

Lecture 2 - Monetary policy: endogenous and exogenous monetary views

- We have already mentioned the exogenous money version of monetary policy, held also by Keynes': given the money demand function (preference for liquidity), the central bank decides on the money supply and thus determines the interest rate.
- However, monetary policy does not work as it is told in textbooks
- We have seen how according to endogenous money theory:
credit-->deposits-->reserves
- So let us start by looking at how the central bank generates the reserves demanded by the banks.
- Just as a premise: according to the textbooks it is indifferent for the central bank to have as an **operative target** either the money supply or the interest rate; in actual, the operative target of CBs has always been **the interest** rate, and this indifference is ill-founded.
- The **final objective** of the central bank can be a certain inflation rate (e.g. ECB) or a certain inflation rate and maximum employment (e.g. US-Fed). This is decided by the politicians.

The Central Bank menu. Let us focus on the operations used in “normal times”

Table 4.1 Eurosystem monetary policy operations				
Monetary policy operations	Type of transaction¹⁾		Maturity	Frequency
	Liquidity-providing	Liquidity-absorbing		
Open market operations				
→ Main refinancing operations	• Reverse transactions	–	• One week ²⁾	• Weekly
→ Longer-term refinancing operations	• Reverse transactions	–	• Three months	• Monthly
Fine-tuning operations	• Reverse transactions • Foreign exchange swaps	• Reverse transactions • Collection of fixed-term deposits • Foreign exchange swaps	• Non-standardised	• Non-regular
Structural operations	• Reverse transactions	• Issuance of ECB debt certificates	• Standardised/ non-standardised	• Regular and non-regular
	• Outright purchases	• Outright sales	–	• Non-regular
Standing facilities				
→ Marginal lending facility	• Reverse transactions	–	• Overnight	• Access at the discretion of counterparties
→ Deposit facility	–	• Deposits	• Overnight	• Access at the discretion of counterparties

1) See Box 4.3 for descriptions of the various types of open market transaction.

2) The maturity has been one week since 10 March 2004. Prior to that date it was two weeks (see Box 4.2).

Interest rate policy: the corridor (normal times, 1999-2007)

- In normal times central bank conduct an interest rate policy
- Central banks target the interest rate (the monetarist target of the money supply was a hangover in the 1970s/80s that only created confusion)
- The ECB announces a rate **corridor**:
- Marginal lending facility (discount windows) 5,0 %
- Main refinancing operations (**policy rate**) 4,0 %
- Marginal deposit facility (excess reserves) 3,0 %
- (at 13 January 2007)
- Recall: credit-->deposits→ reserves
- The CB has to satisfy the demand for reserves at its policy rate. If it doesn't, the overnight interest rate in the interbank monetary market (EONIA in the Eurozone) would rise to the ceiling or fall to the floor. The overnight market rate (Eonia) is the **operative target**. The policy (or official rate) announces the **stance**, the operative target is the rate the ECB wants to influence.

