

# **WHAT KIND OF CENTRAL BANK FOR THE EZ?**

## **A primer in Euro Zone Central Banking**

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### **ABSTRACT**

Central banking in the euro zone has a strict legal mandate to focus on price stability and to refrain from monetary financing. This mandate limits the ability to act as a lender of last resort and eliminates the possibility of acting as a market maker of last resort, curtailing the central bank role in the delivery of financial stability. This has increased fiscal and financial stress to levels that requires swift action. It is true that there is no federal fiscal structure to back the central bank in the delivery of price stability. However, the Eurosystem is the only truly shared and independent economic institutions of the EZ with financial power to deal with the current euro troubles. This brief describes the role and alternative designs of central banks to conclude that liberating the Eurosystem from its legal mandate straitjacket is the most convenient current option at hand.

## **The Role of a Central Bank**

Central banks play a key role in the delivery of both macroeconomic and financial stability, two connected and highly ranked policy objectives in modern economies.

Macroeconomic stability generally refers to both aggregate output and price stability. However, the explicit central bank legal mandate may tilt the focus to one of them. For example, the focus of the Eurosystem (the central bank system for the euro zone) is on price stability, whereas the US Federal Reserve (the central bank system for the US) gives equal importance to output and price stability. In any case, to pursue macroeconomic stability central banks target the evolution of liquidity and interest rates in order to affect the inflation and/or growth rates of the economy.

Financial stability refers to the smooth functioning of the financial system. It conveys supervision and control of financial institutions in order to avoid insolvencies that can eventually distort credit activity and have a negative impact on real economic activity. In pursuing financial stability central banks act as lenders of last resort and market makers of last resort. The extent to which they can engage in this type of last resort operations may be also limited by their legal mandate. For example, legally, the Eurosystem cannot engage in a program of open sovereign debt purchases.

Thus, the degree of involvement and ability of central banks to pursue their stability role crucially depends on their specific legal mandate, which embeds beliefs about economic priorities (inflation vis-à-vis growth) and about the relationship between the fiscal (treasury) and the monetary (central bank) authorities, the latter being reflected in the structure of central bank balance sheet.

We can further elaborate on these issues by looking at two distinct models of central banking and then connecting the discussion with the particular euro zone policy architecture.

## **Two Types of Central Banks**

So we now describe two stylized models of a central bank (Figure 1). The bottom line distinguishing feature between both models is the underlying implicit interaction that operates between the budget constraints of the treasury and the central bank (Sims, 2003)

In model 1, the balance sheet of the central bank is characterized by an asset side that mainly contains domestic currency denominated short run treasury debt and by a liability side that mainly contains domestic monetary liabilities (i.e. currency in circulation and domestic banking sector reserves). This liability composition implies that central bank bankruptcy is not an issue here since fiat money is non-redeemable.

An additional feature of this model is that the central bank and the treasury share a single budget constraint, reflecting the implicit understanding that if necessary: (1) the treasury will always back the central bank with fiscal resources when pursuing stability goals, thus taking the central bank liabilities as its own fiscal liability, and (2) conversely the central bank will always exchange treasury securities for money as a last resort.

**Figure 1**  
**Two Central Bank Models**

MODEL 1		MODEL 2	
ASSETS	LIABILITIES	ASSETS	LIABILITIES
Gold & Foreign Reserves (FR)	Currency in Circulation (CC)	Gold & Foreign Reserves (FR)	Currency in Circulation (CC)
Loans to Banks (LB)		Loans to Banks (LB)	Bank Reserves (BR)
Public Debt (PD)		Public Debt (PD)	Other Liabilities (OL)
	Bank Reserves (BR)		Treasury Deposits (TD)
	Treasury Deposits (TD)	Other Assets (OA)	Net Worth (NW)
Other Assets (OA)	Net Worth (NW)		

In model 2, treasury securities are a relatively small, even marginal, entry in the asset side of the central bank, where foreign currency denominated assets may actually get to be a main component. Similarly, non-monetary foreign currency denominated liabilities may be significant in the liability

side. This liability composition implies that central bank bankruptcy may be an issue in this case (Buiter, 2008).

In this model the central bank and the treasury have distinct budget constraints. This reflects the implicit understanding that the treasury may not necessarily see central bank liabilities as its liabilities and be always ready to back it, and similarly that the central bank may decide not to exchange treasury securities for money as last resort.

In comparing the two models, notice that the implicit single budget constraint for the treasury and the central bank implies that model 1 requires a strong degree of mutual trust and commitment between the treasury and the central bank. This is so because the treasury must stand by the central bank delivering the fiscal discipline needed to back it when its liquidity injections targeted at guaranteeing financial stability may put at risk price stability objectives. Similarly, the central bank must stand by the treasury and redeem its securities as last resort when there is a clear risk of sovereign solvency.

