

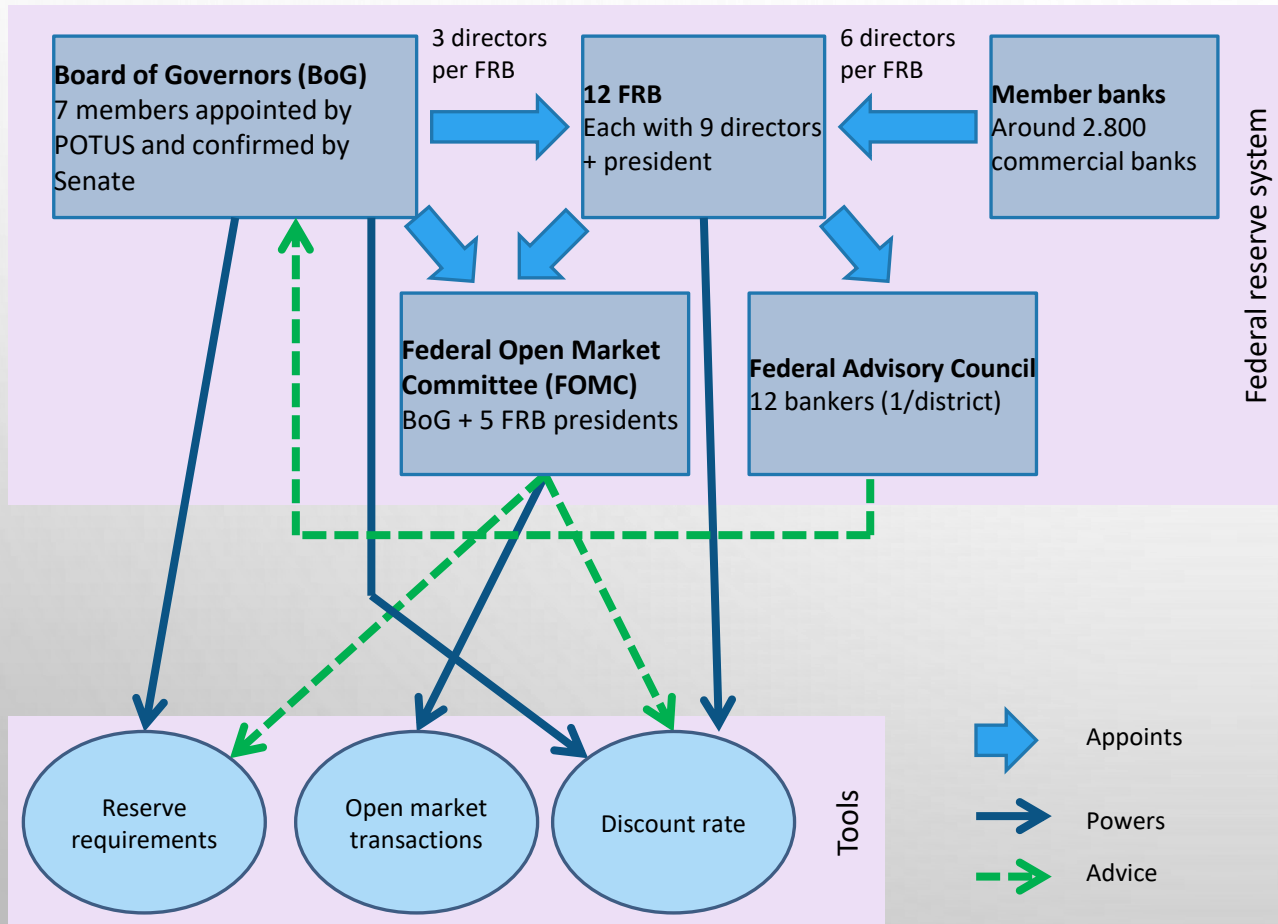
B10. CENTRAL BANKS



- FED VS ECB
- WHY DIFFERENT CB MODELS?
- MONETARY POLICY: TOOLS, MANDATES, GOALS
- CB & FINANCIAL CRISES
- CB & CURRENCIES

FED USA

Complex system of weights and balances, controls and responsibilities (independence *within* the government)



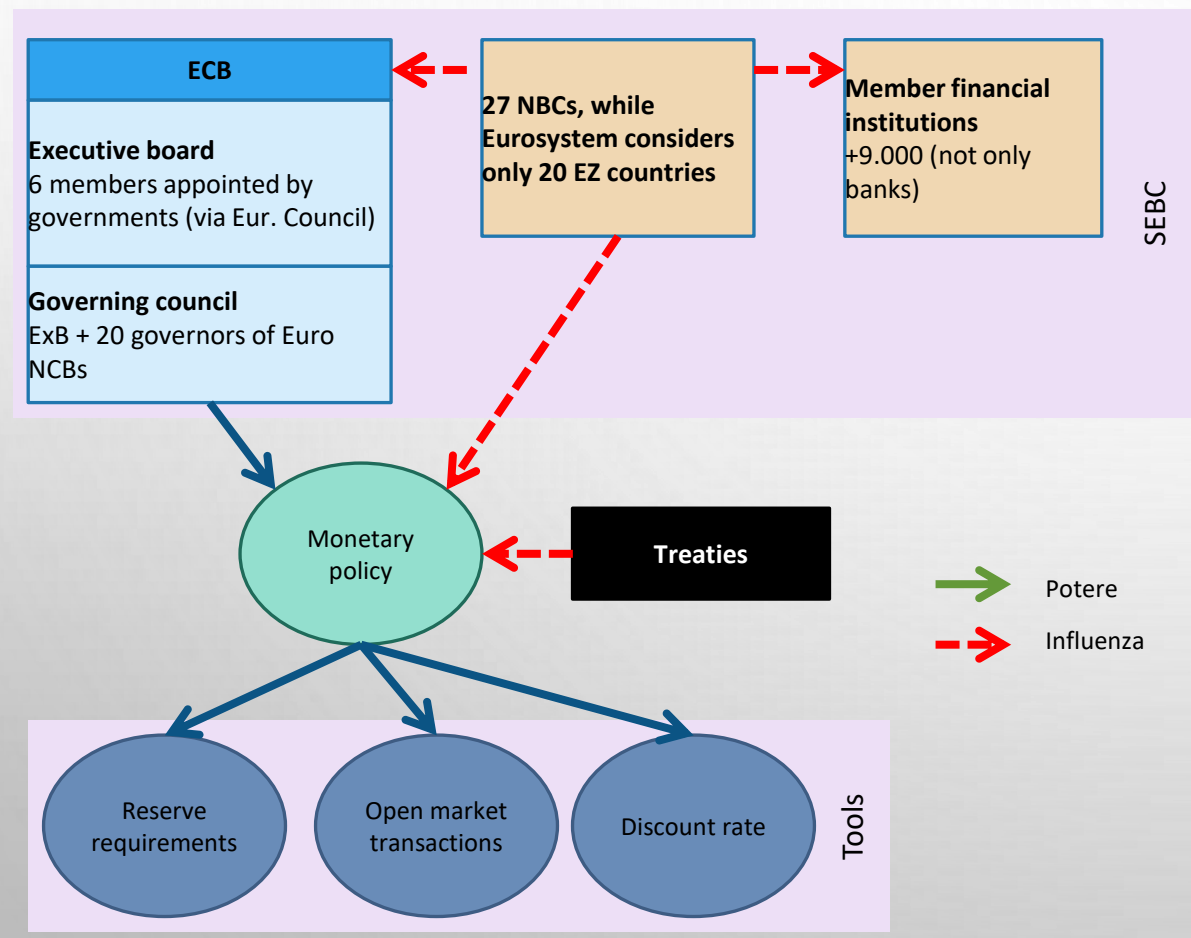
- BoG: chairman has public and internal influence, oversight
- FOMC ("the Fed"):
 - Independent choice of instruments and goals
 - Influence from Congress and President

