ECO 407
Competing Views in Macroeconomic Theory and Policy

Lecture 7
The Theory of Money

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Types of Economies

- An ***economy*** may be defined as a method of making provisions
  - How commodities are ***produced*** and ***distributed*** in society
  - It involves ***social relations***
- According to Marx, an economy is determined in the ***sphere of production*** (i.e., ***not*** in the ***sphere of distribution***)
- There are therefore five main types of economies:
  - Traditional economy
  - Slave economy
  - Feudal economy
  - Capitalist economy
  - Communist economy

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The Capitalist Economy

- ***Workers*** are separated (***"alienated"***) from the ***means of production***
  - Workers can only sell their ***labour power***
  - Owners of means of production (***capitalists***) appropriate the ***surplus***

- Capitalists are motivated by the possibility of making ***profits***
  - Profit is expressed in a sum of money
  - Therefore, a ***capitalist economy*** cannot work without ***money***

- ***Marx*** describes the ***monetary system*** as: **M → C → C' → M'**
  - The difference between **M'** and **M** is the profit
  - The process thus implies ***money creation***

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The Capitalist Economy (cont'd)

- ***Keynes*** also states that the purpose of production in a ***monetary economy*** is to accumulate ***money***
  - Only those who possess money have ***effective demand***
  - If effective demand is low, then unemployment results

- All ***commodities***, including ***labour power***, can only be bought with ***money***
  - The production process starts with money and ends with money (**M → C → C' → M'**)
  - Therefore, we cannot start with the ***barter paradigm*** (i.e., money is not a ***veil*** hiding the true nature of production)

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The Orthodox Theory of Money

- ***Theory of Money:*** An explanation for why money is useful or necessary to facilitate ***trade*** (D. Andolfatto)
  - It helps us understand the ***demand for money***
  - Since the demand creates its supply, it helps us understand the business of ***money creation***

- ***Definition:*** Money is an object that circulates widely as a ***medium of exchange*** (D. Andolfatto)
  - Over time, different objects serve as money
  - It took the form of paper money in the 19th century
  - More recently, government took control of the ***paper money*** supply while banks managed the ***electronic money*** supply

Orthodoxy: The Demand for Money

- Money is necessary because of the difficulty of ***barter exchange***
  - Lack of double coincidence of wants
  - Gains from trade are usually multilateral

- But economy could function as a ***"communal gift-giving"*** economy
  - But individuals tend to respond to private incentives
  - Although "tit-for-tat" strategy may be possible
  - But for this to work there must be public availability of ***information***

- This situation can be saved with a monetary exchange
  - The economic function of money is then to serve as a ***record-keeping device***

Orthodoxy: The Supply of Money

- According to this view, the ***supply of money*** refers to how society might best arrange this record-keeping device
  - The role of money is to ***encode*** a certain ***type of information***
  - It can be encoded in a ***tangible*** or ***intangible*** manner
- Money is a ***debt instrument*** that could be ***backed*** or ***unbacked***
- ***Governments*** have legislated themselves ***monopoly control*** over the business of issuing ***paper notes***
  - These notes have value as long as people find them useful for making payments
  - Private agencies (***banks***) are also allowed to create ***money in electronic form***

Orthodoxy: The Banking Sector

- Banks are ***financial intermediaries***, but not all financial intermediaries are banks
  - Financial intermediaries are ***asset-transformers***
- ***Liabilities*** created by most intermediaries are typically ***illiquid***
  - Bank liabilities are the exception
  - Nowadays most of the ***money supply*** is created by ***private banks***
- Most monetary systems are ***"dual money regimes"***
  - ***Outside*** (currency) and ***inside*** (deposits) money
- There is a ***security mismatch***
  - Bank assets are ***illiquid*** while their liabilities are ***liquid***
  - Risk of crisis (***bank "run"***)

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Is Money a Commodity?

