6. Inflation targeting II.

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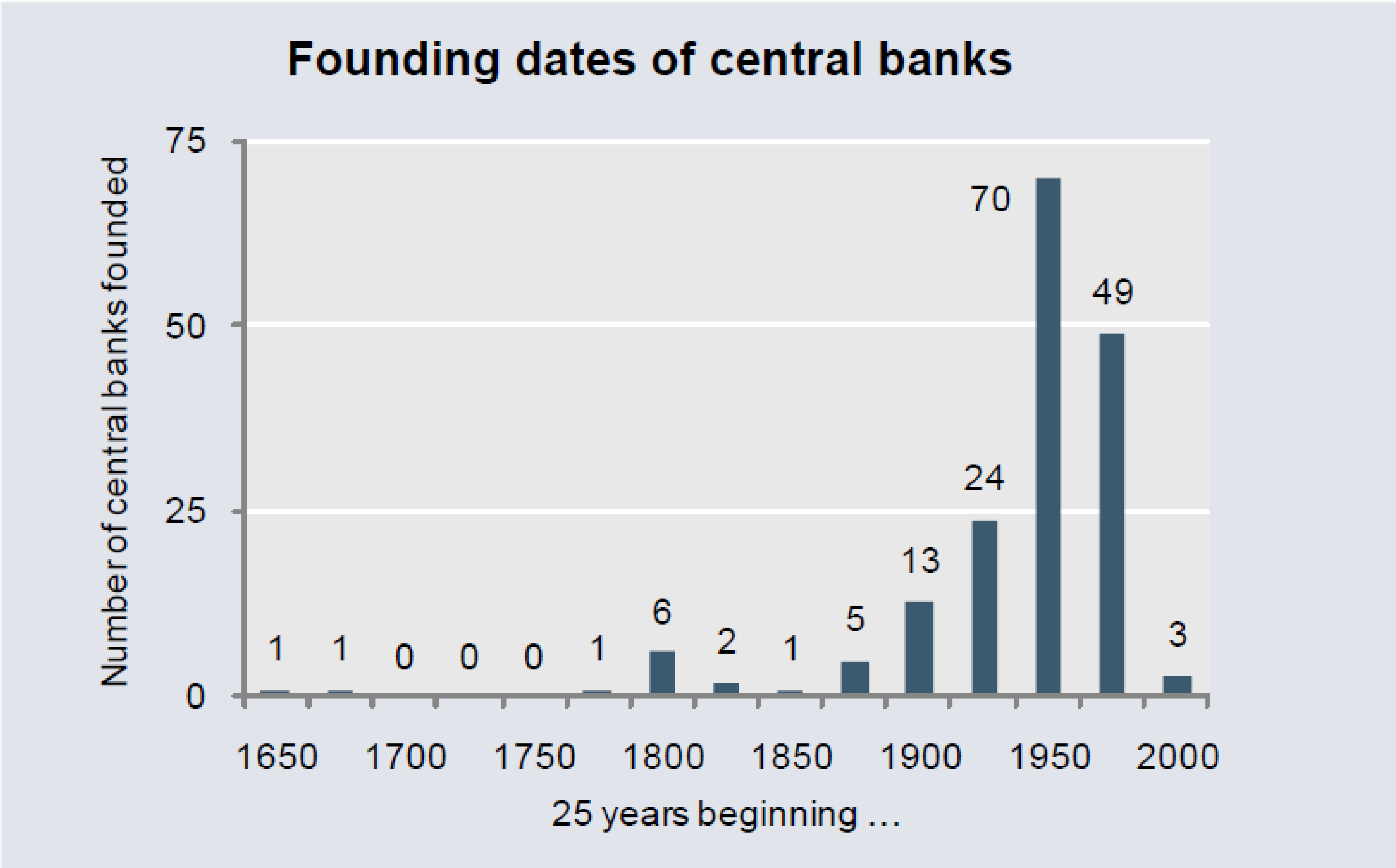
The evolving world of central banking



Source: BIS

The oldest „players“ of the CB game

Riksbank 1668 (Nobel prize 1968)

