FINANCIAL MARKETS AND INSTITUTIONS

CENTRAL BANKS

A.Y. 2016/2017

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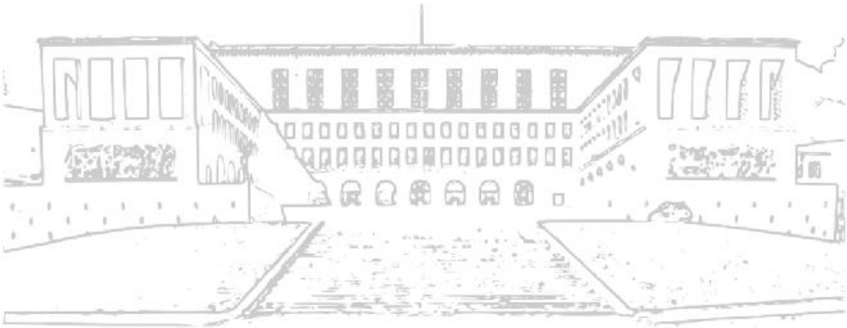


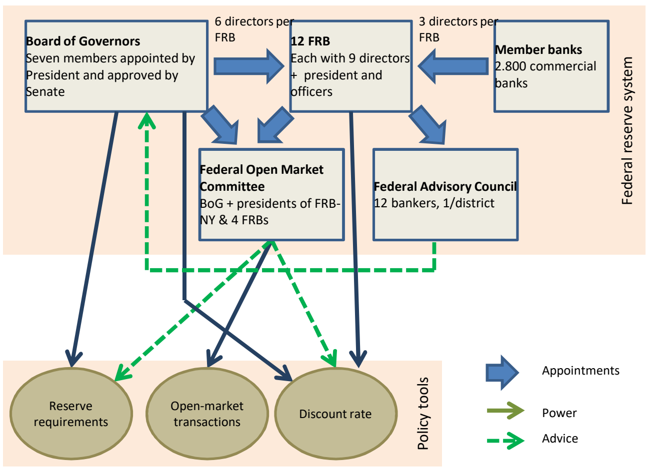
DEAMS
University of Trieste

AGENDA

- The US system
- The EU system
- Main features of other systems
- Rationale of different CB models
- Monetary policy instruments and goals: rationale of different CB mandates
- Monetary policy and financial crisis
- International financial system

THE US/FED SYSTEM

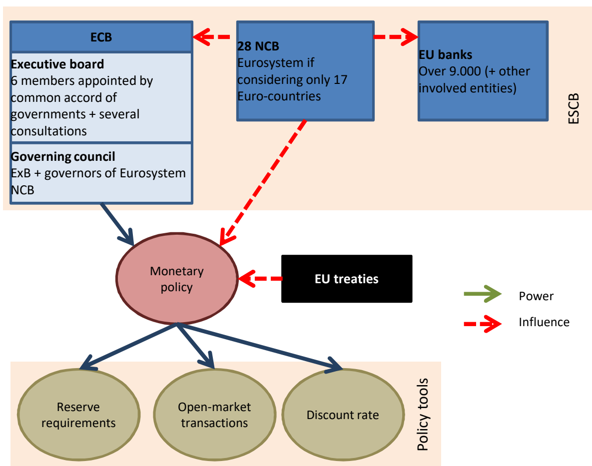
- A complex balanced system of power, controls and responsibilities



- BoG: control on all tools, its chairmen has public and internal influence
- FOMC (“the Fed”):
- Altogether, system is free to establish policy instruments (instrument independence) and to set policy goals (goal independence)
- However, influence derives from Congress (laws) and President

THE EU/ECB SYSTEM

- NCBs are the core of the ESCB



NCBs:

- decide ECB’s budget
- enforce monetary policy
- enforce regulation and supervision (discussion ongoing for centralised ECB’s intervention)
- Greater independence than Fed (depends on appointments)
- Treaties require price stability and changes are extremely difficult: more goal independence

DIFFERENT MODELS: WHY?

