an opportunity.

How robust is the covenant? In democracies, there is no rule that cannot be dismissed by elected governments. The risk will always be there that, over the long run that characterizes the PADRE plan, governments find the covenant politically inconvenient. The best that can be done is to make any future change difficult to enact. To that effect, a clause should establish that the covenant and its automatic nature can only be changed by a majority decision, with the *proviso* that member States that vote against any change will not be liable to any potential loss. Explicitly, those States that vote in favor of any change will agree to collectively bear the burden of non-full repayment of its debt by any member country. Other schemes can be

¹⁰ The no-bailout clause would preclude any new Troika operation.

imagined but it is important to anticipate the temptation of any relaxation to the rigorous terms of the covenant.

5. Variants and Loose Ends

This section briefly examines various potential shortcomings of the plan and possible variants in addition to those previously discussed.

5.1. Agency Borrowing Rates

The agency will have to borrow the staggering amount of € 4,700 billion over a few years. A natural question is: at what rate will it be able to borrow? This matters a lot if the plan is to fulfill the aim of not leading to transfers across countries. Indeed, consider the case where the agency borrows at a higher rate than some member countries. If the agency's borrowing rate is used to discount the stream of seigniorage receipts, the present value for a low interest country will be lower than if the country would do the same operation on its own. This represents a net opportunity cost. Conversely, high interest countries will benefit from a net opportunity benefit. This amounts to implicit transfers, which the plan vows to exclude. Two questions arise: Can we anticipate the borrowing rate of the agency? Can the problem be solved?

One hypothesis is that the agency borrowing rate will be a weighted average of individual borrowing costs. This would indeed give rise to transfers but there is no reason for that to be the case. The markets, and the rating agencies, have no reason to adopt such a simple pricing rule. They will assess the probability of debt repayment by the agency. Its bonds are guaranteed by future seigniorage income, perhaps the strongest collateral possible.¹¹ This argues for the lowest possible interest rate. However, if the covenant is less than fully credible, the markets will apply a risk premium.

One indication is the borrowing rate of the ESM. In November 2013, it issued ten-year bonds that were largely oversubscribed. The interest rate was 2.26%. At the same time, ten-year German bonds fetched 1.68%. This is so even though the ESM is restricted to lend only 71% of its capital. On the other hand, the capital is not fully paid out and, while it is callable on demand, it is provided by all member countries, some of which face steep risk premia (and some did not have market access at the time). This means that we will not know for sure until the plan is started.

One solution is that the agency applies different interest rates to different countries. As it acquires maturing bonds, it can apply the going country interest rates to evaluate the discounted value of seigniorage stream due. Over time, as it rolls over its own maturing bonds, it can segment them on a country-by-country basis and apply the relevant discount rate.

5.2. The Legacy of Officially-Held Debts

In some cases, government debts are owned to official institutions, including other member states, the ECB, the ESM and the IMF. For example, by mid-2013, 84% of

¹¹ There is no indication that the demand for currency has declined in recent years as a result of technological change in banking and finance.

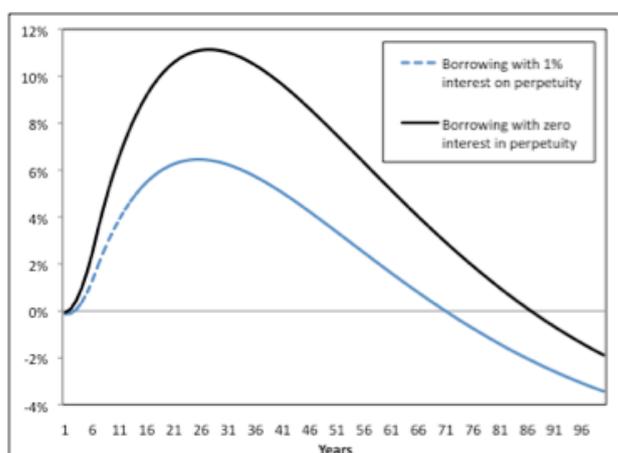
the Greek public debt was owed to these institutions.¹² Privately held Greek debt amounts to 27% of GDP, well below the objective of the example of 105% in Table 2. In this case, the agency will not be able to acquire enough debt instruments on the bond markets, but this should not represent a major problem. A solution, among many others, would be for the agency to acquire *prorata* from the official creditors at face value the agreed-upon amount of debt worth 72% of GDP to be restructured (and swapped into perpetuities). The remaining debt in the hand of official creditors would be swapped into marketable bonds and off-loaded on the markets.