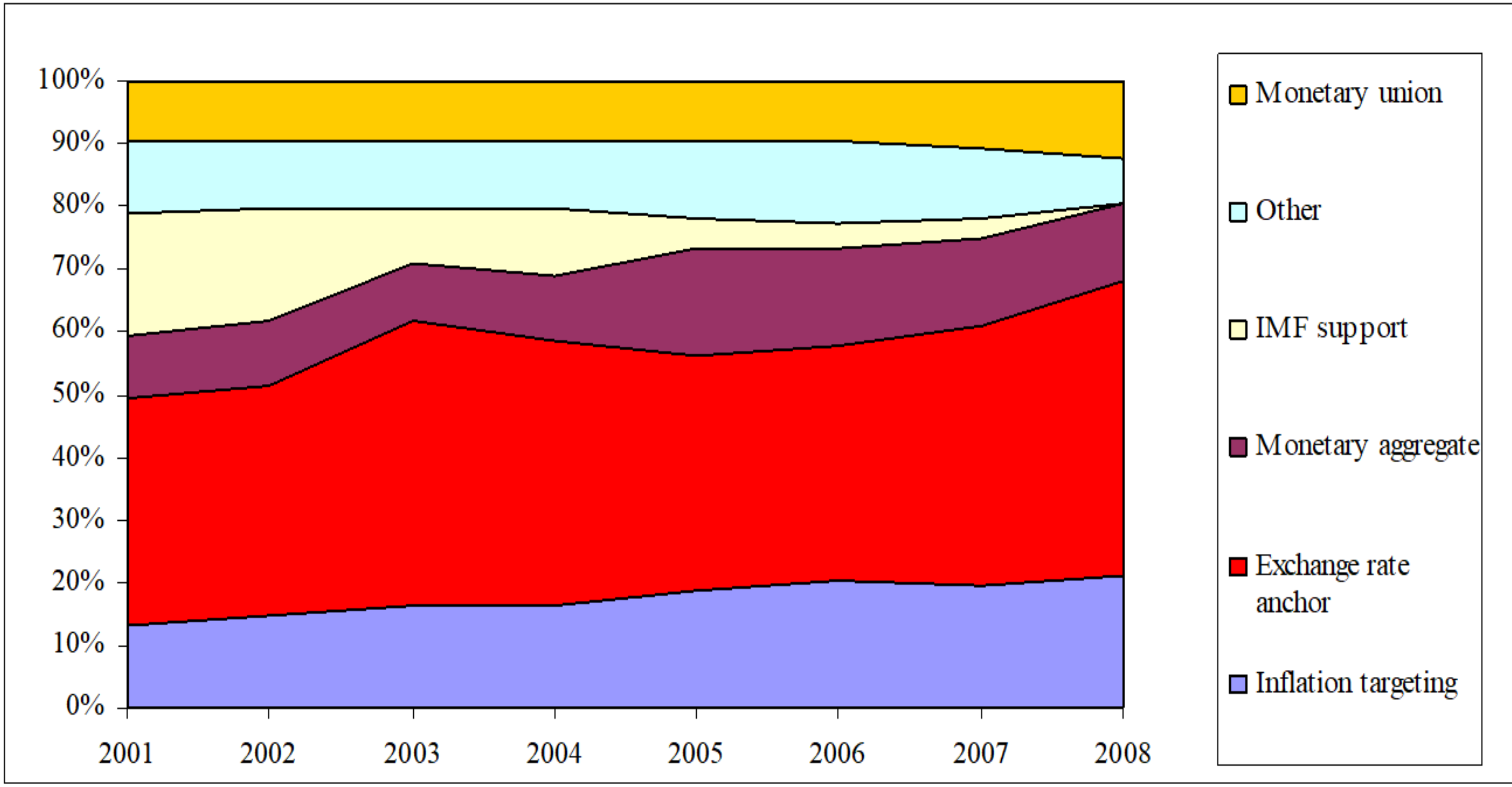
Source: https://flsriks.wordpress.com/2018/09/08/oppet-hus-pa-riksbanken/

Bank of England 1694

Source: https://www.ai-expo.net/global/partners/bank-of-england/

Inflation Targets of Central Banks

Monetary policy arrangements by IMF in 1999-2008



Source: CNB and IMF

SIMPLE FORMULA

Money multiplier = 1/Reserve requirement

$$m = \frac{1}{R}$$

BASIC THEORY OF THE MULTIPLIER

Under the reserve ratio of 10%

500 CZK turns into **5000 CZK** of deposits if we assume a perfect world of bank deposits only

Under the reserve ratio of 20%

500 CZK turns into **2500 CZK** of deposits (in the same world)

<u>However, the monetary world does not work like this as we already know!</u>

“New Monetarists” in “Old Central Banks”