Federal Reserve Banks



ECB EU

NCBs at the core of the ESCB



NCBs:

- define ECB's budget
- enforce monetary policy, regulation and supervision
- greater independence, more need to compromise
- treaties require price stability and changes are extremely difficult: more goal independence



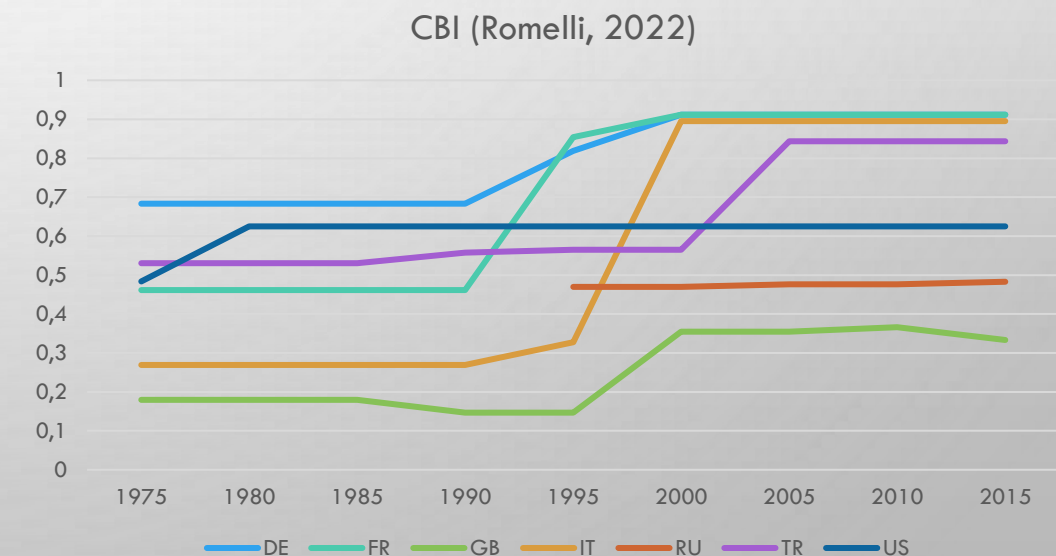
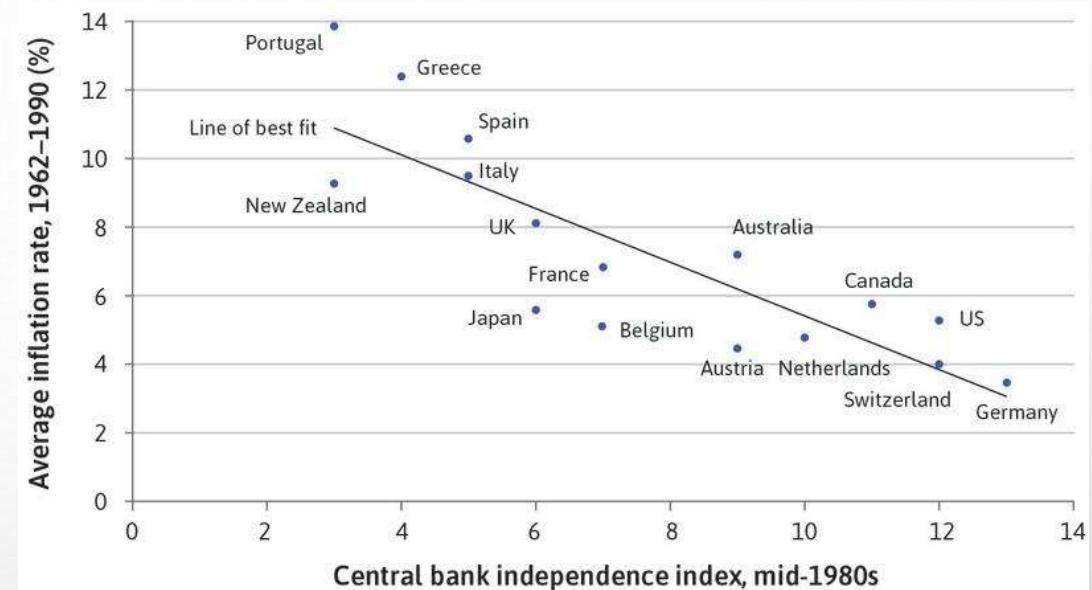
WHY DIFFERENT MODELS?

- **Pros** of independence:

- Political shortsighted influence produces inflation by acting on short-term goals (unemployment and IR): election deadlines rather than economy needs
- Treasuries' influence accumulates risk by promoting abnormal absorption of public debt in CB/banks
- Monetary policy requires specific expertise

