

# An Introduction to Modern Macroeconomics

— Week 1 —

Vivaldo Mendes

Dep. of Economics — Instituto Universitário de Lisboa

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# Summary

- ① Useful information about the course
- ② The current state of macro: a brief review
- ③ Major current controversies

# I – Useful information

# Useful information

- **Lecturer:**
  - ▶ Vivaldo Mendes (vivaldo.mendes@iscte.pt)
- **Office:** Room 519 (Building II)
- **Phone numbers:** internal (795191), external (217903959)
- **Classes:** Tuesdays (Room 1E8) and Thursdays (Room C601), 9.300h–11.00h
- **Office hours:** Tuesdays and Thursdays 12 to 13.00h.
- **Course homepage:** there will be one operational soon, with news and materials online
  - ▶ address: <http://cmc.de.iscte.pt/>

# Grading

- **Grading:** this process includes two alternatives:
- Option A
  - ▶ Midterm test (40%): There will be one midterm test on a date to arrange
  - ▶ Final test (40%): The final test will be in June 2012
  - ▶ Team assignment (20%): on a take-home computing exercise (Matlab)
- Option B
  - ▶ Final test (100%): The final test will be in late May/early June 2015
- **Active participation:** in classes is welcome, it's very useful for learning and grading

# Teaching approach

- The teaching material requires **12 weeks** × **3 hours a week**
- **Some topics:**
  - ▶ will be covered in just one week
  - ▶ Some topics: require two or more weeks
- **A step ladder approach** to teaching:
  - ▶ If you miss one step, it's more difficult to put your feet on the next ...
- **Computers:** they will be used as much as possible (**Matlab**)

## Teaching approach (cont.)

- **Good knowledge of mathematics:** it helps, however it is not enough
- **Lack of such knowledge:** do not worry, you will not be left behind ...
  - ▶ ... if you pay careful attention when the crucial maths concepts are introduced in classes
- The course is intended to be **"self-contained"**
- Mathematics that matters are **basic knowledge of:**
  - ▶ Derivatives
  - ▶ Difference equations
  - ▶ Optimization (Lagrangian)
  - ▶ Matrices

# The textbook

- **No textbook:** there is no adopted textbook
- **Publicly available lecture notes:** will be provided (topic by topic)
- **Main reasons:**
  - ▶ Students save time
  - ▶ Lecture notes are "tailored" to each topic
  - ▶ No available textbook that covers the objectives of this course
- Some major macro textbooks available:
  - ▶ Michael Wickens (2011). *Macroeconomic Theory: A Dynamic General Equilibrium Approach*, Princeton University Press (**Master/PhD level**)
  - ▶ Jean-Pascal Bénassy (2011). *Macroeconomic Theory*, Oxford University Press, Oxford. (**Master/PhD level**)
- Stephen Williamson (2013), *Macroeconomics*, 5th Edition, Prentice Hall — (**good for an undergraduate level, but we want to move up a little bit**)



# The 3 objectives of this course

**Objective 1.** Provide a general overview of the current state of macroeconomics and current major controversies

- ① Are business cycles symmetric or asymmetric?
- ② Should the ECB adopt Quantitative Easing?
- ③ Should governments use fiscal policy in a discretionary way?
- ④ Should Central Banks set negative nominal interest rates (as the Swiss central bank has just done)?
- ⑤ The sustainability of social security systems

# The 3 objectives of this course (cont.)

**Objective 2.** Fill the gap between:

- ① undergraduate macro style: a lot of intuition, little mathematical rigor
- ② postgraduate macro style: a lot of mathematical tools to provide rigorous answers to problems in economics

**Objective 3.** Introduce students to the language of computing (Matlab)

# A quick guided tour

- ➊ Introduction: the current state of macro (1 class)
- ➋ Major stylized facts about business cycles (3 classes)
- ➌ Introduction to dynamic processes: fixed points and stability (1 classes)
- ➍ Introduction to Matlab (3 classes)
- ➎ A two period economy: intertemporal decision making (3 classes)
- ➏ Heterogeneity and inequality, plus financial constraints (2 classes)
- ➐ Fiscal policy and Ricardian equivalence (3 classes)
- ➑ The equity premium puzzle (2 classes)
- ➒ Overlapping generation models and the sustainability of social security (2 classes)
- ➓ Current monetary controversies (3 classes)