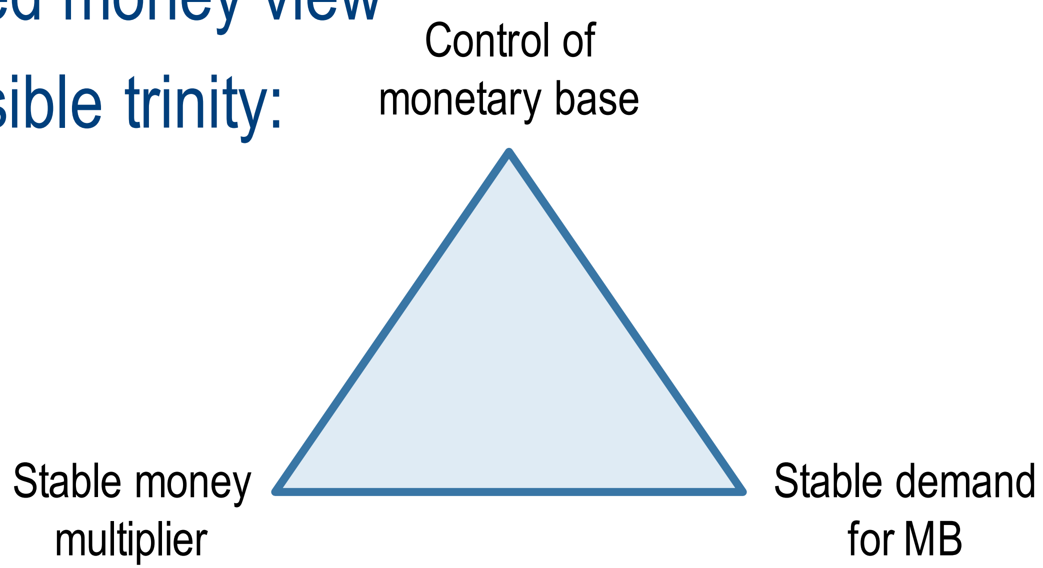
- It turns out that the old monetarist goal (price stability) is best achieved via <u>inflation targeting</u>
- Two crucial building blocks of modern monetary policy: <u>rational expectations and rigidities</u> (or rational inattention; Sims, 2003) – see further
- Rational expectations imply long-term neutrality of monetary policy (although see Aghion et al., 2012)
- Rigidities imply short-term effectiveness in affecting real variables, such as GDP and employment
- Inflation targeting anchors expectations: inflation is more palpable to households than money supply

What Variables Should the Central Bank Stabilize?

- Stabilization is currently the <u>tenet</u> of central banking
- But remember the radical libertarian (and, to some extent, Austrian) opposition to active stabilization
- This was the mainstream view prior to the 1930s
- Three stabilization targets: <u>nominal variables, real variables, financial variables</u>
- One cannot catch all rabbits. It can be shown that giving most weight to nominal variables helps stabilize the rest of the economy as well
- But should other variables have zero weight? Fed's dual mandate; recent focus on financial stability

But What Nominal Variables? Money?

- The monetarist experiment of Paul Volcker was, to a large extent, based on the idea of fixed money (see previous lecture)
- The rapid disinflation showed the power of monetary policy, but serious side effects appeared, questioning the fixed money view
- Impossible trinity:

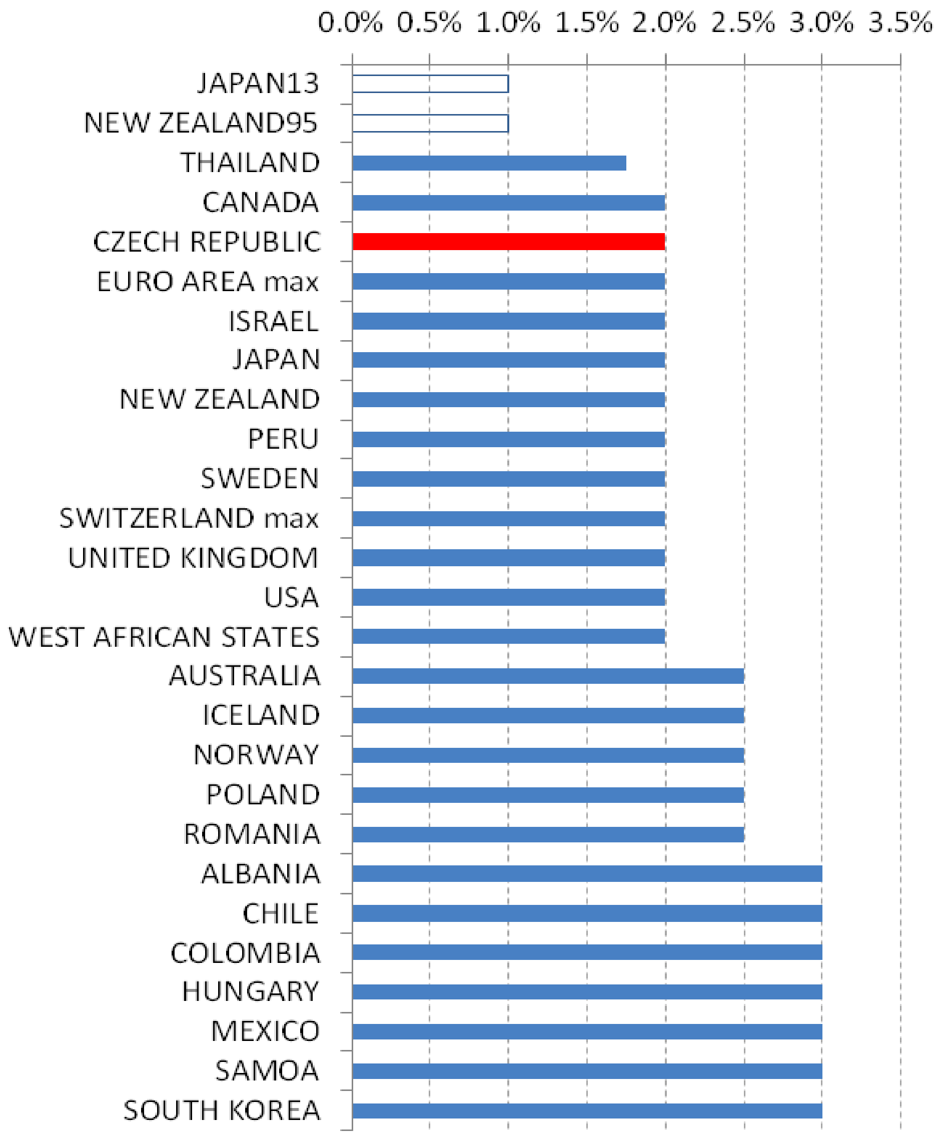


Source: Author

Inflation Targeting: Why 2%?

- Most central banks in developed countries define goals now in CPI, not in any kind of monetary aggregate
- 2% increase in CPI is typically seen as price stability
- The reason is that CPI <u>overstates inflation</u> - see further
- A positive target on CPI growth also creates a buffer against the zero lower bound on the interest rate, which is the primary instrument of central banks