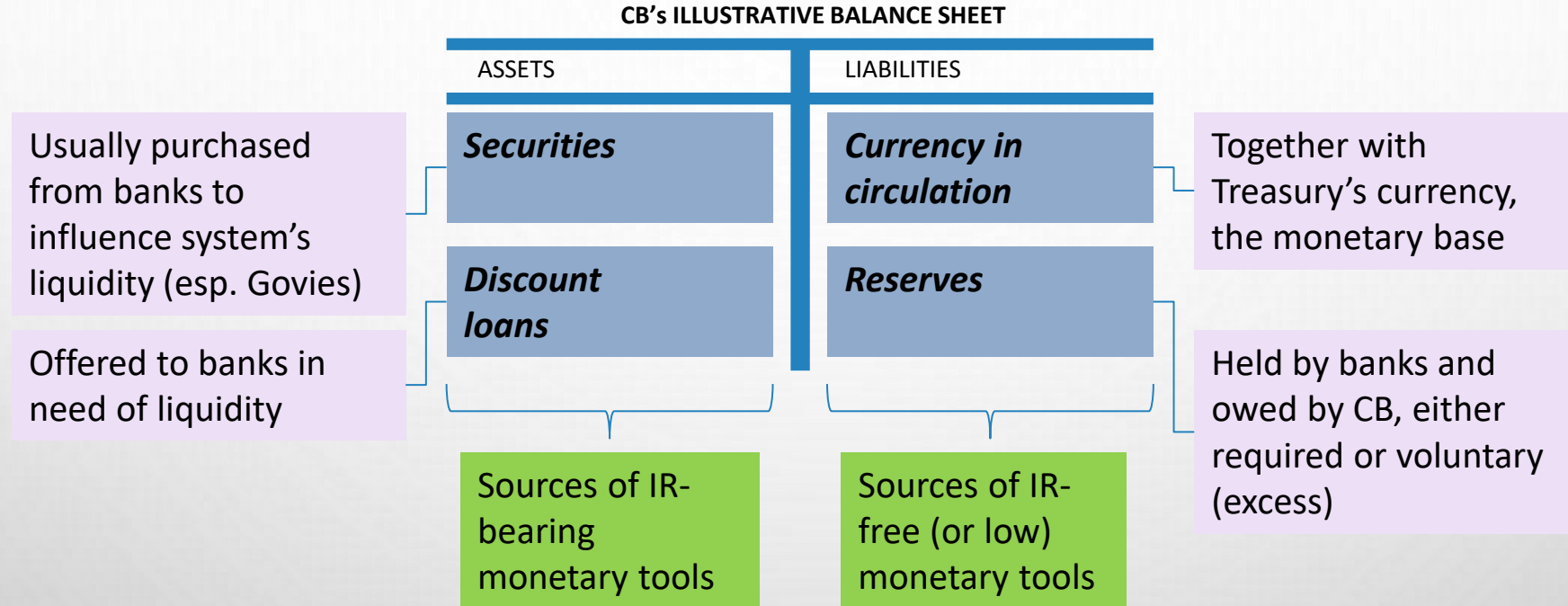
- **Cons** of independence:

- Accountability and democratic control (?)
- Governments' fiscal policies weakened by monetary policy (?)
- Independence did not avoid crisis...