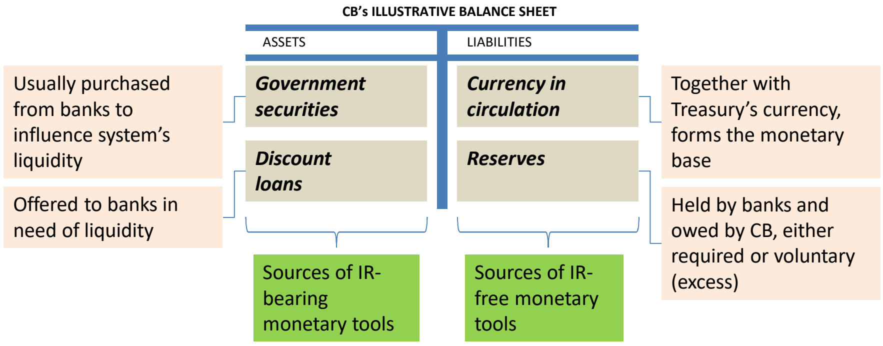
- No model proved superior in dealing with monetary policy (however, some proved inferior)
- Theory of bureaucratic behavior:
  - bureaucrats and bureaucracies have an implicit objective in maximizing own welfare/power/independence (not necessarily always the public interest)
  - tendency to resist to reduction of power and promote more independence (global trend), to avoid conflicts with other powers (f.i. Fed Vs. Congress, ECB Vs. NCBs) and to extend its responsibilities (f.i. ECB and centralised supervision)

DIFFERENT MODELS: WHY?

- **Pros** of independence (empirical evidence):
  - Political shortsighted influence can produce inflation by acting on short-term goals (unemployment and IR) depending on election dates rather than economy needs
  - Treasuries' influence could accumulate risk by promoting abnormal absorption of public debt
  - Monetary policy requires great expertise, historically lacking within political circles
- **Cons** of independence (conjectures…?):
  - Lack of responsibilities and democratic control/sovereignty
  - No actions possible in case of poor CB's performance
  - Politicians acting on fiscal policy can be opposed by unaccomodating monetary policy
  - Independence did not avoid policy failures (f.i. Great Depression)

MONETARY POLICY

Clearer by adopting an accounting perspective



MONETARY POLICY TOOLS

Open market operations

- Main policy tool in influencing IR and system's liquidity
- Purchases increase reserves (CB's liabilities) and securities (CB's assets), through the banking system that sees an increase in monetary base and money supply (the opposite for sales)

Discount lending

- Also important tool, yet more "localised"
- More discount loans increase reserves (CB's liabilities) and loans (CB's assets), through the banking systems that sees an increase in monetary base and money supply (the opposite on repayment)

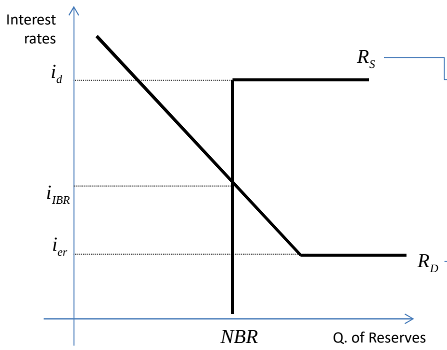
Reserve requirements

- Although infrequent, mandatorily increase demand for reserves

MONETARY POLICY TOOLS

<u>Operations in the market for reserves</u>

- Influence inter-banking rate (i_{IBR}) and therefore other market IR
- Through reserve requirements and IR on reserves (i_{er})
- Influenced by open-market non-borrowed reserves (NBR) and borrowed reserves at the discount rate i_d



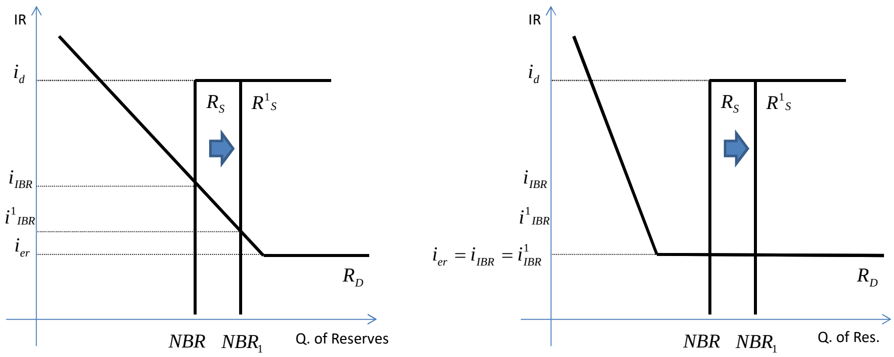
• Borrowed reserves will be zero (interbanking loans are cheaper) unless IBR equals discount rate
• It can't increase further otherwise funds are abritraged between CB and interbanking channels

• Opportunity cost of reserves decreases as IBR decreases, increasing demand
• It can't decrease further than IR on reserves

