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Wissenschaftszentrum Berlin  
für Sozialforschung



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**Discussion Paper**

SP II 2012-304

December 2012

Research Area

**Markets and Politics**

Research Unit

**Economics of Change**

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Abstract

## **Institutionalizing Eurozone Exit: A modified NEWNEY approach**

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In this note, we argue that the Eurozone needs an institutional exit mechanism to enhance Eurozone stability, and propose modifications to the Dobbs' NEWNEY mechanism, the only mechanism that satisfies the twin properties of eliminating incentives for intra-Eurozone capital flight and maintaining Eurozone price stability. Our modifications eliminate moral hazard, allow for a fair distribution of costs (between and within countries) and are also appropriate for the exit of a fiscally strong country.

Wir befürworten einen institutionellen Exit-Mechanismus für die Eurozone, nicht zuletzt um die Stabilität der Eurozone zu stärken, und schlagen Modifikationen zu Dobb's NEWNEY Mechanismus vor, dem einzigen Mechanismus, der Anreize zu Kapitalflucht innerhalb der Eurozone eliminiert und Preisstabilität garantiert. Unsere Modifikationen eliminieren moral hazard und erlauben es, die Kosten eines Exits gerecht zu verteilen, sowohl zwischen Ländern als auch innerhalb eines Landes. Der modifizierte Mechanismus eignet sich nicht nur für den Exit eines fiskalisch schwachen, sondern auch für den Exit eines fiskalischen starken Lands.

*Keywords: Monetary Union, Eurozone exit, NEWNEY*

*JEL classification: E42, F30*

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Despite Mario Draghi's now-famous pledge to do 'whatever it takes' to save euro, the EU has been unable to dispel Eurozone uncertainty. Currently, the Intrade market places the probability of an exit by the end of 2014 at 55 percent, and the continued flow of capital away from 'peripheral' Eurozone countries show that this assessment is shared by investors and firms. Therefore, many analysts predict that without significant political developments, speculation regarding a costly Eurozone exit will soon return in force.

This Eurozone uncertainty remains a substantial drag on the European economy, the value of the euro and indeed the fundamental idea of European integration (see recent developments in the UK regarding the EU budget). Therefore, to mitigate the negative effects of Eurozone uncertainty, the EU must adopt a structured mechanism for orderly exit. Only once such a mechanism is in place can the EU convincingly assure economic agents that any exit will proceed smoothly, with no contagion and minimal disruption to markets and the financial system, a necessary step to eliminate the negative externalities of the debt crisis. Moreover, an exit mechanism that honors the fundamental principles on which the union is built will also help maintain political stability and ensure that Eurozone exit does not risk a break of the European project.

The best candidate for such a mechanism is Dobbs' (2012) 'NEWNEY' approach, the only mechanism that satisfies the twin properties of eliminating incentives for intra-Eurozone capital flight and maintaining Eurozone price stability if properly calibrated. However, Dobbs' approach suffers from a number of unattractive properties that we believe prevented it from receiving serious attention by policy-makers, most importantly the moral hazard problem it creates and the implied regressive taxation of EU citizens. In this note, we show how these deficiencies can be cured by simple, yet practical, modifications and also discuss how the mechanism can be smoothly implemented and adapted for the case of exit of a country in strong fiscal position. We argue that the commitment to a formalized exit mechanism should enhance the stability of the eurozone and show how a modified version of Dobbs' approach satisfies all key desiderata for structured exit. Crucially, it maintains, contrary to some other recent proposals, the core principles on which the political and economic union is built, in particular regarding equal rights of all Eurozone citizens, freedom of movement, and non-discrimination.

