

# Introduction to Macroeconomics

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# I – Useful information

# Useful information

- **Lecturer:**
  - Vivaldo Mendes (vivaldo.mendes@iscte.pt)
- **Office:** Room 519 (Building II)
  - Tuesdays: 14.30–15.30h; Wednesdays: 11.00–12.00h.
- **Phone numbers:** internal (220372), external (217650518)
- **Course homepage:** with news and materials online already working
  - address: *<http://cm.de.iscte.pt/>*

# Grading

- **Grading:** this process includes two alternatives:
- Option A
  - Final test (60%): The final test will be on December 2016
  - A group essay (40%): on a subject discussed in the course and using Matlab
- Option B
  - Final test (100%): The final test will be on December 2016 or January 2017

# Teaching approach

- **Computers:** they will be used as much as possible (**Matlab**)
- **Good knowledge of mathematics:** it helps, however it is not enough
- 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
  - Major available textbooks require a much lengthier course (not just 30 hours course)

## Major graduate textbooks

Some major postgraduate macro textbooks available:

- David Romer (2012). *Advanced Macroeconomics*, 4th edition, McGraw-Hill, New York
- Michael Wickens (2012). *Macroeconomic Theory: A Dynamic General Equilibrium Approach*, 2nd Edition, Princeton University Press
- Jean-Pascal Bénassy (2011). *Macroeconomic Theory*, Oxford University Press, Oxford.
- Lars Ljungqvist and Tom Sargent (2012). *Recursive Macroeconomic Theory*, 3rd edition, MIT Press
- Stephen Williamson (2011), *Macroeconomics*, 4th Edition, Prentice Hall — *a good choice for those with little economics background*

# Prerequisites

- 1 Basic knowledge of the fundamental concepts in macroeconomics:
  - 1 The IS/LM model
  - 2 The Phillips curve
  - 3 Central banks and monetary policy
- 2 Introduction to Matlab (covered in the prep week). See courses' website for slides and bibliographic references
- 3 A two period economy (no classes). See site for slides and bibliographic references in the course's website



## A quick guided tour

- 1 The current state of macro: a brief characterization (1 class)
- 2 Major stylized facts about business cycles (2 class)
- 3 Solution to models with rational expectations (4 classes)
- 4 The Real Business Cycle model (3 classes)
- 5 Credibility and time consistency in economic policy (2 classes)
- 6 The optimal choice of policy instruments (the Poole model) (2 classes)
- 7 The New Keynesian Model: optimal monetary policy (4 classes)
- 8 Central banks, commitment, credibility and the financial crisis (2 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 next Fig.)
- **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

## 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
- **Nonsense:** admitting that the Central Bank could manage monetary policy to **permanently** exploit the trade-off between inflation and unemployment
- **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

- 1 **Real wages:** are countercyclical in the model, but procyclical in the economy
- 2 **Stagflation:**
  - 1 the early 1070's put in evidence a very unpleasant reality to which the model could provide no remedy
  - 2 higher and higher unemployment and inflation rates (stagflation)
- 3 **Monetary aggregates:** Central Banks lost the control of these aggregates
- 4 **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



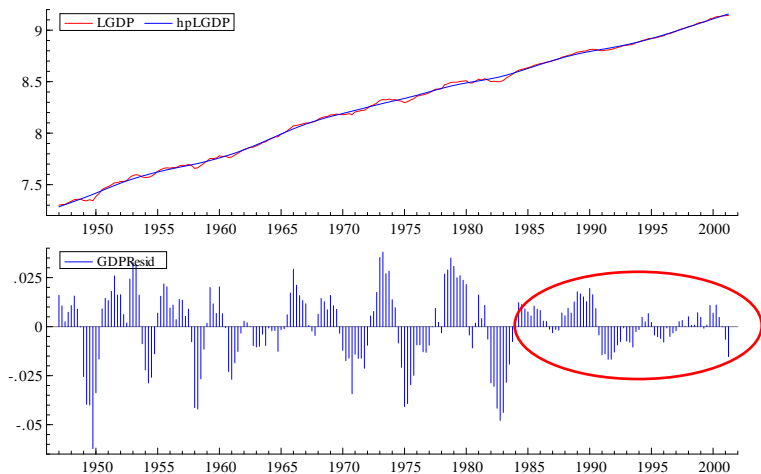
# Main ingredients of the New Synthesis

- **Built upon** the Old Keynesian framework
  - ... with the usual nominal/real rigidities in price setting
  - ... without the problems that pushed the model to serious problems in the early 70s
- **The same functions:** IS, LM, Agregate Supply
- **Some new arguments:** "forward looking or rational expectations" instead of "adaptive expectations", "Calvo pricing", maximization of utility, and so on ...
- **General equilibrium framework:** built upon sound microeconomic principles
- **Quantitative simulations:** relies a lot on simulations like the RBC literature
- **Contrary to RBC:** has a *key role to monetary policy* and a a relevant role for fiscal policy

