Introduction to Macroeconomics

Vivaldo Mendes
Instituto Universitário de Lisboa (ISCTE-IUL)
vivaldo.mendes@iscte-iul.pt

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1. The Practice of Macroeconomics

Macroeconomics *versus* Microeconomics

. . .

Microeconomics:

- Studies the optimal decision making process of a household, a firm, one market.
- Usually, this process is considered free from any political interference (trade-unions, business confederations, lobbying processes)

. . .

Macroeconomics:

- Studies the working of an economy as a whole (all households, all firms, all markets)
- Usually, the economic policies designed by public decision making institutions (Government, Central Bank) to manage the performance of the economy are not free from political influence and lobbying processes

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Macroeconomics *vs* Microeconomics: Examples

. . .

- The interest rate that Maria pays for her mortgage is a "micro" variable
- The interest rate that the European Central Bank (ECB) sets for the entire EuroZone (EZ) is a "macro" variable

. . .

- The increase in the price of electricity is a "micro" variable
- The rate of inflation (of all goods and services) is a "macro" variable

. . .

- Can you come up with another example?

Why Macroeconomic "Models"?

. . .

- **Complexity**. The structure of an entire economy is extremely complex:
  - millions of consumers, firms by the hundreds of thousands
  - huge number of goods and services, and prices as well
  - huge number of monetary and financial instruments

. . .

- **Experiments are impossible**. It is simply impossible to "see" what is happening in the tremendous complexity beneath a modern economy.

. . .

- **Simplify**. We need to simplify that huge complexity: that is the task of building an (abstract) economic model
- **Model**: a simplification … not a falsification of economic reality

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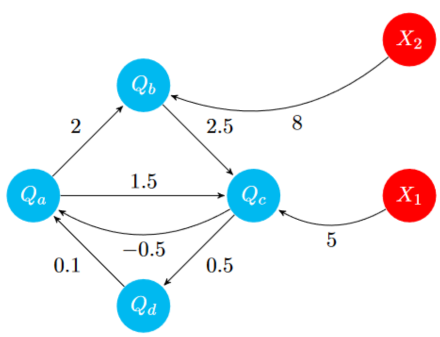
A Graphical Example of a Model



- **Inputs**: $\{X_1, X_2\}$
- **Structure**: $\{2, 0.1, -0.5, 8, 1.5, \ldots\}$
- **Outputs**: $\{Q_a, Q_b, Q_c, Q_d\}$

The Elements of a Macroeconomic Model

- **Inputs**: the values of the exogenous variables
- **Structure**: set of impacts given by the parameters values
- **Outputs**: values of the endogenous variables
- **Agents**:
  - **Private agents**: consumers, firms, commercial banks, financial firms, foreign agents
  - **Public agents**: government, central bank (they have the power granted by law to implement policy measures)
- **Markets**: Goods & Services (G&S), labour, money, foreign currencies

2. The Purpose of Macroeconomics

Main Macroeconomic Variables

- Real GDP (Gross Domestic Product)
- Unemployment Rate
- Inflation rate
- Interest rate

. . .

Excellent sources of macroeconomic data:

- For the US economy go here: ***FRED Economic Data***
- For the EU economy go here: ***EUROSTAT Data***
- For World economic data: ***TED Data***

Real GDP

Next week, we will define with rigor what "Real GDP" is all about. The next figure shows the evolution of Real GDP for the US economy.