Dobbs' mechanism is based on a simple logic: each euro in existence will be converted to a share of 'new' euros (*euro'*) and the exiting country's currency, that we shall label 'florin.' The rate of conversion will be set by the following formula:

$$1 \text{ euro} = \frac{MS'}{MS} \text{euro}' + \frac{MS^x}{MS} \text{florin}.$$

Where  $MS$  is the money supply of the Eurozone,  $MS'$  is the money supply of the Eurozone minus the exiting country and  $MS^x$  is the money supply of the exiting country (in euros). Following conversion, 'new' euros will be the legal tender in the new, smaller Eurozone and florins will be the legal tender in the exiting country.

As Dobbs details, this mechanism has two important properties: First, it eliminates incentives for intra-eurozone capital flight since each euro is converted equally, regardless of where it is held. Second, price stability will be maintained in the Eurozone since the total stock of euros following exit will be precisely equal to the pre-exit stock of euros in the countries remaining in the Eurozone; that is, the money supply in the countries forming the post-exit Eurozone is not affected by exit.<sup>1</sup> The mechanism also has two main disadvantages: First, adopting the mechanism creates a moral hazard problem since the cost of devaluation by the exiting country is distributed equally among holders of the euro in both staying and exiting countries. Second, this cost hits people whose wealth is predominantly in money-holdings (that is, the relatively poor) harder than others whose wealth is spread among different types of assets.

### **Exit by member in weak fiscal position**

First, consider the exit of a country in a relatively weak fiscal position. In this case, the primary threat is contagion: markets fear that one exit will force other countries in weak fiscal positions to exit as well. The situation is particularly precarious since the fear of correlated exit is self-fulfilling: If investors take one unstructured exit as a signal that other costly exits will follow, then exit will cause capital flight from other Eurozone countries in weak fiscal positions, which will drive up interest rates for their government bonds. Therefore, one unstructured exit can cause other weak, but still fiscally solvent, countries to lose access to capital markets and without large bailouts they will have no option but to follow the course of the first troubled country and exit and devalue.<sup>2</sup>

Adopting the Dobbs' mechanism for exit eliminates the threat of contagion by removing incentives for intra-eurozone capital flight. However, the mechanism does not render exit costless. Since the exiting country's currency will face an imminent devaluation, the exchange rate between 'new' euros and florins will be less than parity. The cost of exit would take the form of a tax on money holdings, which is borne by all euros equally. A back-of-the-envelope calculation using GDP ratios as a proxy for money supply ratios and supposing a 50 percent devaluation shows that Greek exit would result in a 1.14 percent tax. A Spanish or Italian exit, supposing a 30 percent devaluation, would result in a 3.39 and 5.03 percent tax respectively. A worst-case-scenario involving the exit of Greece, Ireland, Italy, Portugal and Spain (PIIGS), and an average 30 percent devaluation (50 percent for Greece) would result in a 10.93 percent tax. While these numbers are not trivial, they must be weighed against the potential losses resulting from an unstructured exit of these countries.

Since the cost of exit and devaluation by the exiting country is spread over all holders

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<sup>1</sup>This assumes demand for money remains constant. Note that the mechanism provides a short-term disincentive to hold cash immediately prior to an exit announcement, and could therefore lead to a decrease in money demand in anticipation of an exit. After the exit announcement, however, there is no disincentive to hold cash, and money demand will return to normal.

<sup>2</sup>For a more detailed discussion of Eurozone disaster scenarios see the recent briefing by The Economist, "Breaking up the euro area" (August 11, 2012).

of the euro the mechanism introduces a moral hazard problem.<sup>3</sup> This moral hazard problem, however, can be solved through a lump-sum transfer. By implementing an exit fine, calibrated to the full cost of exit, the mechanism eliminates the moral hazard problem. Of course it might not be necessary for the exiting country to bear the full cost of exit: other countries, which have benefited from the euro project, should arguably bear some of the costs due to realization of downside risks which have led to the necessity of an exit. We make no judgement here as to the proper division of exit costs; we simply state that our mechanism could accommodate any division of the exit costs through the imposition of an exit fine. The actual split of costs can be negotiated through normal political process.

