



DIRECTORATE GENERAL FOR INTERNAL POLICIES  
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES

# The Role of the ECB in Financial Assistance Programmes

NOTE

## Abstract

In this note I describe the proper role for a well-designed central bank in resolving bank and sovereign debt crises: ensuring that markets and financial institutions, including sovereigns, remain liquid. I consider how much revenue the ECB can raise without be inflationary and how it can mobilise this revenue in support of the financial assistance programmes for illiquid but potentially solvent sovereigns.

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## EXECUTIVE SUMMARY

- In a better world, an organization as independent and as lacking in accountability as the ECB would play no role in providing a significant amount of funds for financial assistance programmes for sovereigns such as the three active Troika programmes or for programmes for banks.
- In a world where leaders lack the political will to resolve the sovereign and banking crises, the ECB may have a role to play as it is the only entity capable of mobilising substantial revenue with sufficient speed. It is better to have the ECB in its current form take on the quasi-fiscal role of lender-of-last-resort than to suffer widespread financial ruin.
- Well-designed central banks (as opposed to the ECB) do and should act as market makers and lenders of last resort even though it is hard to ascertain whether or not the illiquidity is temporary and as a consequence they must take on risk on behalf of society. Such central banks should, if necessary, make a market for sovereign as well as bank debt if this market is dysfunctional and they should stand ready to provide liquidity to a solvent but illiquid sovereign as well as to a solvent but illiquid bank.
- The issuance of fiat money is an extremely profitable monopoly and the Eurosystem can collect a sizable amount of seigniorage revenue while maintaining inflation of two percent. A back-of-the envelope calculation puts yearly seigniorage collection at EUR 40 billion. Buitier and Rahbari (2011) estimate that the Eurosystem can collect seigniorage revenue with a present discounted value of about three trillion euros.
- A straightforward way that the ECB can use its seigniorage to support illiquid but potentially solvent sovereigns is to buy their debt outright in secondary markets as it has done in the Securities Markets Programme. However this is less efficient than purchasing their debt in primary issuer markets and includes no conditionality that would promote good fiscal behaviour.
- The recent LTROs are a second method for funding illiquid sovereigns. Banks are used as intermediaries so as effectively to allow indirect purchases of sovereign debt in primary markets. This is done by having the ECB makes long-term loans to banks at subsidized interest rates. Financial repression in periphery countries then ensures that the banks use at least some of the money to purchase their sovereign's debt in the primary issue market. But, this is also inefficient as only some of the money loaned is used to purchase debt and this method too includes no conditionality.
- A third method for assisting illiquid sovereigns would be to use the IMF as an intermediary. The National Central Banks (NCBs) of the Eurosystem would make loans to the IMF and the IMF would makes loans to the sovereigns at low interest rates reflecting its preferred creditor status. These loans would have the benefit of conditionality but political leaders might not be sufficiently discerning to restrict funding to potentially solvent borrowers and the method might be viewed as a violation of the Treaty.
- A fourth method is similar to the third but uses the European Stability Mechanism (ESM) as intermediary. The ESM is given a banking license and borrows from the NCBs, using the loans it later makes to sovereigns as collateral. This has the problems of the third method but might be an improvement in that the ESM is a European institution. As such the conditions might be more flexible and this method avoids the spectacle of the euro area having to beg emerging markets for funding through the IMF.
- A lack of political will might mean that the IMF is the only entity capable of recapitalizing systemically important banks and adequately insuring periphery bank

deposits with sufficient haste. Using the ECB would be a case of the end justifying the politically unfortunate means.

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## 1. INTRODUCTION

In a more perfect world, the ECB would not play a role in providing a significant amount of funds in financial assistance programmes for sovereigns such as the three active Troika programmes for Greece, Ireland and Portugal, or for programmes for banks, such as the one recently announced for Spain. ECB policy makers are unelected and the institution enjoys a possibly unprecedented level of independence for a central bank. It has virtually no formal accountability and has disdained substantive accountability. A significant fiscal role for such a body is not palatable in a democracy. Taking on such a role threatens not only the legitimacy of the Eurosystem, but as the Eurosystem is one of the key governance institutions of the European Union, a loss of its legitimacy endangers the legitimacy of all other European Union governance institutions, including the European Commission, the European Court of Justice and the European Parliament.

