



European Macroeconomics

III. Policy implications of the two paradigms

Lecture 4

COFFEE & DOUGHNUTS
FOR THE UNEMPLOYED

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HORAN
BAILIFF

PARKING 25

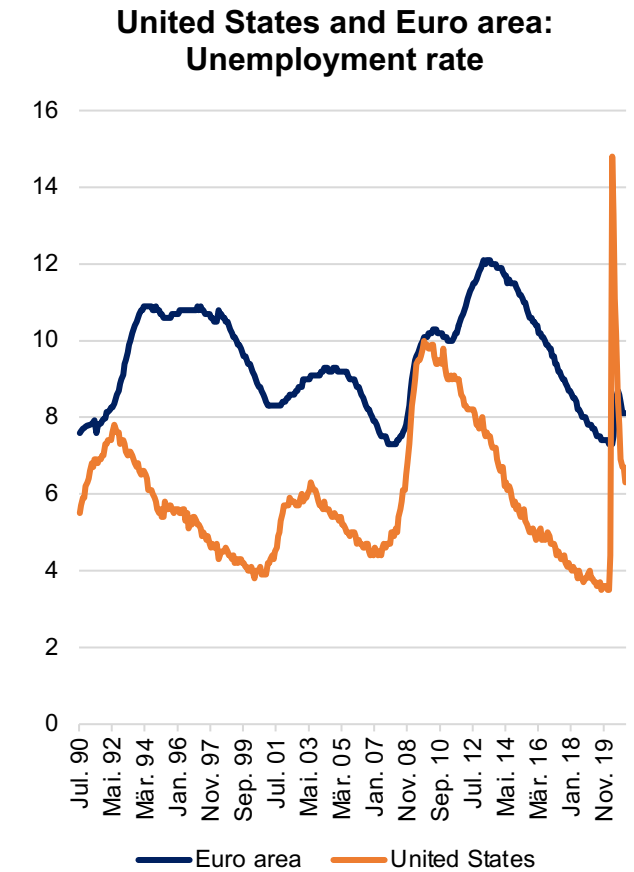
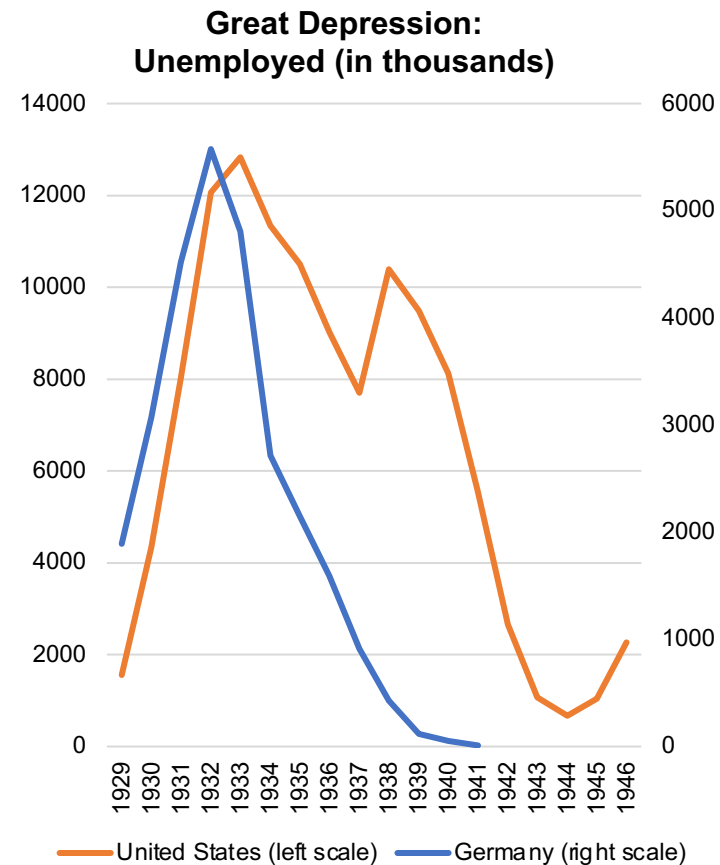
1. Unemployment and stabilization policies



(1) Explaining cyclical unemployment

The challenge of cyclical unemployment

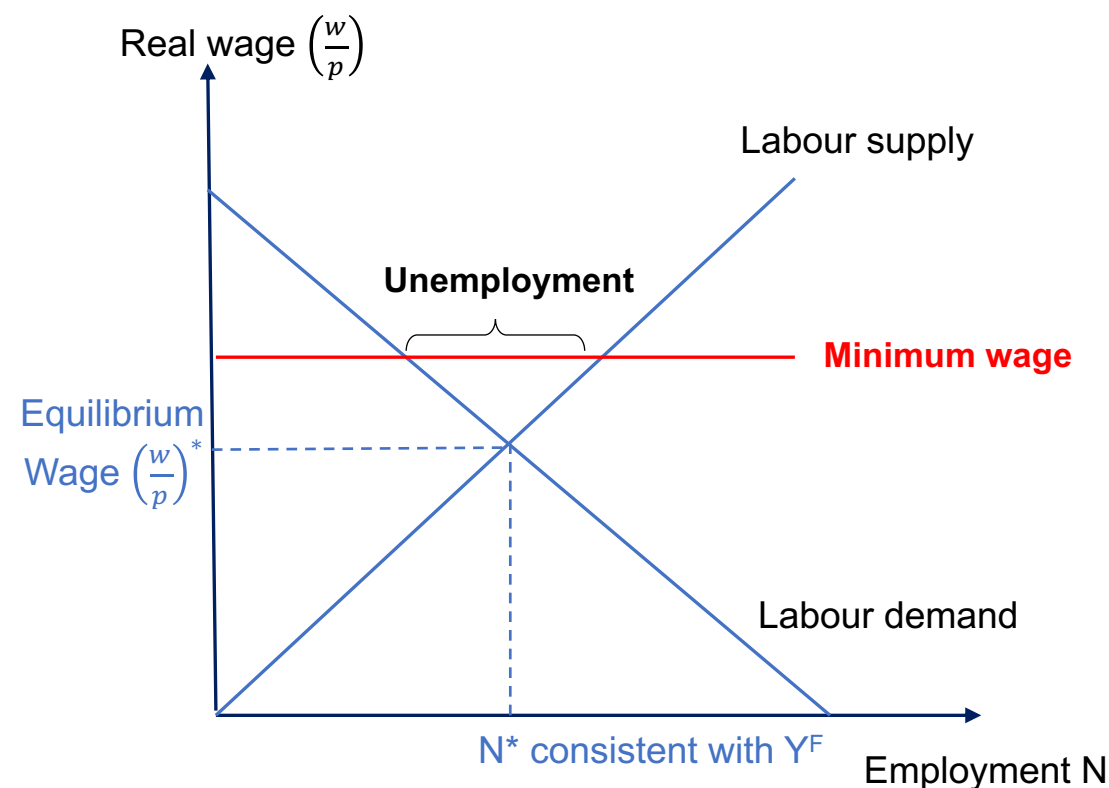
- Unemployment is a huge problem for societies
- The charts show that the unemployment rate fluctuates with the economic cycles.
- Strong increases in the Great Depression (1929-1933), the financial crises (2008/09), in the euro crises (2011/13) and in the COVID pandemic
- How can one explain such fluctuations? Standard textbooks are silent about this



