Lecture 10

Short-run GDP Fluctuations

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Economics & Society

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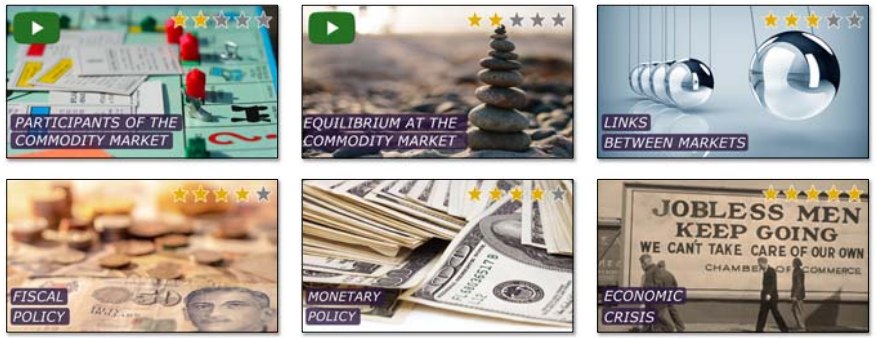
Previously in E&S…

- Definition of money
  - functions and properties of money
- Intrinsic value vs. fiat money
- The banking system
  - CB – commercial banks
- The money supply
- The money demand
  - for transactions – precaution – speculation
- Equilibrium interest rate and monetary policy
- Inflation

Short-run GDP Fluctuations

Estimated duration: 100min



Lecture 10

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Investment & the real interest rate

- Assume that there exist 14 ***investment projects*** for $100 each, expected to yield the following ***per year returns***:

  9%, 9%, 7%, 5%, 5%, 5%, 4%, 4%, 3%, 2%, 2%, 1%, 1%, 1%

  - If you had $1,400 and the ***interest rate*** was 4.5% how much would you invest?

    9%, 9%, 7%, 5%, 5%, 5%, 4%, 4%, 3%, 2%, 2%, 1%, 1%, 1% 6 · $100 = $600

  - If you had $1,400 and the ***interest rate*** was 3.5%?

    9%, 9%, 7%, 5%, 5%, 5%, 4%, 4%, 3%, 2%, 2%, 1%, 1%, 1% 8 · $100 = $800

  - If the ***interest rate*** was 2.5%?

    9%, 9%, 7%, 5%, 5%, 5%, 4%, 4%, 3%, 2%, 2%, 1%, 1%, 1% 9 · $100 = $900

- Investment is ***inversely related*** to the real interest rate **[L2]**

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Links between markets

- ***Output*** is transacted using ***money***:
  - The equilibrium output is determined in the ***commodity market***
  - The equilibrium real interest rate is determined in the ***money market***.
- The two markets are ***connected*** with each-other through ***2 links***:
- Link 1: From the ***commodity*** market to the ***money*** market

  Increase in Y^* → Increase in M_D
- Link 2: From the ***money*** market to the ***commodity*** market

  Increase in r^* → decrease in I

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Fiscal policy

- The government can ***boost Y*** by either expanding G or contracting t

  these practices are known as ***Expansionary Fiscal Policy***
- Both alternatives may cause ***budget deficits***

  that is, $G > T$
- Deficits are ***funded*** by issuing ***government securities***

  effectively ***borrowing*** from households and firms at an ***interest***
- Past years' deficits ***pile up*** forming the ***government debt***
- If the ***"debt / GDP" ratio*** becomes too high, lenders will ***stop buying*** securities

  this may lead to a ***fiscal crisis***
- Decrease in G or increase in t are referred to as ***Contractionary Fiscal Policy***

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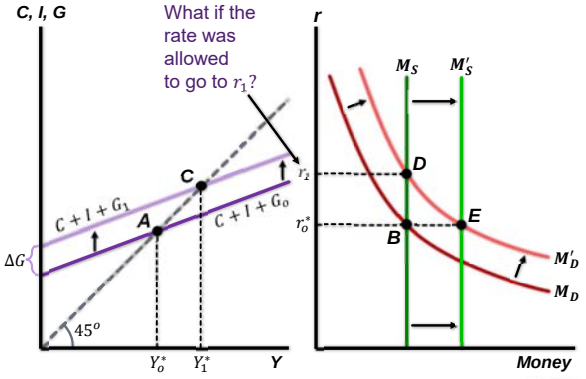
Link 1 with fiscal policy

- Commodity market ***equilibrates*** at Y_o^* and money market at r_o^*
- An ***increase in G*** shifts the equilibrium in the commodity market to Y_1^*
- M_D ***shifts*** to M_D'
- r_o^* will tend to ***rise*** to r_1
- ***Unless*** M_S shifts to M_S' to ***keep*** the rate at r_o^*