- Key concept is the <u>equilibrium interest rate</u>, at which monetary policy is neutral (balance between easing and tightening)

Inflation Targets of Central Banks – close to 2%



Source: Author

Why 2%? - continued

- Substitution bias
- Outlet bias
- Technological progress and increasing quality of goods

Traditional ways of inflation measurment cannot account for all these if relative prices change (see Gordon, 2006)

Why 2%? - an example

Assume item 1 and item 2 are <u>substitutes</u>

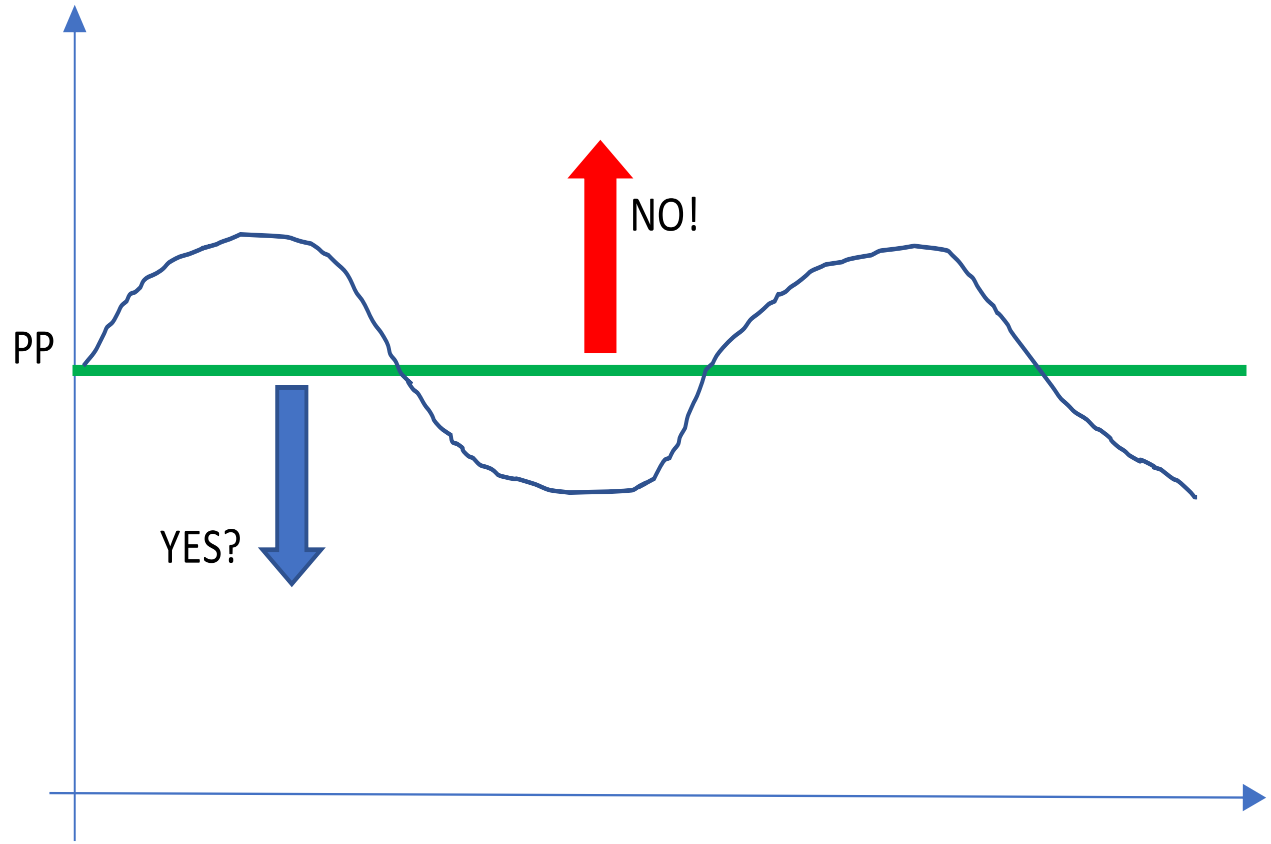
	t 1	t2
item 1	100	100
item 2	100	90
average "basket" price	100	95