The classical model: Unemployment is caused by rigid prices

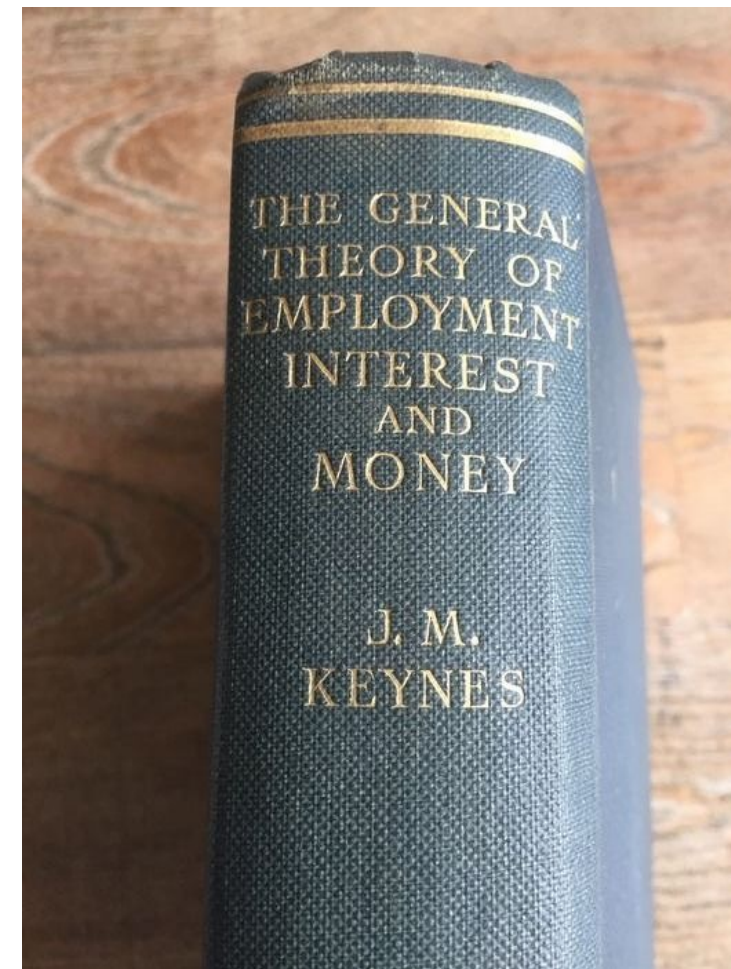
- In the classical model there is no room for cyclical unemployment as the economy is self-stabilizing
- The **labour market model** assumes that
 - the **labour supply** of the households increases with the real wage,
 - the **labour demand** of the firms decreases with the real wage
- The market mechanism leads to an equilibrium real wage with full employment (Y^F)
- Unemployment is created by a minimum wage above the equilibrium real wage. This can also be the result of collective wage bargaining
- But minimum wages do not necessarily lead to unemployment nor can they explain cyclical fluctuations of the unemployment rate
- Wage and price rigidities play a decisive role in the so-called New Keynesian Economics

The classical labour market



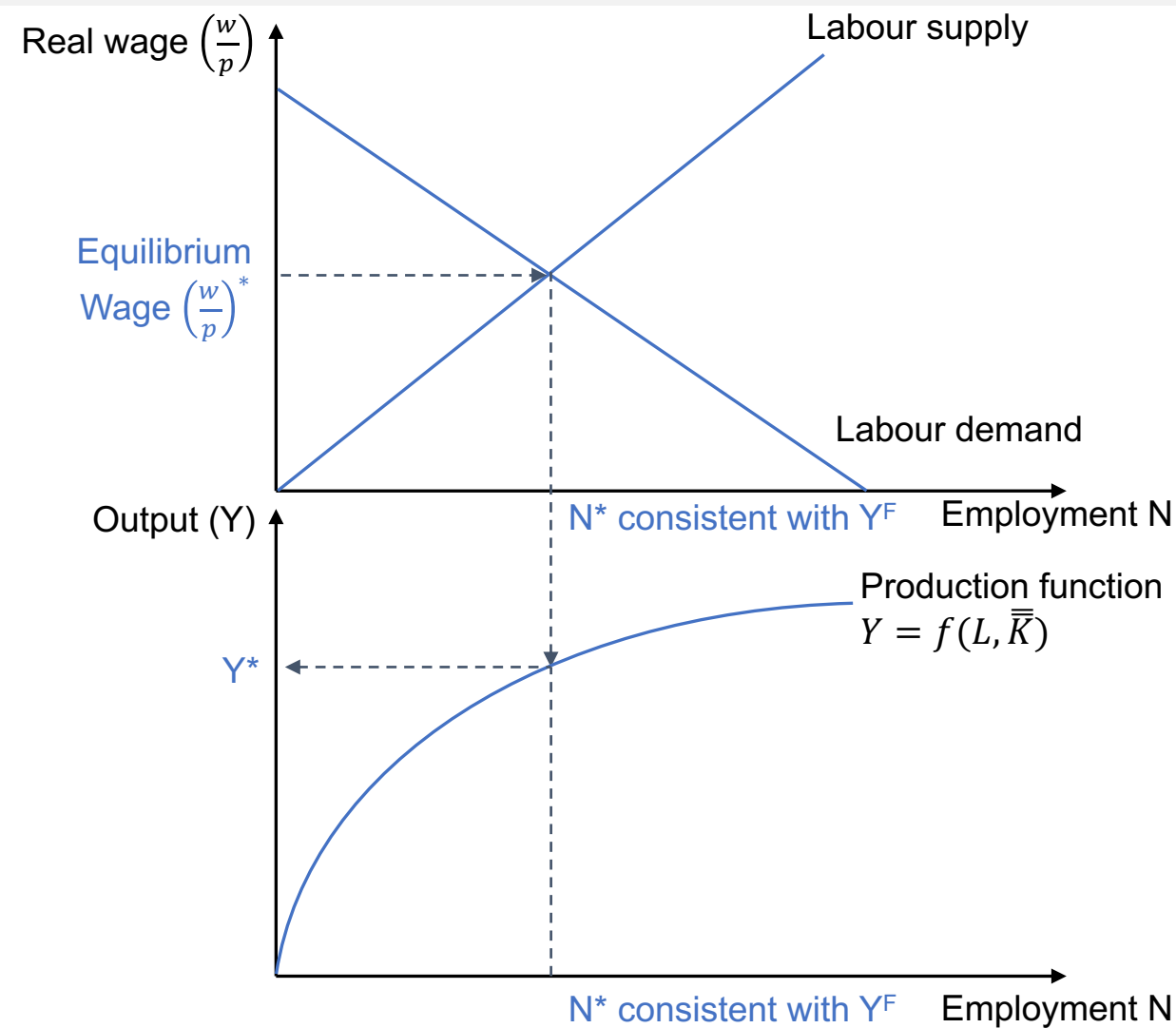
Keynes in the *General Theory* on the flexibility of wages

- “For the classical theory has been accustomed to **rest the supposedly self-adjusting character of the economic system on an assumed fluidity of money-wages**; and, when there is rigidity, to lay on this rigidity the blame of maladjustment.” (p. 257)
- “There is, therefore, no ground for the belief that a **flexible wage policy** is capable of maintaining a state of continuous full employment (...). **The economic system cannot be made self-adjusting along these lines.**” (p.267)
- “(...) it would be much **better that wages should be rigidly fixed** and deemed incapable of material changes, than that depressions should be accompanied by a gradual downward tendency of money-wages.” (p. 265)



