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## When good intentions pave the road to hell: Monetization fears and Europe's narrowing options

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## Working Paper No. 810

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### **When Good Intentions Pave the Road to Hell: Monetization Fears and Europe's Narrowing Options**

by

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## **Abstract**

With the creation of the Economic and Monetary Union and the euro, the national government debt of eurozone member-states became credit sensitive. While the potentially destabilizing impact of adverse cyclical conditions on credit-sensitive debt was seriously underestimated, the design was intentional, framed within a Friedman-Fischer-Buchanan view that “no monetization” rules provide a powerful means to discipline government behavior. While most countries follow some kind of “no monetization” rule, the one embraced by the eurozone was special, as it also prevented monetization on the secondary market for debt. This made all eurozone public debt defaultable—at least until the European Central Bank (ECB) announced the Outright Monetary Transactions program, which can be seen as an enhanced rule-based approach that makes governments solvent on the condition that they balance their budgets. This has further narrowed Europe’s options for policy solutions that are conducive to job creation. An approach that would require no immediate changes in the European Union’s (EU) political structure would be for the EU to fund “net government spending in the interest of Europe” through the issue of a eurobond backed by the ECB.

**Keywords:** Euro; Eurozone; Debt Monetization; Sovereign Debt Crisis; Government Budget Constraint

**JEL Classifications:** E63, H63

## 1. EXCHANGE RATE RISK IN A SINGLE-CURRENCY AREA?

During the 2008-2009 financial and banking crisis, markets suddenly discovered that not all euro-denominated government debt was equally safe. By 2011, yield spreads were back to the magnitudes seen at the time of the European Exchange Rate Mechanism (ERM) that was operative between 1979 and the start of the Economic and Monetary Union (EMU) in 1999. The striking convergence of long-term government bond yields between participating nations during the process of transition from the ERM to the EMU had suddenly evaporated. Governments and banks of those countries where yields had gone higher were facing rising costs of funding, which deteriorated banks' balance sheets and disrupted the overall eurozone interbank funding markets. In some countries, the "sovereign debt" (better, the "ex-sovereign debt") crisis was so serious as to hamper their governments' ability to raise funds through new issues.

Increasing yield divergence called into question the view that bond yields in the late 1990s had converged as a result of inflation expectations being anchored within a "credible monetary policy framework."<sup>1</sup> When spreads started to widen, there had been no inflation shock nor an alleged loss of credibility of the European Central Bank (ECB) as a "guardian of price stability." The fact that yield spreads suddenly increased is better explained by markets seeing the rising possibility of a public debt default.

A deep economic slump and the banking crisis had caused rising debt/GDP ratios and prompted financial markets to focus on the known (yet disregarded until then) issue that eurozone governments issuing debt would not be automatically rescued by the ECB under the existing EMU rules, thus opening up a scenario of euro breakup and consequent redenomination of government debt. It was a eurozone credibility shock, rather than an inflation credibility shock. Exchange rate risk was coming back to the single currency area and this widened spreads in a similar fashion just as, during ERM, spreads had reflected the risk of exchange rate realignments.

The European Union (EU) policy response included loan agreements, contingency funds, and austerity packages. The ECB, in its turn, modified its channels to refinance banks and

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<sup>1</sup> This was still the "consensus view" at the outbreak of the crisis. For example, Swanson (2008) explains convergence as the "anticipation of monetary union and the credibility of the ECB with respect to its objective of keeping inflation low and stable," and Ehrmann *et al.* (2007) argue that "the common monetary policy has been a key contributor for anchoring the long-term inflation expectations of financial market participants across the euro area."

started to purchase government debt to prevent further price declines. These policies were, at best, ineffective in ending the debt crisis. It was not until ECB President Mario Draghi made his “whatever it takes” speech<sup>2</sup>, followed by the September, 2012 announcement of the modalities for undertaking Outright Monetary Transactions (OMTs) in secondary markets for sovereign bonds, that the funding crisis stopped escalating.

Because eurozone government debt is credit-sensitive, and because deposit insurance is provided by credit-dependent governments, the fall of incomes in the eurozone quickly triggered a re-pricing of debt in the midst of a rising perception of redenomination risk.<sup>3</sup> With Draghi’s move in the summer of 2012, the ECB addressed one serious flaw in the architecture of the euro by placing a floor on the price of government debt by using its unique power to make unfunded euro payments. Yet, Draghi’s backstop was conditional, and the move restored the operational viability of the euro monetary system at the cost of setting conditions of stagnation upon the overall eurozone area. Because government debts had been made safe on the condition that government net spending remain well below what is needed to restore growth and job creation, the eurozone continues to face an unprecedented challenge.

The “whatever it takes” speech was remarkable because after 14 years of existence the ECB proclaimed that making a market for government bonds would fall within its mandate if it were a means to stop a threat to the very existence of the eurozone. Until then, markets had had reason to doubt that the ECB would ever take such action within the institutional constraints that fall within the institutional constraints set by the statute. That the ECB issued such a statement only when the integrity of the eurozone was under immediate threat raises the question as to whether the ECB had believed until then that it could avoid ever resorting to such action or had simply pondered the morally hazardous consequences of making such an announcement in advance of emergency situations.<sup>4</sup>

Had early Euro architects overlooked the threat of credit-sensitive government debt? Yes and no. Yes, because their focus on price stability had diverted attention from the potentially

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<sup>2</sup> A transcript of the 2012 speech, in which Draghi states, “Within our mandate, the ECB is ready to do whatever it takes to preserve the euro,” can be found here:

<http://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html>

<sup>3</sup> The risk that a country will unilaterally exit the EMU and redenominate its public debt.