5.3. Positive Interest on the Perpetuities

As described so far, the debt acquired by the agency is fully wiped out since it is swapped against a zero-interest perpetuity. Can the cost of the plan be reduced by charging a positive interest rate on the perpetuity? This would not change much since the principle is that any country pays back its debt to the agency in full.

The amount of debt withdrawn from the markets would be the same but governments would make payments to the agency in addition to transferring seigniorage income.¹³ This would change the time profile of government and agency costs in opposite directions. The counterpart of the increase in governments' tax burden would be less debt build-up by the agency in the early years. The two time profiles of agency borrowing are shown in Figure 4. It shows that the peak of additional borrowing by the agency – to meet the “early deficits – is reduced from 11% to 6% of GDP.

Figure 4. Agency borrowing with and without interest on perpetuities



5.4. The Attraction of Infinity

For simplicity, the presentation so far has considered the case of perpetuities and looked at the present value of seigniorage income over an infinite horizon. This simplifies the analysis and the calculations, at the cost of realism. Perpetuities are

¹² Source : *Economic Survey of Greece*, OECD, November 2013.

¹³ Keeping the country debt burden unchanged by reducing the amount of seigniorage sent to the agency annually would simply reproduce the base case as this reduction would match the annual interest payment to the agency.

instruments used relatively sparingly. More importantly, perhaps, the notion of infinite government commitments may stretch the ordinary understanding of politics. A more practical approach would be a finite horizon. This requires that seigniorage income be sufficient, however. Table 5, which is comparable to Table 4, shows the present value of seigniorage over a 50-year and a 100-year horizon. Clearly, less than infinity would not be enough to cover the costs of a 50% debt write-down, or barely so in the most optimistic case and over 100 years. The implication is that the amount of debt restructuring would have to be significantly reduced.

A commitment to never receive seigniorage from the ECB – more precisely until the cost of debt restructuring is fully repaid, which could take two centuries or more – may seem outlandish but it is not clear that limiting it to 50 years would look very different.

Table 5. Present value of seigniorage income

Horizon: 50 years		Annual real growth rate		
		1%	1.5%	2%
Nominal interest rate	3%	1233	1561	1950
	3.5%	1094	1380	1717
	4%	976	1226	1520

Horizon: 100 years		Annual real growth rate		
		1%	1.5%	2%
Nominal interest rate	3%	2360	3299	4592
	3.5%	1094	2586	3544
	4%	1527	2069	2791

Note: See Table 4.

6. Conclusions

The main message is that it is possible to definitely solve the Sovereign Debt Crisis, without transfers across countries and without hurting current debtholders, can be done in an orderly way. The payoff is bound to be considerable in terms of stability of the currency, re-integration of financial markets, economic and employment growth, and restored room for countercyclical fiscal policy.

A natural question is why is the plan working. What problem is it solving? The first answer is that it deals with a massive market failure, the fact that financial markets are prone to runs because of the multiple equilibria phenomenon. The plan does not eliminate the phenomenon, so it is not a first best solution, which is not known to exist. It does, however, significantly reduce the odds of a new crisis as it withdraws debts from the markets. The second answer is that it deals with two equally massive

political failures: the well-known deficit bias¹⁴ and the summary disposal of the no-bailout clause when it was first challenged. Restraining governments is first best. The covenant offers the possibility of establishing fiscal discipline in the Eurozone. This well-identified problem has not been solved so far in spite of the many revisions to the Stability and Growth Pact.

Not all countries need a debt restructuring, but many do. It is very unlikely that these countries that do will be able to achieve sustainable growth of a sufficient magnitude to ensure full employment and rising standards of living over the coming decades. The most likely scenario, no restructuring and budget surpluses, is likely to result in renewed bouts of economic instability, with worrisome political consequences. This is the legacy problem. PADRE works best when all member countries join the plan. No country looses and all countries stand to benefit from financial stability and economic growth throughout the area. But the plan is flexible enough to work with only a subset of countries.