Also in a more perfect world the ECB's advice would undoubtedly have been sought as it would have been seen not just as an expert in the realm of macroeconomics but also as a leading source of expertise in the area of financial stability, money markets and capital markets. However, when it comes to providing funding to banks and sovereigns within the context of financial assistance programmes to such entities, the ECB would have been designed differently or it would act strictly as the agent of the parties responsible for the financial assistance programmes: the European Financial Stability Facility (EFSF), the European Financial Stabilisation Mechanism (EFSM) and their successor the European Stability Mechanism (ESM), the Member States standing behind these funding programmes and the International Monetary Fund.

In a flawed world however, where leaders lack the political will to resolve the sovereign and banking crises that threaten the financial systems of the euro area and the rest of the globe, the ECB, even though it is not designed for the task, may have a role to play as it is the only entity capable of mobilising sufficiently substantial revenue with sufficient speed. It is better to have the ECB in its current form take on the quasi-fiscal role of lender-of-last-resort than to suffer widespread financial ruin.

In this note I describe the proper role for a well-designed central bank in resolving bank and sovereign debt crises: ensuring that markets and financial institutions, including sovereigns, remain liquid. I consider how much revenue the ECB can raise without threatening its price stability mandate and how it has and could if necessary mobilise this revenue in support of financial assistance programmes for illiquid but potentially solvent sovereigns.

## 2. THE CENTRAL BANK AS LENDER OF LAST RESORT TO GOVERNMENTS

In a well-designed and properly functioning monetary system an independent and unelected monetary policy committee would conduct monetary policy by setting short-term interest rates, or perhaps by managing the exchange rate. However, to maintain financial stability the less independent and more accountable central bank (distinct from the monetary policy committee) must also be willing to take on the quasi-fiscal role of acting both as the market maker of last resort and the lender of last resort.

In a liquidity crisis the markets for a range of financial assets become dysfunctional. Trading volume plummets and trading only occurs at prices that are far lower than would prevail in more orderly times. To restore market functioning, the central bank may have to act as the market-maker of last resort by purchasing or accepting as collateral the financial assets which either cannot be sold in the market, or can only be sold at fire sale prices, at prices below but near to those that would prevail in normal times. If the central bank succeeds in reviving the dysfunctional market or markets and if it paid below-market prices for the financial assets it purchased then the change in the composition of its balance sheet is profitable, its net worth increases and tax payers and society are better off. However, if the action is not a success and the assets turn out to be worth significantly less than expected, there is a risk that tax payers and society may be worse off.

Fear-driven markets may believe that a financial institution (or even a class of financial institutions or the sovereign itself) is insolvent. Then this financial institution cannot borrow or can only borrow at far-above-market interest rates. As a result market participants' expectations are self-fulfilling and the financial institution is indeed insolvent, even though it would have been solvent otherwise. In scenarios where more than one outcome is possible the central bank can act as the lender of last resort to ensure the socially preferred outcome is realized. If there is the potential for a fear-driven run on otherwise solvent financial institutions and the central bank is credible that it stands willing to act as lender of last resort and to lend as much as it takes to avert the run, the run may never happen. If the run does occur and the bank makes a loan to the threatened financial institution the fear may pass and the financial institution can return to the market as normal.

If the loan was made at a penalty rate and the illiquidity was temporary, a solvent borrower repays, the central bank makes a profit and tax payers and society are better off. But there is a risk that the illiquid borrower turns out to be insolvent as well. Then, the loan is not repaid, the central bank's net worth declines and tax payers and society are worse off.

To the degree that dysfunctional markets or illiquid financial institutions have systemic importance, the fates of other financial markets and institutions are affected by the central bank's intervention. In deciding whether to purchase an illiquid asset outright or accept it as collateral or whether or not to rescue an illiquid but possibly solvent financial institution, the central bank is making a decision that can affect the prices of all of the assets on its balance sheet as well as those assets held by the private sector. If the market or institution under consideration for rescue is sufficiently systemically important, the decision to intervene may even reduce the riskiness of the central bank's own balance sheet and that of the nation or area over whose markets it presides.

Well-designed central banks do and should act as market makers and lenders of last resort even though it is difficult in practice to ascertain whether or not the illiquidity is temporary and as a consequence they must take on risk on behalf of society. In a properly designed monetary system, however, the central bank should have far less independence and far more formal and substantive accountability than is enjoyed by the ECB.

In a properly designed monetary system, the central bank should if necessary make a market for sovereign as well as bank debt if this market is dysfunctional and it should stand ready to provide liquidity to a solvent but illiquid sovereign as well as to a solvent but illiquid bank. Like banks, a sovereign without control over its central bank is prone to liquidity and maturity mismatch between its assets and liabilities and can suffer the same fear-driven wholesale market funding run.

