

Monetary policy and the EURO

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Monetary policy in / out of monetary union

	No monetary union	Monetary union
Countries	1	2 or more
Central Bank	1	1



OUTLINE

- I. Conventional and unconventional monetary policy
- II. Asymmetric and symmetric shocks in / out of a monetary union
- III. Monetary policy of the ECB

Readings: Baldwin, Wyplosz (Chapter 16).

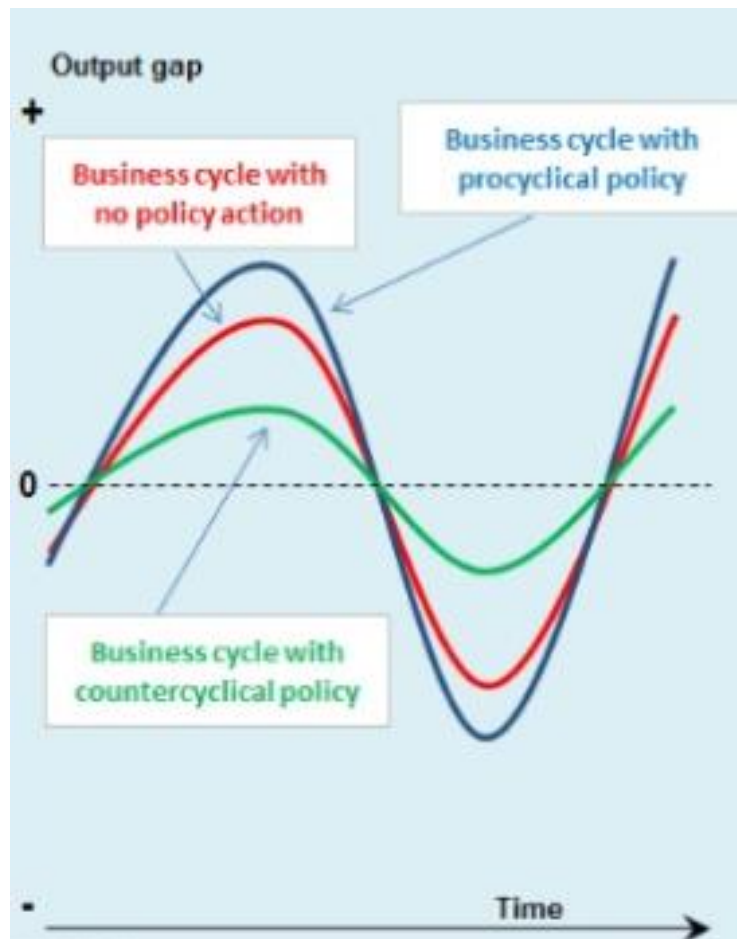
I. Conventional and unconventional monetary policy

Countercyclical and procyclical policy

Inflation on target



Successful
policy



Unsuccessful
policy



Inflation away from target

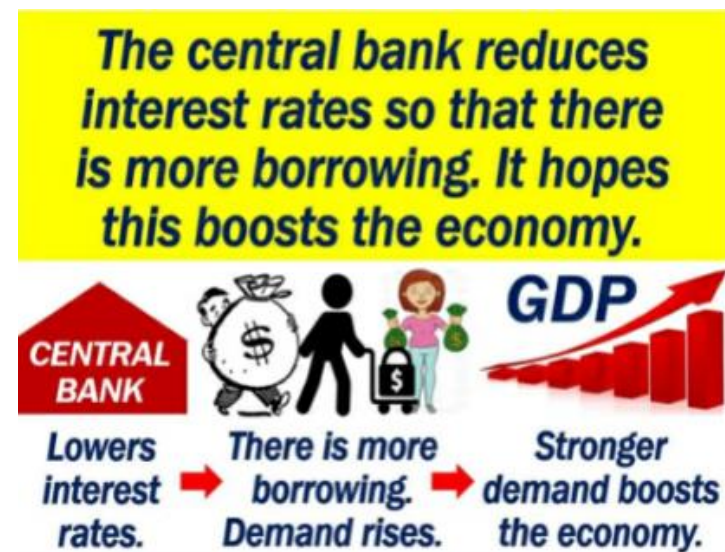
Monetary Policy

- **Monetary policy** is the process by which the monetary authority (the central bank) of a country often targets an inflation rate (exchange rate) to ensure price stability (exchange rate stability) and general trust in the currency.
- **Further goals of a monetary policy** are usually to contribute to economic growth and stability, to lower unemployment, and to maintain predictable exchange rates with other currencies.
- **Monetary policy is referred to as either being:**



Monetary Policy

- **Expansionary monetary policy:** is intended to increase inflation near to the value of inflation target (usually 2% dynamic of CPI index) in order to avoid deflation, anchored inflation expectations (and also recession of the economy).
- **Easing of MP** = A decline in MP rates (\downarrow) leads to a decline in market interest rates (\downarrow) and subsequently to changes in other variables, i.e.:
 - exchange rate depreciate (\uparrow),
 - consumption and investment expenditure (\uparrow),
 - savings (\downarrow),
 - output (\uparrow),
 - prices of goods and services (\uparrow),
 - asset prices (\uparrow)



Monetary Policy

- **Contractionary monetary policy** is intended to slow inflation near to the value of inflation target (usually 2% dynamic of CPI index) in order to avoid excessive inflation, anchored inflation expectations (and also overheating of the economy).
- deterioration of asset values.
- **Tightening of MP** = A rise in MP rates (\uparrow) leads to a decline in market interest rates (\uparrow) and subsequently to changes in other variables, i.e.:
 - exchange rate appreciate (\downarrow),
 - consumption and investment expenditure (\downarrow),
 - savings (\uparrow),
 - output (\downarrow),
 - prices of goods and services (\downarrow),
 - asset prices (\downarrow)



Conventional Monetary Policy (an simplified view)

- If the economy is not in „good shape“ \Rightarrow central bank **decreases** interest rates



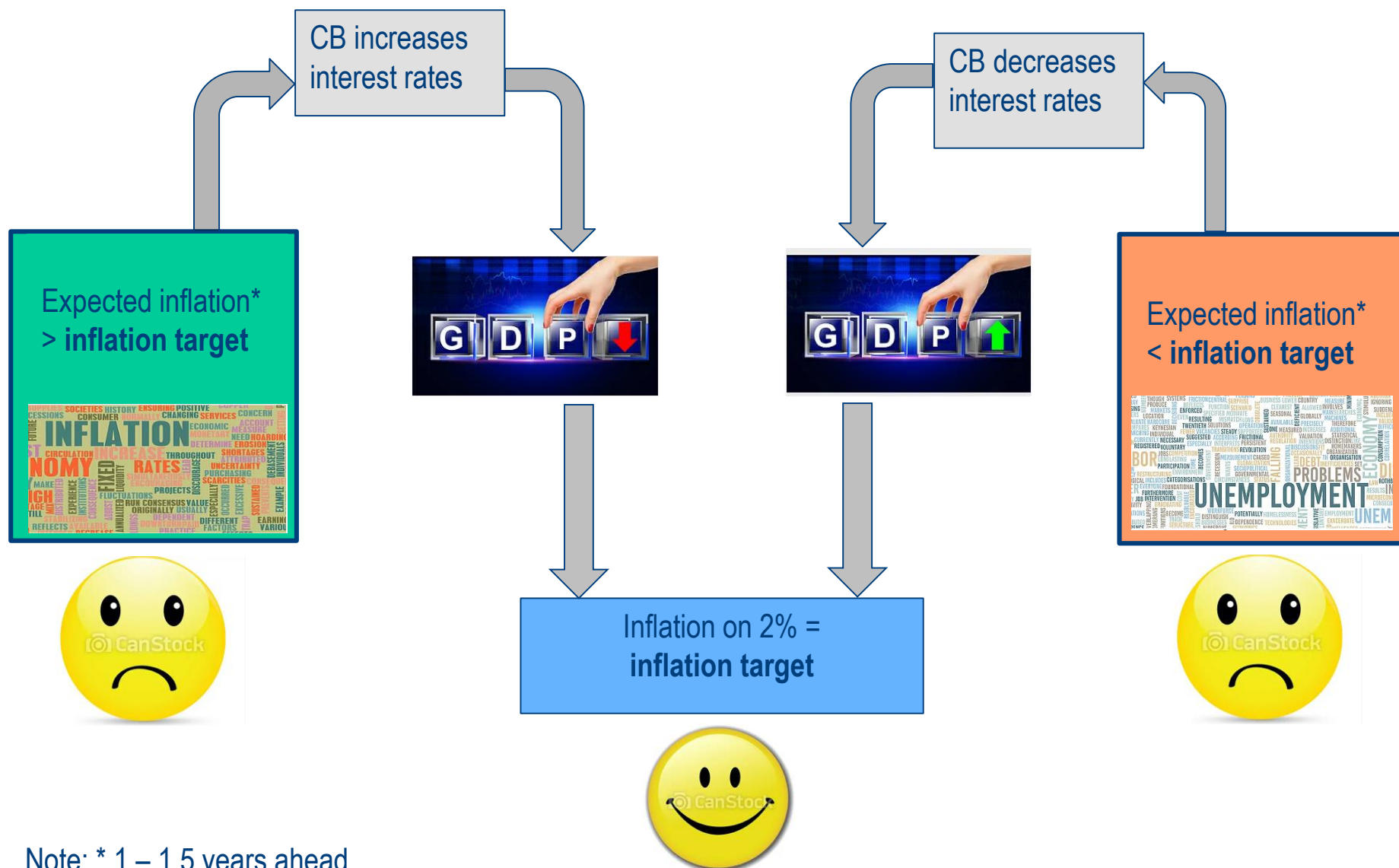
Expected
inflation below
inflation target