It bears recalling what the plan does not do. It is not a monetary financing of existing debt. It is not inflationary in any way. It does not change the objectives and incentives of the ECB, nor does it threaten its independence. It is not a case of fiscal dominance. Nor does it establish a mutualization of national debts. The debt issued by the agency does not represent Eurobonds, because it is guaranteed by future seigniorage income, country by country. The plan is best pictured as a collection of silos, within which each country commits its future seigniorage revenues to pay for its own debt restructuring. Indeed, it is a restructuring of existing debts, not a write-down, since the debts acquired by the agency will be honored in full. Finally, the plan is not providing incentives to more fiscal indiscipline. Quite to the contrary, the covenant is designed to establish firmly and definitely fiscal discipline. Anyway, the resources mobilized by the plan, future seigniorage income, will never be available any more.¹⁵

The example chosen to present the plan, a restructuring of half of existing debts, is meant to be an illustration of how much is needed to turn the page of the crisis and whether it can be financed. It does not mean that other proposed approaches should not be followed in parallel. In particular, sales of public assets should proceed to reduce the scale of the plan. However, as discussed in Pâris and Wyplosz (2014), the scope for raising income through asset sales is limited in most countries, with the notable exception of Italy.

Finally, the plan as described here should be seen as a set of principles to carry out a painless debt restructuring in the Eurozone. A large number of parameters can be changed; a few of them are examined in the variants presented above. Many aspects are not treated, or very superficially so. This includes the many thorny institutional and legal questions that any new proposal invariably raises.

¹⁴ See, e.g., Alesina and Guido Tabellini (1990), Von Hagen and Harden (1995) or Krogstrup and Wyplosz (2010).

¹⁵ The idea of securitizing future seigniorage income is very general and can be used for many other purposes in other contexts.

References

- Alesina, Alberto and Guido Tabellini (1990) “A Positive Theory of Fiscal Deficits and Government Debt”, *Review of Economic Studies* 57: 403-14.
- Buiter, Willem and Ebrahim Rahbari (2012) “Looking into the Deep Pockets of the ECB”, *Global Economic View*, Citibank.
- Cecchetti, Stephen G., M.S. Mohanty and Fabrizio Zampolli (2011) “The Real Effects of Debt”, BIS.
- De Grauwe, Paul (2012) “The Governance of a Fragile Eurozone”, *Australian Economic Review* 45(3): 255-268.
- Krogstrup, Signe and Charles Wyplosz (2010) “A Common Pool Theory of Supranational Deficit Ceilings”, *European Economic Review* 54(2): 273-281.
- Kumar, Manmohan S. and Jaejoon Woo (2010) “Public Debt and Growth”, IMF Working Paper WP/10/74.
- Nuti, D. Mario (2012) “The ECB Firepower”, <http://dmarionuti.blogspot.fr/2012/08/the-ecb-firepower.html>
- Panizza, Ugo and Andrea F. Presbitero (2012) “Public Debt and Economic Growth: Is There a Causal Effect?”, MoFiR working paper No. 65.
- Pâris, Pierre and Charles Wyplosz (2014) “PADRE: Politically Acceptable Debt Resolution in the Eurozone”, *Geneva Report on the World Economy*, Special No3, CEPR, London.
- Reinhart, Carmen M. and Kenneth S. Rogoff (2010) “Growth in a Time of Debt”, *American Economic Review: Papers and Proceedings*, 100(2):573-578.
- Summers, Lawrence (2013) “Why Stagnation Might Prove To Be The New Normal”, *The Financial Times*, December 15.
- Von Hagen, Jürgen, and Ian Harden (1995) “Budget Processes and Commitment to Fiscal Discipline”, *European Economic Review* 39(3): 771-779.
- Wyplosz, Charles (2013) “Europe’s Quest for Fiscal Discipline”, *European Economy Economic Papers* 498.
- Zenios, Stavros A. (2013) “The Cyprus Debt: Perfect Crisis and a Way Forward”, *Cyprus Economic Policy Review* 7(1): 3-45.