The liquidity providing role of the central bank should, however, be distinguished from the provision of solvency support to either banks or sovereigns. The ECB has been pressured to provide not just liquidity support but also solvency support to both banks and sovereigns in the euro area and it is under pressure to do more of this.<sup>1</sup> This backdoor socialisation of bank debt and sovereign debt, without any proper accountability is extremely damaging to the legitimacy of the institutions involved and even to parliamentary democracy.

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<sup>1</sup> The ECB is not alone; the Federal Reserve Chairman Ben Bernanke appears to have felt required to take on the distasteful task of bailing out the AIG without authorisation from the US Congress.

### 3. SEIGNIORAGE

In this section I describe how the ability to print fiat money produces revenue for the central bank and, ultimately, its government or governments. I provide some estimates of the likely revenue that the ECB can generate while still providing price stability.

The time- $t$  budget constraint of a government can be expressed algebraically as

$$G_t = T_t + \frac{M_t - M_{t-1}}{P_t} + \frac{B_t - (1 + i_t)B_{t-1}}{P_t}, t = 0, 1, \dots,$$

where  $G_t$  is the real value of time- $t$  government spending,  $T_t$  is the real value of time- $t$  taxes,  $M_t$  is the time- $t$  money stock,  $B_t$  is the time- $t$  stock of outstanding government debt,  $i_t$  is the nominal interest rate between time  $t-1$  and time  $t$  and  $P_t$  is the time- $t$  price level. The above equation says that government spending (the left-hand side of the equation) can be financed by levying taxes (the first term on the right-hand side), increasing the money supply (the second term on the right-hand side) or by increasing its issuance of government debt (the third term on the right-hand side).

The revenue attained by increasing the money supply is known as seigniorage. If we rule out Ponzi games where the government issues ever increasing amounts of debt to pay off previous borrowing, the sequence of above (within-period) government budget constraints implies the government's intertemporal budget constraint: the present discounted value of current and future government spending equals the present discounted value of current and future taxes plus the present discounted value of current and future seigniorage.

The seigniorage generated by the central bank can be a convenient source of revenue for a government as it is easy to collect: administrative costs are low compared to those associated with other types of taxation. For governments with inefficient tax systems, collecting a significant fraction of revenue in the form of seigniorage can be desirable. Throughout history the ability of sovereigns to wage war was dependent on how much seigniorage they could extract. In modern economies with efficient tax systems, however, seigniorage is seen as an especially distortionary tax and it is typical for central banks to have the pursuit of low inflation as their legislated mandate. As a result, seigniorage revenue is small relative to total revenue, although it can still be significant. A key question for the euro area is how large is the discounted present value of the seigniorage that the Eurosystem can extract over time if it pursues its price stability mandate.

The issuance of fiat money is an extremely profitable monopoly. Proceeding with some crude, back-of-the-envelope figures, suppose that in a typical year the real value of the euro area monetary base is ten percent of euro area GDP and inflation and the real growth of GDP are both two percent. Then the amount of seigniorage collected is about 0.4 percent of Euro Area GDP. If Euro Area GDP is very roughly ten trillion euros, then the Eurosystem can collect 40 billion euros of seigniorage in a year. Using more refined techniques and making conservative assumptions about real GDP growth, Buiter and Rahbari (2011) estimate that the Eurosystem can collect seigniorage revenue with a present discounted value of about three trillion euros while maintaining inflation of two percent.<sup>2</sup>

<sup>2</sup> For the Fed, it is easy to come up with conservative estimates of the net present value of future seigniorage in excess of seven trillion dollars.

The Eurosystem's seigniorage, after subtracting the operating costs of this massive – perhaps even bloated – body, belong to the tax payers of the euro area.<sup>3</sup> The national central banks (NCBs) distribute their share of the seigniorage to national treasuries and as a consequence of this revenue a flow of national government expenditure can be financed with a smaller stream of (non-seigniorage) taxes than would be necessary without the seigniorage.

Unfortunately, central bank profits have already been compromised by events during the financial crisis. By taking on credit risk, often at less than ex ante fair rates of remuneration, the Eurosystem and other central banks have risked transferring some of the present discounted value of their seigniorage to those parties that have succeeded in offloading the credit risk on it.<sup>4</sup> In a better world a central bank should only take on credit risk with the knowledge and agreement of the tax payers who own the seigniorage, or their trustees, the elected officials to whom the central bank is ultimately accountable. Unfortunately, there was and is no appropriate governmental body to give prior approval to the ECB and there is no proper ex post accountability. Nor is any improvement in ECB governance and accountability on the horizon.