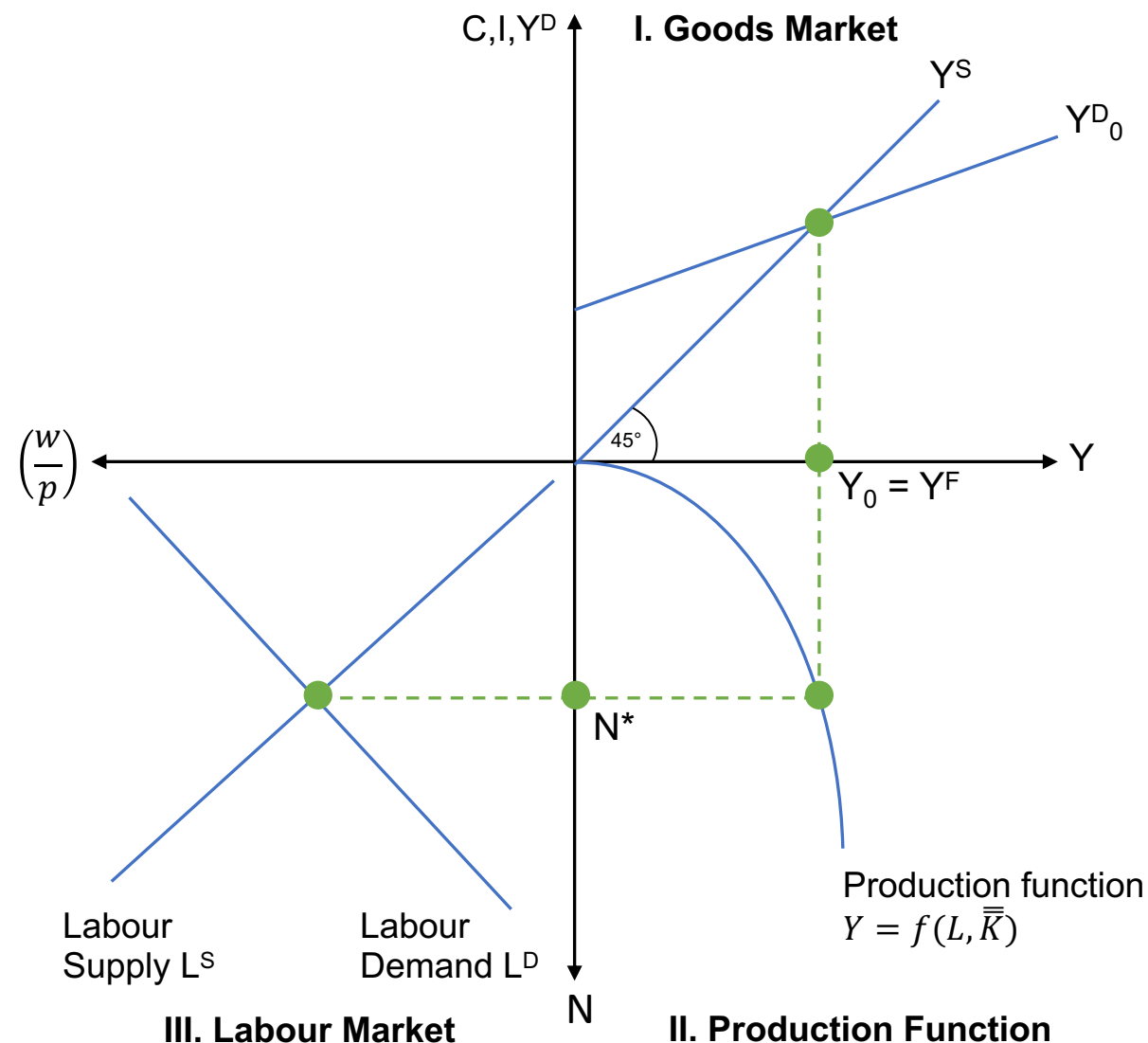
Explaining Keynesian unemployment

- We start with the classical labour market. With this market we can derive the full employment.
- We take the full employment and insert it in the production function. Then we can derive the full employment output.
- Now we combine these two charts with the chart for the goods market



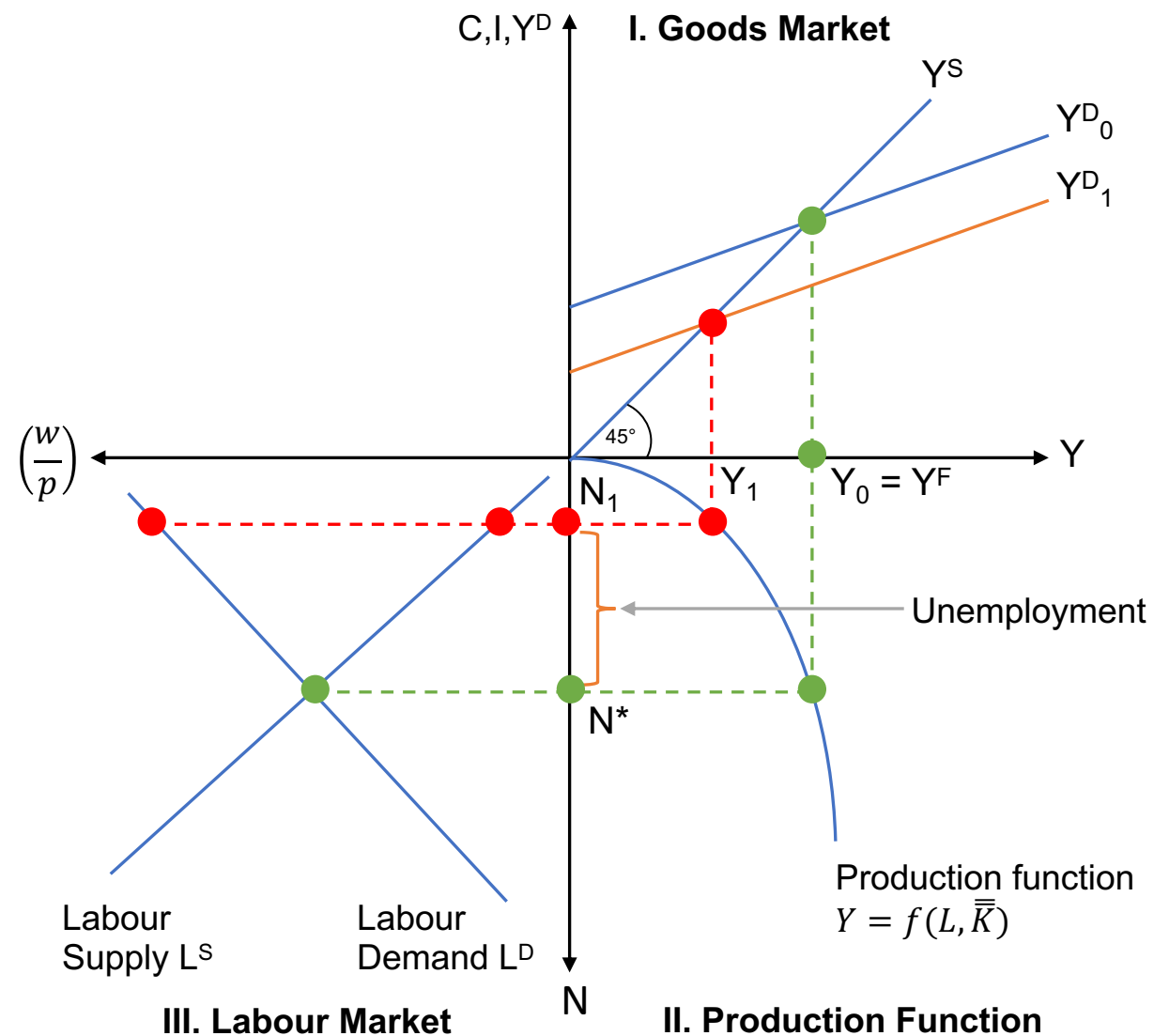
The impact of the goods market on the labour market

- We start with the **green lines**. They describe a situation with equilibrium on the goods market and full employment
- Now we assume a **negative demand shock**. Aggregate demand shifts downwards. The new goods market equilibrium is presented by the red lines.
- We can see that the equilibrium output on the goods market requires less employment (N_1) than full employment (N^*)
- The **red lines** show a goods market equilibrium with unemployment