<sup>4</sup> The latter hypothesis is backed by the fact that the ECB opened the door to the notion of unlimited commitment only following approval of the Fiscal Compact.

destabilizing impact of adverse cyclical conditions on credit-sensitive public debt. No, because the design was fully intentional.

The rules set for the single currency included provisions that were specifically intended to build the new currency on what they thought were the solid foundations provided by the paradigm of economic policy that had dominated the western world since the 1980s: A “credible” price stability goal and a “sustainable” fiscal stance. In order to achieve this goal, the power to make unfunded euro payments was exclusively assigned to the ECB and disconnected from any political body at any level— national or EU. Such provision was driven by the belief that by moving monetary sovereignty<sup>5</sup> from governments to an EU body (the eurosystem) that had no public spending and taxing power would:

- a) prevent governments from using monetary sovereignty to “inflate debt away,”
- b) restrain their net spending,
- c) provide the stable environment that supports long-term growth.

The oversight was that the inherent threat to financial stability involved in the application of such a paradigm was dramatically underrated. Yet, the embraced paradigm is evidence that the institutional design of the eurozone purposely and purposefully made government debt defaultable as a powerful means to prevent the inflationary effects of accommodating government net spending. Politically, this was deemed especially relevant in consideration of the diversity of public sectors among the participating member nations.

Fiscal discipline was seen as a means of enhancing the integrity and the efficiency of all European governments. Yet, good intentions pave the road to hell, and the reasonable political goal of pushing convergence via fiscal rules clashed with the side effects of effectively turning off the ultimate source of aggregate demand in the EU economy.

This paper argues that to attain their stated objectives of stability and growth, Euro architects were missing two important conditions: A plan to prevent eurozone debt from becoming credit sensitive, and an adequate flow of net financial assets into the private sector through net government spending. In other words, they used a poor framework to implement

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<sup>5</sup> In this paper, “monetary sovereignty” is defined as the power of the government to settle any payment promise by issuing a check drawn on its central bank that won’t bounce.

supposedly good intentions. In the aftermath of the ECB backstop, the unresolved question remains: How can Europe restore growth and job creation? Unilateral solutions of restoring national currencies would deal a deadly blow to the European integration project. Another—EU-friendly—solution is possible and will be discussed in the last section.

## **2. EUROZONE SUSTAINABILITY: AN OCA OR A SOLVENCY ISSUE?**

Ever since the 1989 Delors blueprint and the 1992 Treaty on European Union, the single currency in Europe has been universally described as an unparalleled experiment in monetary unification.<sup>6</sup> Views have been divided between those who underscored the boldness of Europeans in taking one step further toward greater economic integration and those who stressed the economic weakness of a far-fetched, reckless political project. In one view, the unparalleled experiment was a milestone in European integration; in the other, it was a grandiose, ill-fated scheme.

The bulk of the debate centered almost uniquely on the question of whether or not the eurozone is an optimal currency area (OCA), or would ever become one. Most early critics saw evidence that member countries formed an economic region that was far from being an OCA; their economies were seen to be subject to asymmetric shocks, labor mobility was far too low, and economic divergence could be offset only by cross-border fiscal transfers whose magnitude was far larger than a politically divided EU could ever accept. This critique was countered by the notion of OCA endogeneity,<sup>7</sup> according to which monetary unions can succeed even when OCA conditions are not satisfied initially. In this latter view, sharing the same currency is a condition that would act as an incentive for member nations' economies to converge and increasingly fulfill the OCA criteria. The hypothesis of endogenous OCAs offered euro architects a powerful argument for winning over critics of monetary union in Europe.

A second reason for proceeding with the creation of a single currency even when OCA conditions were not satisfied was based on the observation that the creation of a single currency was supplanting a system of fixed exchange rates, not one of freely floating currencies. In a

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<sup>6</sup> No other precedent of monetary union in Europe had contemplated a single issuer for the currency area (Einaudi, 2001).

<sup>7</sup> See Frankel and Rose (1998).

passionate defense of the euro, published by the European Commission as “one of the most exciting experiments in monetary history,” Jonung and Drea (2009) defied critics for being biased against the euro and for overlooking the fact that “Europe was facing a choice between permanently fixed exchange rates and semi-permanent fixed rates.” Consequently, the OCA criteria were inapplicable to the case of Europe’s transition to a single currency.

These same authors stressed that the true new character of the euro was not in the loss of policy autonomy that was already quite limited under semi-permanent ERM fixed rates. Rather, the leap forward was in removing monetary sovereignty from all eurozone states for good: “Never before have sovereign nation states surrendered their national currencies to a common central bank, abstaining from monetary sovereignty.” Breaking the link between money and governments was seen as a unique peculiarity and a strong point of the new currency when compared with the pre-existing exchange rate arrangement. From this perspective, and as long as one agrees that money printing creates no real wealth and only generates inflation, governments’ loss of monetary sovereignty can only be a blessing. Former ECB Executive Board member Otmar Issing (2006) explained it like this:

Relinquishing national sovereignty in such an important field is a substantive contribution to political integration. A central bank is, after all, an element of statehood. The Maastricht Treaty has made the ECB independent of any political influence so that it is able to fulfil its clear mandate of preserving price stability. Monetary policy-making is hence not only centralized but also depoliticized.

Issing was emphasizing that transferring monetary sovereignty from the member countries to the ECB was a way to lay down solid foundations for price stability. For him, this was enhanced by removing government control of the currency. By contrast, fiscal policy has a limited scope:

Compliance with the rules in Member States will keep deficits low enough to ensure government solvency while providing governments with the necessary room to smoothen economic fluctuations through the operation of automatic fiscal stabilizers.