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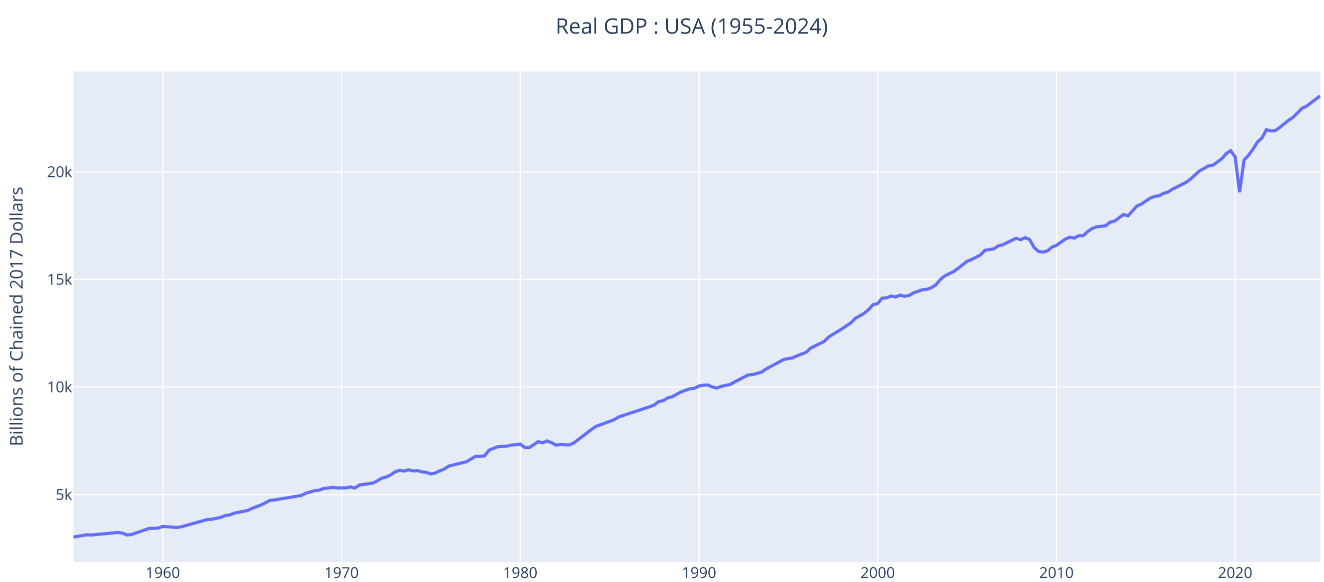


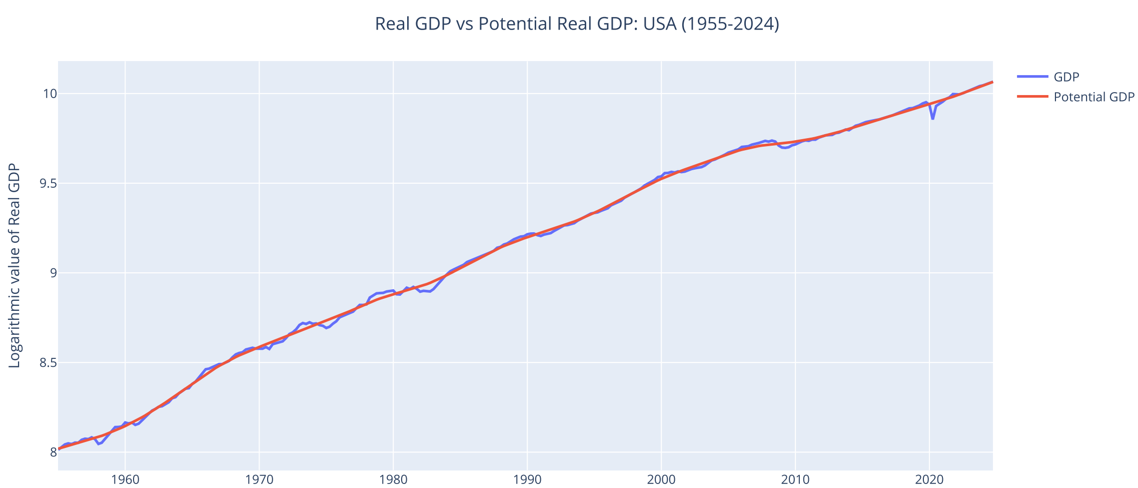
Real GDP vs Potential GDP

The previous figure does not provide much information by itself. Why?

. . .