## II - The current state of macro

# The terrible importance of macroeconomics

*“The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. **Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.**”*

John Maynard Keynes

# The First (Old) Neoclassical Synthesis

- **Young subject:** macroeconomics was "born" in the mid 1940's
  - ▶ **1946:** the first time the term "macroeconomics" were used in one title (vide Fig 1)
- **Keynesian ideas** dominated macroeconomics until early 1970's
- **The first Neoclassical Synthesis:** Keynesian/Classical dichotomy
  - ▶ The economy "**is**" **Keynesian** in the short term: there is a **permanent trade-off** between inflation and unemployment that can be exploited by policy makers
  - ▶ The economy "**is**" **Classical** in the long term: no such permanent trade-off exists
- **In the late 1960's:** serious problems with the Synthesis became evident: empirically and conceptually

# The first time "macroeconomics" used in a title

Cowles Foundation Paper 14

Reprinted from

ECONOMETRICA, Journal of the Econometric Society, Vol. 14, No. 2, April, 1946  
The University of Chicago, Chicago 37, Illinois, U.S.A.

## MACROECONOMICS AND THE THEORY OF RATIONAL BEHAVIOR<sup>1</sup>

BY LAWRENCE R. KLEIN

### I. THE PROBLEM

MANY of the newly constructed mathematical models of economic systems, especially the business-cycle theories, are very loosely related to the behavior of individual households or firms which must form the basis of all theories of economic behavior. In these mathematical models, the demand equations for factors of production in the economy as a whole are derived from the assumption that entrepreneurs collectively attempt to maximize some aggregate profit; whereas the usually accepted assumption is that the individual firm attempts to maximize its own profit. For example Evans,<sup>2</sup> Keynes,<sup>3</sup> Hicks,<sup>4</sup> and Pigou<sup>5</sup> all have in their systems marginal-productivity (i.e., profit-maximizing) equations for the total economy or for some very large subsections such as the consumer-goods or producer-goods industries. These marginal-productivity equations are written, without justification, for the economy as a whole, in exactly the same form as the marginal-productivity equations for a single firm producing a single commodity.

# Conceptual problems with the Old Synthesis

- **No microeconomic foundations:** most functions in the model were totally ad-hoc
- **Backward looking expectations:** private agents produce systematic mistakes in their forecasting exercises
- **Irrationality:** policy makers were fully-rational agents and knew how the economy works; private agents were "irrational" with little knowledge of how the economy works
- **Vulnerable to the Lucas critique:** if policy makers intervene in the economy, private agents react by changing their choices, so the structure of the economy changes and the public intervention has perverse effects



# Empirical problems with the Old Synthesis

- ❶ **Real wages:** are countercyclical in the model, but procyclical in the economy
- ❷ **Stagflation:**
  - ❶ the early 1970's put in evidence a very unpleasant reality to which the model could provide no remedy
  - ❷ higher and higher unemployment and inflation rates (stagflation)
- ❸ **Public debt:** increased permanently in almost all OECD countries, with little evidence of a decline in unemployment
- ❹ **Monetary aggregates:** Central Banks lost the control of these aggregates
- ❺ **Basic stylized facts from the business cycles:** the model could hardly reproduce these facts (variances, covariances, etc..)

# 30 years of revolutions and counter-revolutions

- **The Old Synthesis:** stand for the 1950's and the golden 1960's
- **Sargent and Lucas:** launched the **New-Classical model** (early 1970's)
  - ▶ Macro with microeconomic foundations
- **Real Business Cycles (RBC):** problems with New-Classical model led to the RBC model in the early 1980's
  - ▶ Finn Kydland and Edward Prescott (1982), Time to Build and Aggregate Fluctuations, *Econometrica*, 50, 1345–1370)
- **New Keynesian Model:** problems with the RBC led to the development of the **NKM** (or the New Synthesis) in the mid 1990's:
  - ▶ Yun, T. (1996). Nominal Price Rigidity, Money Supply Endogeneity, and Business Cycles, *Journal of Monetary Economics*, 37 (April), 345–70
- **Now we have a financial crisis:** problems for the New Synthesis
- **So far:** no clear theoretical answer to the crisis