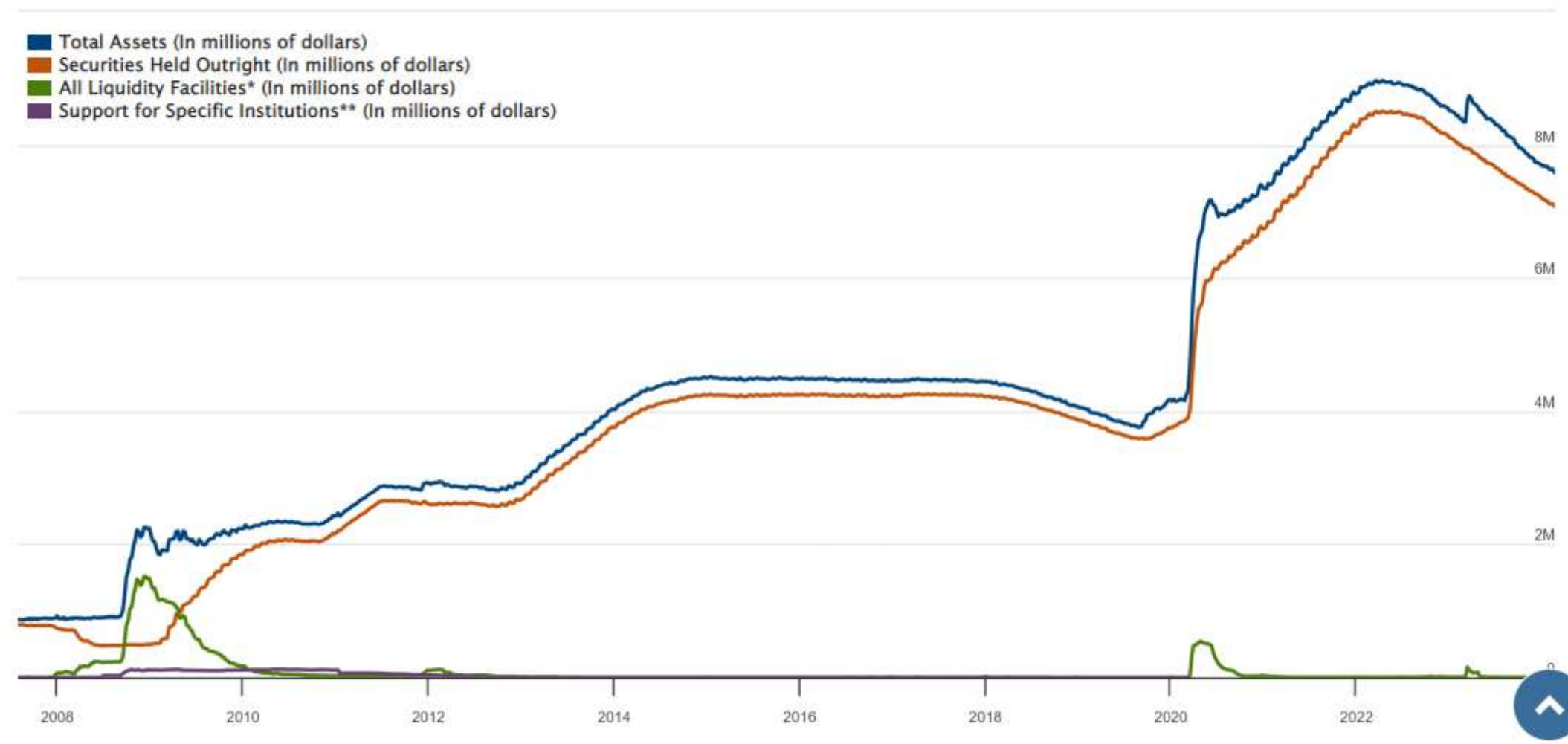


MONETARY POLICY

The accounting perspective

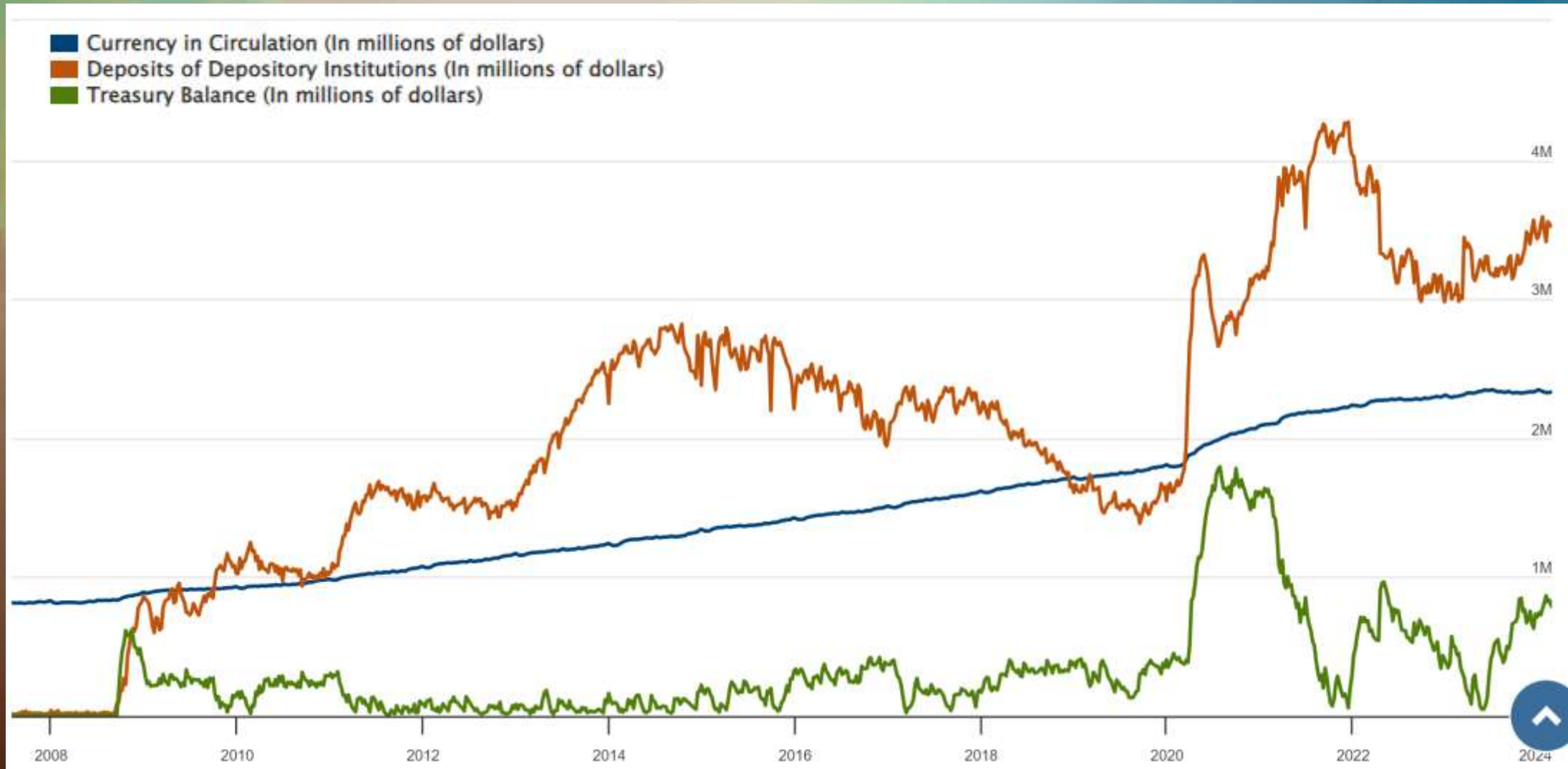


FED'S BALANCE SHEET



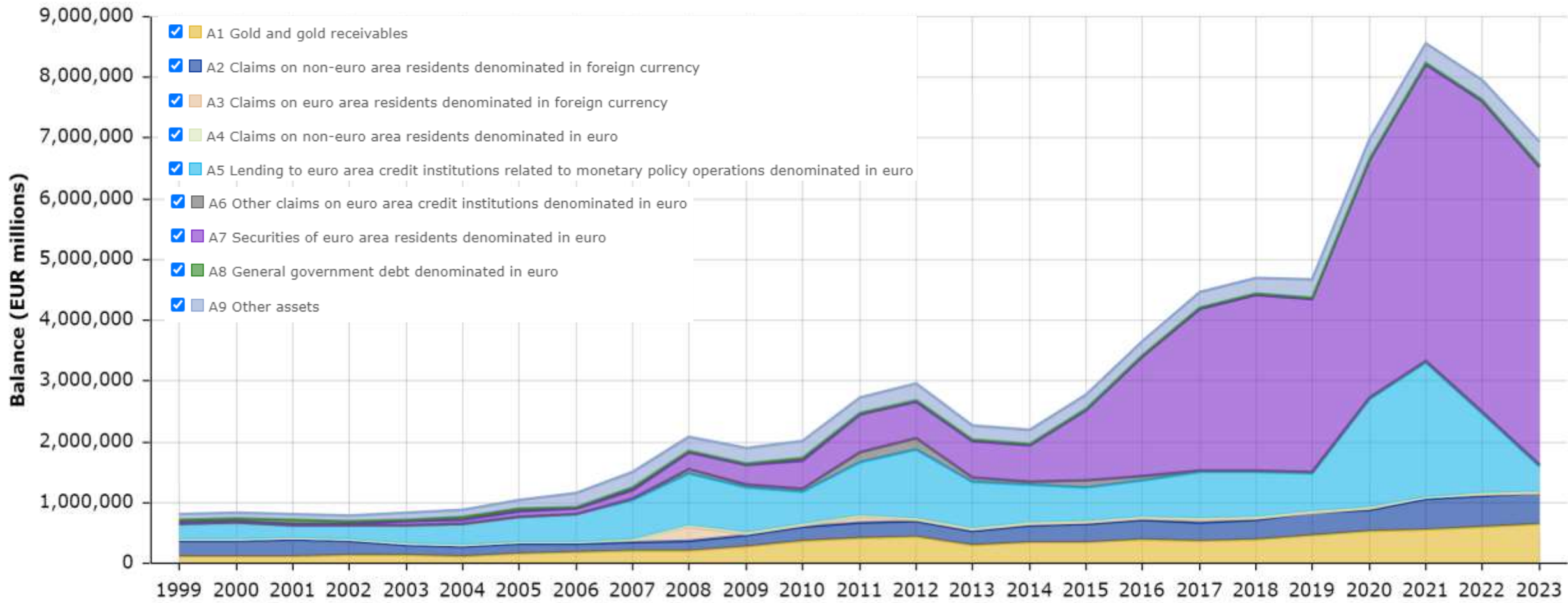
EXAMPLES

FED'S BALANCE SHEET



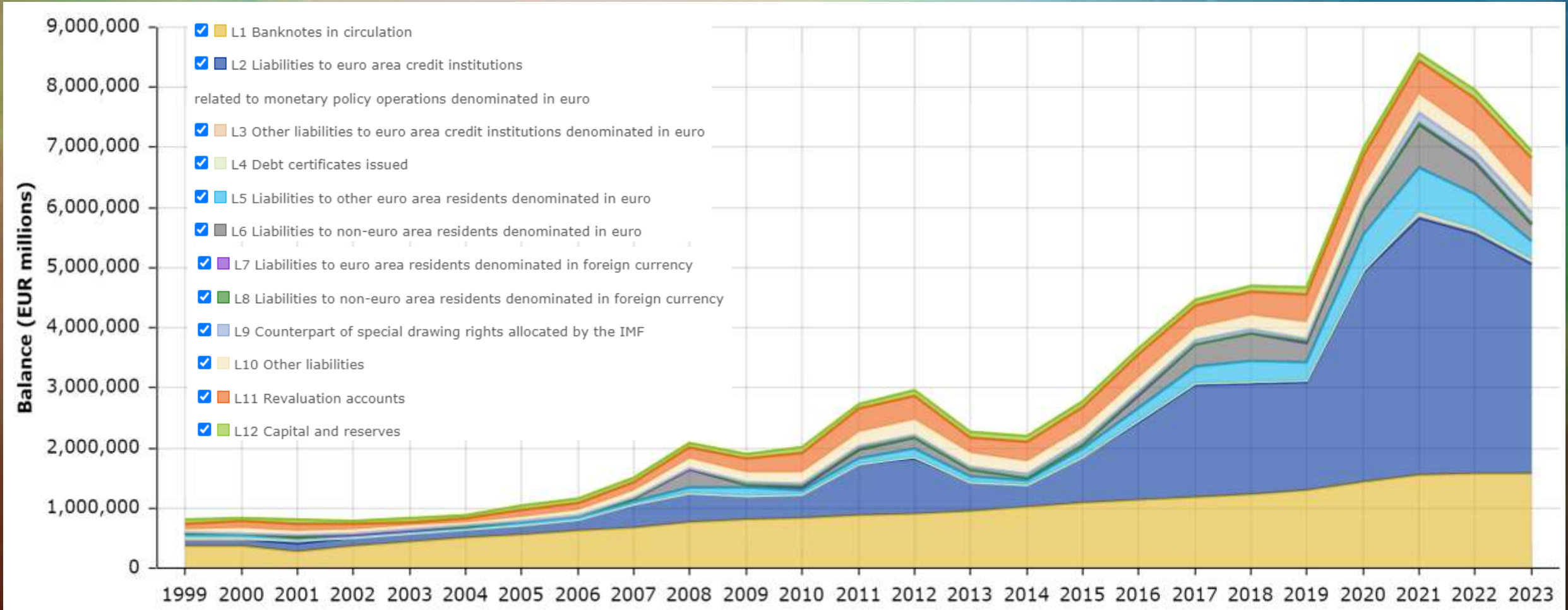
EXAMPLES

ESCB'S BALANCE SHEET



EXAMPLES

ESCB'S BALANCE SHEET

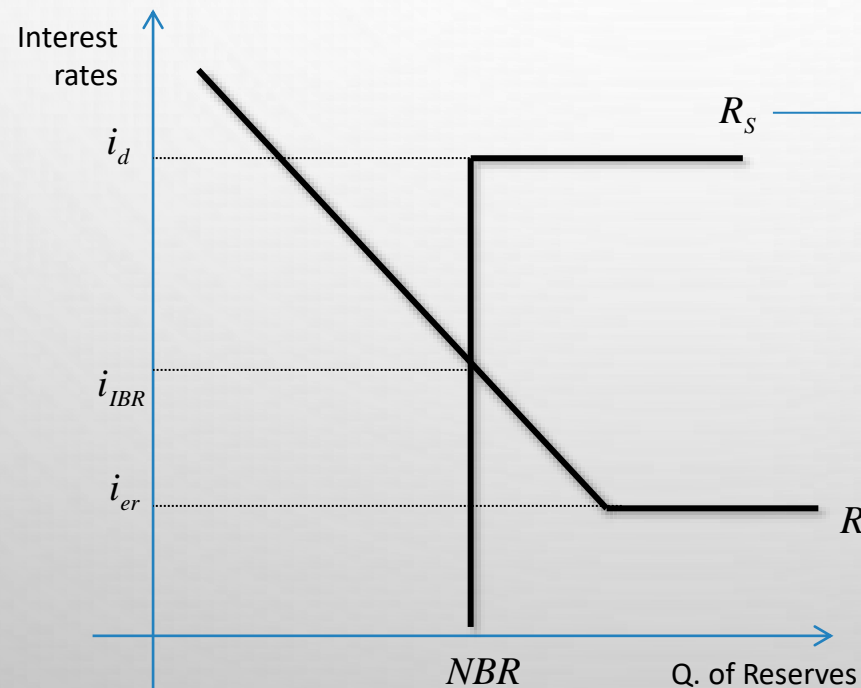