Expected
inflation above
inflation target

- If the economy is „overheating“ \Rightarrow central bank **increases** interest rates



Monetary Policy

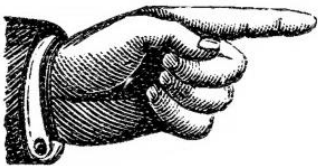


Note: * 1 – 1.5 years ahead

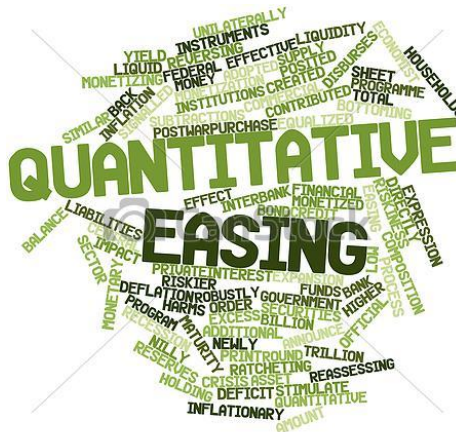
- If the economy is not in „good shape“ and the central bank cannot decrease interest rates (The CB has already reached the zero lower bound).... What then?



- CB has not been unresponsive => unconventional tools ...



Forward Guidance



Monetary policy: Conventional x Unconventional

- **Conventional:** primarily the setting of monetary policy interest rates via open market operations
- **Unconventional:** instruments are implemented in a situation where the scope for conducting monetary policy using policy rates had been exhausted, as central banks had cut rates to zero and could not lower them any further using conventional measures.

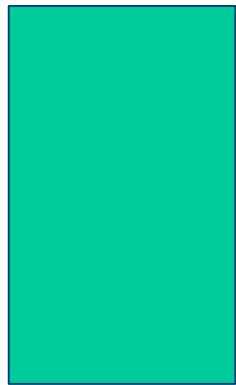
Challenges for the monetary policy:

- How to conduct monetary policy, when the ZLB was reached?
- What is the role of asset prices and monetary policy?
- Which exchange rate regime is better (fix of float)?

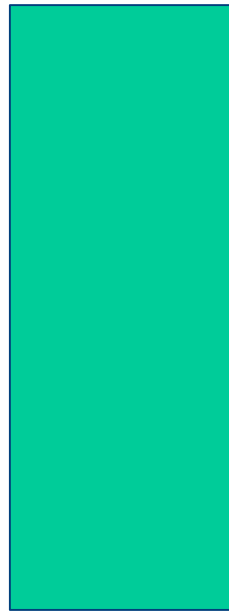
FED Jackson Hole: <https://www.kansascityfed.org/publications/research/escp>

Unconventional Monetary Policy – „QE“

- **(i) quantitative easing** – action by the monetary authority that causes its balance sheet to expand while keeping the liquidity and riskiness of its balance sheet asset portfolio unchanged on average;



Time T



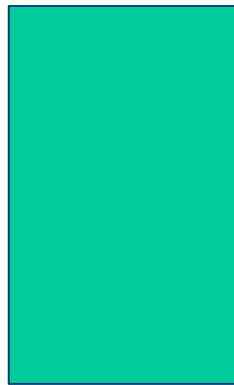
Time T+1



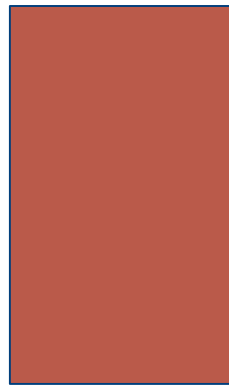
Liquidity and
riskiness

Unconventional Monetary Policy – „QE“

- (ii) **qualitative easing** – the central bank conducts operations that hold the size of its balance sheet constant but change the composition of its balance sheet away from government debt securities towards riskier and less liquid assets;



Time T



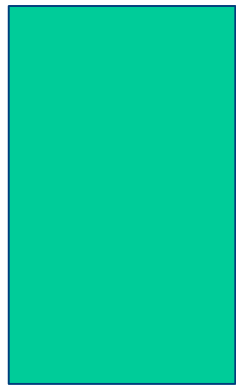
Time T+1



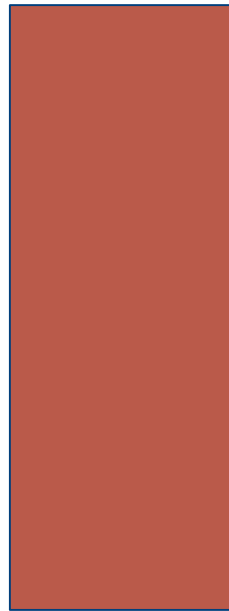
Liquidity and
riskiness

Unconventional Monetary Policy – „QE“

- **(iii) credit easing** – a combination of quantitative and qualitative easing where the central bank expands its balance sheet in such a way that liquidity decreases and the riskiness of its assets increases;



Time T



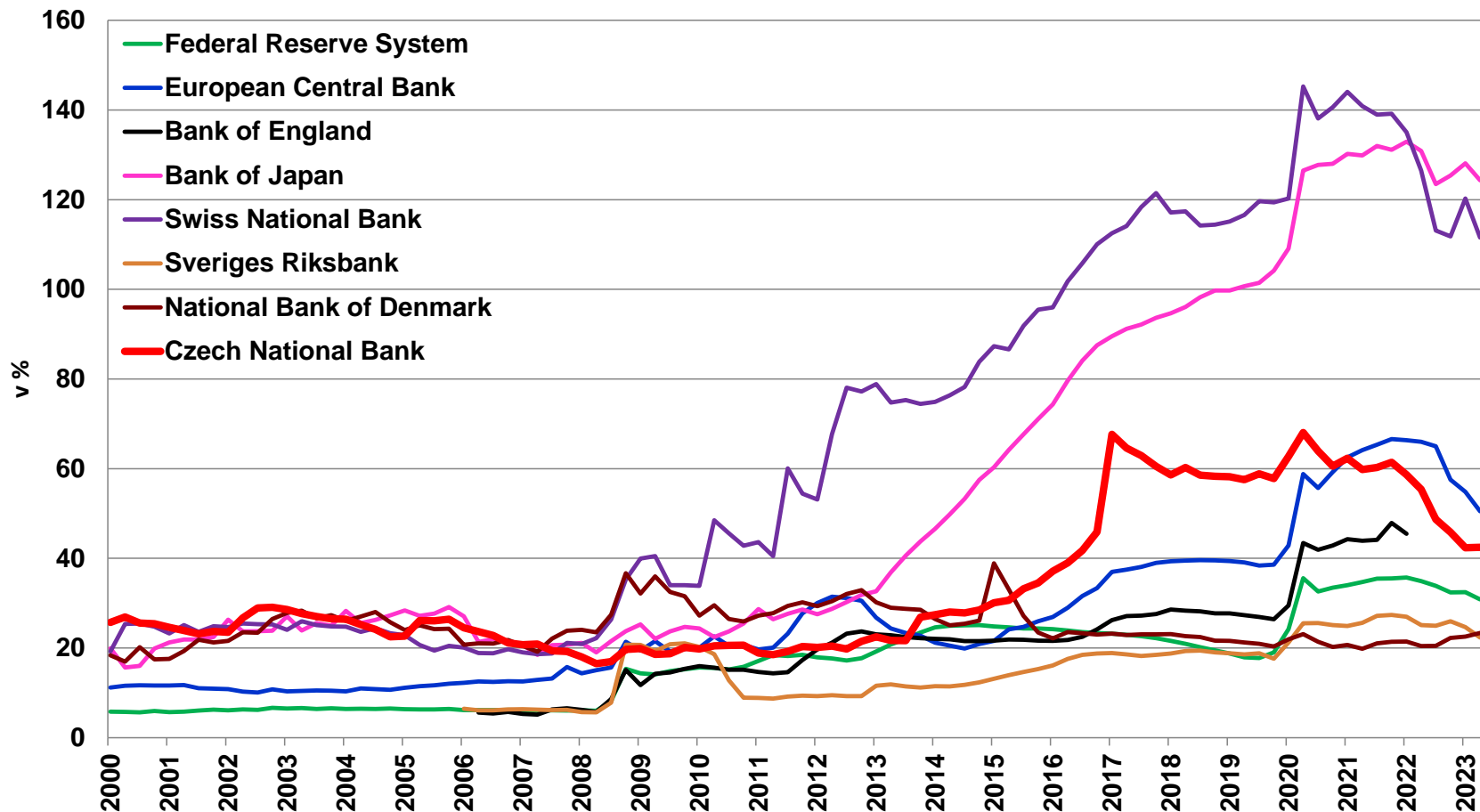
Time T+1



Liquidity and
riskiness

Unconventional Monetary Policy

- Ratio of total assets of selected central banks to GDP



Source: Bloomberg.