The impact of the goods market on the labour market

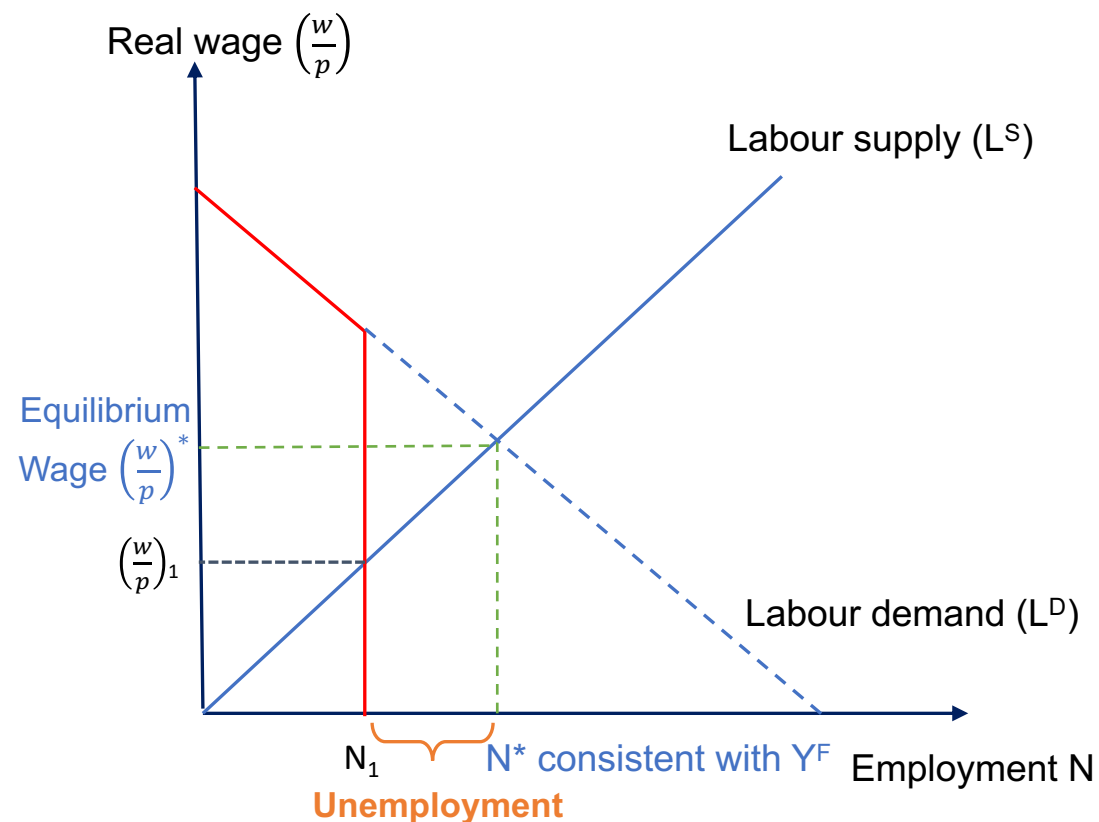
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Can flexible wages restore full employment?

- For a more detailed look at the labour market, we present the labour market diagram in isolation.
- The labour demand of the firms is **rationed** by the amount of goods that they can sell.
- The rationing is shown by the **effective labour demand**. It differs from the **notional labour demand** which assumes no rationing.
- The chart shows that a **decline of the real wage** (i.e. from $\left(\frac{w}{p}\right)^*$ to $\left(\frac{w}{p}\right)_1$) cannot restore full employment.
- The effect of a lower wage on employment depends on its effects on **aggregate demand**.
- If a lower wage **reduces aggregate demand**, rationing and unemployment increase. Thus, Keynes was against lower wages in a recession.

Labour market with rationing (isolated view)



Policy implications

Classical model

- Unemployment reflects government interference in the market system that by itself is **self-stabilizing**
- Reduction of unemployment requires more **wage flexibility**
 - Lower minimum wages
 - Reducing the influence of collective bargaining

Keynesian Model

- Cyclical unemployment reflects an **inherent instability** of the market system that requires government stabilization policy
- Reduction of unemployment requires a **stimulation of aggregate demand** by
 - fiscal policy and/or
 - monetary policy

(2) The role of macroeconomic stabilization

Classical approach

vs.

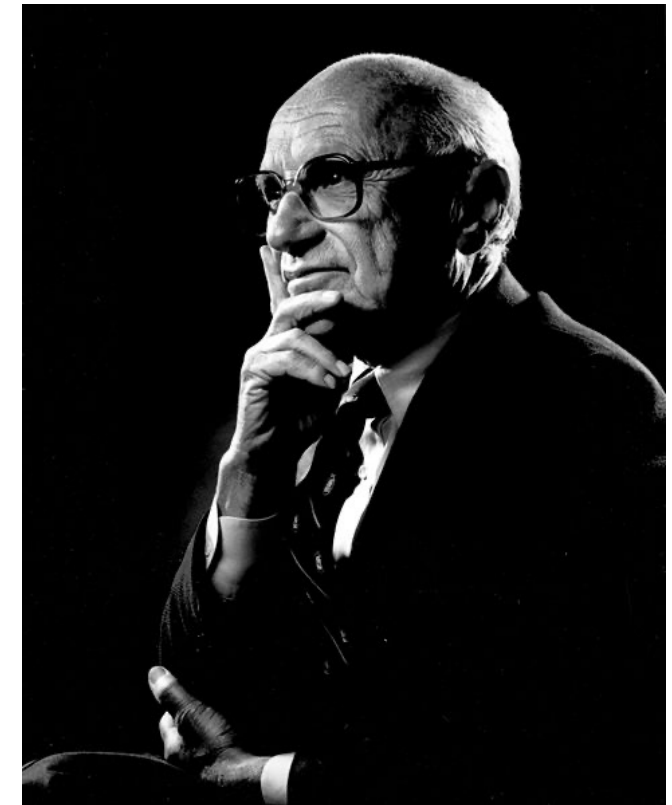
Keynesian approach

The classical view on monetary policy: Monetarism

“The first and most important lesson that history teaches about what monetary policy can do - and it is a lesson of the most profound importance - is **that monetary policy can prevent money itself from being a major source of economic disturbance.**

This sounds like a negative proposition: **avoid major mistakes.** In part it is.

The past few years, (...) would have been steadier and more productive of economic well-being **if the Federal Reserve had avoided drastic and erratic changes of direction (...)**”



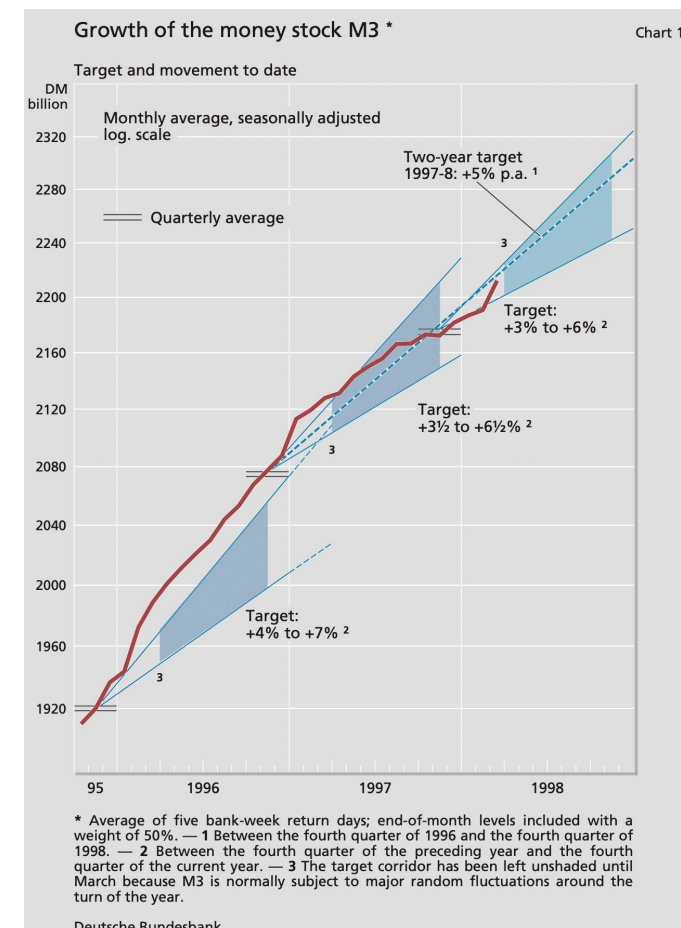
Milton Friedman
1912-2006

The strategy of monetary targeting

Milton Friedman (1968):

- My own prescription is still that the monetary authority go all the way in avoiding such swings by adopting publicly the policy of achieving a **steady rate of growth in a specified monetary total**.
- The **precise rate of growth**, like the **precise monetary total**, is **less important** than the adoption of some stated and known rate.
- I myself have argued for a rate that would on the average achieve rough stability in the level of prices of final products, which I have estimated would call for something like a **3 to 5 per cent per year rate of growth** in currency plus all commercial bank deposits (...).

The Bundesbank's failed attempts at monetary targeting in the 1990s



Source: Deutsche Bundesbank, Annual Report 1997, p.75

The classical view on fiscal policy: Ricardian equivalence

Robert Barro: *Macroeconomics*, p. 351

- „The real budget deficit of one unit in year one means that government saving is minus one unit.
- Since households do not change consumption, they place the entire extra unit of year 1's real disposable income into bonds.
- Therefore, real household saving in year 1 rises by one unit.
- Thus, the extra real household saving exactly offsets the government's dissaving. The sum of household and government real saving (...) does not change.“
- „a deficit-finance tax cut does not affect real GDP and other macroeconomic variables.“ (p. 360)

Jean-Claude Trichet, President of the ECB

on 27 August 2010 during the euro crisis (explicitly referring to Robert Barro):

“The concern is, however, that in the short run the deficit reductions – although unavoidable in the long run – have negative effects on aggregate demand. The economy, it is sometimes argued, is at present too fragile and thus consolidation efforts should be postponed or even new fiscal stimulus measures added.