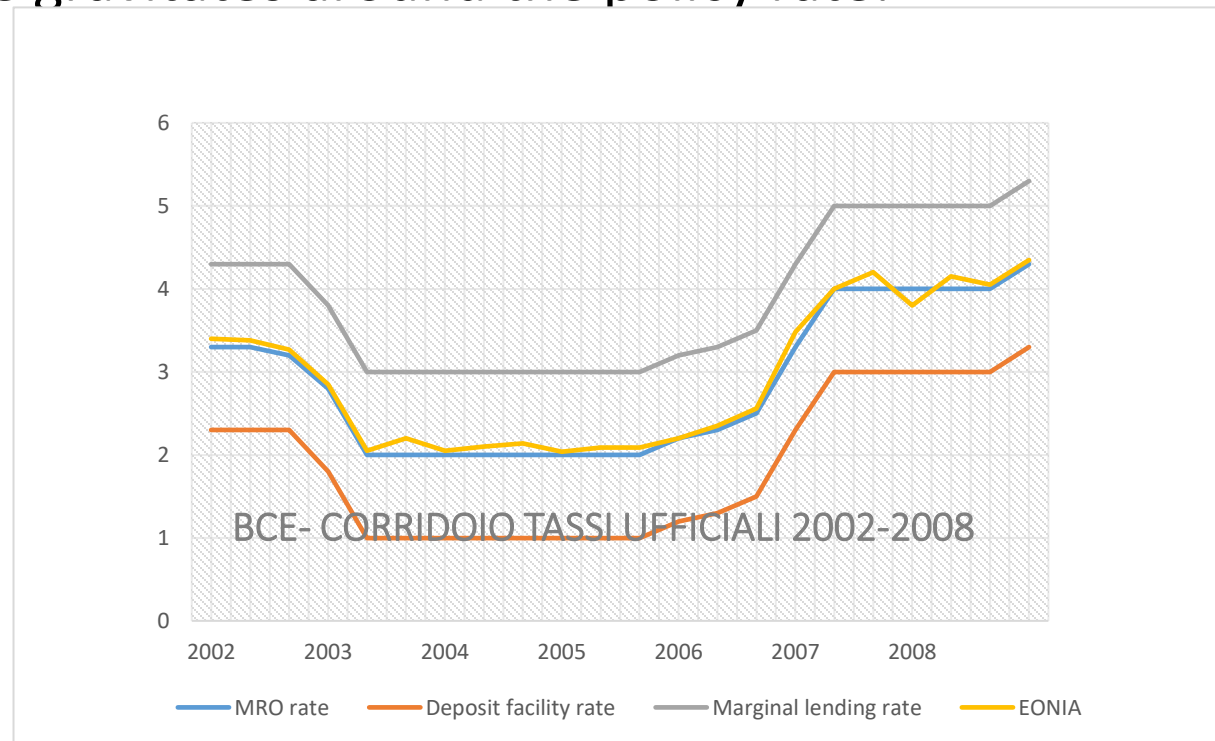


How monetary policy works (in normal times)

- The CB announces the target rate and the corridor.
- Banks in excess of reserves may deposit the excess in the MDF, or lend them out at a higher rate; banks in deficit of reserves may use the MLF, or borrow them out at a lower rate (also avoiding the stigma associated with the MLF).
- The market rate will fluctuate around that of MROs.
- Long interest rates will reflect the current level of the short rate and the expected trend of the same rate.
- When announcing the rates corridor, the central bank does not touch the supply of reserves whose demand in the short term is given and depends on the existing amount of loans/deposits.
- If the central bank changes rates, **in the medium run** the amount of loans/deposits will change, and so will the demand for reserves.
- Only then will the central bank adjust the supply of reserves.

Monetary policy in a nutshell

- **The central bank is price maker and quantity taker** (i is exogenous, reserves are endogenous). The central bank is passive from the point of view of money supply
- Because of interbank payment flows, there are always banks with excess R and banks with deficit of R.
- Normally (trust) they exchange them and the overnight interbank monetary market rate gravitates around the policy rate:



The ECB balance sheet in normal times (assets: how central bank money is created; liabilities: where it stays)

Consolidated balance sheet of the Eurosystem (€ billion) (29 June 2007)

<i>Assets</i>		<i>Liabilities</i>	
Autonomous liquidity factors (assets)	449	730	Autonomous liquidity factors (liabilities)
Net foreign assets (Gold and other foreign assets)	318	633	Banknotes
Domestic assets	131	70	Government deposits
		27	Other autonomous factors (net)
Monetary policy instruments	464	183	Monetary policy instruments
Main refinancing operations (MRO)	313	182	Current accounts (reserves)
Longer term refinancing operations (LTRO)	150		
Marginal lending facility	1	1	Deposit facility
Total	913	913	

Balance sheet in normal times

Consolidated balance sheet of the Eurosystem (€ billion) (29 June 2007)			
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- Right side: origin of liquidity: autonomous factors (foreign channel) + monetary policy
- Left side: where liquidity stays (it's absorbed): autonomous factors (banknotes, gov. account) + reserves
- $(730 + 183) - 449 = \text{net liquidity deficit} = 464$
- Monetary policy instruments = NLD = 464
- The standing facilities (MLF & MDF) are almost irrelevant.

Conclusions on monetary policy in normal times: decoupling principle

- The central bank announces the interest rates corridor and adjusts the money supply to the net needs of the banking system.
- If it did not do so, the supply of reserves would be either in short supply or in excess, causing the interest rate to swing violently up and down the corridor.
- Instead, the central bank tries to meet banks' reserve needs to the penny. Reserves may, however, be misallocated among banks (due to random factors). Banks, however, by exchanging reserves gravitate the interbank rate towards the MRO rate.
- This rate becomes the architrave of the whole rate curve.
- As Claudio Borio (chief economist of BIS) put it: *"It is in this relatively unglamorous and often obscure corner of the financial markets that the ultimate source of the central banks' power to influence economic activity resides"*.
- **The decoupling principle** applies, i.e. the interest rate policy is carried out independently of the control of the liquidity supply.

Conclusions on monetary policy in normal times: the role of reserves

- It can be appreciated that the interest rate manoeuvre is an **open mouth operation** and not an **open market operation** as in standard textbooks.
- The model works also without a **mandatory reserve requirement**. **Banks do need reserves anyway to make interbank payments.**
- The reserve requirement, however, strengthens the banks' demand for reserves and the central bank's power of control over their supply.
- The existence of mandatory reserves also allows banks to use them for payments (remember, the reserve requirement does not have to be met moment by moment but on average over a six-week period).
- If, without mandatory reserves, these are scarce, this can lead to violent fluctuations in interest rates, and the central bank has to intervene continuously to prevent them by adjusting the supply.
- With a mandatory reserves regime there is no need for continuous CB intervention.