Note: Fed (USA), ECB (euro area), BoE (UK), SNB (Switzerland), SvR (Sweden), NBD (Denmark), CNB (Czech Republic).

Unconventional Monetary Policy – forward guidance

- **(iv) forward guidance** – the central bank makes an explicit commitment regarding the future path of a variable, such as undertaking to maintain interest rates at zero for at least a year or until the inflation rate rises;

Central banks can provide the markets and the public with guidance on their future monetary policy in two forms – “Delphic” and “Odyssean”.

- **Delphic FG**



- **Odyssean FG**



Delphic FG means that the CB publishes its forecast for future monetary policy (usually the monetary policy rate). Rather than a commitment, therefore, it represents only the published predicted path of the policy rate based on the outlook for key economic variables (GDP, unemployment, inflation and others).

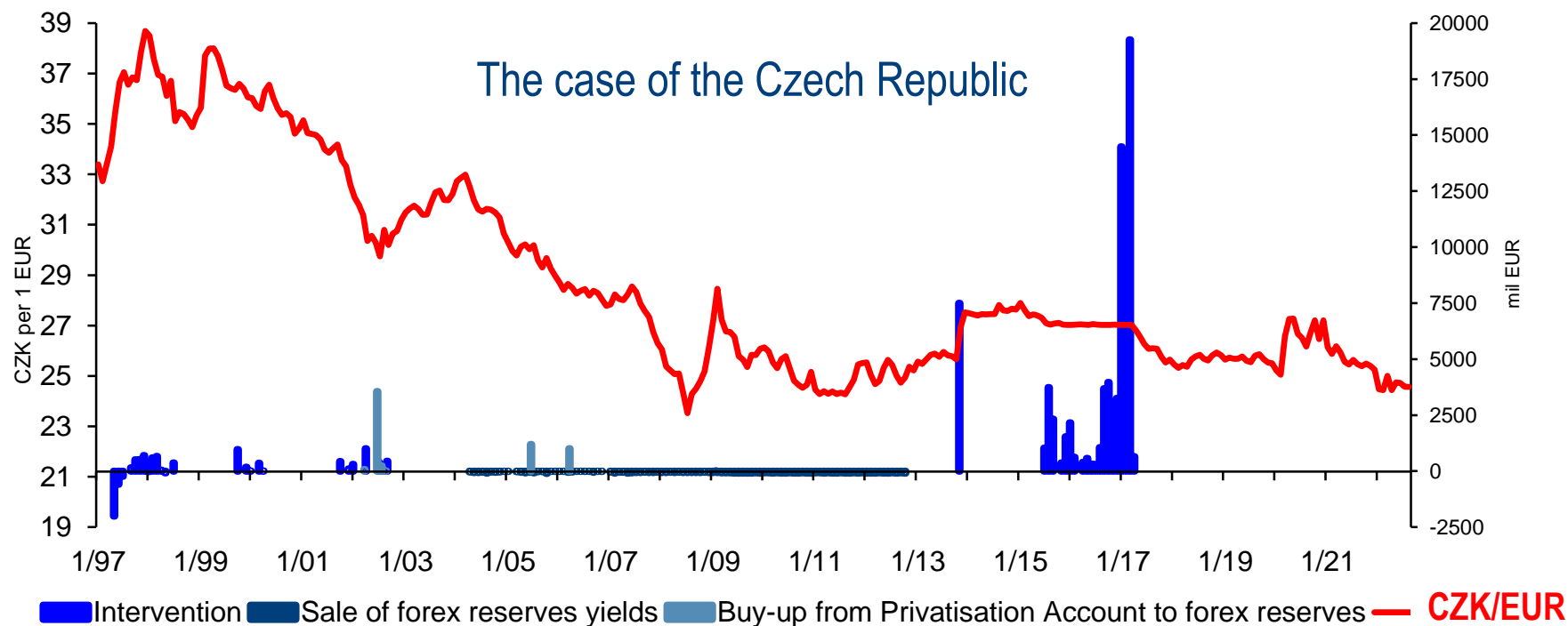
- (1) the CB verbally indicates its current opinion on its future monetary policy stance (i.e. without precisely quantifying the future policy rate level)
- (2) the CB supplements its current opinion on its future monetary policy stance with a quantitative specification of the path of the key rate

Odyssean FG means that the CB formulates an explicit commitment (in some cases conditional on a particular path of a key economic variable), i.e. it commits itself to a particular future path of its key rate or some other monetary policy instrument.

- (3) the CB commits itself to a particular future level of its key rate for as long as certain conditions apply (e.g. as long as the unemployment rate remains above 6.5% or internal inflation expectations change, or until the financial stability of the financial system is no longer under threat)
- (4) the CB commits itself to maintaining its policy rate at a particular level (or not raising it above a particular level) for a predetermined period of time; the way in which this time is defined can differ significantly, from very vague (“for an extended period of time”) to very precise (“until the end of 2010 Q2”).

Unconventional Monetary Policy – FX interventions

- **(v) foreign exchange interventions** – the central bank conducts operations in the forex market to weaken the domestic currency, thereby easing real interest rates via higher inflation due to higher import prices and stimulating the real economy via the indirect exchange rate channel.



Unconventional Monetary Policy – negative rates

- **(vi) negative interest rates** – reducing rates to negative values ranks among unconventional instruments and has its obvious limits

Limits / adverse effects:

- The risk of cash substituting for cashless money and other financial assets
- Disruption of the natural relationship between debtors and creditors.
- Spillover effects on the property/credit market, i.e. stimulation of credit demand by low interest rates.



Unconventional Monetary Policy – HDM

- **(vii) helicopter drop of money** - A hypothetical, unconventional tool of monetary policy that involves printing large sums of money and distributing it to the public in order to stimulate the economy.

Helicopter drop is largely a metaphor for unconventional measures to jumpstart the economy during deflationary periods. While “helicopter drop” was first mentioned by noted economist [Milton Friedman](#), it gained popularity after [Ben Bernanke](#) made a passing reference to it in a November 2002 speech, when he was a new Federal Reserve governor.

Necessary condition:

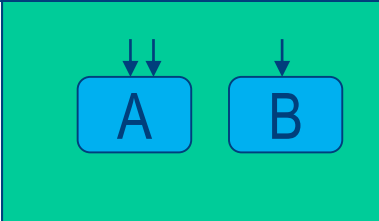
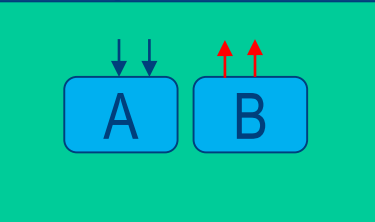
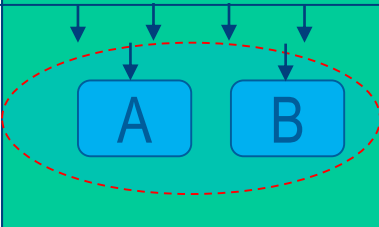
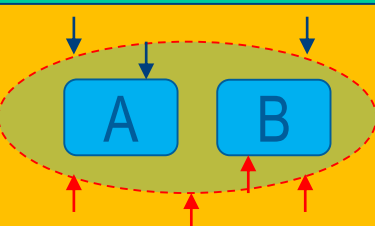
- the money would have to be time-limited to support demand now and not be saved

Problems:

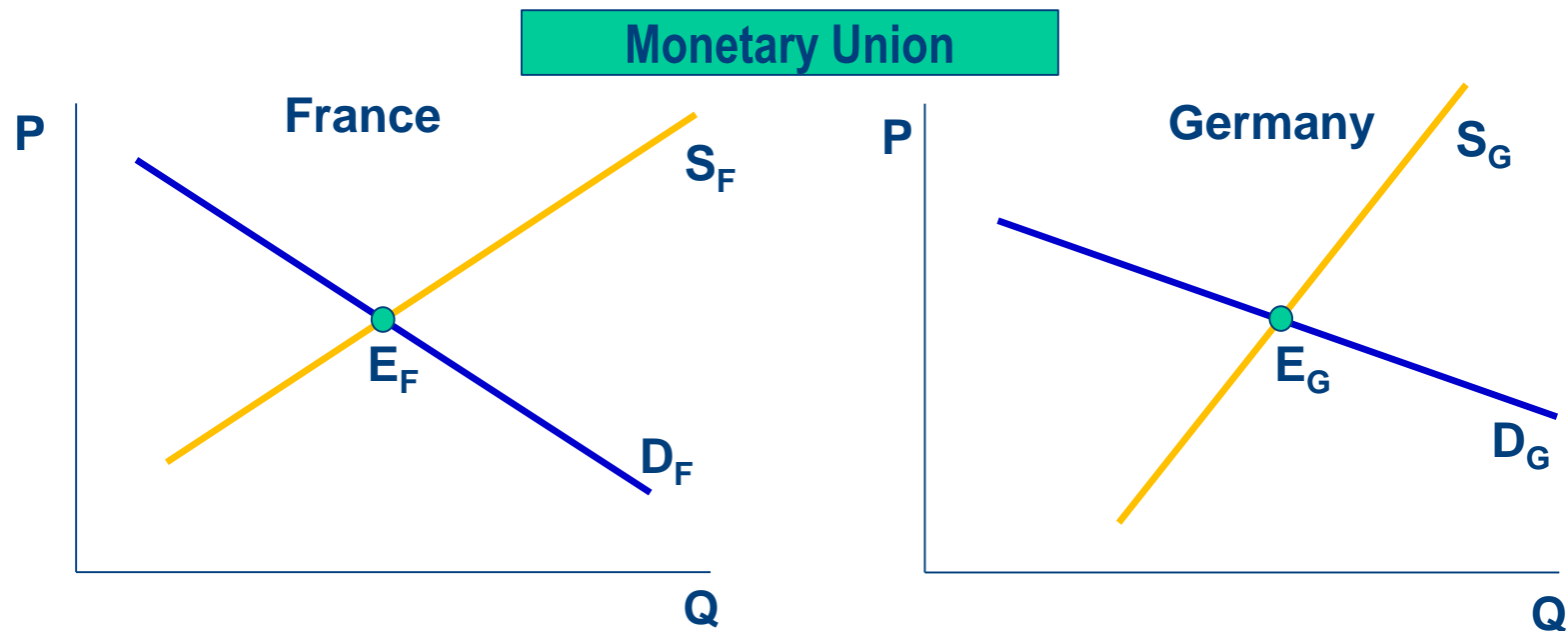
- it has never been tried
- free money for nothing???



II. Asymmetric and Symmetric shocks in / out of monetary union

		Shocks	
		Symmetric	Asymmetric
Monetary union	No		
	Yes		

Asymmetric shock (SD diagram)

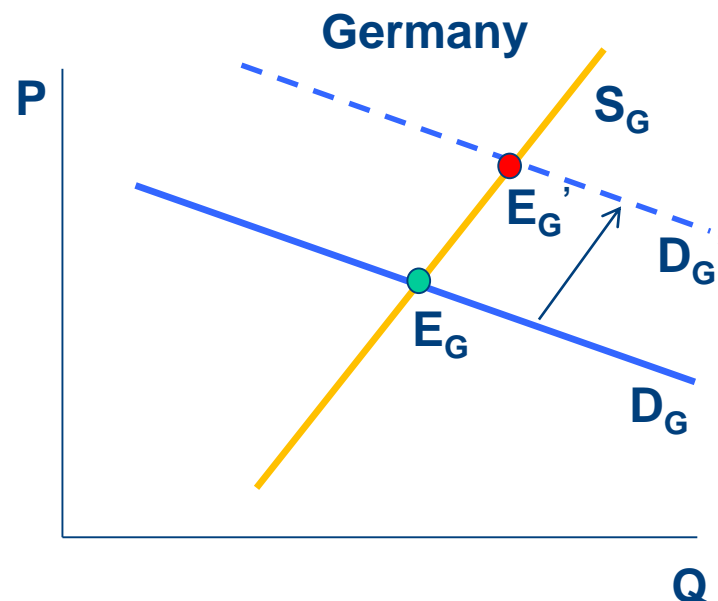
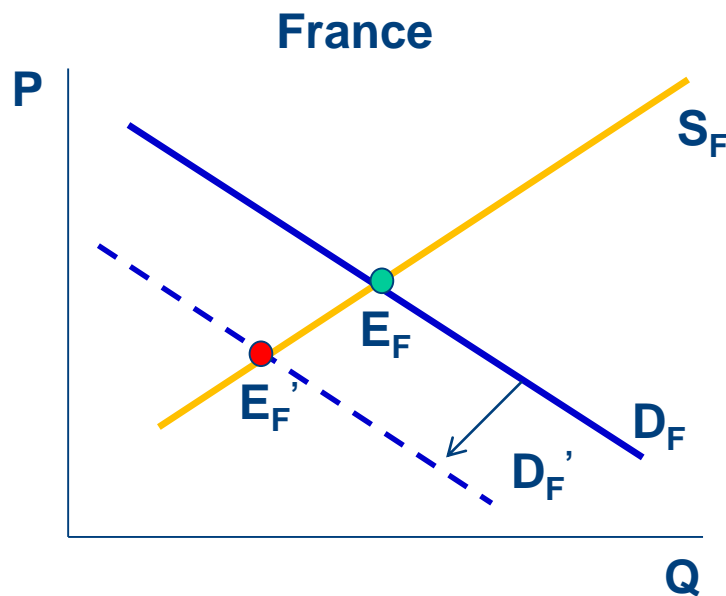


■ Assumptions (Mundell, 1961):

- Two countries in monetary union: France and Germany
- Monetary union: countries have abandoned their national currency and use a common currency, the euro, which is managed by a common central bank (the ECB)
- D_F, D_G ... French, German **demand curves** (rising prices P discourage demanded quantity Q)
- S_F, S_G ... French, German **supply curves** (rising prices P encourage supplied quantity Q)
- E_F, E_G ... French, German **market equilibrium**

Asymmetric shock – primary adjustment

Monetary Union



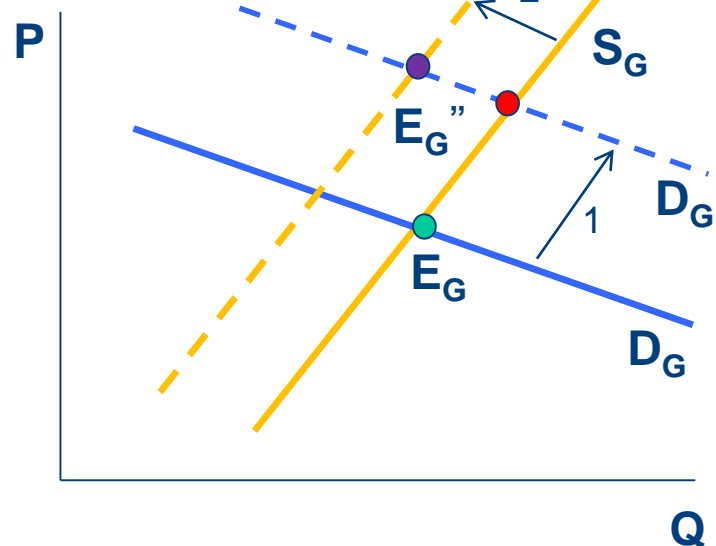
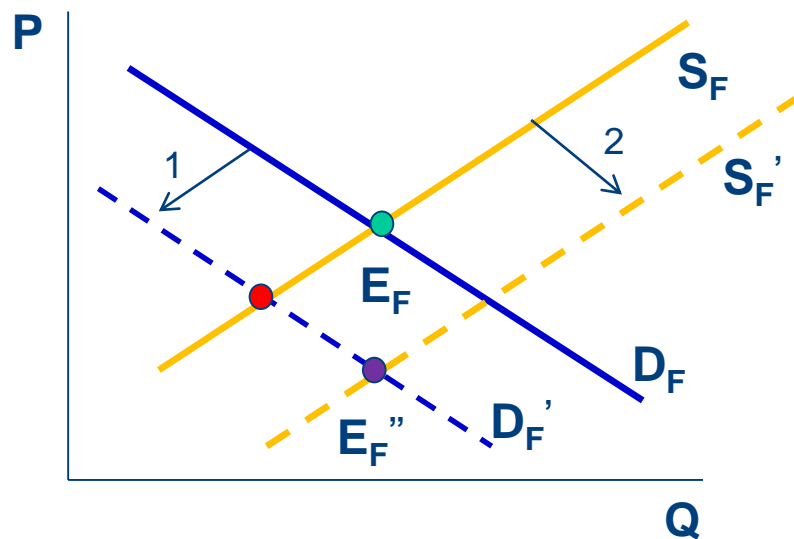
- **Autonomous demand shift from French to German goods (permanent)**
 - **France:** declining production, rising unemployment \Rightarrow pressure for lower wages and lower inflation \Rightarrow D_F shift downwards to $D'_F \Rightarrow E_F \Rightarrow E'_F$
 - **Germany:** rising production \Rightarrow declining unemployment \Rightarrow inflationary pressures \Rightarrow D_G shift upwards to $D'_G \Rightarrow E_G \Rightarrow E'_G$
- Both countries have an adjustment problem... \Rightarrow Is there a mechanism that leads to automatic equilibration?
- **YES!:** there are **two mechanisms** that leads to automatic equilibration.