As I pointed out recently, I am sceptical about this line of argument. Indeed, *the strict Ricardian view may provide a more reasonable central estimate of the likely effects of consolidation*. For a given expenditure, **a shift from borrowing to taxation should have no real demand effects** as it simply replaces future tax burden with current one.”

<https://www.ecb.europa.eu/press/key/date/2010/html/sp100827.en.html>

Keynesian stabilization policy

Main players:

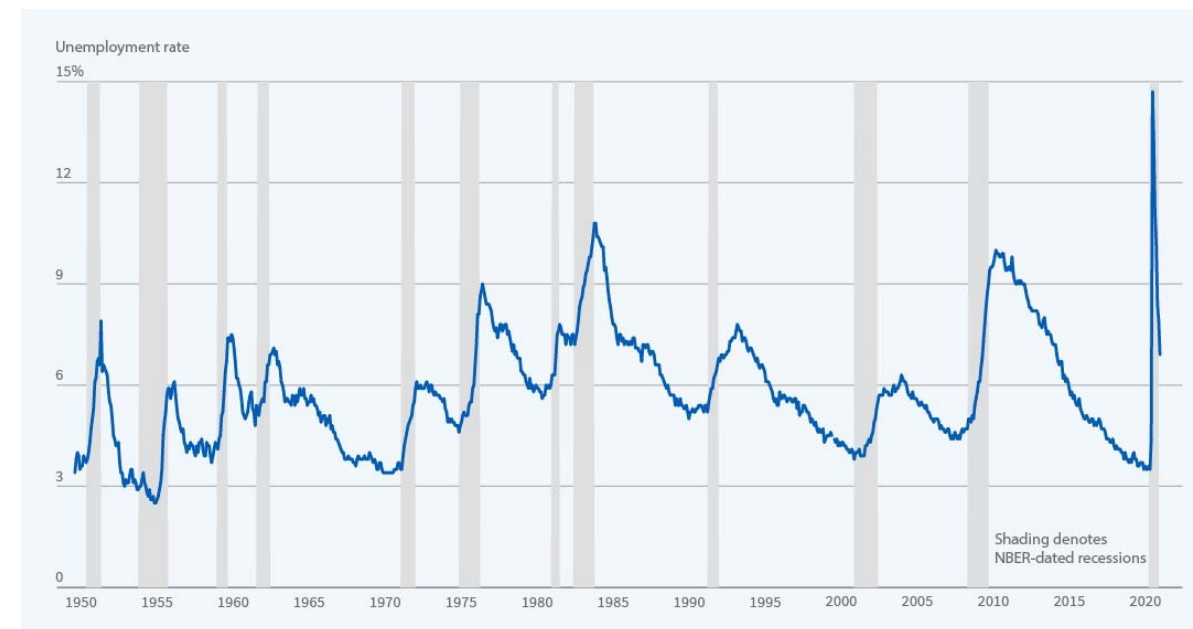
Central bank with monetary policy

- Conventional interest rate policy
- Unconventional policy measures (i.e. Quantitative easing, forward guidance)

Government with fiscal policy

- Expenditures: investment, transfers
- Taxes: Income tax, value-added tax

Fluctuations of the US Unemployment Rate with the business cycle



Source: NBER. Recessions are shaded in grey



Monetary Policy

Investment depends on the interest rate

- So far, we have assumed a constant level of investment

$$I = \bar{I}$$

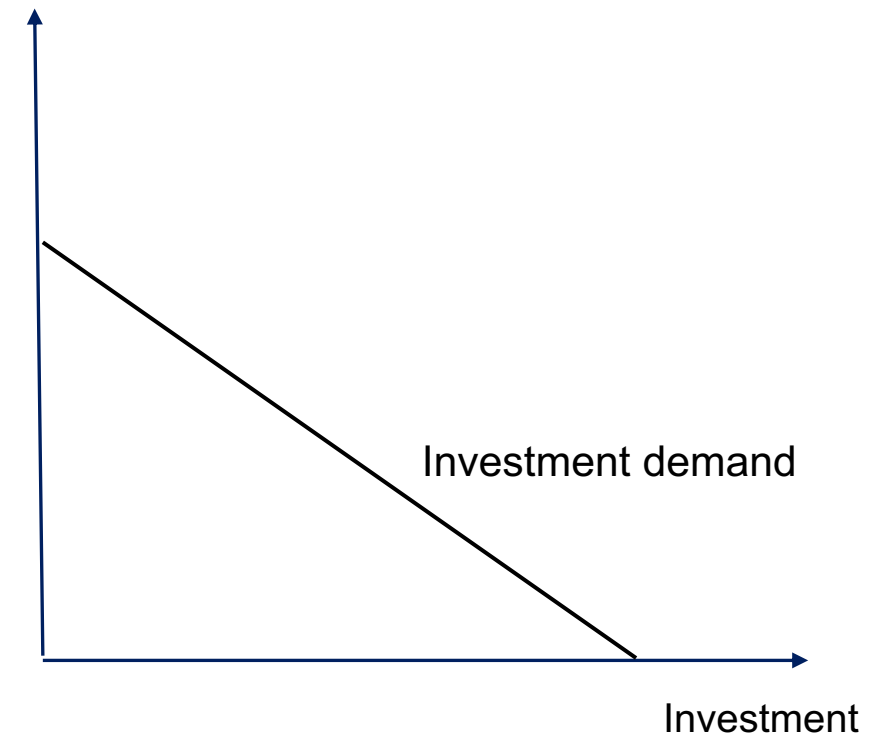
- Now we assume that investment depends negatively on the interest rate

$$I = I(i)$$

- The logic is the same as in the classical model. With a given return of investments projects, the lower the interest rate for loans the more investments will be realized
- But note: the interest rate is not a commodity interest rate (expressed in units of the APG), it is a money interest rate (expressed in units of money tomorrow for 1 unit of money today)

Investment function

Nominal interest rate i



A simple numerical example

- We assume this investment function:

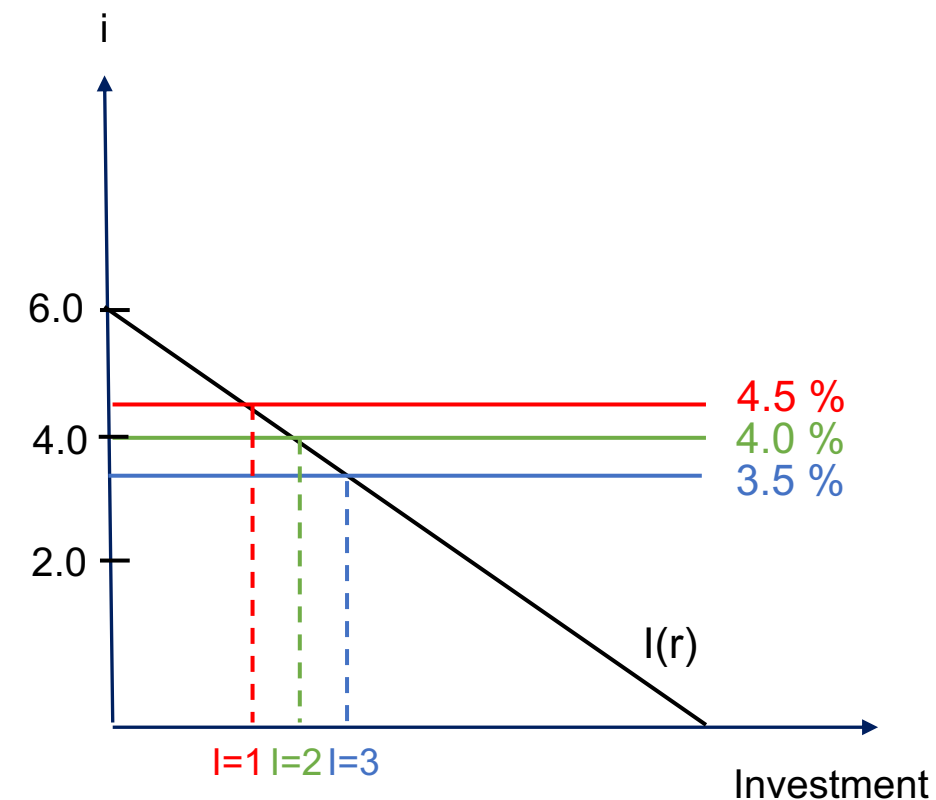
$$I = 10 - 2i$$

- For different interest rates, we can derive the levels of investment

→ For an interest rate of 3,5 %: $I = 3$

→ For an interest rate of 4 %: $I = 2$

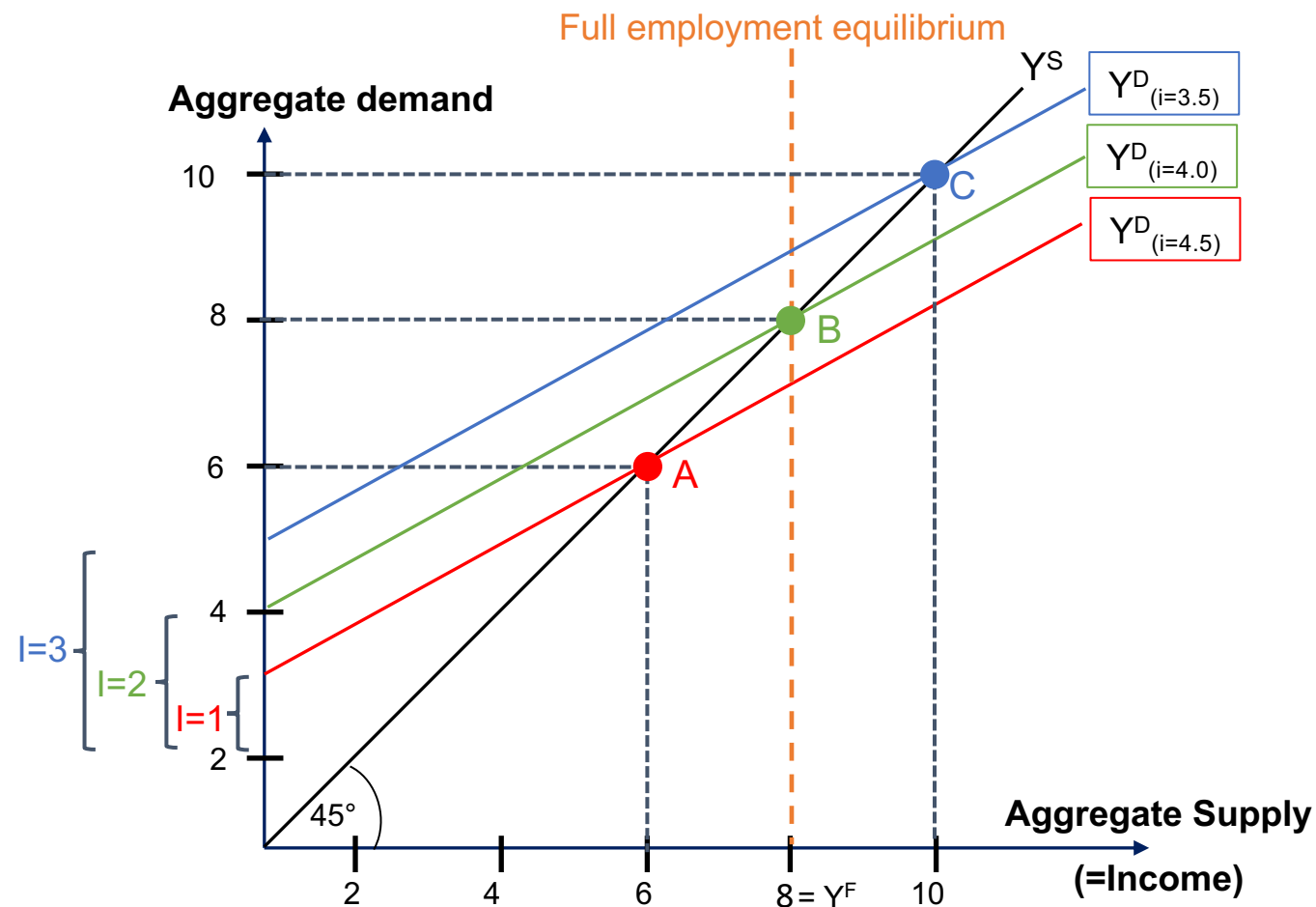
→ For an interest rate of 4.5 %: $I = 1$



The goods market diagram with investment determined by the interest rate

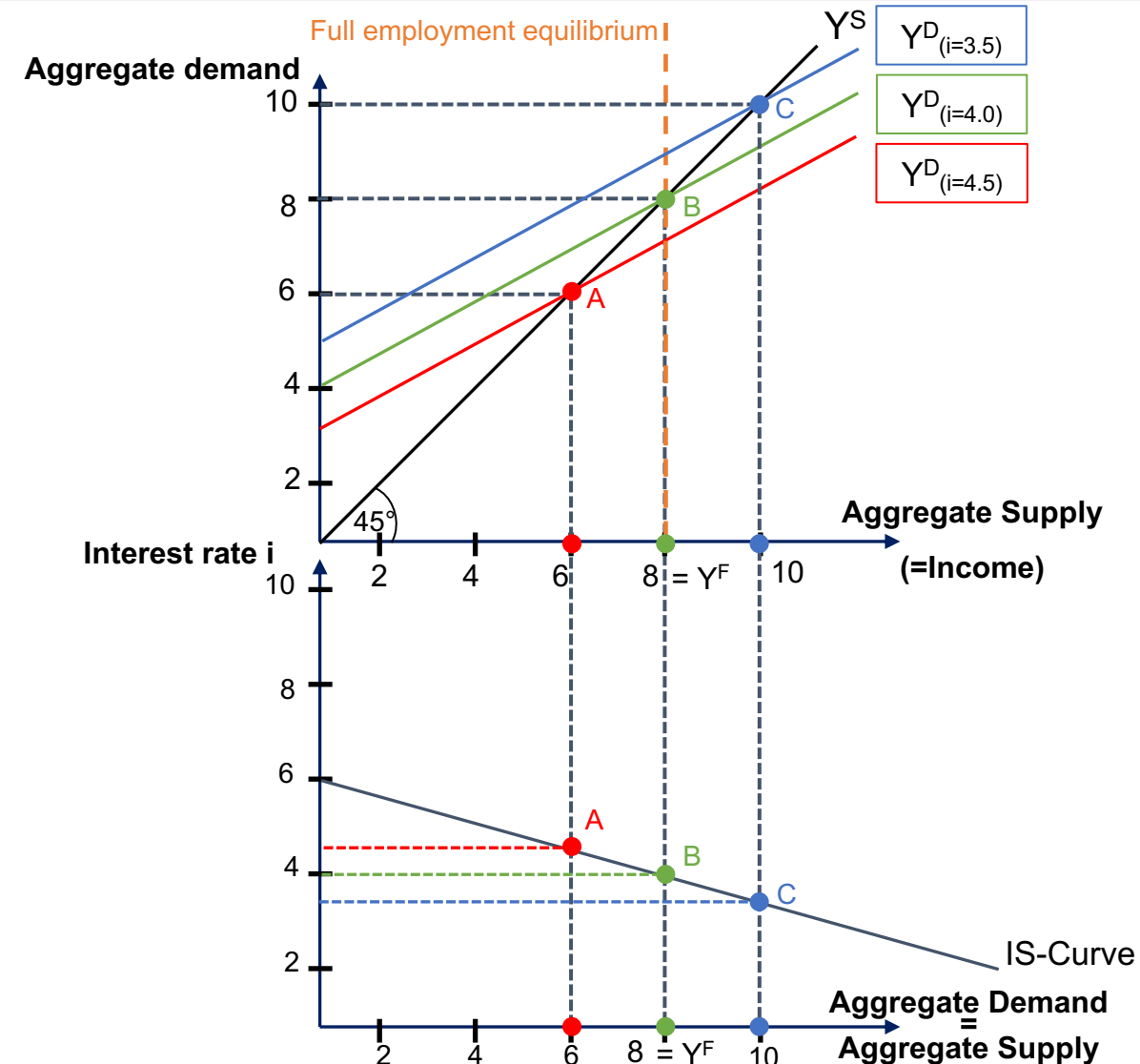
Keynesian approach

- We start with goods market diagram that we already used.
- But now we have the level of investment varying with the interest rate
- For the three different interest rates we get three different aggregate demand curves
- For each aggregate demand curve, we get a different equilibrium level of output.