EXAMPLES

MONETARY POLICY TOOLS

Operations in the market for reserves

- 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



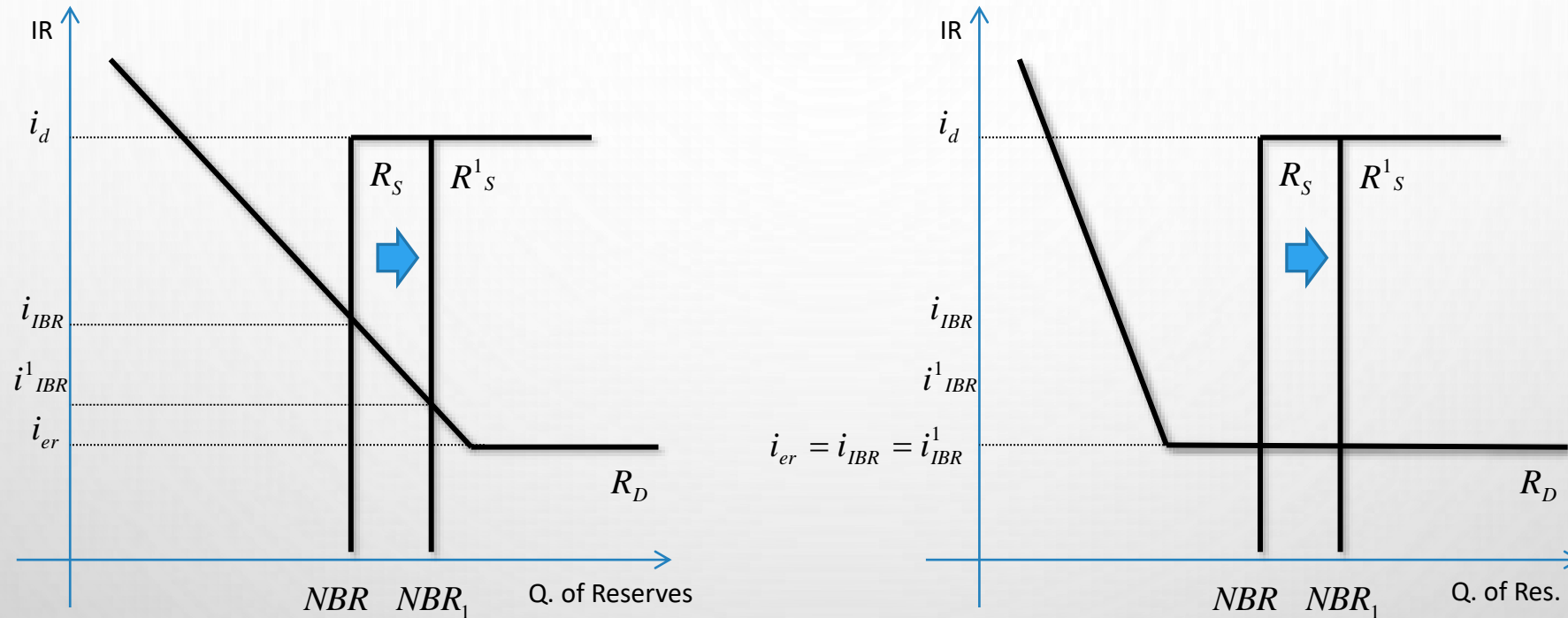
- Borrowed reserves will be zero (interbanking loans are cheaper) unless IBR equals discount rate
- It can't increase further otherwise funds are arbitrated between CB and interbanking channels