Asymmetric shock – solutions (in monetary union)

France

Monetary Union

Germany



■ (1) Wage flexibility: If wages (w) in both countries are flexible:

• First-order effects:

France: unemployed workers will reduce their wage claims $\Rightarrow S_F$ shift downwards to S_F'

Germany: excess demand for labour will push wages up $\Rightarrow S_G$ shift upwards to S_G'

New equilibrium: the price of output declines in France (French products are more competitive now and stimulating demand) and the opposite occurs in Germany.

• Second-order effects:

The wage and price increases in Germany make French products more competitive $\Rightarrow D_F$ shift upwards.

Decline in French costs and prices makes German products less competitive $\Rightarrow D_G$ shift downwards

Asymmetric shock – solutions (in monetary union)

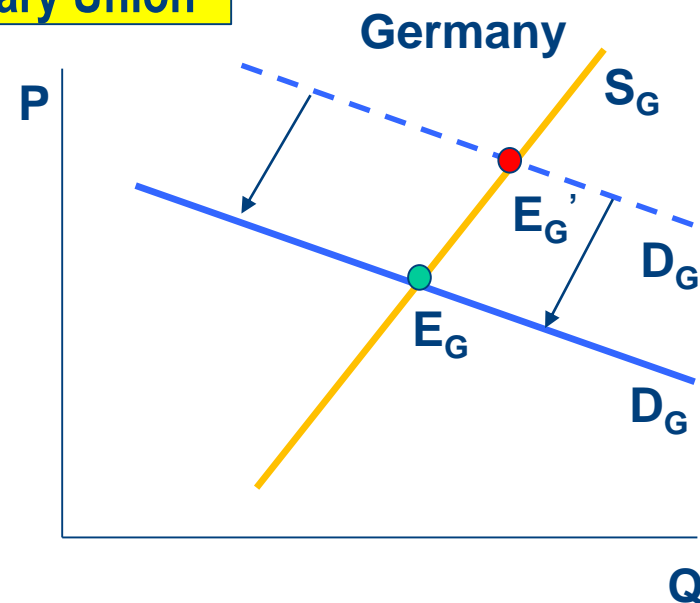
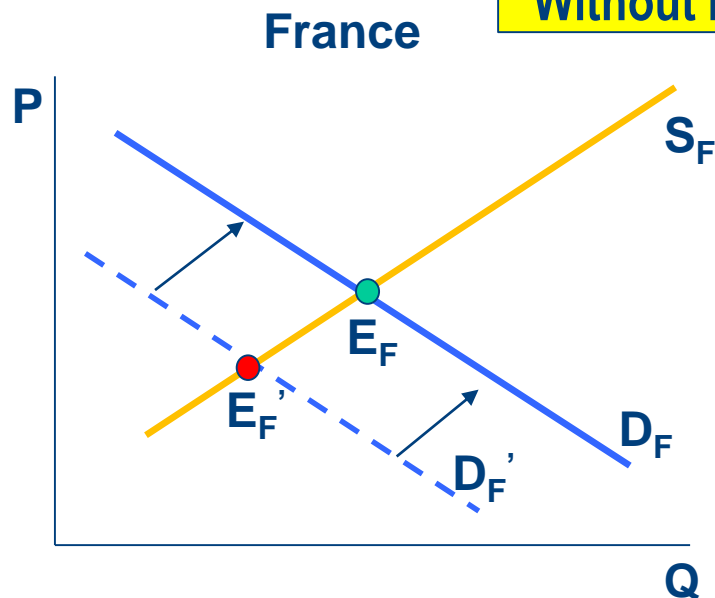
Monetary Union



- (2) Mobility of labour:
 - The French unemployed workers move to Germany (excess demand for labour) => the wage adjustment mechanism is not needed => French unemployment disappear and the inflationary wage pressures in Germany vanish.

Asymmetric shock – use of the exchange rate

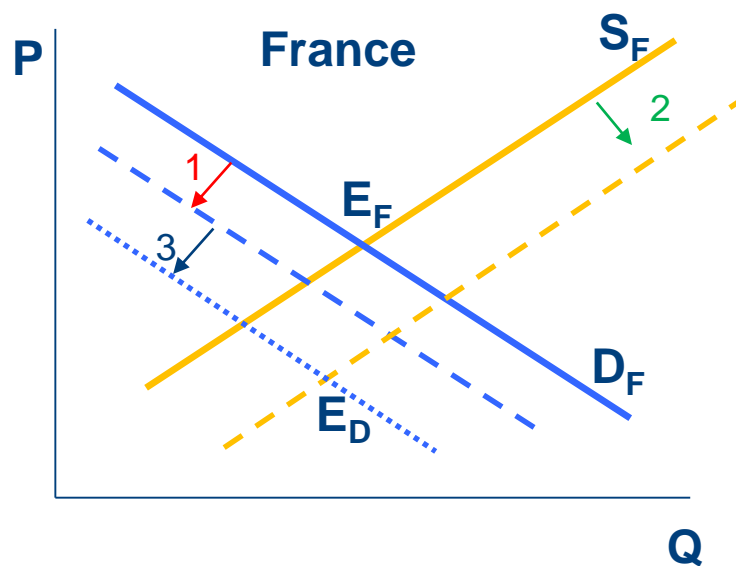
Without Monetary Union



- **Fixed exchange rate regime:**
 - Devaluation of FRF and revaluation of DEM
 - Cheaper French exports in Germany and more expensive German exports in France
 - Rising demand for French goods ($D_F' \Rightarrow D_F$) and declining demand for German goods ($D_G' \Rightarrow D_G$) \Rightarrow Return to initial equilibria prevailing before asymmetric shock, i.e. return to E_F and E_G
- **Flexible exchange rate regime:**
 - Simultaneously lead to depreciation of FRF and appreciation of DEM

Asymmetric shock – absence of the exchange rate

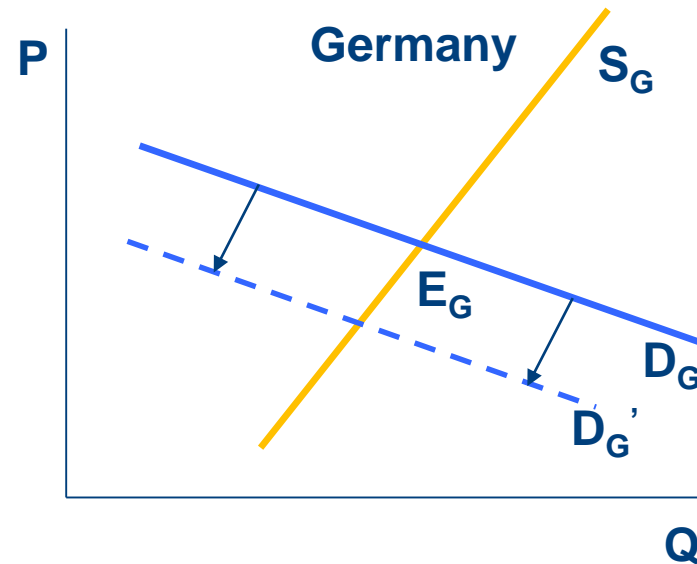
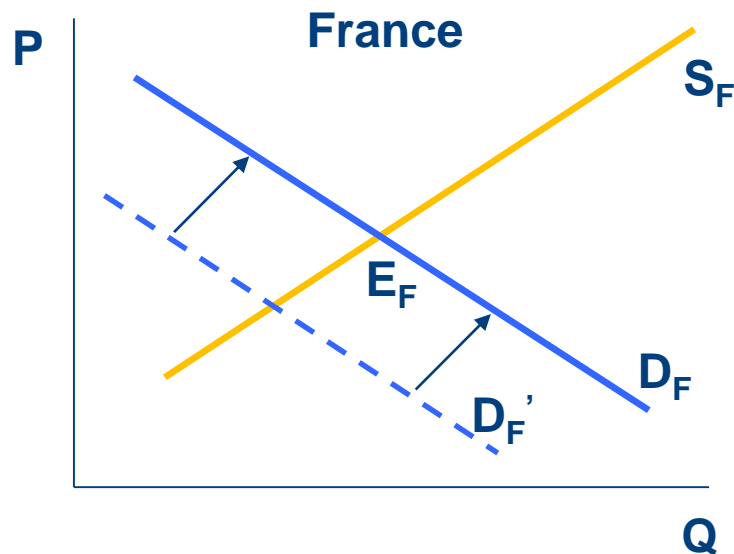
Monetary Union



- (1) Primary effects (internal devaluation): **drop in demand (to south west)** => lower production and higher unemployment =>
- (2) pressure on wages => cheaper production \Rightarrow output expansion (**supply curve moves to south-east**)
- (3) Secondary effects: lower wages => lower household expenditure => contraction in output (**demand curve moves again to south-west**)
- Danger of self-strengthening spiral of deflation and contraction