To calibrate an appropriate fine, the cost of exit must be easily quantifiable and, importantly, contractible. Therefore, another desirable property of the exit mechanism is that the cost of exit can be calculated by the following formula:

$$\text{Total Cost} = (1 - \text{xrate})MS^x$$

Where *xrate* is the market exchange rate between florins and ‘new’ euros (*florin = xrate \* euro*). Since both *xrate* and  $MS^x$  are verifiable and contractible, an exit fine can be contracted at, for example, *y* percent of the Total Cost.

## Exit by member in strong fiscal position

Unstructured exit of a country in a strong fiscal position would also be problematic. For example, consider an exit of Germany, whose currency would be expected to be stronger than the euro. While exit will not cause financial contagion in this case, exit would still result in a large loss of wealth for the exiting country due to capital inflight. Anticipating that the exiting country’s currency will be stronger than the euro, euros would flow from the Eurozone to the exiting nation. Therefore, in an unstructured exit euros would be disproportionately converted to marks, resulting in a money supply of marks which is greater than  $MS^x$ . The resulting ‘inflation’ would cause a loss of wealth for individuals in the exiting country.<sup>4</sup>

The mechanism above will also mitigate the adverse effects of the exit of a country in a relatively strong fiscal position: Again, the incentive for capital inflight would be removed by the mechanism since each euro is converted equally, regardless of where it is held. The mechanism also preserves price stability in both the exiting country and the Eurozone. These results follow simply from the fact that, using the formal structure we have introduced above and swapping the ‘euro’ and ‘florin’

<sup>3</sup>Akin to the moral hazard problem introduced by bailouts, this moral hazard problem could also induce countries in the eurozone to conduct risky fiscal policy.

<sup>4</sup>See De Grauwe and Yuemei Ji (2012) for a more detailed discussion of the dangers of increasing TARGET2 claims. The authors explain that capital inflight by individuals could be mitigated by only converting deposits by residents. International firms, however, could still shift money holdings to the exiting country, and individuals could circumvent this measure by buying assets in the exiting country and selling them after exit. Moreover, conversion for residents only would jeopardize some of the fundamental values of the EU such as non-discrimination.

labels, the exit of the country with the strongest currency is equivalent to the exit of all countries *but* the strongest.

A possible objection to the mechanism is that the Eurozone can hold a country “hostage” by threatening to devalue after exit. This is analogous to Sinn’s (2012) argument regarding Target 2 claims and capital inflight; for example, if the Eurozone devalued the ‘new’ euro after a German exit, then Germany would be forced to share the cost of the devaluation since German euros would also be partially converted to ‘new’ euros. As above, this moral hazard problem is eliminated by an exit fine, which would be negative if the Eurozone devalued following exit (that is it would impose a transfer from the Eurozone to Germany). Note that the fine would be equal to zero unless inflationary policy is pursued post-exit. Therefore, the fine serves only to prevent the moral hazard problem, not to transfer wealth to the exiting country.

If the mark were reintroduced, there is also the possibility that it could be viewed as a safe-haven currency, similar to the Swiss Franc. This would increase the value of the mark relative to the euro without a Eurozone devaluation. Therefore, to insure an exit fine is not affected by ‘exogenous’ factors in the case of say, German exit, a negative exit fine could be based on the euro’s value relative to an external bundle of currencies (such as the dollar), or even a bundle of goods. This would solve the reverse moral hazard problem and make the exit fine robust to external currency speculation.

## Implementation

Logistically, currency conversion would need to be a gradual and organized process. Therefore, Eurozone exit and the resulting conversion should be facilitated by the central banking system and would likely take the form of a direct conversion from ‘old’ to ‘new’ euros, where the rate of exchange between the two would be determined by the market rate of exchange of ‘new’ euros to florins.

$$1 \text{ euro} = \frac{MS' + \text{xrate} * MS^x}{MS} \text{euro}'.$$

Importantly, as soon as exit is announced the situation is stable, in the sense that there are no opportunities for arbitrage since the tax on money holdings will be immediately priced into exchange rates. Therefore, as Dobbs’ original proposal outlines, conversion can be completed gradually since the ‘old’ euros and ‘new’ euros can exist as parallel currency (as can ‘old’ euros and florins in the exiting country).