This view admits that governments’ loss of monetary sovereignty introduces a solvency issue. Yet, in this view, it is of no concern as long as member states comply with the rules limiting deficits to the (supposedly) narrow fluctuations caused by business cycle conditions. In actual fact, the broken link between fiscal and monetary powers was viewed as a key condition for the



stability of the new Europe. Hence, debate on eurozone sustainability remained focused on OCA endogeneity and whether the single currency would facilitate economic convergence.

The monetary sovereignty question, however, was precisely the concern of a 1996 manuscript (published two years later) by Charles Goodhart. Goodhart had questioned if OCA could be the decisive benchmark against which to assess the sustainability of the new currency area. In his paper, he provided evidence that the Chartalist explanation of the nature of money has a much better predictive and explanatory capability than the competing and more widely held view of money as a means to minimize the costs of making exchanges in the process of trading and its related spatial/geographic facet of OCA theory. Goodhart (1998) explained:

Much of the economic analysis and assessment of the comparative advantages and disadvantages of moving to a single currency, Euro, area in Europe has been undertaken within the context of the Optimal Currency Area paradigm. This, in its turn, is the spatial/ geographic facet of the currently dominating model of the nature and evolution of money.

He concluded:

If, then, the key issue is the political relationship between control over money and sovereign power, we need to consider carefully what problems this may portend for the future Euro single currency area. In the Euro area, the traditional historical links between money creation and sovereignty will be broken to a unique extent. Money creation will be the responsibility of a federal body, the European System of Central Banks, intentionally made, by the Maastricht Treaty, entirely independent of Governments, whereas most other fiscal and other powers will remain in the hands of the participating nation states.

Thus, Goodhart's critique of the single currency project moved the focus of the inquiry into eurozone sustainability from the question of OCA conditions to the question of the broken link between money and government.

Yet, not all those who quoted or cited Goodhart seem to have fully understood his point. The conventional view remained that all a government loses by forfeiting its power to print money is its liberty to create inflation at will. Hence, introducing a solvency issue can only help to compel governments to abstain from being inflationary. Breaking the link of the currency to the state was precisely the reason many Euro architects had claimed the euro was going to be a high quality, stable currency.

In their response to economists who had claimed that the euro area would not match OCA conditions, Jonung and Drea (2009) rather grotesquely cite Goodhart in support of their defense of the euro: after all, Goodhart was supporting the notion that OCA theory is not a valid benchmark for assessing the future of the euro! Yet, they missed Goodhart's point on the importance of the link between each currency and its state and the possible consequences of moving monetary sovereignty to a non-state body like the ECB.<sup>8</sup> Jonung and Drea proudly described the strength of the single currency as being free of government and, while criticizing American economists' concerns about Europe as an OCA, they did not realize that Goodhart's article contained a much more devastating criticism than the one based on OCA conditions. What many, including Issing, Jonung, and Drea, saw as a blessing, Goodhart and others saw as a curse.

Ironically, when Jonung and Drea's paper was published, solvency had already become an issue, and the ex-sovereign debt crisis was beginning to unfold, threatening the survival of the eurozone. Since then, an increasing number of commentators have stressed the notion that the single currency deeply changed the nature of eurozone countries' debts, as national governments issue debt that is denominated in what is equivalent to a foreign currency, "one over which they have no control."<sup>9</sup> This meant that because the euro remains outside the control of the governments that continue to issue debt, countries' public finances have inevitably become vulnerable.<sup>10</sup>

Acknowledgment of the solvency issue along Goodhart's line, however, was understood in a way that made it consistent with the OCA issue: The solvency issue that had triggered the debt crisis was seen as a consequence of the intentional constrictions on member states, but the ultimate cause was seen in their lack of convergence. The crisis was seen as a failure of the OCA endogeneity hypothesis. In such a view, if member states would converge properly, the eurozone would again be a viable currency area. Solvency, in other words, had become the

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<sup>8</sup> They also missed the points raised by other critics who, before and after Goodhart's article, had expressed concerns with the broken link between currency and the state—critics such as Kaldor and Levy scholars including Godley, Forstater, Wray, and Kelton, and most notably Mosler, who had organized and funded a 1996 conference in Bretton Woods attended by Goodhart to discuss the vulnerability of the projected currency area in Europe.

<sup>9</sup> De Grauwe (2011). See also Corsetti and Dedola (2013).

<sup>10</sup> Kösters (2010), for example, asserts that "It is well known that a member state of a monetary union no longer has the ability to overcome public over-indebtedness by printing money."

benchmark for OCA endogeneity: When countries converge to an OCA, solvency is not an issue.

Under such a theoretical umbrella, the fact that eurozone countries now borrow in a currency that they can no longer domestically govern meant that they were losing printing power and thus surrendering the possibility to devalue and to inflate away public debt.<sup>11</sup> Viewed from this perspective, the loss of monetary sovereignty should become a problem only to a country that is structurally weaker than the others. In this view, any country that is too far from the norm of the currency area and cannot meet the overall discipline has no other option than to reform to converge or leave the euro.

The OCA-based critique of the euro seemed again vindicated: If a currency area does not fit with OCA conditions, the weaker countries will feel the consequences of having lost monetary sovereignty and be forced to leave. Indeed, taking monetary power away from Euro nations was precisely the goal, assuming this would act as a powerful incentive for weaker countries to reform their economies in a timely way. In this same view, any policy response aimed at introducing mechanisms for funding eurozone debt would mean admitting defeat in the fight for government discipline and opening the gates to inflation, and, in fact, when the ECB finally guaranteed national debts, the decision was highly controversial and was made strictly conditional to member states' maintenance of fiscal discipline.