Note that i_{er} for ECB (deposit facility) is currently 0% for BR, 0,5% for NBR

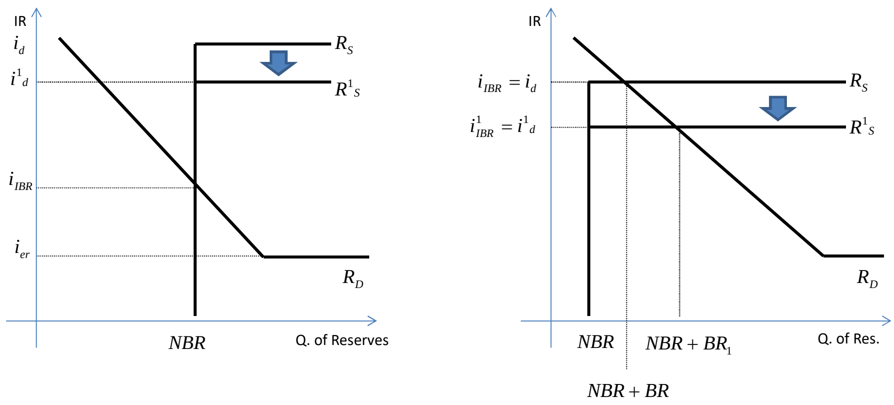
MONETARY POLICY TOOLS

<u>Effects of open-market operations (purchase)</u>



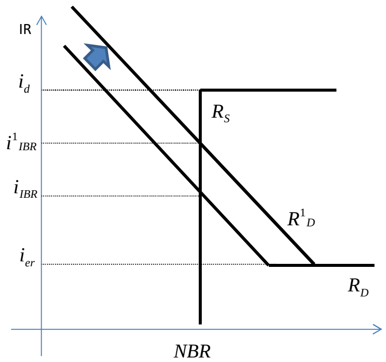
Monetary policy tools

Effects of discount lending (lower IR on discounts)



Monetary policy tools

Effects of reserve requirements (increase)



Effects are different if demand and supply meet where flat, but mostly irrelevant

MONETARY POLICY TOOLS

Use of open-market operations

- Involving government bonds, especially short-term:
  - market is deep, liquid and trades in high volumes,
  - hence could absorb even large interventions
- Transactions take the technical form of:
  - repurchase agreement (REPO): CBs buy (or sell) spot and is obliged to sell (or buy) at a future date (usually within days) – temporary and defensive
  - outright transaction: actual purchase (or selling) – by itself not temporary
- ECB: main refinancing operations (MRO), long-term refinancing operations (LTRO) and securities markets program (SMP)

MONETARY POLICY TOOLS

Use of discount lending

- Liquidity backup, in the very short-term, for solvent and/or troubled institutions (with different pricing)
- Discount lending could allow CBs to become lenders of last resort to avoid bank runs, by increasing discount lending and extending it particularly to troubled institutions
- Lending of last resort induces moral hazard as any safety net
- For ECB, main reference is to “marginal lending facility”

MONETARY POLICY GOALS

Primary goal: price stability

- “Low” and stable increase in price level
- Reduced uncertainty and economic growth
- Nominal anchor: choosing of a target variable:
  - Typically, inflation or money supply
  - Reduces time-inconsistency problems: short-run policies hamper long-run efficacy
  - Constrains discretionary policies

MONETARY POLICY GOALS

Other goals:

- High **employment** (lower than 100%):
  - frictional unemployment is beneficial (looking for better jobs, education, …), structural unemployment (mismatch between demand and supply of labour) is outside CBs’ powers
  - match demand and supply: natural rate of unemployment
- Economic **growth**: promoting investments and savings, also in combination with fiscal policy
- **Financial markets stability**: by responding to excessive or insufficient funds within intermediaries
- **IR stability**: reducing fluctuations that create uncertainty
- **ER stability**:
  - to assist internal competitiveness and avoid “imported” inflation
  - to reduce uncertainty and assist economies highly dependent on foreign trade

Monetary policy goals

Relationship between goals:

- In the long run all goals converge whereas in the short term can conflict: f.i. growth can produce inflation, hence keeping it stable by increasing IR produces unemployment
- Therefore CBs are usually ruled as follows:
  - By **hierarchical mandates**: setting price stability as the primary goal, and growth and employment as secondary objectives (f.i. ECB), preferred since time inconsistency is reduced and as long as other goals are pursued
  - By **dual mandates**: achieving together price stability and minimum unemployment (f.i. Fed)
- Short-term fluctuations of price stability are tolerated to achieve other goals if not contrasting with long run price stability

Monetary policy goals

Price stability is usually achieved by **inflation targeting** (despite some CBs target also other variables, f.i. monetary targets in ECB):