- In which periods GDP grew at higher rates?
- In what periods the US economy was performing above/below its potential GDP level?
- This raises to the surface another crucial aggregate: **Potential Real GDP**.
- Business cycles consist of short-term variations in macroeconomic activity and comprise booms & recessions.
- An economic recession: Real GDP is much smaller than Potential Real GDP.
- An economic boom: ???

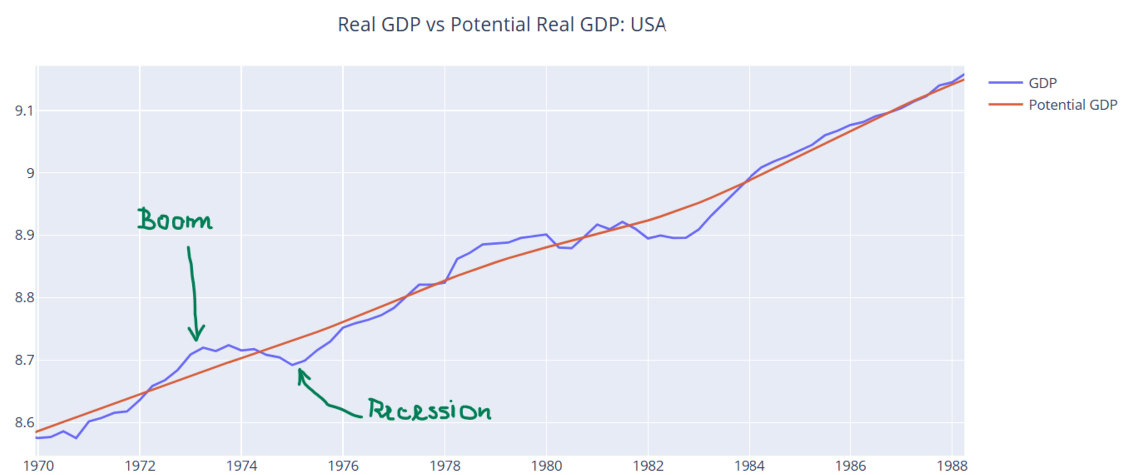
Real GDP vs Potential GDP: USA (1955-2024)