Symmetric shock



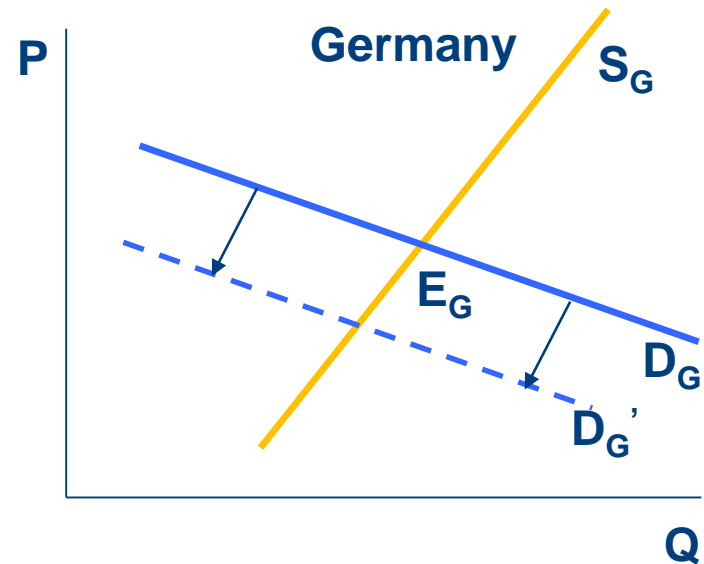
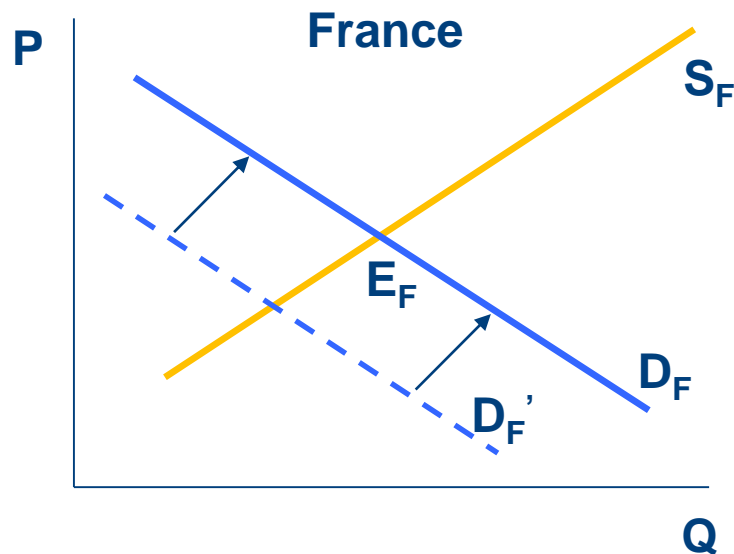
■ Existence of monetary union:

- Symmetric shock hits all members of monetary union
- Monetary authority (ECB) react => monetary expansion / devaluation

■ Non-existence of monetary union:

- Would be devaluation an attractive policy option? => NO! => Danger of competitive devaluation (solving French problems at expense of Germany)
- Danger of retaliating competitive devaluations, which destabilise mutual trade and push up inflation only
- Difficult distinction between symmetric and asymmetric shocks in practice

Asymmetric shock



■ Existence of monetary union:

- Asymmetric shock \Rightarrow ECB will not react \Rightarrow is responsible for maintaining price stability and for stabilizing the economy in the EA as the whole, i.e. at aggregate numbers. Results: greater fluctuation in output (and thus (un)employment) in the individual countries.
- At the extreme case of a pure asymmetric shock the ECB never stabilized.

■ Non-existence of monetary union

- National central banks will react by means of interest rates (and flexible exchange rates adjust too).

III. Monetary Policy of the ECB



Monetary policy

**Price stability is the best contribution
that monetary policy can make to
economic growth**

<https://www.ecb.europa.eu/mopo/html/index.en.html>

Monetary policy of the ECB



- **ECB** takes decisions on monetary policy every six weeks – determining what should be done to keep inflation under control.
- Who takes the decision?
 - **Governing Council** (The Governing Council is the main decision-making body of the ECB. It consists of the six members of the Executive Board, plus the governors of the national central banks of the 19 euro area countries.)



Monetary policy of the ECB

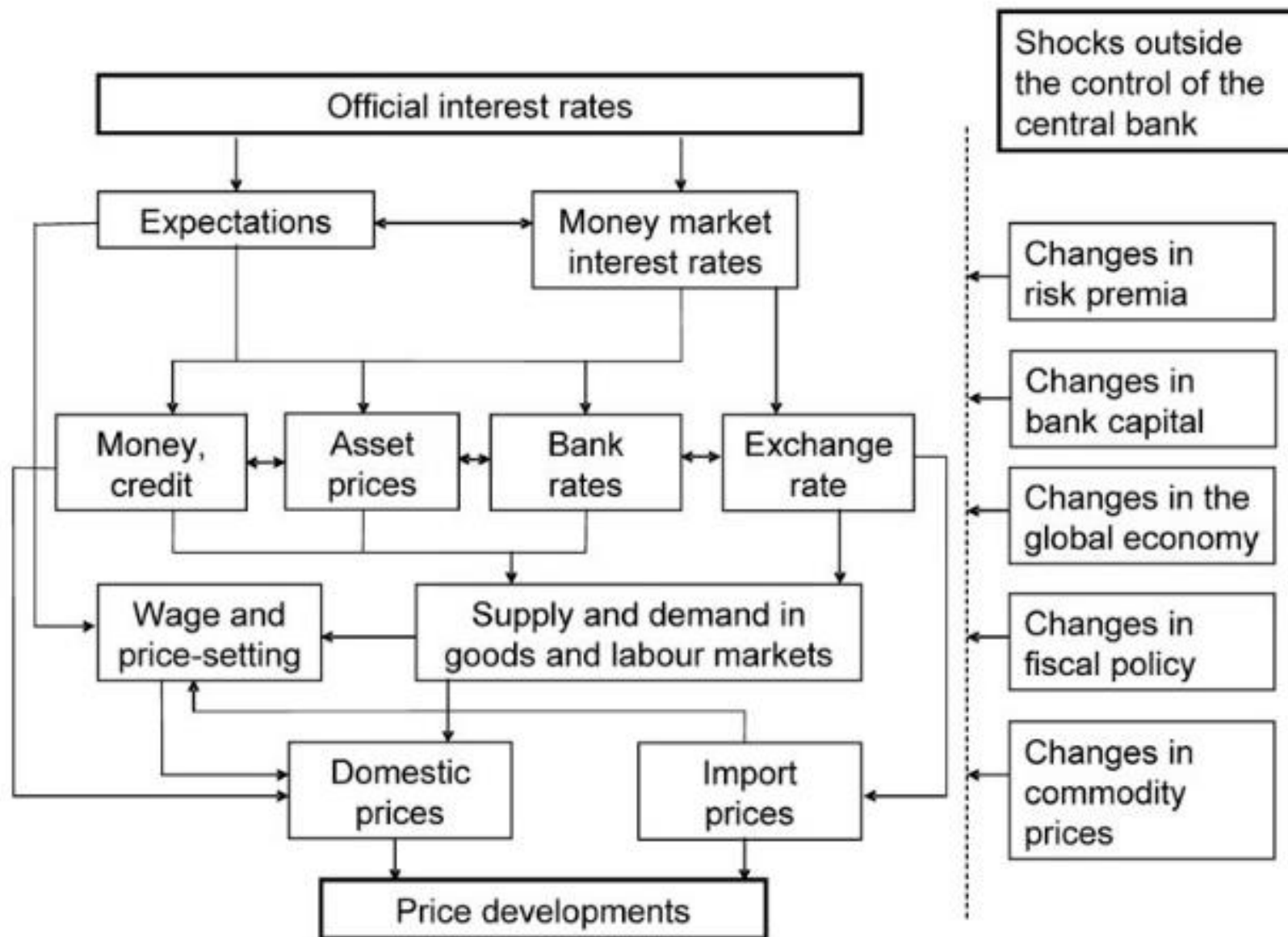


- ECB's monetary policy continues to support the economy
- Low interest rates support ECB's symmetric 2% inflation target.
- ECB revised its monetary policy strategy in summer 2021.

- Asset purchases continue at a higher pace...
- ECB decided to keep up the pace of our asset purchases under our Pandemic Emergency Purchase Programme.