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<sup>3</sup> Even after allowing for its roles other than monetary policy it is not completely clear why the central bank of France needed 12,746 employees in 2010. (*Central Bank Directory 2012*, Franklin Templeton Investments).

<sup>4</sup> Examples of such transfers include the national central bank of Luxembourg's long-standing policy of allowing Icelandic banks to borrow from it using each other's debt as collateral; the unlimited one-year fixed rate liquidity provision of June 2009 which may have been a transfer of about EUR 1 billion from taxpayers to happy banks; the Eurosystem's purchase of Greek sovereign debt at (apparently) way above market value.

## 4. WAYS THAT THE ECB CAN LEND TO ILLIQUID SOVEREIGNS

In this section I consider four methods that the ECB can use to lend to illiquid but potentially solvent sovereigns. I also consider the possible use of ECB funds to recapitalise banks and to fund deposit insurance schemes.

### 4.1 Buying sovereign debt outright in secondary markets

A straightforward way that the ECB can use its seigniorage to support illiquid but potentially solvent sovereigns is to buy their debt outright in secondary markets. This has already been done under the Securities Markets Programme (SMP) announced on 10 May 2010. On 13 April 2012, euro area periphery sovereign debt worth EUR 214 billion was outstanding under the SMP. The ECB does not publish data on the composition of its purchases, but it is widely assumed that so far the ECB has purchased Greek, Portuguese, Irish, Spanish and Italian government debt securities under the programme. The flow of new sovereign debt purchases under the SMP has declined markedly recently and has been effectively zero since February 2012.

There is little doubt that the ECB's SMP purchases prevented major financial turmoil that could have resulted in a chain of defaults of otherwise probably solvent euro area banks and sovereigns, notably in May 2010 and again in August 2011 and October and November 2011. The SMP is an ineffective method, however, for ensuring that sovereigns are able to borrow at reasonable interest rates. It is inefficient to cap the yield of the entire outstanding debt stock, which effectively requires offering to purchase all outstanding sovereign debt at above-market prices, just to put a lid on the yield of newly issued sovereign debt.

The reason that the SMP is restricted to secondary market purchases is Article 123.1 of the consolidated version of the Treaty on the Functioning of the European Union which forbids their direct purchase. Purchases on secondary markets are inefficient and perhaps violate the spirit of the Treaty, but they are not specifically forbidden by it.

Along with being inefficient, the SMP method suffers from the problem that it is being used to buy the debt of clearly insolvent sovereigns. And, financial support is being offered to profligate but possibly solvent sovereigns without the requirement of collateral and without any conditionality that would promote solvency. Without any such commitment mechanism, the availability of such support has the potential to create incentive problems that might convert illiquidity problems into insolvency problems.

### 4.2 Indirect purchases of sovereign debt in primary issue markets via banks

A second method for funding illiquid sovereigns is to use the banks as intermediaries so as effectively to allow indirect purchases of sovereign debt in primary issue markets. This method requires two components. First, the ECB makes long-term loans to banks at subsidized interest rates. Second, financial repression in periphery countries ensures that the banks use at least some of the money to purchase their sovereign's debt in the primary issue market.

As discussed in last quarter's briefing paper, on 8 December 2011 the ECB announced two longer-term fixed-rate and full-allotment refinancing operations (LTROs) with a maturity of 36 months and the option of early repayment after one year. The interest rates were set at the average rate of the main refinancing operations over the life of the

respective operation. The allotment dates were 21 December 2011 and 29 February 2012. A total of 523 banks bid for EUR 489.2 billion in the first LTRO, while 800 banks bid for EUR 529.5 billion in the second. Given that some previous shorter-term LTROs had matured, the total increase in liquidity from LTROs after the second operation was EUR 522.6 billion. The terms on which this funding is provided are very attractive. Over the three-year life of a LTRO, the average cost of funding could be as little as 60 basis points.

The other half of this second mechanism is financial repression by the periphery authorities, which forces periphery banks to purchase, often in the primary markets, more of their own sovereign's debt and at lower yields than they would without pressure by the authorities. This is not entirely objectionable to the banks involved: the likely outcome is that their sovereign does not default and thanks to the generous terms offered by the ECB, even government debt purchased at higher than fair prices in the primary issue markets offers an acceptable carry trade. In the unlikely event that their sovereign defaults, these banks were already so exposed to the sovereign that they would have defaulted anyway.