Data source: ***FRED Economic Data***

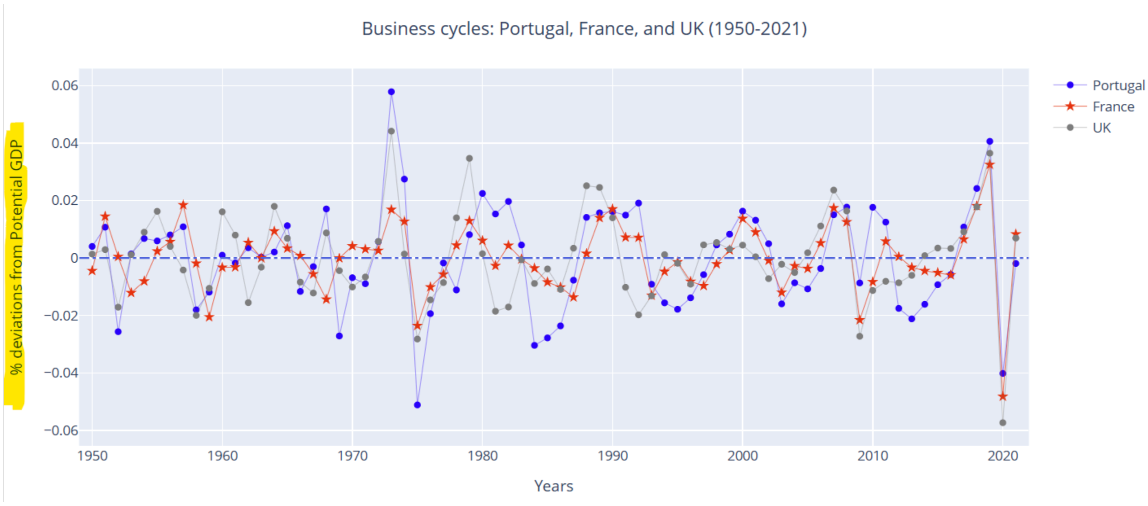
Real GDP vs Potential Real GDP: USA

A closer view: we can zoom in ***between 1970 and 1988***



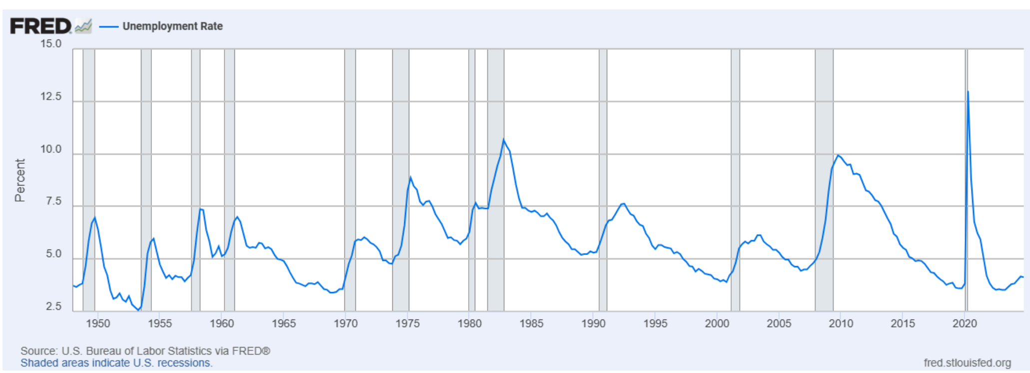
Business cycles

Percentage deviations of real GDP from Potential GDP



The Unemployment Rate: USA 1947-2024

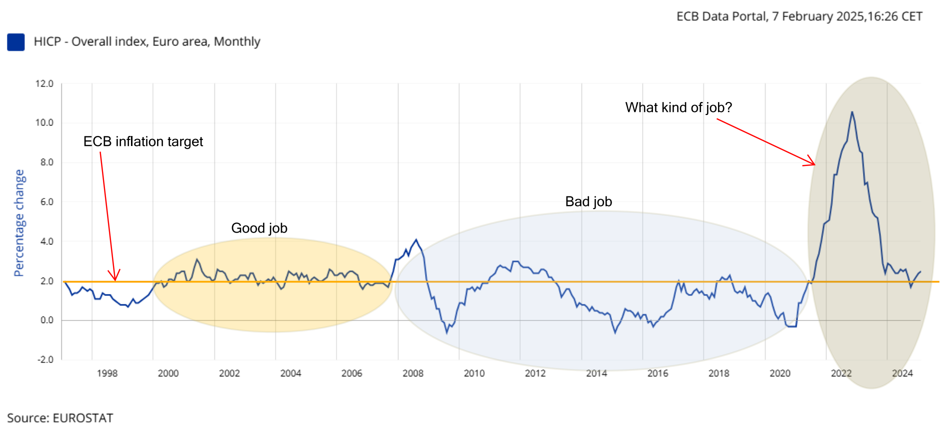
The % of the labor force that does not have a job