### **3. BALANCED BUDGET DISCIPLINE AND THE CREATION OF SOVEREIGN DEFAULT IN EUROPE**

As discussed in the previous section, discipline in the eurozone had been intentionally designed to make the value of government debt no longer guaranteed by central banks. This is equivalent to making any government a plain user (rather than a monopoly issuer) of the currency. This section, which investigates the theoretical framework that supports the notion that there are net benefits in removing the power to “print money” from eurozone governments, has two parts. The first explores the logical foundation of the case for restricting government's power to print

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<sup>11</sup> See, for example, Martin and Waller (2012), who claim that “A country can overuse seigniorage and create very high inflation rates, even hyperinflation.”

money. The second part explains the specific means employed to make eurozone government debt defaultable and the measures that the ECB chose to embrace to avoid a euro implosion.

### **3.1 An institutionally Established Budget Constraint of Government**

This is a view that had become prominent in the 1980s and centers on three propositions that have their roots in the work of, among others, Friedman, Fischer, and Buchanan:

- 1) Money supply expansion is inflationary: Monetary aggregates expanding faster than the demand for money create inflation in the long run (Friedman, 1968);
- 2) Monetization is a common outcome of unsustainable debt: Any negative fiscal balance entails financial crowding out, and “unsustainable” debt prods the government to print money to cover the deficit, accelerating inflation (Fischer, 1989);
- 3) Governments are deficit biased: When voters are biased towards deficit spending (because of their short horizon), the democratic process fails to effectively monitor that the government does not threaten macroeconomic stability, and a constitutional rule is desired to limit governments’ power to spend in excess of tax receipts (Buchanan and Wagner, 1977).

According to this view and its three propositions, governments should establish rules that tie their own hands and limit their freedom in running fiscal deficits so as to avoid social welfare losses. Such rules are justified as a form of protection of future generations who are likely to bear the burden of either delayed taxes (when a deficit-biased government chooses to pay off debt by raising taxes) or inflation (when a deficit-biased government chooses to pay off its debt through monetization).

The prime rule is that money-printing power be removed from government. If the power to print money sits in the hands of the same authority making spending decisions, this leaves government spending decisions unconstrained, at least in the short run. When government possesses the power to print money, it is effectively free of any budget constraint, thus opening the possibility of uncontrolled increases in spending and hence in the size of the public sector.

According to a classic formulation of government budget constraint,<sup>12</sup> any fiscal deficit must be funded by issuing bonds (i.e., borrowing from residents and/or from foreigners) or by printing money (i.e., borrowing from the central bank). When governments persistently run

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<sup>12</sup> See Fischer (1989).

fiscal deficits, they will sooner or later “print money to cover their budget deficits [...] Rapid inflation is almost always a fiscal phenomenon.”<sup>13</sup>

This is typically illustrated by the following fiscal funding condition:

$$G - T = \Delta B + \Delta M \quad (1)$$

where  $G$  is public spending,  $T$  is tax receipts,  $\Delta B$  is the newly public debt issued in the period and purchased by the private (domestic and foreign) sector including banks, and  $\Delta M$  is the newly issued money stock. Equation (1) also intends to capture the impact of public deficit on private sector balance sheets. Common interpretation goes as follows: Government spending ( $G$ ) is primarily funded by taxes ( $T$ ). When, in any given time period, taxes fall short of spending, then funding must come from bond issues. Normally, these issues are purchased by the private sector ( $\Delta B$ ), in which case the private sector funds the difference between public spending and taxes by lending the currency it holds to the government in exchange for a promise of a greater amount of currency in the future. If, instead, new debt is purchased by the central bank, this means no additional debt in the hands of the private sector and a corresponding increase in the money stock in circulation ( $\Delta M$ ).

Using newly printed money as a source of funding is conventionally called “debt monetization,”<sup>14</sup> and when this kind of funding is available without limits, government spending is said to be unconstrained. If Buchanan’s hypothesis that voters and governments are deficit-biased holds, then deficits and inflation will rise rampantly. For this reason, monetization is considered the ugly beast that scares markets, threatens price stability, and supports any reckless government activity. When monetization goes too far, it is said, it will raise inflation to the point where individuals flee from the currency, causing hyper-inflation. This makes it imperative to remove the money-printing weapon from government’s hands and keep the process of money creation remote from politics by assigning it to an “independent central bank.” This is well summarized by Hamilton (2008):

[T]he power to create money is precisely the kind of power we never want to have in the hands of Congress or the President. If the politicians had the ability to pay for their programs simply by printing money, there is no question that the outcome would be

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<sup>13</sup> Fischer (1989, p.20).

<sup>14</sup> Monetization of public debt is synonymous with “printing money,” and here it stands for a purchase of government bonds by the central bank that provides the private sector with additional means of payments.

ferocious inflation. One of the clearest lessons of history is that a central bank that lacks strong independence from the fiscal authorities is a recipe for disaster.

The ability to create money to pay for whatever you might deem worthwhile is one that few human beings are capable of exercising responsibly. For this reason, the key institutional premise on which an independent central bank is founded is that it in fact does not have the power to create wealth or direct its allocation at all.

To respond to such a threat, governments should, in this view, be prohibited from printing money directly or from selling new debt to the central bank, thus excluding the monetization option. Once a rule is established to prohibit government from monetizing, fiscal funding condition (1) becomes:

$$G - T = \Delta B. \quad (2)$$

In other words, the institutional prohibition of monetization allegedly compels the government to face a harder constraint: Any spending in excess of taxes should ultimately be funded by selling bonds to the private sector ( $\Delta B$ ) and by future tax collection. This, however, is not an ordinary condition, but a construct aimed at preventing government from monetizing its debt, or, in other words, preventing government from borrowing from the central bank without limits.