While this second method has some advantages over the SMP, it has three serious problems. First, this method too is inefficient in that only some of the money loaned at subsidised rates is used for purchasing sovereign debt. Second, the availability of cheap loans worsens moral hazard problems associated with banks. Third, this second method for assisting fiscally impaired sovereign suffers from the common problem with the SMP that it comes with no conditionality: no commitment mechanism promotes fiscally responsible actions on the part of sovereigns.

### **4.3 Indirect lending to the euro area periphery sovereigns through the IMF**

A third method for assisting illiquid but solvent sovereigns that has not yet been employed is to use the IMF as an intermediary. This third method has three components. First, the NCBs of the Eurosystem make loans to the IMF. Second, the IMF makes loans to the sovereigns. The loans carry low interest rates because of the IMF's preferred creditor status. Third, the sovereigns receiving the loans must be subject to IMF/Troika programmes, including an IMF Stand-By Arrangement or some similar programme involving subsidized lending in return for some combination of fiscal, financial and structural reform. This third component makes this method a potentially substantial improvement over the other two.

A problem with the third method is the question of whether it is really permissible. NCBs are allowed to lend to the IMF and the IMF is allowed to lend to sovereigns. NCB loans to the IMF that are implicitly, but not explicitly, associated with subsequent IMF loans to euro area sovereigns are not specifically forbidden by the Treaty. Nevertheless, it is likely that some would perceive such a plan as more than just a violation of the spirit of the Treaty and one might expect challenges in the European Court of Justice or in one or more of the national constitutional courts.

A second problem with the third method is whether policy makers will be discriminating enough to ensure that only potentially solvent sovereigns are offered immediate support. Insolvent sovereigns should be forced to restructure their debt so as to restore likely solvency in the presence of good fiscal behaviour before for being considered for such funding. It is not confidence inspiring that Greece was provided Troika funding despite being clearly insolvent and Portugal and Ireland were provided with funding despite likely being insolvent. A third problem is the question of how effective the conditionality would be.

#### **4.4 Indirect lending to the euro area periphery sovereigns through the ESM**

A fourth method is similar to the third, but involves indirect loans from NCBs to illiquid sovereigns being channeled through the ESM, rather than the IMF. This could be done by making the ESM an eligible counterparty of the Eurosystem. The ESM could then borrow from the Eurosystem's liquidity facilities and use the proceeds to make loans to euro area sovereigns. These claims on euro area sovereigns then serve as its collateral in its borrowing from the Eurosystem. As the ESM has preferred creditor status, it can make loans to sovereigns at favourable rates.

The primary advantage of method four over the similar method three is that the ESM is a European institution. It may be easier for it to be more flexible in the terms of its loans to euro area sovereigns than it is for the IMF. It also conveys the favourable impression that Europe can solve its own problems and avoids the more embarrassing route of having to beg emerging market nations – via the IMF – for financial support. It suffers from the same problems of method three: the danger that support will be given to insolvent sovereigns before their debt is restructured, that the conditionality may prove ineffective and its legality may be questioned. The courts will need to be convinced that the ESM is really a credit institution and not a state agency.

#### **4.5 Other roles for the ECB**

It is at least a proper role for a well-designed central bank to act a lender-of-last-resort to illiquid but potentially solvent sovereigns. Only the ECB's extreme independence and lack of accountability make it ill-suited for the job. Recapitalising banks, however, is not a proper role for a central bank and it would be a particularly odious job for the ECB to take on. Nevertheless, it is nice to have a banking system and in the event of a crisis the ECB might be the only entity around capable of recapitalizing systemically important banks in a sufficiently timely manner. The ECB has already played some role in providing capital to banks in its provision of highly subsidized lending through the two LTROs. This blatantly fiscal role would be less unpalatable if the ECB were also to take on more accountability and if the euro area governments were to guarantee the resources committed by the ECB.

In the event of an imminent Greek exit from the euro area one can expect runs on Greek banks. Once the precedent of euro area exit has already occurred runs on other periphery nation banks become more likely, even if there are no plans for these nations to exit. To ensure the socially desirable outcome of no bank runs it is necessary to have a euro area (or preferably EU) deposit guarantee scheme that includes compensation for losses due to currency revaluation. In the not highly unlikely event that the need for such insurance arises before our political leaders put together such a scheme the ECB and its seigniorage may be all that stands between us and disaster. It is a case of the ends justifying the means.

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