- 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 (as of April23) 2,5% for BR (5,75% penalty), 3% for NBR – after reaching a minimum of 0%/-0,5% in September2019. These rates were only seen in 2007-08 and 2000-01.

MONETARY POLICY TOOLS

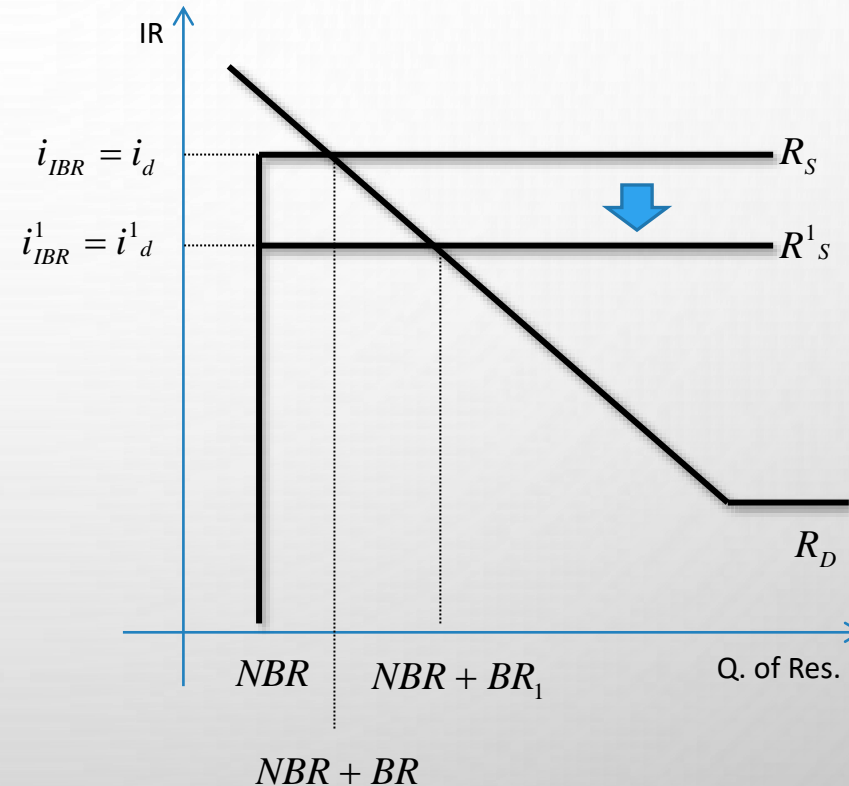
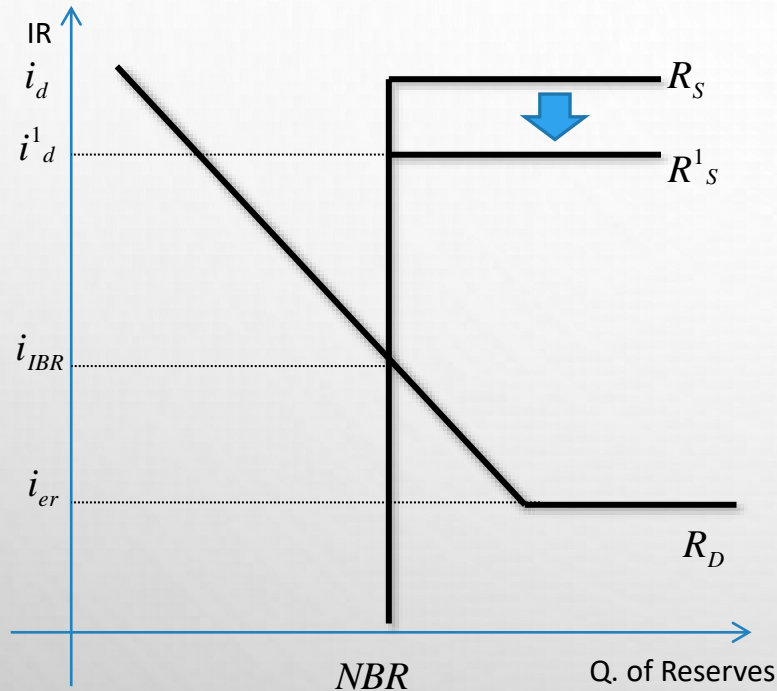
Effects of open-market operations (purchase)



- Mainly (but not only) govies, especially (but not only) short-term
- Through repurchase agreements («defensive») or «outright transactions»
- For the ECB: MRO (main refinancing operations, 1 week), LTRO (long term RO), SMP (securities markets program), TLTRO (targeted long term RO), QE, PEPP: growing non conventional tools