Data source: ***FRED Economic Data***

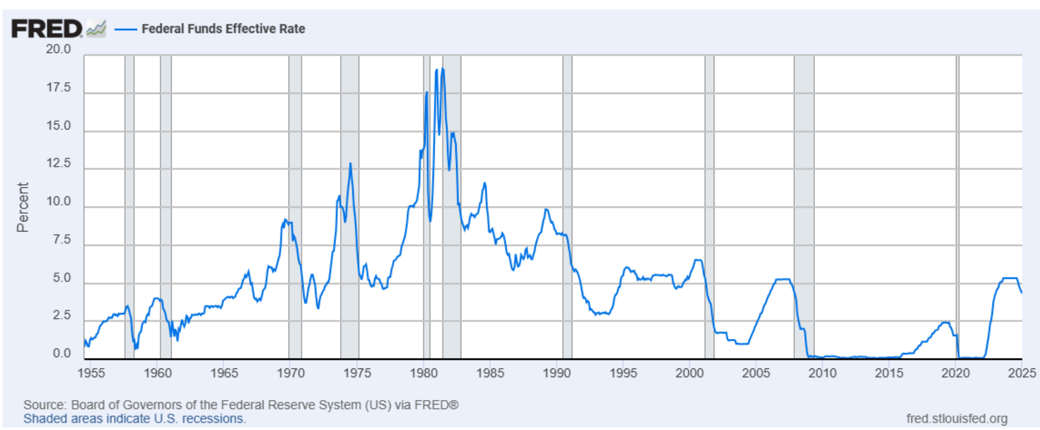
Inflation in the Euro Zone (EZ): 1997-2025

The inflation rate is, normally, taken as the percentage change in the CPI (Consumer Price Index). Central banks have a target level: 2% per year.



The Interest Rate in the USA (FFR)

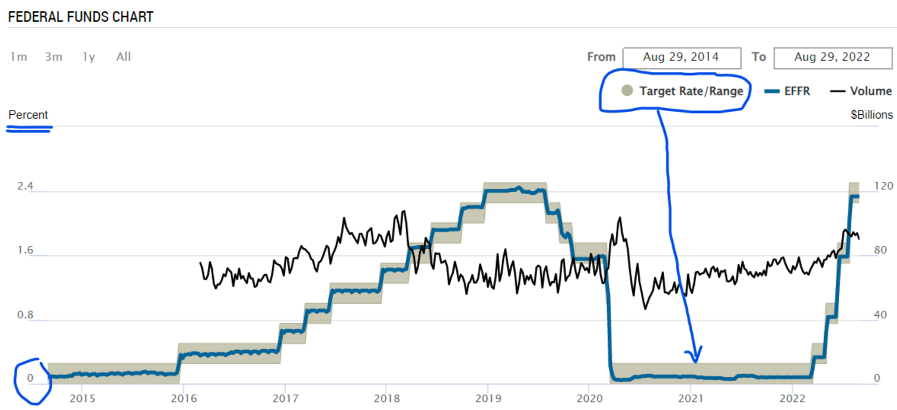
The Federal Funds Rate (FFR) is the most important ***short-term*** interest rate in the US. In week 6 we will learn more about it.



Data source: ***FRED Economic Data***

Target Interest Rate in the USA

The central bank of the USA (Federal Reserve Board, or simply ***Fed***) sets the range of the target rate for trading in the federal funds market.



Source: ***FRB of New York***

3. Macroeconomic Policy

What is Macroeconomic Policy?

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- It is the intervention of public institutions (the Government and the Central bank) in the functioning of the economy.

. . .

- Why is it necessary? For several reasons:

. . .

- The economy may be hit by **exogenous shocks** that have dramatic impacts on the entire economy (Covid, war in Ukraine, a large increase in oil prices, etc.)

. . .

- Some sectors have to be regulated because they are prone to **market failures** (natural monopolies, collusion, externalities)

. . .

- Some private agents may **behave dishonestly** (moral hazard) and may led to a dramatic collapse of an entire sector in the economy (e.g., bank runs)