# III - Major current controversies

# In good times...

- 1 Central Banks used to have a very important target:

*inflation rate : 2%*

- 2 Central Banks used to behave like this:

*recession comes in :  $\downarrow i$*

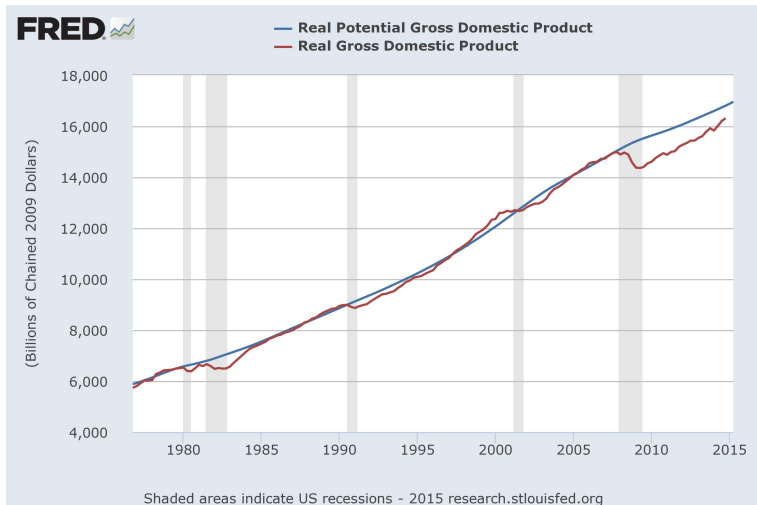
*boom comes in :  $\uparrow i$*

- 3 Governments were advised to be prudent on fiscal policy:

- 1 be careful with your public budget
- 2 get a structural public budget deficit down and close to zero

## ... but in our current times

We have witnessed the largest and deepest recession over the last 100 years



... but in our current times

We have deflation ... not inflation

## Deflation in the Eurozone

Percentage



GUARDIAN GRAPHIC

SOURCE: EUROSTAT

... but in our current times

We have deflation ... not inflation

INTERNATIONAL SWITZERLAND

World central banks  
on deflation alert as  
Swiss cut rate to  
-0.75%

by Geoffrey Smith @Geoffreytsmith

JANUARY 15, 2015, 6:43 AM EST

# ... but in our current times

We have deflation ... not inflation ... Sweden February 2015

## Monetary policy

According to the Sveriges Riksbank Act, the objective of monetary policy is to "maintain price stability". The Riksbank has interpreted this objective to mean a low, stable rate of inflation. More precisely, the Riksbank's objective is to keep inflation around 2 per cent per year.

> [The inflation target](#)

**2%**  
Inflation target

What is mor



What is more  
does it affect i

> [Repo rate de](#)

### The repo rate

**0%**

Date: 03/02/2015

Central Bank rate  
Applies from 17 December 2014.

> [Read all about the repo rate decision](#)

### Inflation at present

**-0.3%**

Date: 03/02/2015

The consumer price index - the CPI is measured and published every month by Statistics Sweden (SCB).

**Deflation is here**

> [Current inflation rate](#)