MONETARY POLICY TOOLS

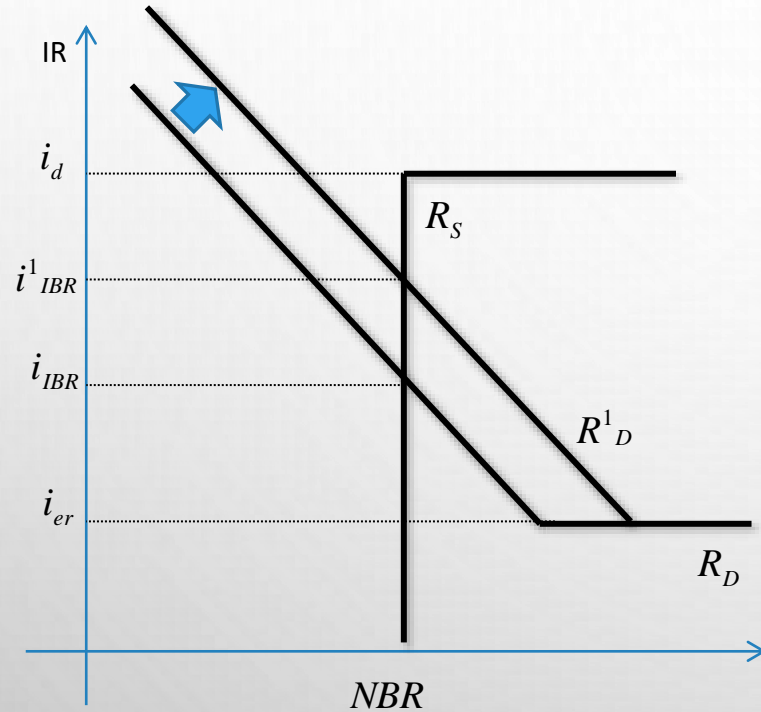
Effects of discount lending (lower IR on discounts)



- Short term liquidity for solvent but illiquid institutions
- «Lender of last resort», also for bank runs issues (but: moral hazard)
- For the ECB: marginal lending facility (ON borrowing)

MONETARY POLICY TOOLS

Effects of reserve requirements (increase)

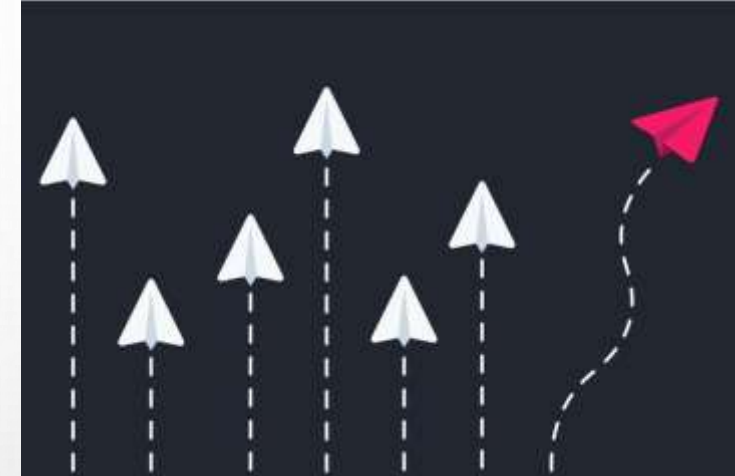


Effects are different if demand and supply meet where flat, but mostly irrelevant

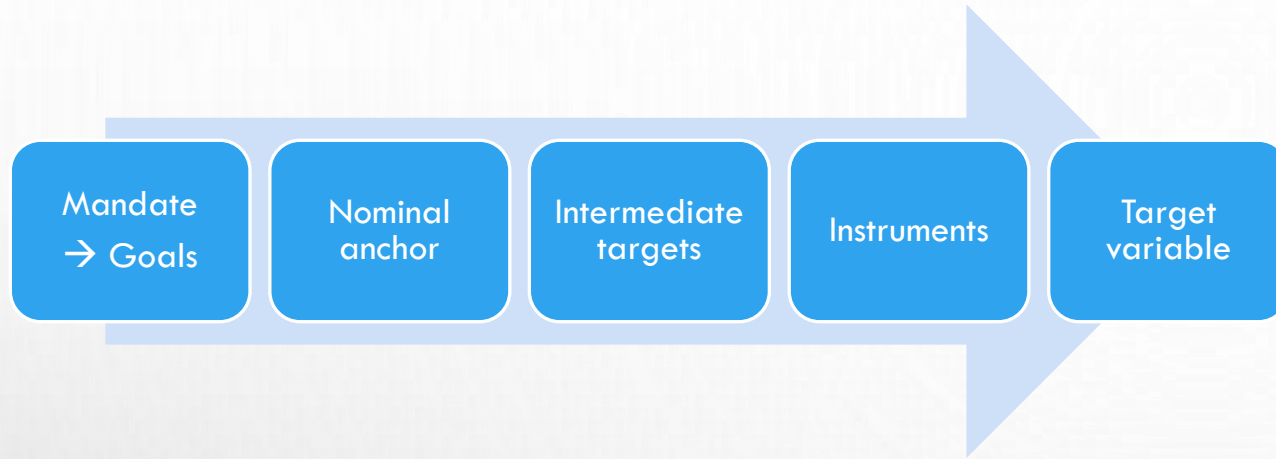
MONETARY POLICY TOOLS

“Unconventional policies” (incomplete list)

- *Negative interest rate policies* to avoid deflationary currency
 - Effective in dealing with lower bound events
 - Side effects: less bank interest margins
 - Longer-term effects: ? (probably happening now)
- *“Unusual” lending* to deal with disruption of monetary policy transmission
 - Contained funding issues on interbank/money markets
 - Longer maturities, more eligible collateral/counterparties, different lending terms/goals
 - Effective for flows to the private sector and stabilizing expectations
 - Side effects: inefficient allocation of credit, weaker leverage reduction
- *Asset purchase programmes* for lower bound and monetary policy issues
 - Protected assets during fire sales and incentivized loans securitisation.
 - Side effects: limited weakening CB balance sheets, poorer asset valuations, scarcity in repo markets, spillovers on commodity prices
- *Forward guidance* to reduce uncertainty (RIP)
 - Clarifying ahead of time intentions and tools
 - Quite effective, subject to credibility and flexibility issues



MONETARY POLICY GOALS



Long run converge, short-term trade-offs:

- **Hierarchical mandate:** price stability first, and growth and employment then (f.i. ECB): less time inconsistent
- **dual mandate:** achieving together price stability and minimum unemployment (f.i. FED)

Primary goal: price stability

- “Low” and stable increase in price level
- Reduced uncertainty and stimulates economic growth
- Need for a nominal anchor (f.i. FED and ECB “symmetrical” inflation target):
 - Reduces time-inconsistency
 - Constrains discretionary policies

Others:

- Full **employment** (<100%): frictional may be good (looking for better jobs, education, ...), structural (D/S) is outside CBs’ powers
- Economic **growth**: investments and savings
- **Financial markets / interest rate stability**
- **ER stability:**
 - to assist competition and reduce uncertainty
 - to avoid “imported” inflation
 - to assist dependency on foreign trade