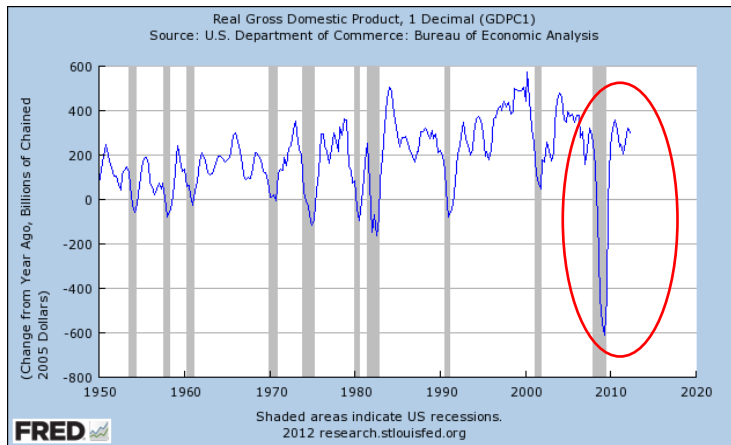
# Major predictions of the New Synthesis

- **Four basic predictions:** (very important)
  - the instrument of monetary policy ought to be the short term interest rate,
  - policy should be focused on the control of inflation
  - inflation can be reduced by aggressively increasing short term interest rates
  - the central bank should conduct monetary policy adopting a strategy of commitment in a forward-looking environment, instead of discretion
- The Old model's predictions up-side-down!!!
- **Problems of the new synthesis:** the current financial crisis

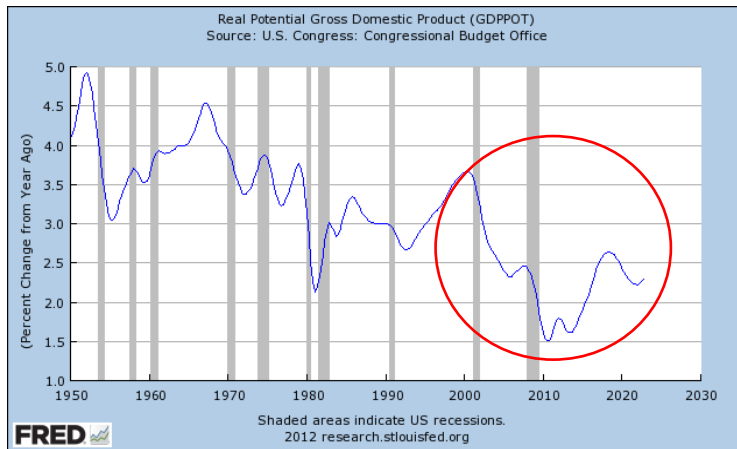
# A picture of the success of the receipt (I)



# Doubts about the success of the receipt (I)



# Doubts about the success of the receipt (II)



## Some influential opinions



Olivier Blanchard (October 2016). Do DSGE Models Have a Future? PIIE Institute, Mass.  
(<https://piie.com/system/files/documents/pb16-11.pdf>)




Ricardo J. Caballero (2010). Macroeconomics after the Crisis: Time to Deal with the Pretense-of-Knowledge Syndrome, MIT, Massachusetts.



Willem Buiter (2009). The unfortunate uselessness of most state of the art academic monetary economics, Maverecon blog in the Financial Times, <http://blogs.ft.com/maverecon/2009/03/theunfortunate-uselessness-of-most-state-of-the-art-academic-monetaryeconomics/#axzz2f9d7wM1i>

## Some influential opinions

 Paul Krugman, Macroeconomists at War, New York Times, August 29, 2013

[http://krugman.blogs.nytimes.com/2013/08/29/macroeconomists-atwar/?\\_r=0](http://krugman.blogs.nytimes.com/2013/08/29/macroeconomists-atwar/?_r=0)

 Simon Wren-Lewis, Macro workers and macro wars, 28 August 2013

<http://mainlymacro.blogspot.pt/2013/08/macro-workers-and-macrowars.html>

 Stephen Williamson, Rottenness, December 17, 2012,

<http://newmonetarism.blogspot.co.uk/2012/12/rottenness.html>