- According to the view that money originated to facilitate trade, money is a ***commodity***
  - One particular commodity was accepted as ***"medium of exchange"***

- According to the alternative view, money is either a ***"credit"*** or a ***"debt"***
  - When a bank makes a loan, both its assets column (***loan***) and its liability column (***public's deposit***) increase by the same amount
  - But the ***"loan"*** creates the ***"public's deposit"*** and not the other way around

- The ***money*** is the liability (the ***public's deposits***)
  - Therefore, a bank's ***loan*** creates ***money***

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Money in Neoclassical Theory

- ***Money*** is added as an after thought to a model based on a ***barter paradigm***
  - Money is ***neutral*** in the long run (it only determines nominal prices)
  - Money is ***exogenously*** determined either by the supply of a scarce commodity (***gold***) or by the government (***fiat money***)

- The central bank ***controls*** the money supply through its control of the ***monetary base***
  - It assumes a ***constant*** deposit multiplier

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Exogenous Money Approach and the IS-LM Model

- The ***exogenous money*** approach makes two main assumptions:
  - The central bank can directly and always control the ***monetary base***
  - The ***money multiplier*** is given (exogenous)
- These are basic underlying conditions for the ***IS-LM model***
  - The central bank controls the ***money supply*** to affect **AD**
- But is the money multiplier ***constant***?
  - The central bank may affect the monetary base but not the money supply (i.e., the level of loans)
- Can the central bank reduce the ***monetary base*** when there are ***no excess reserves***?

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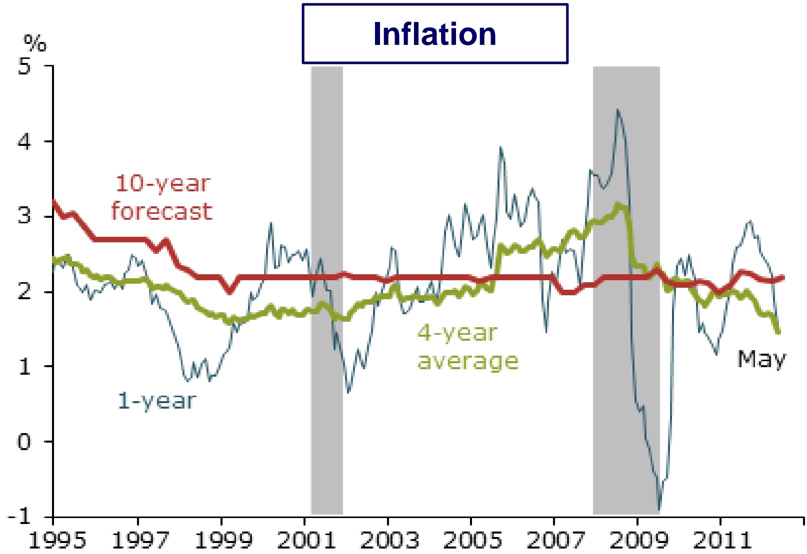
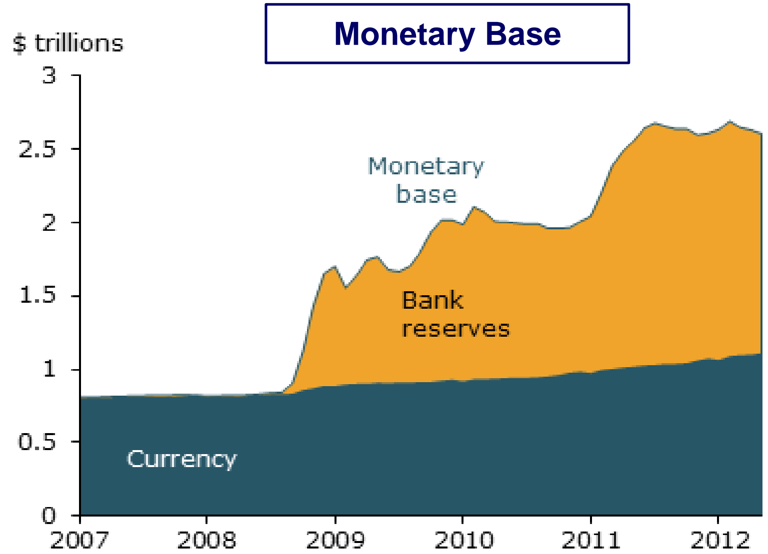
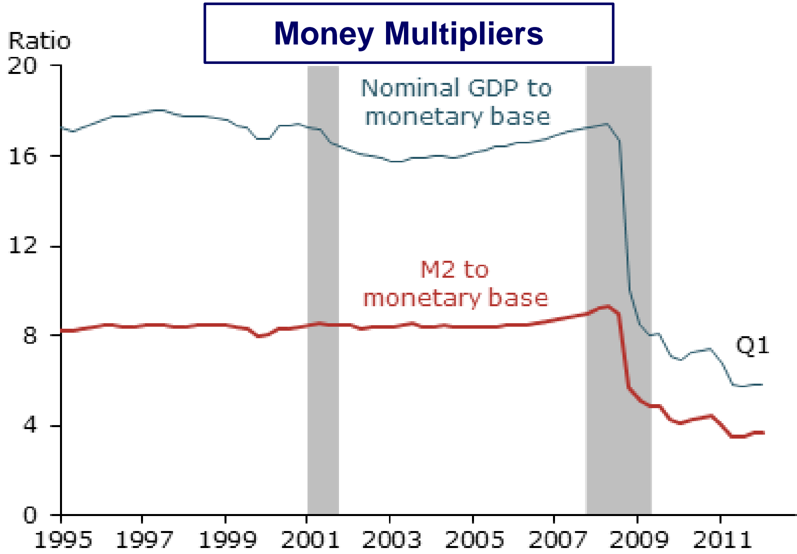
U.S.: Monetary Base and Money Supply