On the contrary, the implicitly distinct budget constraints for the treasury and the central bank imply that in model 2 the close coordination between both authorities is not expected. Rather the opposite. When this model is put in place price stability tends to be a main concern and a profligate treasury the main obstacle to obtain it. In fact, the structure of the central bank balance sheet in this case (with a small amount of treasury securities) implies that it can weather a treasury default without putting at risk its own solvency. The flip side of this scheme is that the central bank stands alone when financial stability actions put price stability at risk. This fact puts limits to the role of the central bank as lender and market maker of last resort.

Coordination between the fiscal and monetary authorities is in principle easier with expert and mature institutions, which may explain why model 1 tends to be more common in developed countries whereas model 2 is often used in less developed economies. But model 2 can also be a choice in developed countries.

As an illustration, we can take a look at the pre Great Recession balance sheets of the US FED and the Eurosystem (Figures 2 and 3).

**Figure 2**  
**US and EZ Central Bank Model**

US FEDERAL RESERVE End 2006 (\$US billions)				EUROSYSTEM End 2006 (€ billions)			
ASSETS		LIABILITIES		ASSETS		LIABILITIES	
FR	34	CC	783	FR	351	CC	647
LB	41	BR	19	LB	675	BR	382
PD	784	TD	5	PD	187	TD	50
OA	15	NW	67	OA	345	OL	270
		NW	209				
<b>Total</b>	<b>874</b>	<b>Total</b>	<b>874</b>	<b>Total</b>	<b>1558</b>	<b>Total</b>	<b>1558</b>

Source: Author's elaboration from US Federal Reserve and European Central Bank data

As it turns out, the US FED design is of type 1 whereas the Eurosystem design is of type 2.

**Figure 3**  
**US and EZ Central Bank Model**

US FED 2006		EUROSYSTEM 2006	
ASSETS	LIABILITIES	ASSETS	LIABILITIES
FR	CC	FR	CC
LB		BR	
PD			OL
			TD
		NW	
OA		OA	NW

Looking at the peculiar macroeconomic policy framework of the euro zone helps to understand the nature and the consequences of this choice.

## **The Peculiar Euro Zone Case**

The Eurosystem is the euro zone central bank and consists of the European Central Bank (ECB) and the National Central Banks (NCBs) of the euro zone member states.

In the macro stability dimension its main mandate is to guarantee price stability in the euro zone, defined as an inflation rate not higher than 2% in a midterm framework. Price stability decisions (monetary policy) correspond to the ECB and are implemented by the Eurosystem via lending facilities.

Financial stability responsibilities correspond to the NCBs, which perform the lender and market maker of last resort functions. Each national treasury stands financially behind its own NCB.

According to the European Treaty, the Eurosystem cannot engage in purchasing programs of debt issued by member state treasuries (the so called monetary financing).

Under this framework, if the treasury of a member country runs directly (fiscal profligacy) or indirectly (contaminated by a NCB financial rescue) into financial difficulties there is no one standing by it. Financial stability will further deteriorate if several treasuries of the zone run into trouble, spreading the sovereign crisis.

The Eurosystem could stand by them, but its legal mandate excludes that possibility. An even if it did, who would stand by the Eurosystem in order to avoid the potential damage to price stability? A federal treasury could, but the euro zone does not have one.

## **Euro Troubles**

This is the fragility of the macro policy framework highlighted by the euro zone financial turmoil that started with Greece in early 2010.

As a response, what may end up being the seed of a future federal fiscal structure has been put in place. The so called European Financial Stability Facility (EFSF) is a fund guaranteed by the national treasuries of the euro zone member states in proportion to their GDP. Since its creation in May 2010 the EFSF has taken the main share of the rescue packages implemented so far in Greece, Ireland and Portugal.

Alongside, the Eurosystem has been providing unlimited liquidity and circumventing its legal mandate of no monetary financing in order to implement a limited public debt purchase program. This limited room for central bank action is a direct consequence of its design (model 2), and it was already visible during its policy response to the 2008-09 Great Recession.

That policy response to the crisis stands in sharp contrast with the aggressive response of the FED (model 1), which has been much more active as lender and market maker of last resort. As a consequence, while the Eurosystem balance sheet has almost doubled between 2006 and 2010, the FED balance sheet has almost tripled in the same period (compare Figures 2 and 4)