Once the monetization option is excluded, government default becomes possible, and an Institutional Budget Constraint (IBC) is purposely designed as a form of protection of future generations. The desired policy outcome of the IBC is precisely that of imposing an inter-temporal (or inter-generational) budget constraint on the government, whereby government spending is made dependent on current and future taxes.<sup>15</sup>

In a number of countries, a range of institutional provisions has been put into effect in order to limit governments' power to "print money" and assign this right to the central bank. These include prohibiting government from receiving overdraft facilities at the central bank and the rule prohibiting the central bank from buying bank securities directly from the government. In the US, the main provisions aimed at this goal are laid down by the Federal Reserve Act.<sup>16</sup>

The catch, however, is that even under such institutional constraints monetization remains an option. Consider, from an IBC perspective, a government that has surrendered

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<sup>15</sup> If government is a currency user, its debt is sustainable if the stock of outstanding debt does not exceed the discounted value of future government primary surpluses.

<sup>16</sup> This allows the Fed to buy Treasury securities in the "open market," but not directly from the U.S. Treasury.

money-printing power to the central bank but remains biased towards deficit spending. Because its ability to pay off the debt under a “no monetization rule” (hereafter NMR) depends on current and future tax collection, debt with the private sector may become “unsustainable.”<sup>17</sup> Although new taxes can always, in principle, be imposed to pay off the debt, there is a limit to the tax burden that an economy can bear, and when that limit is reached, the government can no longer pay off the debt with tax collection. When, under NMR, government funding needs far exceed any reasonable tax pressure, the government should declare its inability to pay off the debt.<sup>18</sup>

Alternatively, however, it could use its political sovereign power to overturn any existing NMR.<sup>19</sup> Within the logic of the IBC, this means that when monetization is formally barred, and yet deficit and debt are not capped, an IBC may not be effective in preventing “unsustainable debt.” Government may keep accumulating debt until debt overhang gets to a point where the government must choose to declare default or reverse the NMR. Thus, insofar as government preserves the constitutional power to compel the central bank to buy its debt without limit, debt monetization continues to be an option, even when an NMR is in place. As it turns out, the NMR is best understood as a means of preventing creeping monetization. Yet, it cannot prevent a breach of the rule one minute before declaring default. In other words, as long as the national government retains its constitutional monetary sovereignty, any provision taking that away from the government can be reversed at any time.

From an IBC perspective, if monetization cannot be fully ruled out, the question then becomes how to prevent the building up of an unbearable debt overhang that makes monetization desirable. In principle, if financial markets are efficient, they will effectively discipline governments by checking any government-deficit-bias behavior in a timely manner. If “bond vigilantes” sense that government has a weak strategy for balancing the budget over time, the market price of government bonds drops and this acts as a signal that fiscal adjustment is

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<sup>17</sup> If the only remaining source of funding is tax collection, this casts doubt on the effectiveness of deficit spending on aggregate demand. In the IBC view, if the private sector understands the implications of the “no monetization” constraint and thus expects more future taxes anytime it observes a rising deficit, then the Barro-Ricardo equivalence would hold.

<sup>18</sup> In the aggregate, a new tax is a reduction of private financial assets as much as a government debt default is.

<sup>19</sup> This is what is known as a case of “time inconsistency.”

warranted. The government will be prompted to adjust its fiscal course before its debt becomes unsustainable.

Yet, following the logic of maintaining an NMR, a question arises: What if the government stubbornly ignores market signals and continues to accumulate debt? And what if markets and bond vigilantes are too lenient with government debt? Deficit- and debt ceilings may be employed, but no self-imposed limit is permanent, and rules can be changed anytime the limit is reached.<sup>20</sup> Hence, it seems that any institutional NMR offers a far-from-perfect solution to the Friedman-Fischer-Buchanan concerns: While rules would seem to be effective in putting off monetization in the short run, they cannot prevent debt hangover and, at some point, massive monetization whenever the government decides to reverse the rule to avoid default.<sup>21</sup> In this regard, any NMR is a reversible commitment.

Finally, one additional (and especially relevant to the rest of this paper) reason why an NMR is believed by its own proponents to be hardly applicable is the possibility of “de facto” monetization when the central bank purchases government debt from banks in the secondary market. This act of removing government debt from private balance sheets and replacing it with central bank money is what Mishkin (1992, p.421) calls a “two-step” monetization process. Because this kind of action is considered to be part and parcel of central banks’ monetary policy operations, “debt monetization cannot be analyzed separately from the objectives of Federal Reserve policy,”<sup>22</sup> and whether or not the central bank (say, the U.S. Federal Reserve) does or does not monetize public debt, even under NMR, is ultimately a question of “managing the supply of the monetary base in accordance with the goals set by its dual mandate.”<sup>23</sup>

From a Friedman-Fischer-Buchanan perspective, if NMR is so hard to enforce, a more effective provision would seem to be one that employs the tools designed to limit the power of government in any constitutional democracy. This is an over-arching principle binding government, a constitutional rule that removes the money-printing power from the government and that government cannot repeal without a qualified majority of representatives. Because any

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<sup>20</sup> Similar considerations apply to the case when government constrains its own budget by making the currency redeemable at a fixed price in an asset that the government does not issue. Such commitment can normally be reversed at any time.

<sup>21</sup> Notice that in the Friedman-Fischer-Buchanan view, monetization is described as a default event: Paying off the debt with “debased money” is a means for government to default on its promise to repay debt.

<sup>22</sup> Thornton (1984).

<sup>23</sup> Andolfatto-Li (2013).