- Inflation targeting is easily understood and communicated
- Provides easy accountability and less time-inconsistency
- Reduces political pressures requiring a long run focus
- Outcomes are slow to emerge and inflation policies lag
- Can be rigid if interpreted restrictively
- Acting on inflation is difficult, so CBs choose **intermediate targets**: monetary aggregates and IR

Monetary policy goals

- Intermediate targets bear trade-offs:
  - once a monetary aggregate target is set, IR fluctuate
  - if IR are set, monetary base fluctuates
- Choice of instrument depends on:
  - Observability/measurability: IR are immediate to observe in nominal terms but difficult in real terms, monetary aggregates are easy to measure but lag on actions taken
  - Controllability: short-term nominal IR can be controlled tightly (but little control on expected inflation), whereas monetary base fluctuates on demand changes (less controllable)
  - Predictability: IR have a closer link with goals if compared with monetary aggregates (hence IR policies are more frequent)

Monetary policy and crisis

Asset-price bubbles can lead to crisis:

- Credit-driven: easy credit artificially inflates an asset's price, and when the tendency is reverted credit losses arise and asset values are destroyed (f.i. subprime mortgage crisis)
- Irrational exuberance: excessive optimism over a category of assets inflates its price, and when the tendency is reverted it has a negative impact on economy (f.i. "New economy" bubble)

CBs should therefore consider the following:

- Exuberance bubbles are hard to identify ("beat the market"?) and its impact is not so dangerous to the overall economy
- If credit is booming, it is easier to see it and the impact of a following crisis is usually huge

MONETARY POLICY AND CRISIS

How should CBs respond?

- Influencing IR has uncertain outcomes: it does not reduce the expectation for high returns of "bubble-investors" and higher IR make bubble burst more severely
- Usually it's a specific asset or a certain asset class being involved: CBs have tools that can impact general macroeconomic variables, rather than hitting with greater focus
- Acting on IR causes a short-term loss of growth, employment and desired inflation
- Hence, usually CBs should not respond to burst bubbles
- Other players should come in before:
  - Regulators (since bubbles are created by deregulation)
  - Supervisors (risk-taking should be assessed and limited)

THE INTERNATIONAL FRAMEWORK

CBs intervene also in Forex:

- By buying/selling international reserves, thus reducing/increasing the monetary base and appreciating the domestic currency: unsterilised foreign exchange intervention
- Sterilised interventions require an additional offsetting open market transaction to leave the monetary base stable, hence no effect on ER or IR, but signaling effect could influence demand due to future expected monetary policy actions

CBs could be involved because of ER regimes:

- Floating ER regimes can be influenced (managed/dirty) with domestic effects
- Fixed ER regimes, setting an anchor, need to be managed but require availability of international reserves: if insufficient a devaluation occurs, if excessive a revaluation

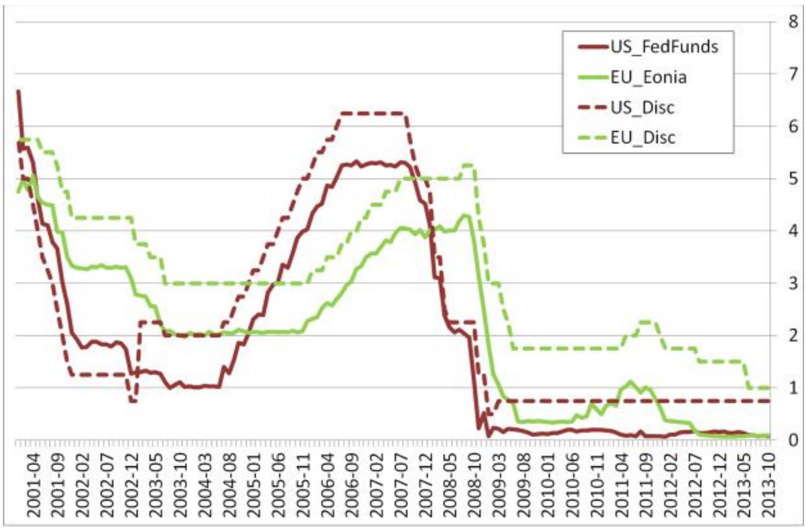
THE INTERNATIONAL FRAMEWORK

Why choose fixed or floating?

- Floating systems can induce in smaller countries inflation or lack of monetary policy discipline, but wide fluctuations can damage internal economy
- Fixed systems can lead to currency crisis exposing countries to speculative attacks, is expensive to be kept in place and make CBs give up control on monetary policy
- Several countries tried capital inflow/outflow restrictions to avoid currency crises, but they don't work or cause other issues
- Not surprisingly, the resulting global system is a mixture of managed floats and fixed ER
- Again, smarter regulation and supervision are called for a more effective result

EXAMPLES

1. What is the comparison between IR of interbanking loans and CB's discount rates in US and EU suggesting?



EXAMPLES

2. On 7th Nov 2013 the ECB "surprisingly" cut IR to an all-time low of 0.25%. The following is part of an article from "The Economist". Comments?