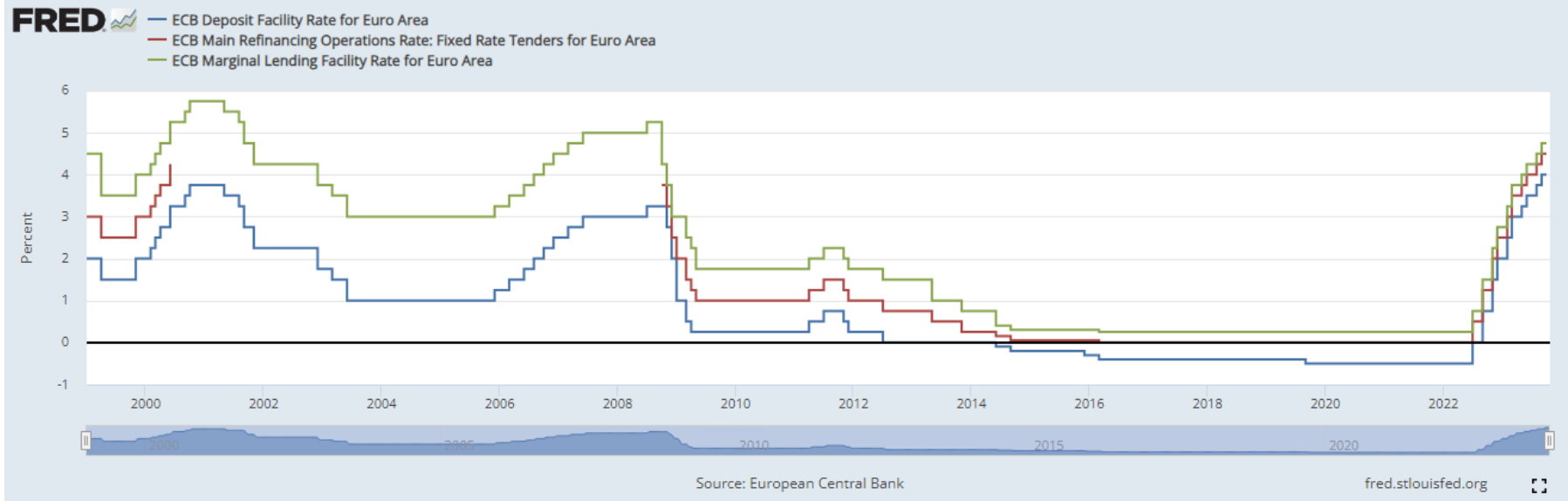
Transmission mechanism of monetary policy



Key interest rates of the ECB

The Governing Council of the ECB sets three key interest rates.

- The interest rate on the **main refinancing operations**. In these operations banks can borrow liquidity from the Eurosystem against collateral on a weekly basis, at a pre-determined interest rate.
- The rate on the **deposit facility**, which banks may use to make overnight deposits with the Eurosystem at a (pre-set) rate lower than the main refinancing operations rate.
- The rate on **the marginal lending facility**, which offers overnight credit to banks from the Eurosystem at an interest rate (also pre-set) above the main refinancing operations rate.



Key interest rates of the ECB

Since the financial crisis began in 2007, the ECB has introduced several non-standard monetary policy measures.

The ECB's measures included:

- a **negative interest rate** on the deposit facility;
- **targeted longer-term refinancing operations** (TLTROs), designed to support bank lending to businesses and households;
- **an asset purchase programme** (APP), involving private and public sector securities, to put downward pressure on the term structure of interest rates;
- forward guidance, which means communicating how the ECB expects its policy measures to evolve in the future and what conditions would warrant a change in the policy stance.

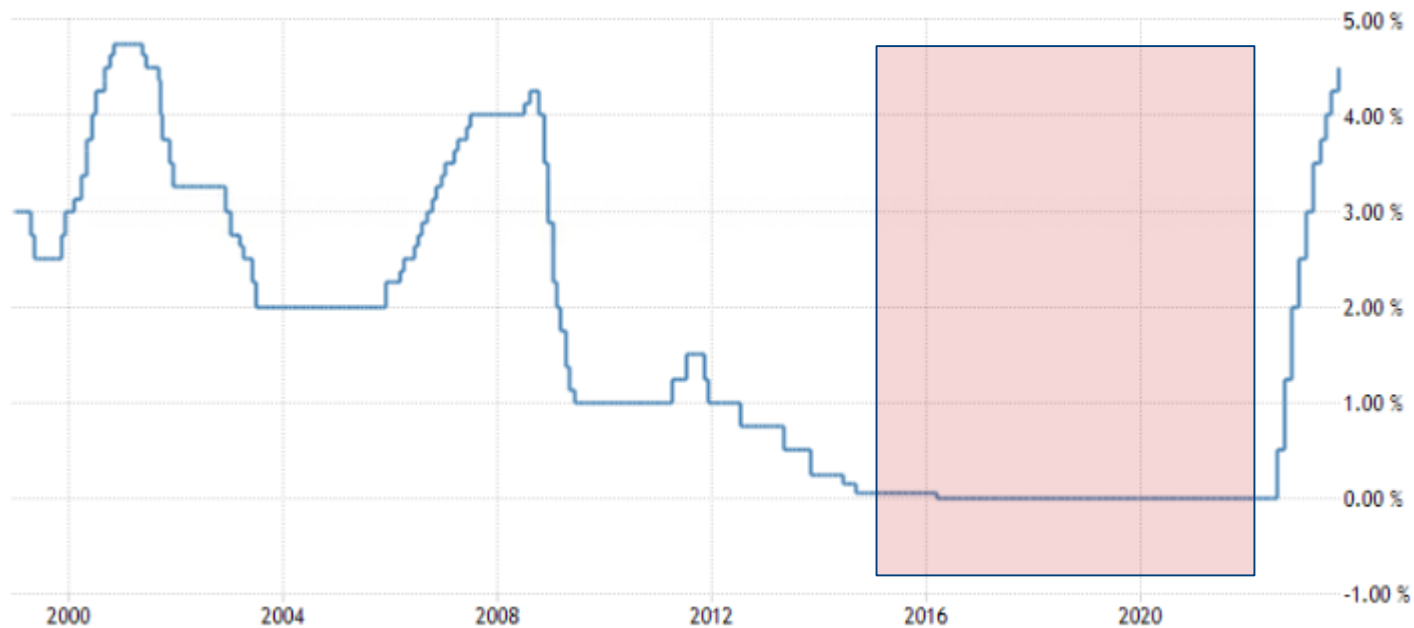
In March 2020 the Governing Council decided on the introduction of the **pandemic emergency purchase programme (PEPP)**, a temporary asset purchase programme of private and public sector securities, to counter the serious risks to the monetary policy transmission mechanism and the outlook for the euro area posed by the coronavirus (COVID-19) outbreak . In addition, the Governing Council announced several adjustments to the already existing non-standard measures

ECB monetary strategy review

1. **Symetry of inflation target:** At the heart of the matter for the ECB is the definition of the mandate of price stability. The new strategy has replaced the somewhat awkward ‘below, but close to, 2 per cent’ from the 2003 strategy review with a clear target of 2 per cent—with explicit reference to the symmetry (an average, not a ceiling).
2. **Horizont of monetary policy:** two per cent inflation over the medium term.

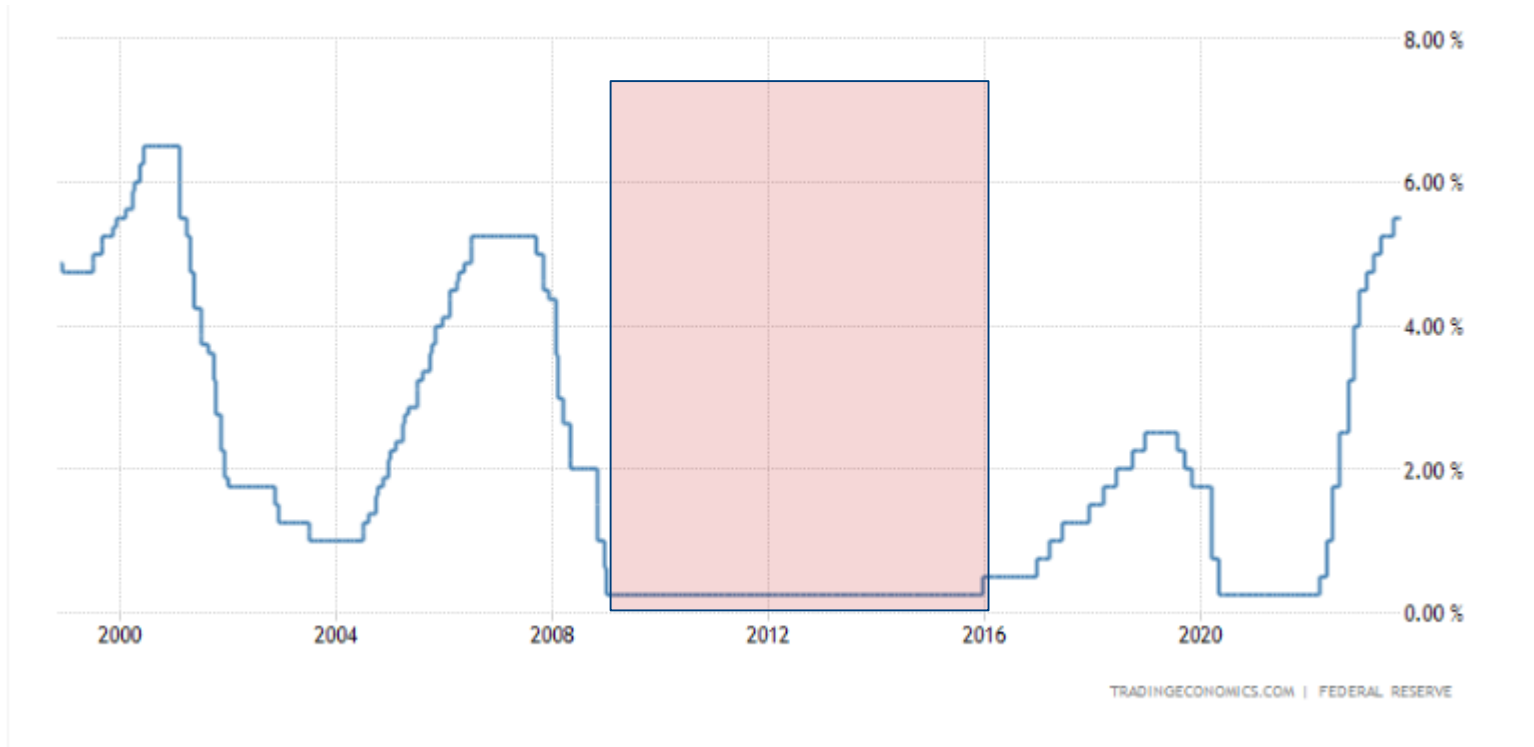
IMNS Policy Webinar: <https://youtu.be/QcVoAhRnUMo> (presentation given by Philip R. Lane, Member of the Executive Board, 15.9.2021)