NMR is a self-imposed constraint, an over-arching rule is more credible as long as it lowers the threat of a last-minute reversal. A similarly powerful commitment would be replacing the national currency with a foreign currency.

### **3.2. The Government Budget Constraint in the Eurozone**

A distinctive example of a solution along these lines is given by the design of the eurozone. Consistently with the IBC perspective, euro architects wanted to avoid that any of the countries sharing the same currency could “monetize” debt and thus inflate the entire area. Accordingly, an overarching, quasi-constitutional rule was established through the Treaty of the European Union aimed at removing any central bank funding channel to national governments. Direct financing arrangements between the ECB and the member states’ governments were prohibited, and the ECB was designed to be far removed from fiscal powers in such a way that it has no obligation to assist (and, in fact, an implicit mandate to discipline) governments in their financing processes.

This principle of separation between eurozone governments and the ECB reflects the “spirit of the Treaty.” The way it was put into practice is in many ways equivalent to central bank independence provisions that exist in most other countries, as the ECB conformed to the widely adopted rule that central banks are not allowed to directly purchase newly issued government securities.

There was, however, one considerable distinction with the ECB procedure for carrying out refinancing operations that was designed in sharp contrast to those in place at other central banks. This was effectively aimed at preventing the possibility of a “two-step” monetization process. In describing this possibility, Thornton (2010) claims that a central bank engaged in the secondary market of government debt may behave in such a manner as to avoid any hidden support to public debt sustainability. Evidently, however, the eurozone did not want to leave any chance of that happening and attained one additional form of protection from monetization that fundamentally differs from other central banks.

When offering central bank money to banks, the ECB does not normally make outright purchases of government securities. Rather, liquidity is loaned to banks against collateral. The latter may include private, as well as public, debt as long as this debt is deemed “eligible” and after an appropriate haircut has been applied. While other central banks normally manage bank

liquidity by trading central bank money for government securities at the chosen policy rate (either outright or through repurchase agreements), the ECB lends at the policy rate against collateral, leaving government bonds to be priced as credit-sensitive assets. Hence, the key difference from other central banks is that the ECB cannot be an unconditional market maker of government bonds.<sup>24</sup> Member countries' public debts do not necessarily trade at, or close to, the policy rate, and instead reflect credit risk.

The eurozone governance system was thus deliberately designed to prevent direct, as well as indirect, monetization. This was clearly not an oversight by Euro architects, who truly intended to create a powerful disciplinary tool and an effective means of banning governments from printing money in the eurozone. From an IBC perspective, any eurozone government that accumulates debt to the point that it becomes unsustainable could not monetize it. Not even a change of rules is an option, considering the fact that no single country can unilaterally amend rules written in an international treaty.<sup>25</sup> What is different in the eurozone is that monetization can no longer be considered a voluntary alternative to default. Default can be avoided by loan agreements, but only as long as other member states agree on extending loans.<sup>26</sup>

While any NMR, as discussed above, is institutionally established and politically enforced so long as it is in the interest of the political authority, enforcement responsibility in the eurozone is assigned to an allegedly politically neutral body—the ECB—rather than being placed in the hands of governments that may want to reverse it. Undoubtedly, the key feature that any NMR is revocable is still relevant, and any member state retains the possibility of reversing the rule by leaving the eurozone. Yet, such a choice would entail the politically traumatic decision of exiting the European Union.

As discussed in section 1, the decision to make government debt credit sensitive had serious drawbacks, and the euro crisis provides evidence that a monetary system is not operationally sustainable if the central bank refuses to support the price of government debt. In May, 2010, the ECB found a way, consistent with the “spirit of the Treaty,” to purchase government bonds through the Securities Market Program (SMP) that was justified under the

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<sup>24</sup> While the Fed is not a market maker of state and municipal bonds, it can be a market maker of Federal Treasury securities.

<sup>25</sup> While U.S. constraints can be lifted by a vote of Congress, Euro constraints seem to be written in stone: In the eurozone, a national decision to override rules would mean breaking that stone.

<sup>26</sup> Notice that any government making a loan inevitably worsens its own fiscal position.

circumstance of what the ECB called “dysfunctional market segments” hampering the “transmission mechanism” of monetary policy. In 2012, the President of the ECB announced that the ECB would, in emergency, enter the government bonds market as massively as necessary (through OMT) to prevent the implosion of the currency.

The announcement was and remains controversial. Yet, it seems that the institutional design of the eurozone remains coherent to NMR: Any direct participation of the ECB in the government bond market should be justified by a malfunctioning of the transmission mechanism and either be limited and temporary (SMP) or be strictly conditional (OMT). Far from being a concession to debt monetization, the ECB approach to member countries’ debt overhang through OMT has the appearance of an enhanced technique to implement NMR.

As discussed in the previous section, any government budget constraint exists only under specific institutional rules and only until those rules are reversed, and a government that retains its power to issue its own currency may agree to subject itself to a self-imposed rule, but may always choose to reverse the rule instead of declaring default. In the eurozone, this option was removed as a unilateral initiative of a single government, and yet the ECB has the option of exceptionally “monetizing debt” through OMT to avoid default while simultaneously compelling governments to adjust their fiscal positions to be consistent with the IBC.

#### **4. THE FISCAL FUNDING CONDITION RECONSIDERED AND THE MYTH OF DEBT MONETIZATION**

As discussed in section 3.2, a “soft” IBC applies to a government that is subject to self-imposed rules, retains monopoly power to issue its own “fiat” currency,<sup>27</sup> and does not forbid the central bank from buying and selling government debt as a means to implement monetary policy. By contrast, the eurozone was designed to include an institutionally established “hard” budget constraint in the fiscal funding condition of member countries.<sup>28</sup> This was considered an essential pillar of a policy aimed at price stability.