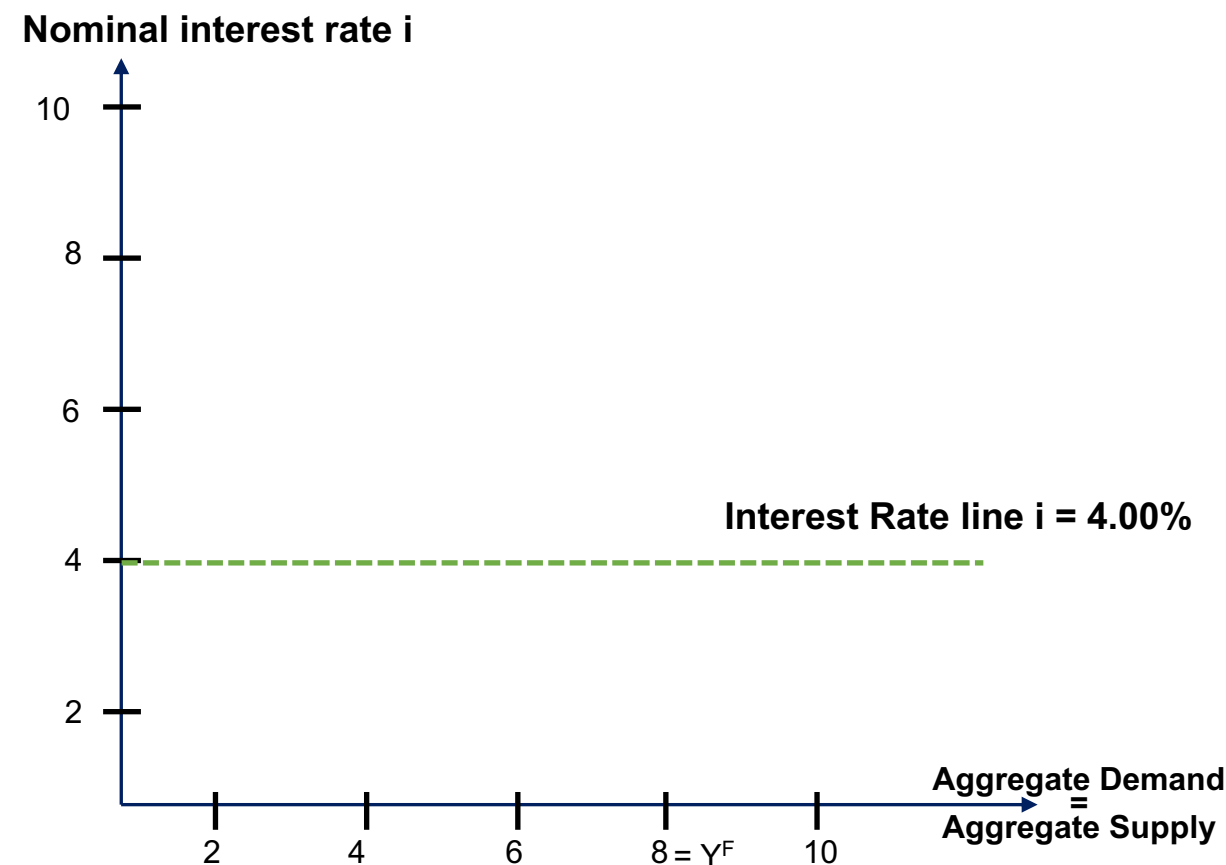
Deriving the IS-curve

- Now we combine the diagram with goods market equilibria with a new diagram that depicts the equilibrium levels of output for different interest rates
- Connecting these points, we get the so-called **IS-Curve**. The name derives from $I=S$: when the goods market is in equilibrium, investment plans are compatible with saving plans



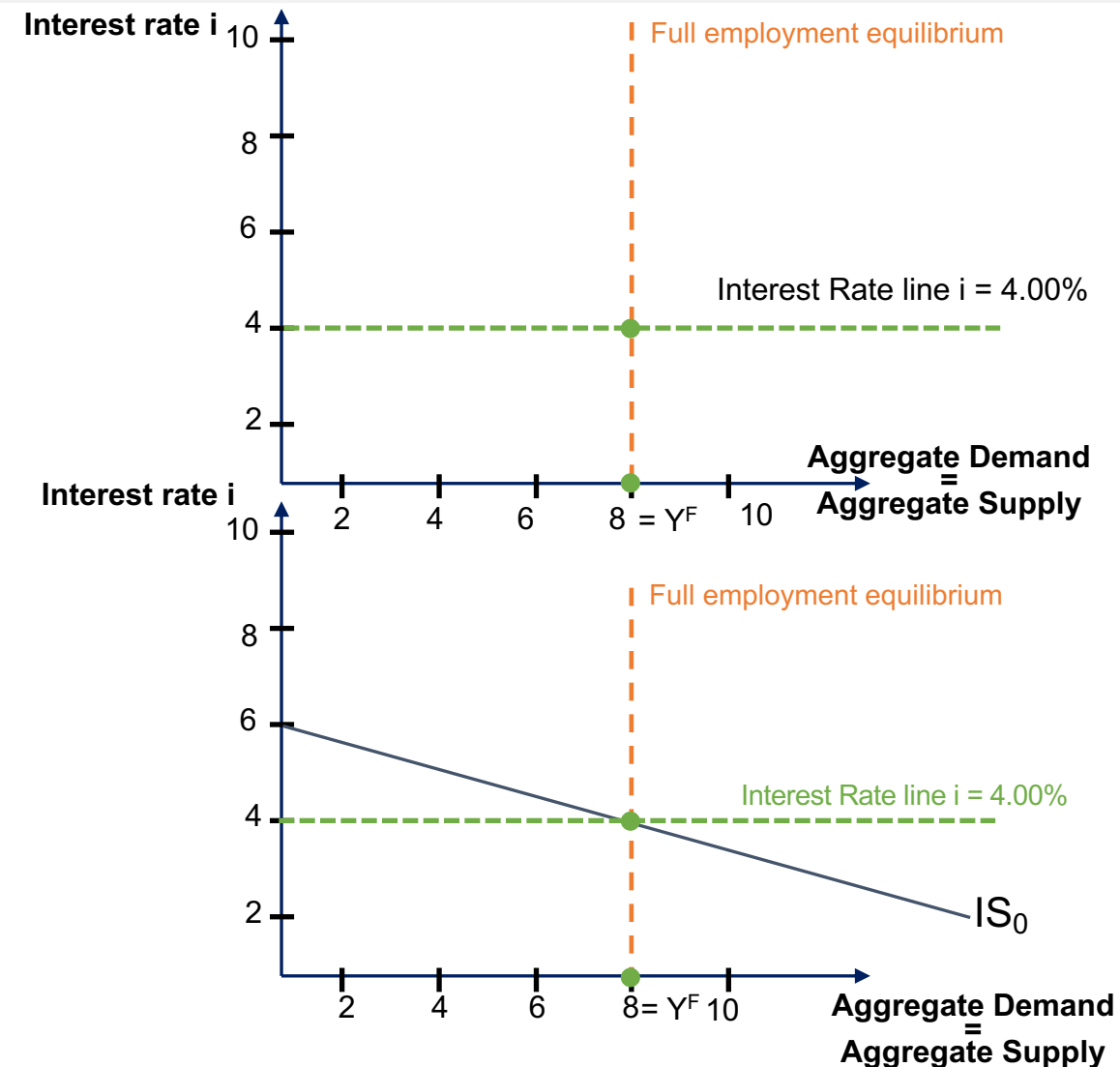
The role of the central bank in the Keynesian model