Above we detail the attractive economic properties of the mechanism, but we must also consider the political feasibility of the mechanism, which after all, does amount to a tax on money holdings. Unadjusted, this would disproportionately tax households which have a larger proportion of wealth in money holdings, i.e., predominantly low income households. This is the second important shortcoming of the NEWNEY model. It is, however, not too difficult to modify NEWNEY such that costs are

more fairly distributed. Specifically, we propose to adjust the burden by allowing individuals to exchange up to  $Q$  'old' euros at a one-to-one exchange rate.<sup>5</sup> This subsidy could in turn be financed with the proceeds of the exit fine. In essence the eurozone exit will be financed by a combination of a fine on the exiting country and a tax on money holdings in excess of  $Q$  euros, which should make the mechanism politically attractive.<sup>6</sup>

Even though the 'domestic' value of the euro will remain constant, it is important to discuss how the mechanism will affect the international value of the euro. Specifically, upon adopting the mechanism, the risk of exit and the subsequent one-time tax on money holdings will be priced into exchange rates. This effect, however, must be weighed against the fact that the risk of a costly unstructured exit is already priced into the current exchange rate of the euro. Therefore, relative to the current situation, adopting the mechanism would be expected to have a stabilizing effect on the international value of euro.

It is also important to note that as soon as the exit is announced, the tax on money holdings will be immediately priced into exchange rates and there is no longer a disincentive for foreign investors to hold euros. That is, immediately following the exit announcement, euro holdings are effectively split into holdings of a stable currency, the 'new' euro, and a less stable currency, the florin. While the international value of the florin will be less than that of the 'old' euro, the value of the 'new' euro will appreciate since it represents a fundamentally less risky bundle than the 'old' bundle, which contained the fiscally troubled country.

## Conclusion

In this note, we argue that the Eurozone would benefit from adopting a structured mechanism for exit to eliminate the negative externalities of Eurozone uncertainty. We focus on Dobbs' NEWNEY mechanism, since it is the only mechanism which satisfies the twin properties of eliminating incentives for intra-Eurozone capital flight and maintaining Eurozone price stability. While the original proposal suffers from a moral hazard problem and disproportionately taxes poor citizens, we show how these problems can be eliminated with additional features. The modified mechanism solves the moral hazard problem, eliminates an implied regressive tax following exit, and can be used for exit of fiscally weak and fiscally strong countries. Moreover, the mechanism is contractible and maintains the core principles on which the political and economic union is built, which will allow it to be institutionalized as part of the Treaty of Europe.

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<sup>5</sup>This would most likely need to be limited to verifiable pre-exit money holdings to eliminate a black market transfer of euros to individuals with money holdings of less than  $Q$ .

<sup>6</sup>In the case of Greek exit and a 50 percent devaluation, the highest possible cost (assuming each individual converted the full amount) would be 36.6 billion euros for a  $Q$  of ten-thousand. The actual cost would likely be lower since not all individuals have money holdings greater or equal to ten-thousand. In the worst-case-scenario of PIIGS exit and an average 30 percent devaluation, the upper-bound-cost would be 201.5 billion for a  $Q$  of ten-thousand.

We would like to emphasize Dobbs' message that the purpose of an exit mechanism is not to promote exit from the eurozone. Rather, the purpose is to mitigate many of the negative externalities of the debt crisis by assuring economic agents that any Eurozone exit will proceed smoothly, with no contagion and minimal disruption to markets and the financial systems of the Eurozone. Counterintuitively, adopting a structured, centralized process for Eurozone exit might make exit less likely.

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