Documents  
Monetary P

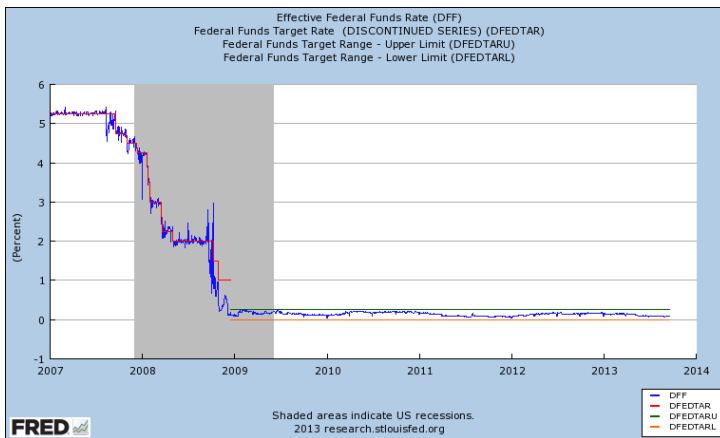


The Riksbank  
Report (former  
published thre



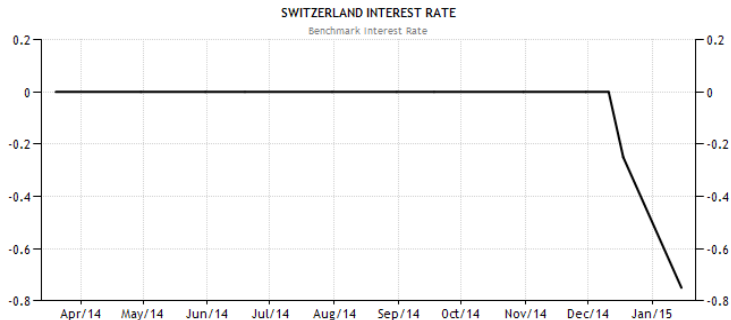
# ... but in our current times

## We have zero interest rates in the US



... but in our current times

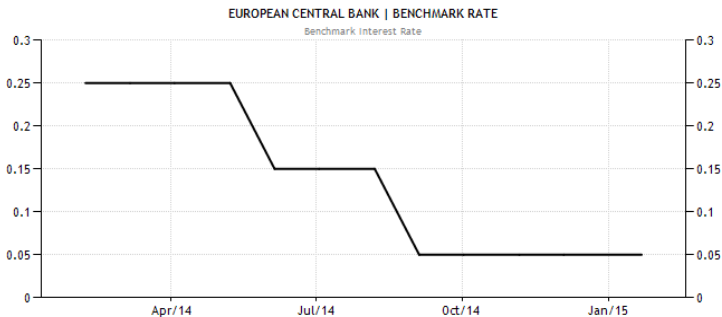
## We have negative interest rates in Switzerland



SOURCE: WWW.TRADINGECONOMICS.COM | SWISS NATIONAL BANK

... but in our current times

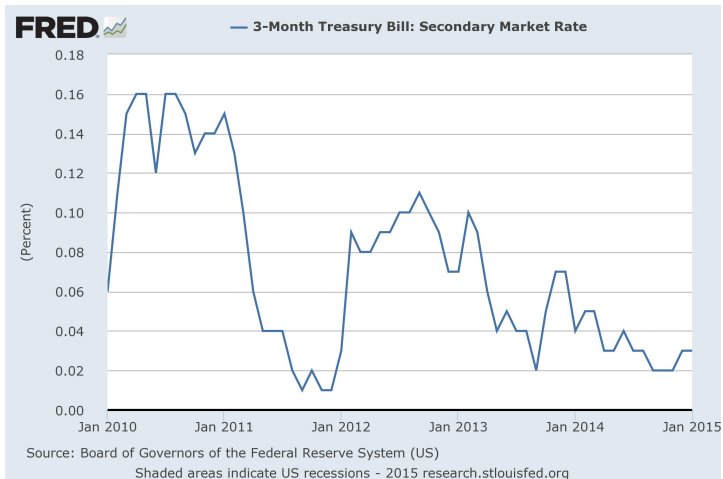
.. and 0% already in the Euro Zone



SOURCE: WWW.TRADINGECONOMICS.COM | EUROPEAN CENTRAL BANK

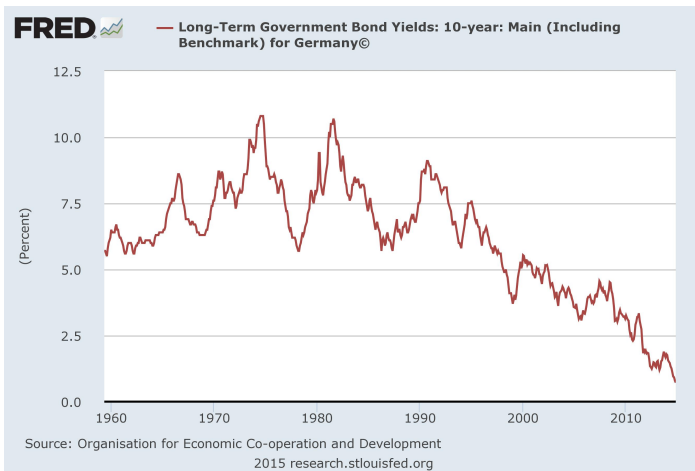
## ... but in our current times

People are lending money to the Government ... and are paying the Government for holding peoples' money