**Figure 4**  
**US and EZ Central Bank Quantitative Response to the Crisis**

<b>US FEDERAL RESERVE</b>				<b>EUROSYSTEM</b>			
<b>End 2010 (\$US billions)</b>				<b>End 2010 (€ billions)</b>			
<b>ASSETS</b>		<b>LIABILITIES</b>		<b>ASSETS</b>		<b>LIABILITIES</b>	
<b>FR</b>	42	<b>CC</b>	942	<b>FR</b>	684	<b>CC</b>	864
<b>LB</b>	46	<b>BR</b>	968	<b>LB</b>	1518	<b>BR</b>	1318
• Depository inst	0.2	<b>TD</b>	341	<b>PD</b>	463	<b>TD</b>	77
• Term Asset Loan Fac	24.8	<b>NW</b>	177	<b>OA</b>	547	<b>OL</b>	526
• AIG, Inc	21					<b>NW</b>	427
<b>PD</b>	1067			<b>Total</b>	3212	<b>Total</b>	3212
<b>NLF</b>	1253						
• Gov- spons entrep	1157						
• CB liquidity swaps	1						
• Private sector loans	95						
<b>OA</b>	20						
<b>Total</b>	2428	<b>Total</b>	2428				

NLF stands for New Lending Facilities

Source: Author's elaboration from US Federal Reserve and European Central Bank data

At the same time, the impact of the response on the qualitative composition of the respective balance sheets differs sharply. While the FED has intensively resorted to unconventional quantitative and credit easing programs to buy public and private bonds, the Eurosystem has not implemented that sort of programs (compare Figures 3 and 5).

**Figure 5**  
**US and EZ Central Bank Qualitative Response to the Crisis**

US FED AFTER 2007		EUROSYSTEM AFTER 2007	
ASSETS	LIABILITIES	ASSETS	LIABILITIES
FR	CC	FR	CC
LB		LB	BR
PD	OL		
NLF	TD		
OA	NW	OA	NW

In any case, it appears that the combined action of the EFSF and the Eurosystem implemented so far is not effective. As a consequence, the option of enhancing the role of the Eurosystem in the resolution of the euro troubles gains ground.

### **What Kind of Central Bank for the EZ?**

Why model 2 for the euro zone?

The model 2 option for the Eurosystem cannot be justified by the fear of potential central bank bankruptcy, since the non-euro denominated liabilities of the Eurosystem are small.



The true original justification seems to be the desire to rule out the special threat to price stability coming from potential fiscal instability in a framework that combines a single monetary authority with a multi-fiscal authority. Imposing fiscal discipline to back the central bank in a context of a multitude of treasuries is problematic, so the Eurosystem has decided to stick to model 2 (Gonzalez Páramo, 2011)

Fiscal instability is apparently identified with fiscal profligacy in this justification. However, a fiscal crisis can also result from the need to rescue financial institutions in order to guarantee financial stability.

Financial stability is a joint central bank and treasury job. The job is better done shoulder-to-shoulder with the support of the treasury to the central bank in order to control the collateral threat to price stability and the simultaneous implicit guarantee that treasury debt will be redeemable by the central bank if the treasury itself faces a stability threat in its support to the central bank. This mutual support is key in order to strike an acceptable trade-off between fiscal, monetary and financial stability.

This mutual support is implicit in the model 1 FED, but is missing in the Eurosystem. And this missing piece is generating high tension in the current (2010-2011) EZ turmoil because it forces the treasuries (taxpayers) of borrower countries to bear the burden of a situation of financial instability that is the result of the whole EZ financial system profligacy (both in borrowers and lender countries).

In addition to the tax load paid for rescuing their financial systems, taxpayers in the euro zone borrower countries are fully loaded with their debts to their financial systems. At the same time, financial system managers have not faced (for the most part) any potential legal or professional responsibilities for the dramatic economic and social consequences caused by the bad performance of their institutions. Rather the opposite: bonuses and rewards still abound.

The situation is approaching a critical point and requires full involvement of the Eurosystem, the only truly shared and independent economic institutions of the EZ. The fiscal solution to the crises is not a realistic option, since steps towards more federalism by increasing the power of the EFSF face political opposition. So the monetary solution should be activated.

Moving towards a model 1 central bank and applying a sufficiently powerful bond purchasing program the Eurosystem would alleviate bank balance sheets and improve the financial conditions of large solvent sovereigns. The Eurosystem has the needed power. Just stepping up its balance sheet to the level of three times its size in 2006 (same relative move as the FED) would inject a 1.5 € trillion financial capacity, substantially more than the recent agreement to leverage the EFSF.

Eurosystem action in this line can stop the current downward spiral and pave the path for the institutional and structural economic reforms needed in order to reinforce the EZ survival chances. There is no risk of central bank insolvency. There is no obvious risk of inflation under current economic conditions, and in any case the alternative is much more costly: a lost decade, as non-competitive economies experience a hard market adjustment, or a euro zone break up.

## **References**

Buiter, Willem (2008). Can Central Banks Go Broke? CEPR. Policy Insight, 24.

Gonzalez Páramo (2011). The ECB and the Sovereign Debt Crisis. ECB Website.

Sims, Christopher (2003). Fiscal Aspects of Central Bank Independence. Working Paper.