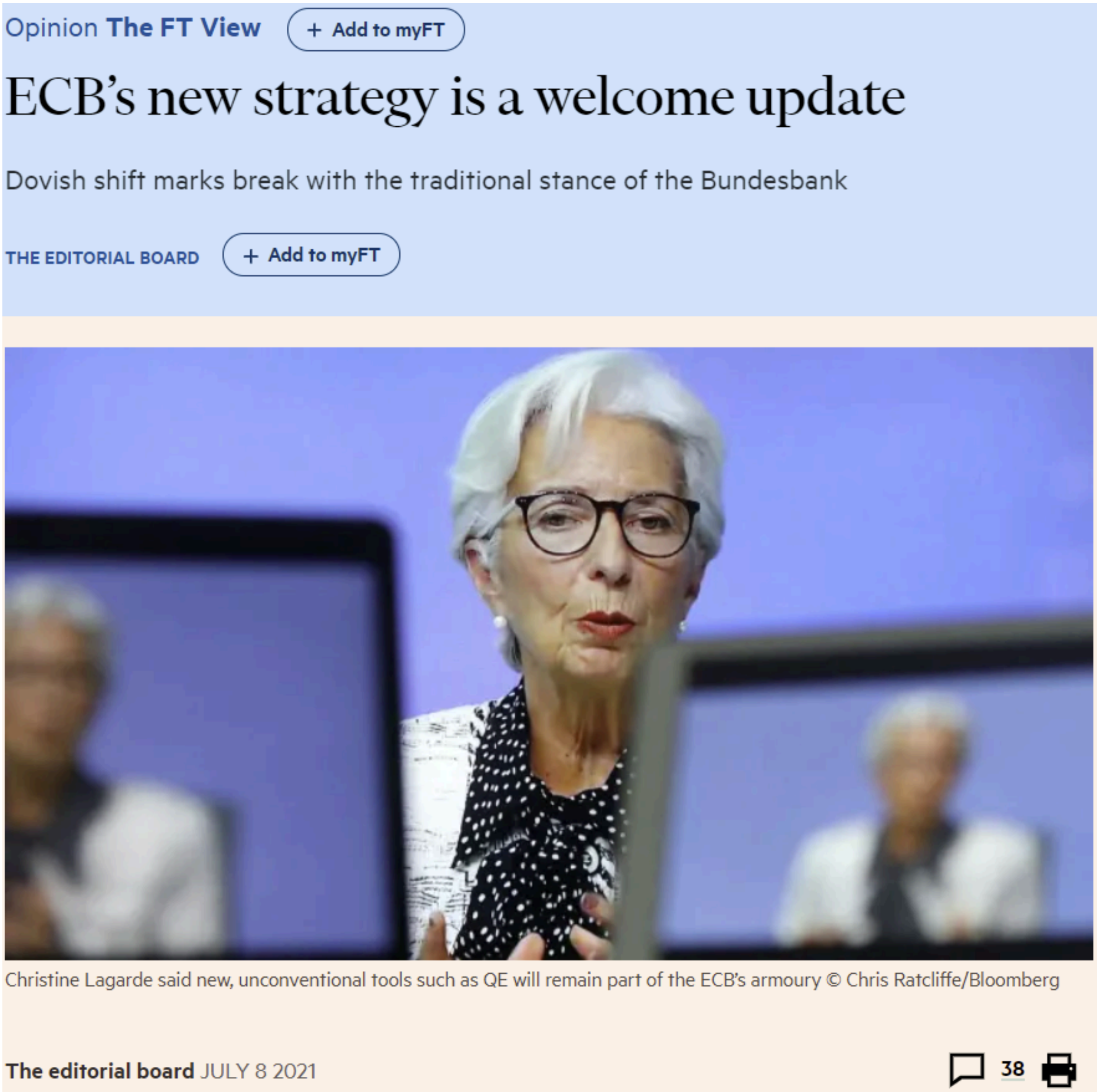
. . .

- The economy is very volatile … even in the sort term

The Summer 2021's Big Problem: DEFLATION

- Everybody was concerned about deflation (negative inflation rates)
- One FT's editorial applauded the move by the ECB to review its policy strategy in July 2021

- Keep interest rates at 0% or even negative if necessary



Opinion **The FT View** + Add to myFT

ECB's new strategy is a welcome update

Dovish shift marks break with the traditional stance of the Bundesbank

THE EDITORIAL BOARD + Add to myFT

Christine Lagarde said new, unconventional tools such as QE will remain part of the ECB's armoury © Chris Ratcliffe/Bloomberg