Source: Author

Mervyn King and the neutrality of money

- *„It is ironic therefore, that economists who believe that money matters (for example, Milton Friedman) argue that the demand for money is highly stable, whereas Keynesian economists argue that money does not matter because its demand is unstable. <u>Both groups are wrong – money really matters when there are large and unpredictable jumps in demand for it</u>.“* (King, 2016, p. 182).

Production potential, Fluctuations and the Role of Monetary Policy

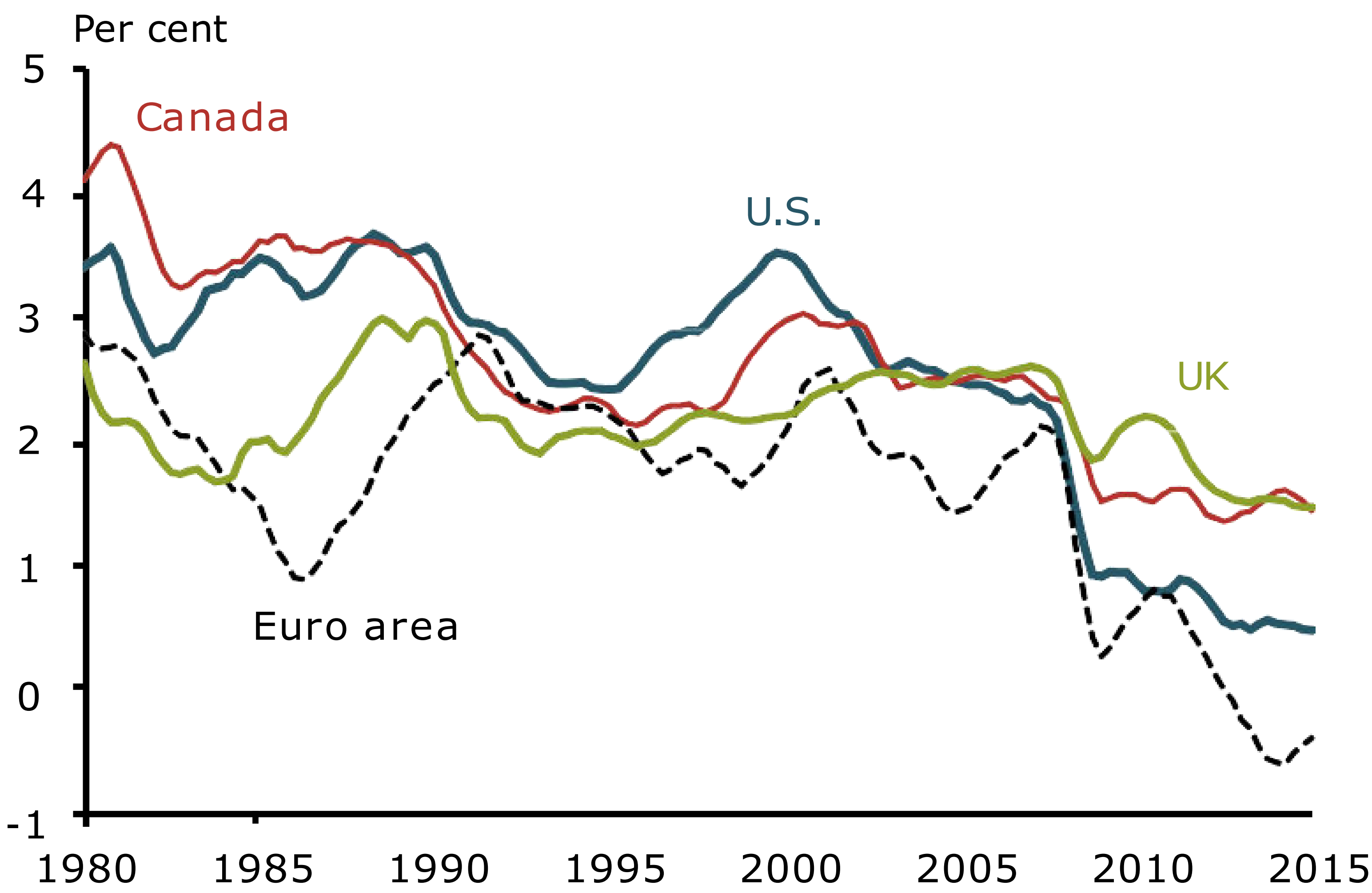


Source: Author

The role of Central Bank targeting inflation: Dam and its dam keeper

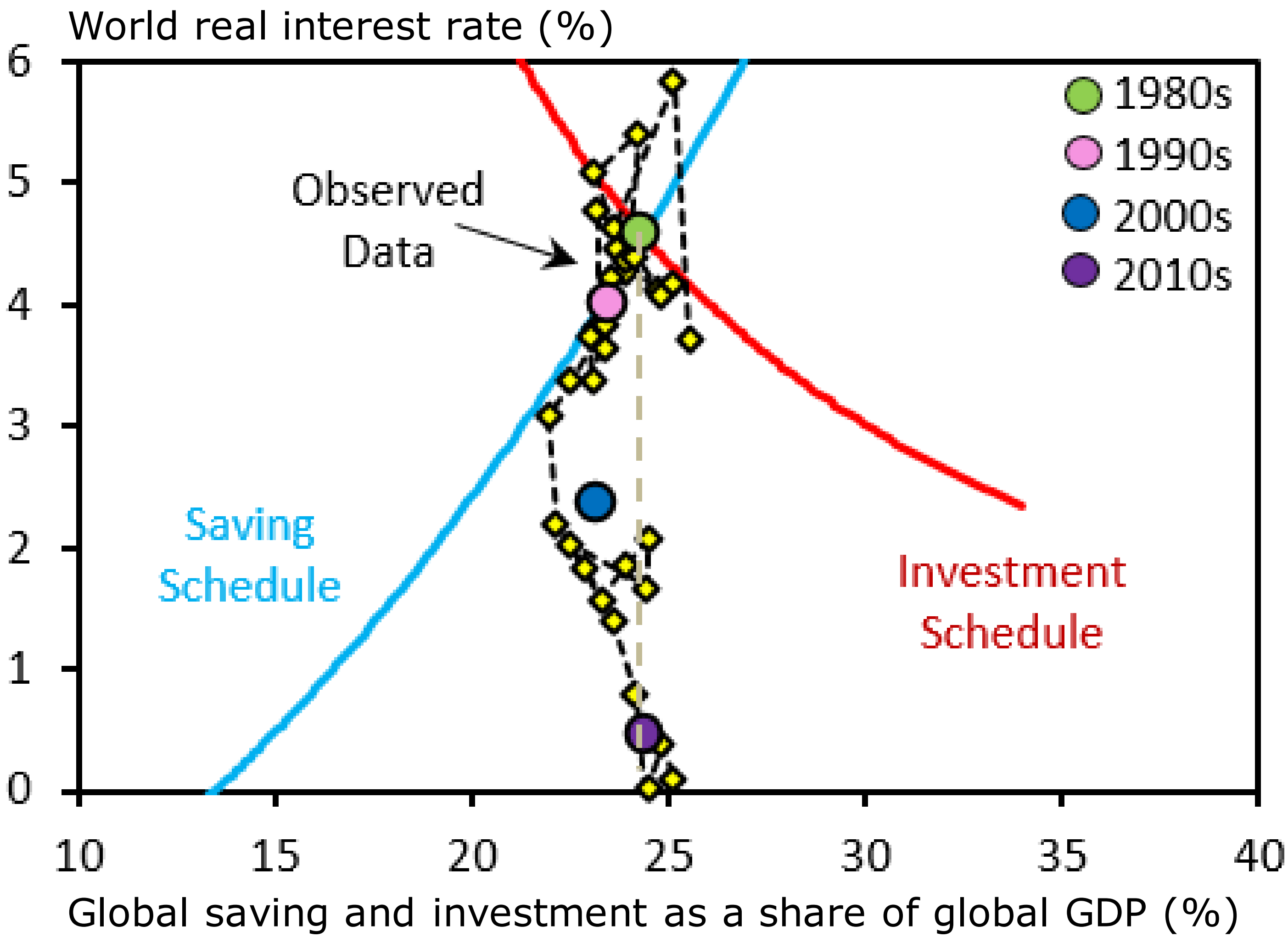
Source: Author

The Equilibrium Rate Has Been Decreasing – or?



Source: Holston et al. (2016)

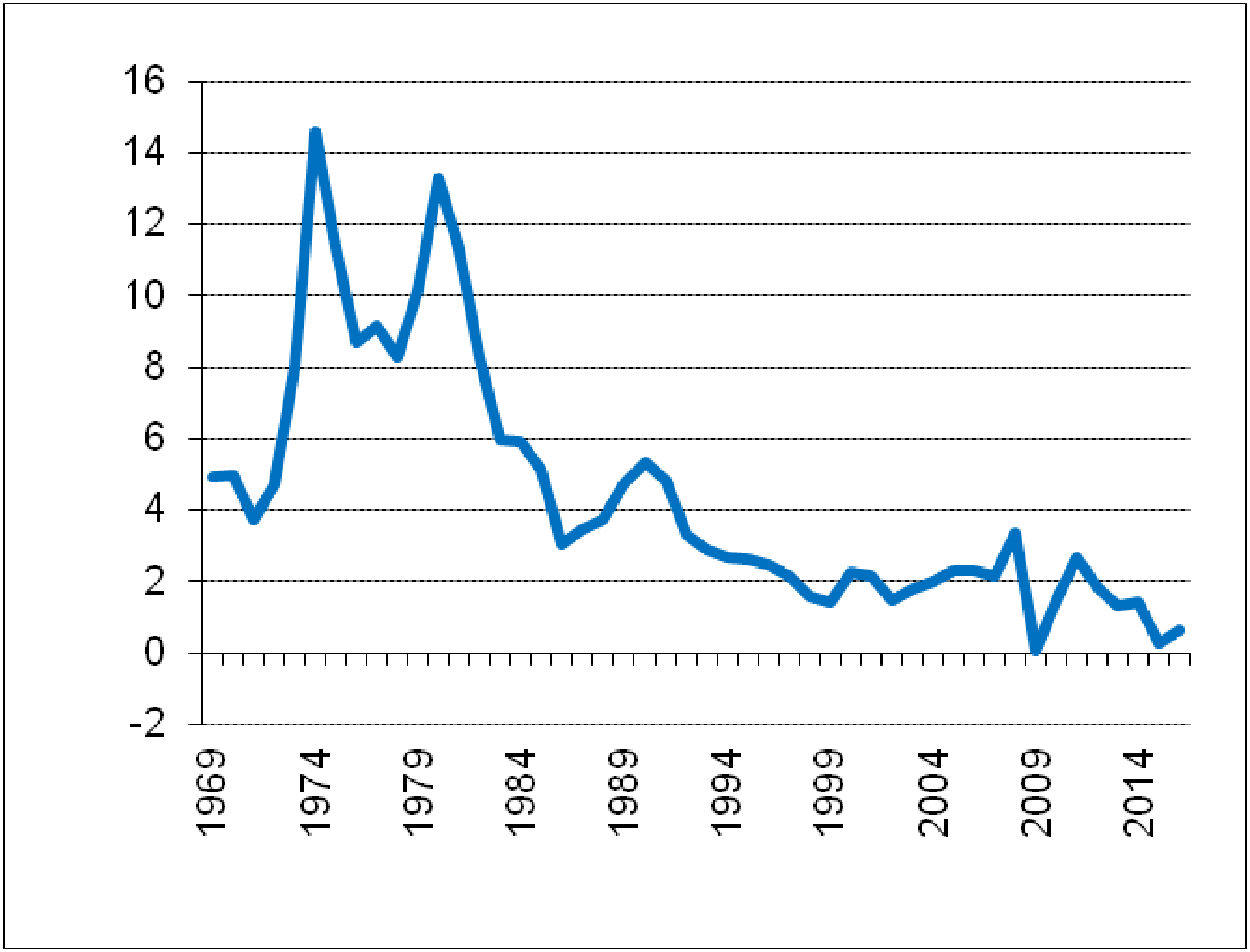
Equilibrium Between Savings and Investment Has Shifted