Unconventional MP – ECB

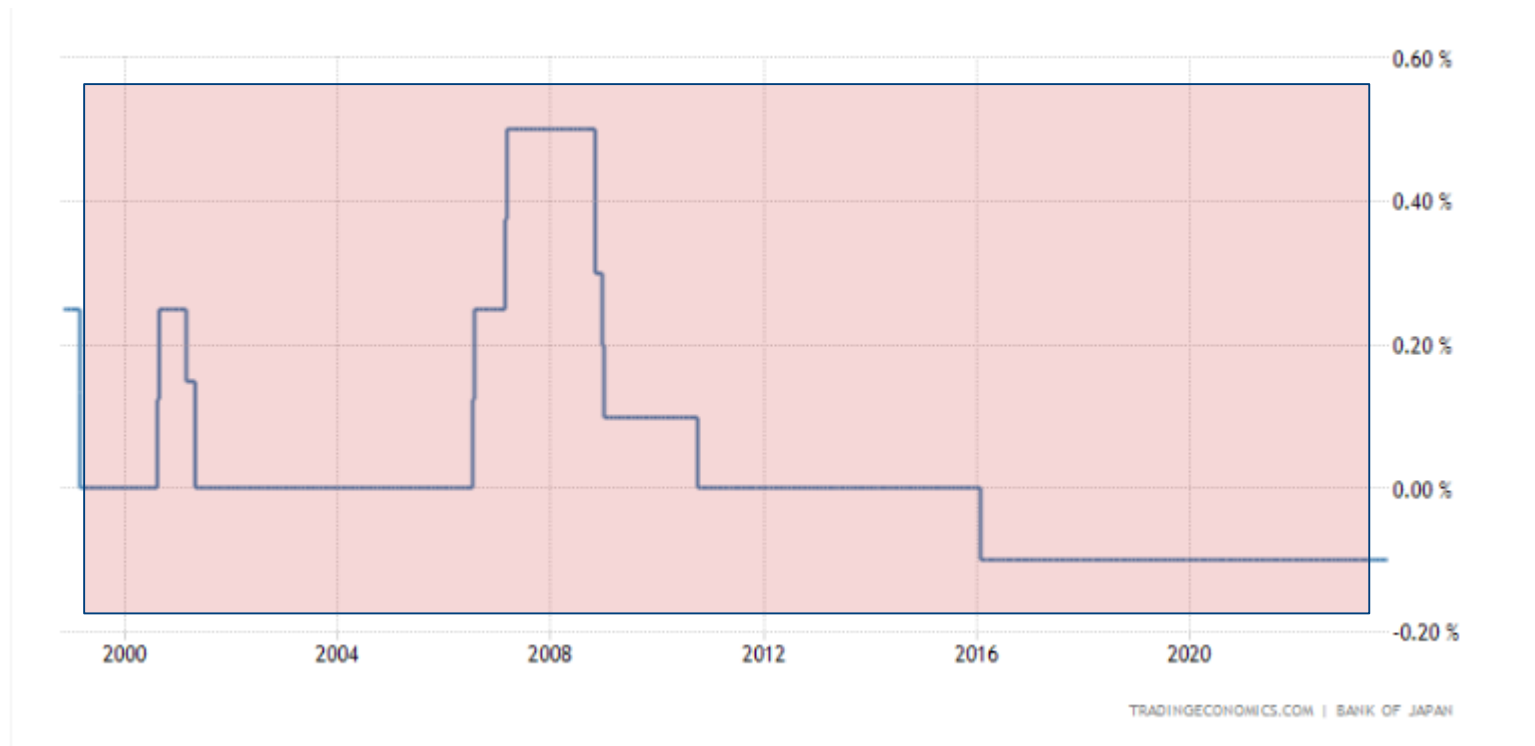
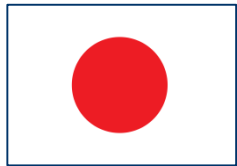


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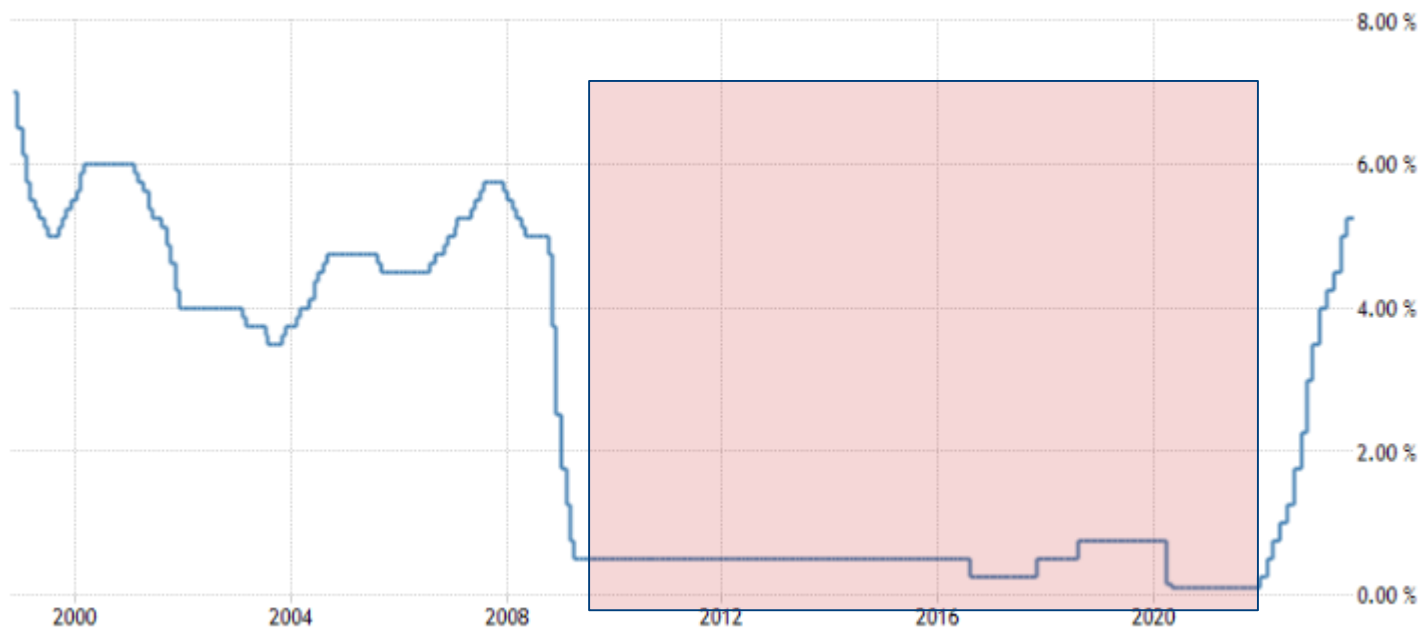
Unconventional MP – Fed



Unconventional MP – Japan



Unconventional MP – UK



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Big challenge for central bankers.....



70s: significant effects
on labour market(s)



20s: marginal effects on
labour market(s)

Thank you for your attention!

before monetary union (EA)



monetary union (EA)



Readings (for whom who are interested):

- Readings:

De Grauwe, P.: „Economics of Monetary Union“, Oxford.

Zestos, G. K.: European Monetary Integration – The Euro. Thompson South Western.

Chang, M.: Monetary Integration in the European Union. Palgrave.

De Grauwe, P.: Exchange Rates and Global Financial Policies. World Scientific.

Analyses of the Czech Republic's current economic alignment with the EA

- a section on the EA
(economic alignment, institutional changes as a response to the debt crisis...)
- analyses of the Czech Republic's preparedness for euro adoption
 - cyclical and structural alignment with the EA
(how our economic developments differ from those of the EA = what is the risk of the single monetary policy being highly suboptimal for the Czech economy?)
 - adjustment mechanisms
(is our economy capable of absorbing the impacts of potential asymmetric shocks using its own adjustment mechanisms?)
 - plus new aspects, i.e. participation in new mechanisms (ESM, SRM)
- See: https://www.cnb.cz/export/sites/cnb/en/monetary-policy/.galleries/strategic_documents/analyses_of_alignment_2020.pdf