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<sup>27</sup> A “fiat” national currency is a credit with the state that can only be formally redeemed against liabilities with the state.

<sup>28</sup> Under the “hard” eurozone IBC, a member country whose debt is priced so low as to threaten its ability to borrow will face two possible options: enter a European Stability Mechanism program and have its debt backed by

The social welfare effect of the “hard” eurozone constraint on government budgets, however, depends on the soundness of the Friedman-Fischer-Buchanan model and of the fiscal funding equation (1). This section will address one fundamental problem with the IBC view and demonstrate that equation (1) incorrectly specifies the fiscal funding condition. This condition should be framed differently to take into account the payment system that banks offer to the private sector (to properly appreciate the consequence of monetization in the primary market for government bonds) as well as the link between fiscal and monetary policy (to properly appreciate the consequence of monetization in the secondary market for government bonds). Once equation (1) is appropriately modified and the fiscal funding condition well-framed, the impact of public deficit on private sector balance sheets looks quite different from the one described in equation (1), and the very notion of monetization as a threat to price stability loses significance.

Figure 1 illustrates the impact of net government spending on the consolidated balance sheets of the banking system and of the non-bank private sector.

*Figure 1* The Impact of Net Government Spending on Private Sector Balance Sheets

	Assets	Liabilities
Bank	$\Delta C_B^b + \Delta B_G^b$	$\Delta D_b^{nb} + \Delta L_b^B$
Non-bank	$\Delta C_B^{nb} + \Delta B_G^{nb} + \Delta D_b^{nb}$	

Notice in Figure 1 that the change in the money stock held by the private sector ( $\Delta M$ ), as described in equation (1), has been replaced by

- i) A change in central bank money ( $\Delta C_B$ ), i.e., a liability of the central bank that can be held as an asset by the banking sector as a net credit position with the central bank ( $\Delta C_B^b$ ) as well as by the non-bank sector as a stock of banknotes ( $\Delta C_B^{nb}$ );
- ii) A change in bank deposits ( $\Delta D_b^{nb}$ ), i.e., a liability of the banking sector and an asset for the non-bank sector.

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OMTs or leave the EMU. As discussed, any government budget constraint exists only under specific institutional rules and only until those rules are reversed. In the case of the eurozone, however, a member state that is willing to restore its “monetary sovereignty” (as defined in footnote 4) would need to repeal the Treaty on European Union.

In addition, change in government debt ( $\Delta B_G$ ) held by the private sector ( $\Delta B$ ) in equation 1) has been broken down into change in government debt held by the banking sector ( $\Delta B_G^b$ ) and change in government debt held by the non-bank sector ( $\Delta B_G^{nb}$ ). Finally, notice that banks can borrow  $C_B$  by obtaining a loan from the central bank ( $\Delta L_b^B$ ).

A measure of the overall impact of net government spending on the private sector (Bank and Non-bank) is the sum of all assets and liabilities of the bank and the non-bank private sector, as illustrated in Figure 1. Thus, equation (1) should be rewritten as:

$$G - T = \Delta C_B^b + \Delta C_B^{nb} + \Delta B_G^b + \Delta B_G^{nb} - \Delta L_b^B \quad (3)$$

or

$$G - T = \Delta C_B + \Delta B_G - \Delta L_b^B \quad (4)$$

Equation (4) is the new fiscal funding condition and substitutes both equations (1) and (2). Assuming, for the sake of simplicity, that all recipients of government spending and taxpayers belong to the non-bank private sector, then

$$G - T = \Delta C_B^{nb} + \Delta B_G^{nb} + \Delta D_b^{nb} \quad (5)$$

This means that any fiscal deficit ( $G-T$ ) entails a net payment to the non-bank private sector and thus a change in this sector's net claims against the Treasury or the central bank.

Equations (3), (4), and (5), along with Figure 1, shed new light on the nature and consequences of monetization. The following points matter for this discussion.

**1) Net government spending is equal to the change in net worth of the private sector.**

Net payments made to the private sector necessarily result in an increase in some combination of bank deposits (claims against banks), banknotes (claims against the central bank), or government bonds (claims against the Treasury). This coincidence holds irrespective of who buys and holds government bonds (the private sector or the central bank).

**2) An increase in the money stock is an outcome of net government spending, irrespective of whether the central bank does or does not purchase government debt from the government or the banks.**

Employing the ordinary definition of “money stock” as the value of means of payments (currency and deposits) held by the non-bank private sector, the change in the money stock generated by net government spending equals:

$$\Delta M = \Delta C_B^{nb} + \Delta D_b^{nb}$$

Given the size of net government spending ( $G - T$ ), then  $\Delta M$  depends on the private sector’s preference for holding money (currency and deposits) or government bonds.

**3) An increase in the money stock cannot be an outcome of central bank’s purchases of government debt from the government or the banks.**

Central bank’s purchase of government debt entails that

$$\Delta B_G < (G - T)$$

and thus, given equation (4),

$$\Delta C_B > \Delta L_b^B$$

This has no effect on  $\Delta M$ : Either banks hold a greater C balance or they convert their balance with the central bank into banknotes and sell them to the non-bank private sector by debiting their deposits ( $D_b^{nb}$ ), leaving the money stock again unchanged.

Two main conclusions can be drawn from this section. First, once the role of banks as payment agents of the government sector is considered, any government deficit, irrespective of whether or not an NMR exists, may cause an increase in the money stock held by the non-bank private sector. This means that the inflationary power of net government spending does not depend on who buys the government bonds.