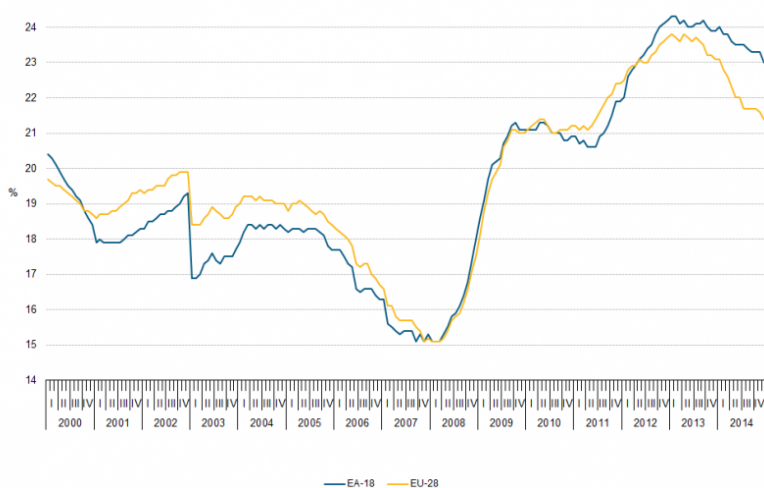
... but in our current times

.. and also in Germany



... but in our current times

We have a dramatic problem with Youth Unemployment rates



# What advice economists are giving to Governments?

- ❶ Is there a place for discretionary fiscal policy in our current times?
- ❷ Should governments increase public spending to offset the large decline in private spending in order to stimulate the economy?
  - ❶ They all did it in 2008
  - ❷ Japan has done it after 2008 as well
  - ❸ US has done it after 2008 as well
  - ❹ Many stopped doing it after 2010.
  - ❺ Why? Many adhered to the concept of "Expansionary Austerity".
- ❸ Is "Austerity Expansionary"? The Troika recipe was based on this proposition.

# They all did it when the crisis popped in





## Japanese fiscal stimulus package in 2013

# Japan's Abe Unveils 10.3 Trillion Yen Fiscal Stimulus: Economy



# The Obama fiscal stimulus package in 2009



Obama rallied the support needed to pass the stimulus package because the Dow had dropped to 6,594.44 in March, panicking lawmakers. (Credit: Joe Raedle/Getty Images)

The \$787 billion economic stimulus package was approved by Congress in February, 2009. The package was designed to quickly jump-start economic growth, and save between 900,000 to 2.3 million jobs. Its three categories of spending were:

- \$288 billion in tax cuts.
- \$224 billion in [extended unemployment benefits](#), education and health care.
- \$275 billion for [job creation](#) using federal contracts, grants and loans.

# The turning point for "Expansionary Austerity"

*[The root of the crisis] is quite simple. One should simply have asked a Swabian housewife, here in Stuttgart, in Baden-Württemberg. She would have provided us with a short, simple, and entirely correct piece of life-wisdom: **that we cannot live beyond our means.** This is the core of the crisis. . . . Then why is the world in this difficult place? Well, we have too often put our trust in experts that were not really **experts.** Perhaps we did not know then that they **were not experts,** but we know it today. When we come together now to think about how one should answer these new global questions, we should put less faith in self-proclaimed experts, and instead follow one principle: **the principle of common sense!** [Merkel, 2008, keynote address in December 2008 to the CDU party convention]*

# What advice economists are giving to Central Banks?

- ❶ What should Central Banks do in order to stimulate the economy and enforce their mandates regarding inflation?
- ❷ Should CB keep on being independent from Governments? They are accountable to whom?
- ❸ Should CB fight housing bubbles? or stock market bubbles?
- ❹ Should CB play politics?