MONETARY POLICY GOALS

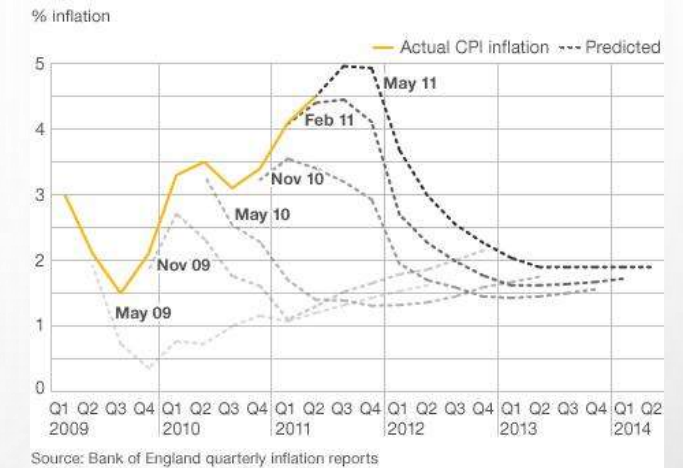
Why inflation targeting for price stability?

- Inflation targeting is **easily understood** and communicated
- Provides **easy accountability** and less time-inconsistency
- **Reduces political pressures** requiring a long run focus

But...

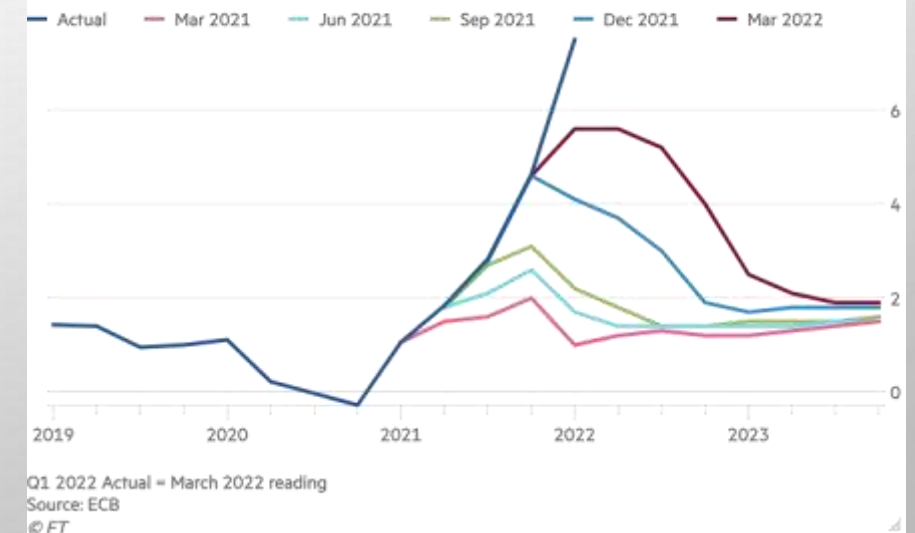
- Outcomes are **slow** to emerge, inflation policies lag, **rigid**
- Acting on inflation is hard, so **intermediate targets** (monery aggregates and IR):
 - **trade-offs**: once a monetary aggregate target is set, IR fluctuate (and viceversa)
 - **observability/measurability**: IR are immediate to observe (not in real terms), monetary aggregates are easy to measure but lag
 - **controllability**: short-term nominal IR can be controlled tightly (less on expected inflation), whereas monetary base fluctuates on demand changes (less controllable)
 - **predictability**: IR closer to goals than monetary aggregates
 - *What do CBs choose?*

Bank of England's optimistic inflation predictions



Rising inflation has caught the ECB by surprise

Eurozone inflation - successive ECB forecasts and outcome (%)



CB AND CRISES

Asset-price bubbles can lead to crisis:

- Credit-driven: easy credit artificially inflates an asset, and when reverted credit losses arise and asset values are destroyed (f.i. subprime mortgage crisis)
- Irrational exuberance: excessive optimism over an asset inflates prices, and when reverted it has a limited impact on economy (f.i. “New economy” bubble)

CBs should therefore consider the following:

- Exuberance bubbles are hard to see and not so dangerous
- If credit is booming, it is easier to see it and the impact is usually huge



How should CBs respond?

- Influencing IR has uncertain outcomes: it does not discourage “bubble-investors” and higher IR make bubble burst sooner and harder
- Usually it’s a specific asset being involved: CBs have tools that are general
- Acting on IR causes a short-term loss of growth, employment... heavy political pressure
- Hence, CBs **do not respond** to burst bubbles, but to facilitate **recovery**: it’s questionable to say that they are “late”, or “did not see it” (but they also care about financial stability...)
- Other players maybe, like regulators and supervisors?



CB AND ER

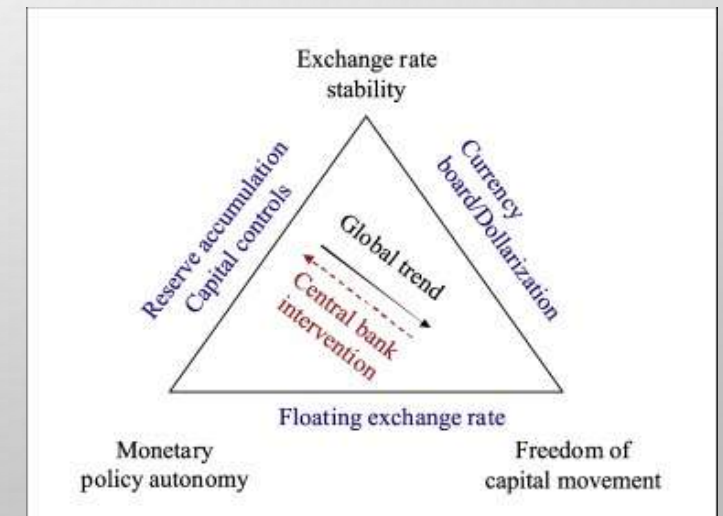
CBs act also on currencies:

- By buying/selling international reserves, changing the monetary base and the value of the domestic currency: **unsterilised intervention**
- **Sterilised interventions** add another offsetting open market transaction to keep the monetary base stable: no effect on ER or IR, but **signaling** effect on future actions

CBs could be involved because of ER regimes:

- **Floating** ER regimes (managed/dirty) may import inflation or damage internal economy through wide fluctuations
- **Fixed** ER regimes, setting an anchor, require availability of international reserves: if insufficient a devaluation occurs, may trigger currency attacks and crises, is expensive and makes CBs lose grip on inflation
- Some countries tried **capital inflow-outflow restrictions**: black markets!
- The global system is a mix of **managed floats** and **temporarily fixed ER**

Trilemma: ER, MB, IR?



ANNUAL REPORTS OF FED AND ECB



EXAMPLES