Second, a “no monetization” rule has no consequence on debt sustainability as long as the central bank is not forbidden from acting as the market maker of government bonds. If the central bank can trade  $C_B$  for  $B_G$ , or  $B_G$  for  $C_B$ , on the secondary market as desired, then the price of government bonds on the secondary market (conventionally, the short-end) is set by monetary policy. Under such conditions government debt is not credit sensitive, and B and C are functionally identical, except that B cannot be directly used to settle payments and must first be converted into C.

## 5. EUROPE'S NARROWING OPTIONS AND ONE EU-FRIENDLY SOLUTION

The “fiscal discipline” of which Eurozone architects were so proud was aimed at making “no monetization” rules much harder to reverse by politically sovereign nations, as no single country can unilaterally amend rules written in an international treaty without breaking that treaty. The key provision in the eurozone, however, is not that of prohibiting the ECB from directly financing governments. This same provision exists in the United States and it does not make US government securities defaultable: By acting as market maker of Federal debt, the Fed has the option to stand ready to convert “forward central bank money” (government debt) into “spot central bank money” (banks’ balances at the central bank) on demand, at the chosen policy rate. Unsurprisingly, the US government can default only by deliberate repudiation. Eurozone debt was instead made defaultable through the prohibition that the ECB monetize eurozone government debt, at least until the ECB revealed it could function as a market maker through OMTs.

If the ECB had been allowed to trade member states’ bonds, targeting their yield, we would not have seen any sovereign debt crisis. However, just as the Fed has no mandate to be a market maker of local and municipal debt, the ECB has no mandate to function, unconditionally, as the market maker of eurozone government debt. Except for the announced and not yet implemented OMT program, the ECB funds banks on “eligible collateral,” not through outright purchases in the government securities market. National government securities can be used as collateral, valued with reference to market price with haircuts, and there is no guarantee that high-debt countries' debts are considered eligible. This procedure is equivalent to making European government de facto defaultable. Each member state is no different than a regional municipality whose spending is constrained by its capacity to obtain external funding.

Making government debts defaultable was the intention of eurozone architects. This would not have caused banking and monetary instability if they had effectively addressed two main issues: First, all pre-eurozone member states’ debt was simply redenominated in euros as countries entered the eurozone, thus making past safe debt suddenly become credit sensitive. Second, they lacked a plan to create a bond issued by a eurozone body and guaranteed by the ECB (equivalent of US federal government debt).

Clearly, with such an institutional setup it was just a matter of time until the euro area would have to face a potentially devastating debt crisis. Only favorable conditions of growth driven by net exports and private credit expansion postponed debt strain pressure.<sup>29</sup> With the global crisis of 2008–2009, member states’ debt increased as a result of cyclical factors. Because eurozone rules had made such debt credit sensitive, the option of monetization materialized in the form of a redenomination of debt in a different currency unit: Leaving the eurozone became a credible alternative for some eurozone member states. The “ex-sovereign” debt problem occurred not because the enforcement of deficit and debt limits was too loose. It occurred because all government debt had been made defaultable, and this is a threat to the stability of any monetary system.

When such a threat developed in 2012, the ECB had no other option than to offer some form of protection to government bonds issued by member states. There is no reason to doubt that the ECB was fully aware that monetary financing prohibitions such as those included in the Treaty on European Union can play “a key role in deepening the crisis”<sup>30</sup> when it started the SMP and then announced the creation of OMTs. The ECB prevented the collapse of the payment system by making an exception to the “no monetization” rule. The exception was justified by the fact that the euro was on the brink of collapse and without such a move the entire eurozone would be at risk of imploding.

The ECB went as far as it could under the treaty provisions, but this meant making its intervention conditional to strict EU-monitored compliance of fiscal discipline rules. Eventually, Draghi’s move served only to further narrow Europe’s options. Fiscal discipline, with weak net exports and feeble private credit expansion, means stagnation, high unemployment, increasing poverty, and social unrest, thus laying the groundwork for the collapse of the single currency area.

Now that the ECB has addressed the destabilizing effects of an arrangement that had prohibited any form of guarantee of national government debt, a solution for Europe necessitates broadening Europe’s options. Shared prosperity and full employment in Europe are not an option under the existing setup, but may become an option under a variety of scenarios.

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<sup>29</sup> The fact that net exports largely originate from a specific geographical area within the eurozone makes internal imbalances appear problematic.

<sup>30</sup> Bindseil and Winkler (2012).



The creation of a federal budget approved by a federal government would be a way forward, but it is not a required institutional reform for adding the option of prosperity and full employment.

A solution that does not require a European federal government is any resolution that allows the eurozone to carry on sufficiently large consolidated net spending so as to bring the private sector's net worth back to a level that supports greater aggregate demand and job creation. Amending the Fiscal Compact is not a necessary condition for making this plan viable. It is sufficient that the EU agree on:

- a) issuing a eurobond, conceivably through the European Stability Mechanism, that the ECB will have the option to trade at the chosen policy rate;
- b) using the revenue obtained from the eurobond issue to fund an increase in net government spending, of an overall size agreed upon at the EU level, directed to all countries in proportionate shares;
- c) excluding such increase in net government spending from the calculation of national public deficit ceilings.

Funds will be transferred to EU governments pro quota, only and exclusively to support fiscal programs that are acknowledged to be in the common interest of the EU. Net government spending could be raised either with spending programs or with a tax cut across the board that the EU deems is "in the interest of Europe." The task of policy makers is to prepare the political ground for restoring aggregate demand and job creation, but they should not fear the new eurobond, as there is nothing to fear. It is just the missing element of a common policy that would provide growth and employment in Europe.

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