Source: Rachel and Smith (2016)

Suuccesful Stabilisation of inflation on the Developed World

y/y inflation in developed countries in (%)

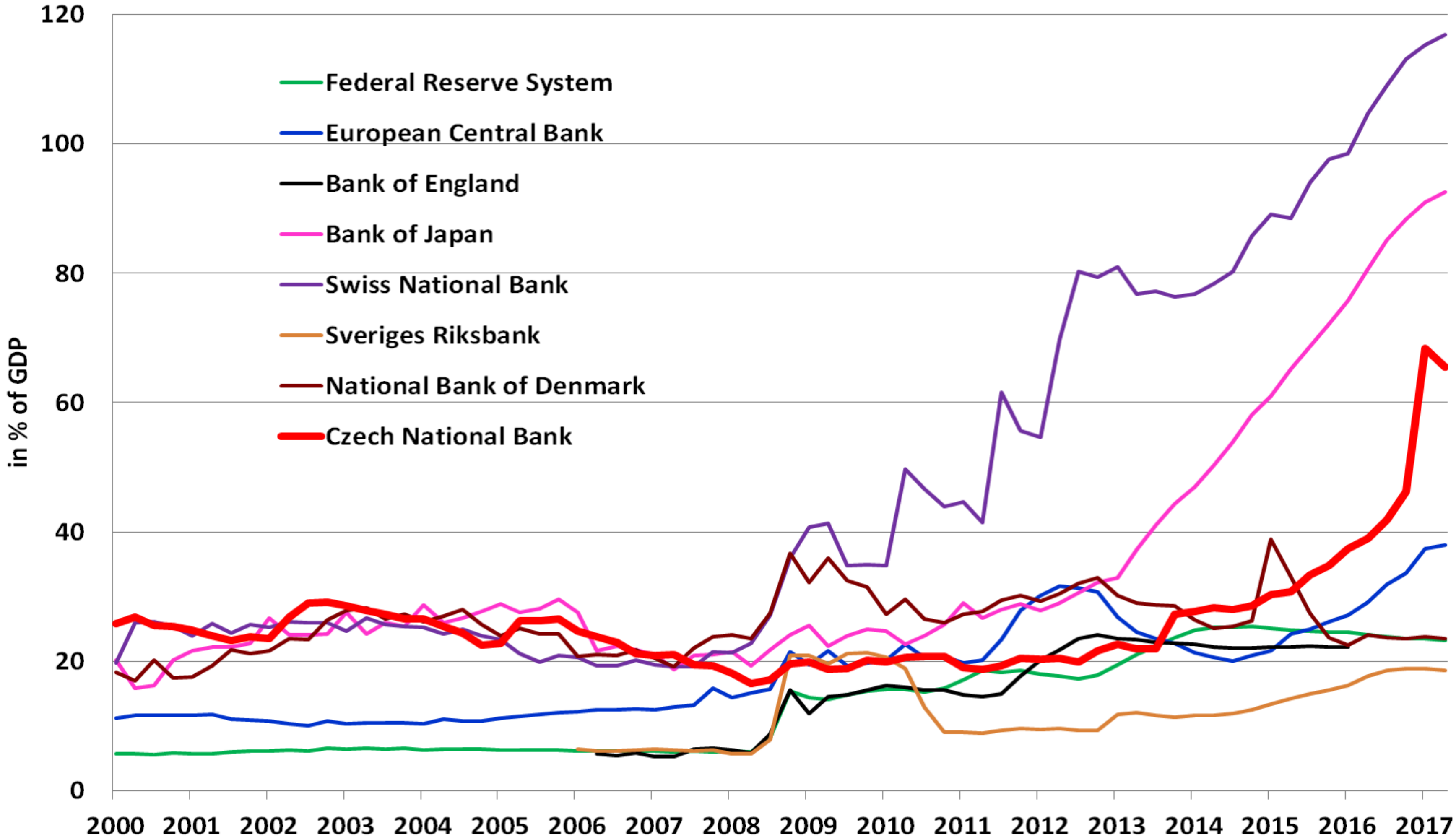


Source: BIS and IMF

What To Do About the Zero Lower Bound?

- We discussed decreasing equilibrium rates
- Because the average cut in the policy rate in a recession is 5 p.p., we might very well hit the <u>zero lower bound in the next recession as well</u>
- What has been tried: exchange rate interventions (small open economies) and QE (large economies) – see next slide
- What has been proposed: <u>significantly negative rates (mildly negative rates have very limited expansionary effects) and helicopter money</u>

Non-conventional monetary policy



Source: IMF, Haver Analytics, Financial Times

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Thank you for your attention!

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