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Monetary policy

- A change in r will affect Y though I
  via link 2
- Expansionary Monetary Policy: CB decreases r^*, to increase I, to increase Y^*
  to stimulate the economic activity when a ***recession*** is feared
- Contractionary Monetary Policy: CB increases r^*, to decrease I, to decrease Y^*
  to ***ease inflation*** by decreasing the money supply

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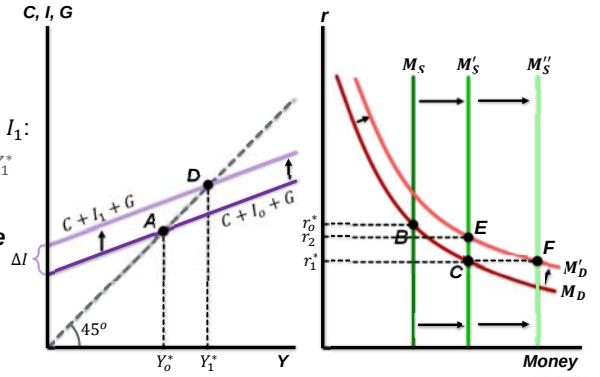
Link 2 with monetary policy

- Markets initially ***equilibrate*** at Y_o^* and r_o^*
- CB ***decreases*** rate to r_1^*
- Investment ***increases*** to I_1:
  - ***Output*** equilibrates at Y_1^*
  - M_D ***shifts*** to M_D'.
- ***Money supply*** must ***rise*** further to ***prevent*** the interest rate from increasing to r_2



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External video

Let's watch a 5 min lesson for the Great Depression.

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The 2007-09 Financial Crisis

- In the years before 2007 several new unregulated ***shadow banks*** had appeared
  - those institutions started offering some new ***"innovative" financial products***
- One of those was to ***package together*** high-risk mortgage loans:
  - When you loan $1,000 at 10% to ***one debtor*** with 2% risk of default, you face 98% probability to earn $100 and 2% probability of losing $1,000
  - When you loan $1 at 10% to ***1,000 debtors*** with 2% risk of default, it is almost certain that you will earn around $80.
- This ***works great*** but it has ***3 important limitations***:
  1. The law of averages applies ***only in normal times***
  2. The "feeling of ***false safety***" made banks to neglect proper due diligence
  3. The over-supply of loans led the housing market to a ***speculative bubble***

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History repeats itself

- In the first sight of ***recession, mortgage defaults*** snowballed
  - many banks had ***invested heavily*** in such MBS and could ***not survive the losses***
- Government and the Fed came to an ***ethical dilemma***:
  - have ***taxpayers cover*** the losses or let the economy ***sink***?
- The 2007-09 crisis was basically a ***repetition*** of the Great Depression:
  - In the Great Depression the bubble was the ***stock market***
  - In the 2007-09 Crisis the bubble was the ***housing market***.
- Both happened because of ***regulation gaps*** in the financial markets
- The 2007-09 Crisis, however, ***lasted way less*** because it was extinguished successfully with ***expansionary policy***

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The Greek Debt Crisis 2008 – today

- The Greek crisis was a ***national debt*** crisis
- During the 80s and 90s Greece was running on deficits
  - mainly ***financed with seignorage***
- In 2002 the country entered the ***Eurozone*** as a founding member:
  - Greece could ***no more*** fund its deficits by printing money
  - But it could finance its spending with ***cheap loans*** in its new currency.
- While the country was living lavishly on credit, ***debt kept piling up***
- By 2008 Greece had an official ***debt / GDP ratio at 115%***
  - in ***reality*** it was 127%
- At the same time, global financial crisis, made investors overly ***averse to risk***

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The weak link

- Within months ***interest rates*** for Greek bonds exploded to 30%!
  - all outstanding Greek securities were ***rated as "trash"***
- Greece was in the ***middle of a deep recession*** with ***nothing*** to fight it:
  - Monetary policy was in the hands of the ECB
  - The government had no money to conduct fiscal policy.
- The IMF, the ECB and the European Commission ***bailed out*** urgent loans
  - under 2 ***conditions***: severe austerity and drastic reforms
- Within ***10 years***: GDP fell by 30%, unemployment exceeded 25%, infrastructure deteriorated, 6 governments were changed
  - the nation's ***morale*** collapsed
- Today, the ***only hope*** is tourism, exports and foreign investments

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Thank you!

(you are welcomed to stay for *consultation* or *discussion*)

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WARNING!

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