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38

Summer 2022's Big Problem: PACY INFLATION

- Suddenly, in 12 months, inflation increased around 6 or 7 percentage points in most Western economies
- Central banks were forced to increase interest rates very aggressively
- Another FT's editorial applauded the courage of central banks in July 2022

- Opinion **The FT View** + Add to myFT

A pivotal moment for central banks

Jackson Hole is a time to reflect on where policymakers made mistakes

THE EDITORIAL BOARD + Add to myFT

Last month US inflation reached 8.5 per cent. Eurozone inflation hit 8.9 per cent. Citigroup now forecasts UK inflation will hit 18.6 per cent in January — nine times the Bank of England's 2 per cent target © FT montage/Getty Images/Reuters/Bloomberg

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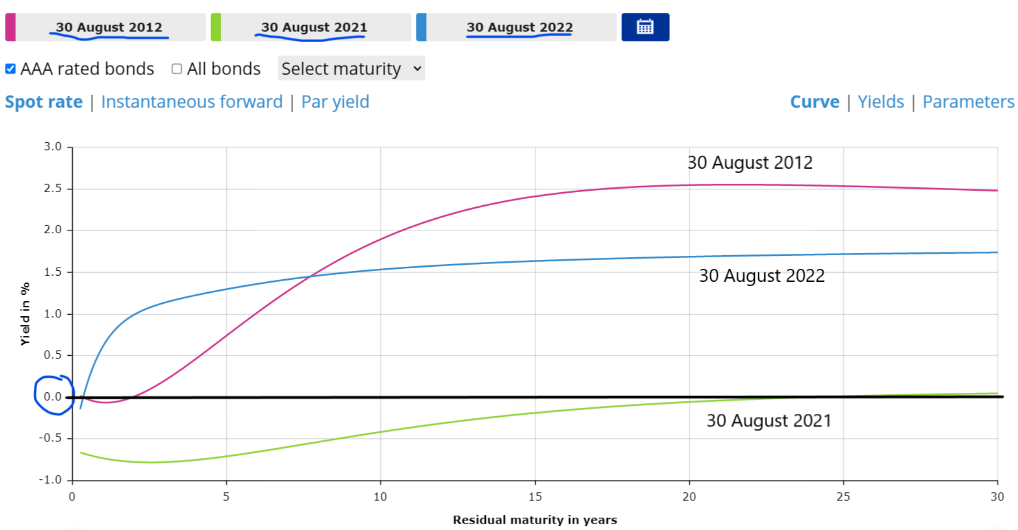
Financial Crisis and Spread Volatility

Financial crisis lead to large jumps in spreads in the financial markets.
Data source: ***FRED Economic Data***

Macroeconomic Instability and Yields

Macroeconomic instability leads to large and abrupt changes in the yields of financial assets.



Data source: ***European Central Bank***

How Active Should Stabilization Policy Be?

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- Economic activity is highly volatile and the Government and the Central Bank should intervene to stabilize economic activity … when needed
- How often and with what intensity should those institutions intervene?

. . .

- **Activists** (also known as Keynesians):
  - They favor regular and extensive use of such interventions
  - Booms and recessions are bad for social and economic reasons

. . .

- **Non-activists** (also known as Classicals):
  - They are against those interventions
  - Booms and recessions are the "natural" reactions of markets to shocks that hit the economy

Should Macroeconomic Policy Follow Rules?

. . .

- The two fundamental macroeconomic polices are:
  - Fiscal policy (Government)
  - Monetary Policy (Central bank)

. . .

- Should those policy-making institutions conduct their policies according to:
  - **Discretion**: no rules previously announced; decide as you consider best, given the circumstances
  - **Commitment to rules**: announce rules and show commitment to such rules no matter the circumstances that my come.

. . .

- Rules are good but sometimes they may put policymakers in a straitjacket.

4. Readings

Readings

Read ***Chapter 1*** of the adopted textbook:

Frederic S. Mishkin (2015). *Macroeconomics: Policy & Practice*, 2nd Edition, Person.

Bibliography