- In this chapter we will present the financial system in a **very simplified way**
- In the **Keynesian model**, the central bank can perfectly control the money interest rate. We will explain the underlying mechanisms in chapter.
- Thus, we present the monetary policy of the central bank as an **interest rate control**, which allows the central bank to keep the interest rate that is relevant for investment at whatever level it desires.
- Graphically, we present this a **horizontal line** in the i/Y space



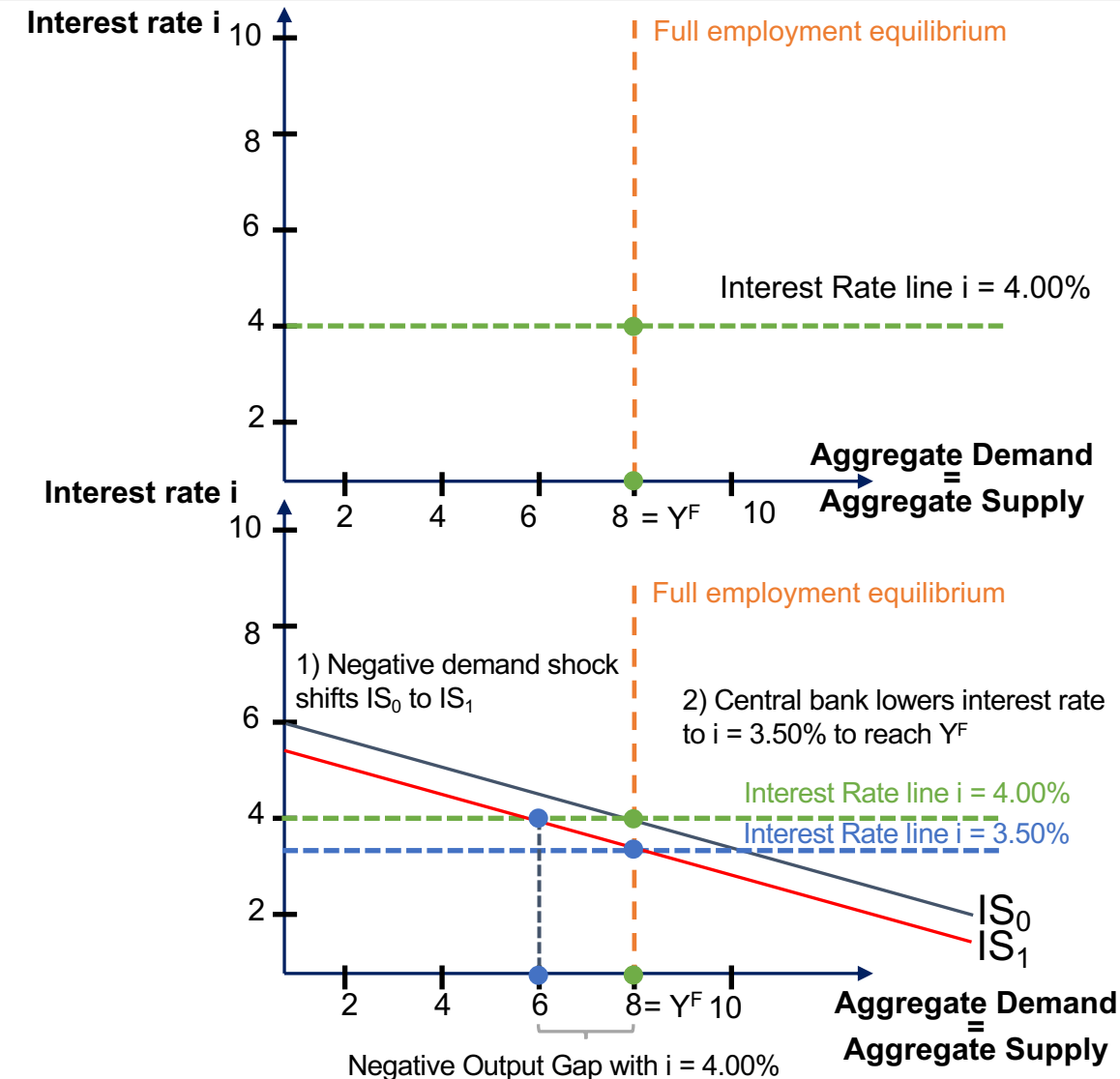
The stabilization role of the central bank

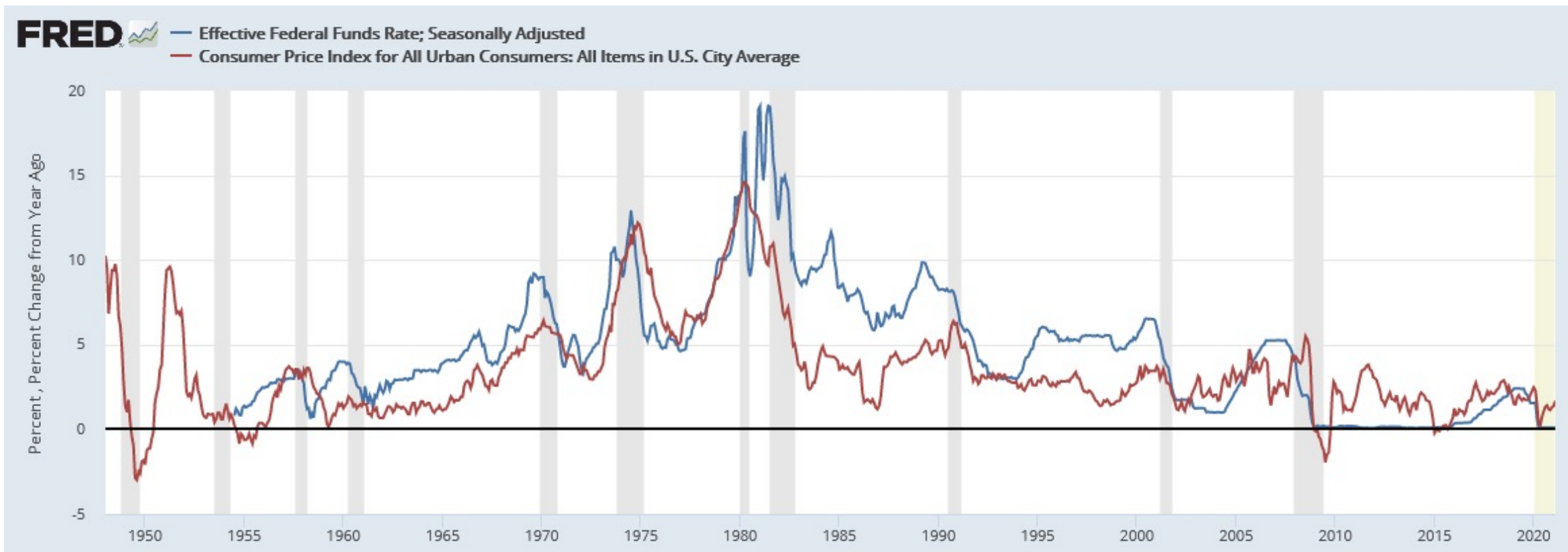
- For a given IS-Curve the central bank can set the interest rate at a level which guarantees full employment.
- If a negative demand shock affects the economy, the IS-curve shifts downwards. At a constant interest rate, this leads to a negative output gap.
- The central bank can stabilize the economy if it reduces the interest rate (blue line) to a level where higher investment restores the full employment output level



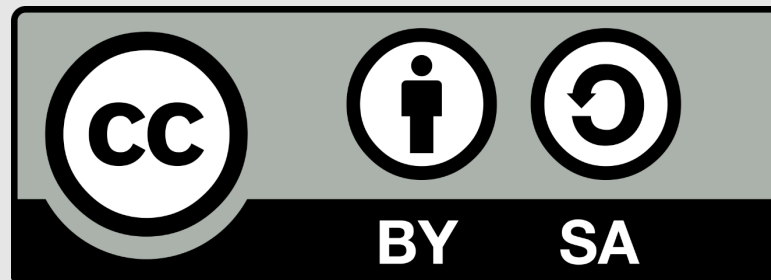
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This chart shows how the US Federal Reserve reacted with its interest policy (=Effective Federal Funds Rate) to an **overheating of the economy** (change in Consumer Price Index) but also to **recessions** (areas shaded in grey).



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