[…] inflation in the euro zone had plunged […] to 0.7% in October. […] the European Central Bank responded by cutting its main policy rate from 0.5%. […] The ECB also extended the time that banks can borrow unlimited amounts from it from mid-2014 to mid-2015.
What are the immediate consequences in terms of ER?
The decision came as a surprise–the euro fell sharply against the dollar-even though the collapse in inflation had brought it a percentage point under the central bank's target of "below but close to 2%.
Traders [thought] that any rate cut would be delayed until December. […] ECB usually moves in a ponderous way.
[…] the 23-strong governing council would then have available new staff forecasts.
[…] it still remains slow-moving and fettered compared with other central banks
Is the ECB facing new troubles?
[…] falling inflation […] could be highly corrosive, especially if inflation turns to outright deflation. […] once people start to expect falling rather than rising prices it can be very difficult to reverse.
[…] inflation […] is now lower than in Japan. […] Mr Draghi said that the euro area did not face the risk of Japanese-style deflation [but] "a prolonged period of low inflation" until "a gradual" return towards the ECB's target. That […] is deeply worrying, for two reasons.
Why?

[1] sickly countries […] are weighed down by excessive debt. […] it becomes much more difficult
[2] harder to regain their competitive edge, forcing them towards the deflationary precipice.
Enough?

[…] The ECB […] is still not doing enough: […] one option [is] a negative rate on CB's deposits.

EXAMPLES

3. The following is part of an article from "The Economist" focusing on the US.

[…] Markets must believe that rates will stay close to zero even as growth and inflation pick up, thus making current borrowing and investment more attractive. […] central bankers in an awkward position: […] they must persuade markets that they will tolerate higher inflation.
[CB] have an incentive to renege on promises to allow higher inflation, rendering them less credible. […] But once the economy is chugging along, the temptation is to try to get the best of both worlds, by raising rates before prices go up. And if markets doubt that central banks will really embrace higher inflation […] then expectations will not adjust and the real interest rate will not fall. Baseline, simple policy rules generally perform poorly. […] Committing to allow inflation to rise above 2% generates much better performance; the economy hits a 5.5% unemployment rate about two years earlier—assuming the commitment is credible. But […] it probably isn't.
So, what to do?

The use of thresholds on unemployment and inflation [have] a meaningful improvement at the pace of the drop in unemployment from lowering the Fed's threshold […] down to 5.5%.
[…] raise the Fed's target for inflation from 2% to 3%. […] a "nominal income" objective [with] the fastest and largest drop in unemployment of any of the policies tested.
So, do we have a solution?
[…] federal funds rate scarcely rises. […] The pace of improvement is far too slow. The longest economic expansion in America's history […] clocked in at […] 10 years exactly. The postwar average is only 58 months. […] economy falling back into recession in 2019. […] the federal funds rate is *at most* 4% in 2019: the Fed [risks to run] out of room before hitting the zero lower bound. […] it suddenly becomes very, very clear how Japan found itself stuck.
No way out, then?

EXAMPLES

3. cont.

[…] the key ingredients to a *monetary-policy* solution […]:
- Announce an inflation or price-level target that guarantees a period of above-normal inflation.
- Depreciate the currency.
- Support the depreciation, to the extent necessary, through direct intervention in foreign-exchange markets: print money and buy foreign currencies or assets.

Isn't depreciation just a beggar-thy-neighbour measure, though?
[…] No, because […] it is a means to support expectations of higher inflation. Down the line there might be a boost to output through the net export channel thanks to devaluation. But in the meantime, higher inflation expectations should generate faster growth, including growth in domestic demand.
Is it that simple?

There is an alternative to devaluation: fiscal […] helicopter drop. If the Fed said that it would finance a Treasury plan to mail every American a $1,000 cheque every day until nominal output was forecast to return to the pre-crisis trend, that would kick America off the ZLB.
That would require Congressional assent. But one might easily say that the devaluation solution would also require the government's approval, since undertaking something that aggressive without political backing could endanger the central bank's independence. And that's the real lesson, isn't it? Heads of state kicked economies off the ZLB in the 1930s, not central bankers. It wasn't a reflective Bank of Japan that decided to change course on monetary policy; the shift was imposed by a newly elected government. The decision […] is one that has to be taken politically.

EXAMPLES

4. €conomia: ECB's central banking game