Period 2008-2012

- Average rate of inflation below 2%
- Monetary base tripled
- Money multipliers plummeted

Source: John C. Williams, "Monetary Policy, Money, and Inflation," FRBSF Economic Letter 2012-21, 9 July 2012.

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Post-Keynesian Endogenous Money Approach

- Important role of money in the ***monetary theory of production*** (that Keynes adopted from Marx)
- ***Circuit theory*** focused on the role of money in financing spending (effective demand)
- ***Chartalism:*** Money is a creature of law (***fiat money***)
  - Taxes generate a demand for money
  - Government deficit spending or bank loans create money
- ***Horizontalism:*** Central banks cannot control ***bank reserves*** in a discretionary manner
  - Reserves are supplied on demand
  - It turned the textbook ***deposit multiplier*** on its head

Endogenous Money and the IS-LM Model

- The ***"fetish"*** for liquidity causes unemployment (Keynes)
- In this circumstances, ***expansionary monetary policy*** cannot eliminate unemployment
  - Low interest rates don't induce investment in illiquid capital
  - Banks may hold ***excess reserves*** and the money supply will not increase
  - Bank credit depends on ***credit-worthiness*** of their customers, not on availability of ***excess reserves*** (Lavoie)
- Therefore, if liquidity preference is high, both the ***demand*** for and the ***supply*** of loans collapse
  - Thus the ***endogenous money*** approach rejects the traditional ***IS-LM*** model

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Post-Keynesian Horizontalist Model

- The banks' lending ***interest rate*** (**i**) is set as a ***mark-up*** over the ***bank rate*** (**i***)

$$i = (1 + m)\, i^*$$

- The ***supply of loans*** (**L^S**) is horizontal at the level of **i**
- The ***demand for loans*** (**L^D**) decreases with **i** and increases with **Y**
- The ***monetary base*** (**B**) equals the banks' ***reserves*** (**R**)
  - Therefore, there is no currency and **M = D** (only ***deposit*** money)
- Banks' ***reserves*** (**R**) are a fraction (**k**) of the ***money supply*** (**M**)

$$R = kM \quad \text{so} \quad M = R/k \quad \text{and} \quad mm = 1/k$$

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Post-Keynesian Horizontalist Model (cont'd)

- Banks' ***assets*** consist of ***loans*** (**L**) and ***reserves*** (**R**) while banks' ***liabilities*** consist only of ***deposits*** (where **D = M**)
- Thus the banking sector's ***balance sheet*** is:

$$\mathbf{L + R = M + E}$$

where **E** is banks' ***equity***

- Since **R = kM**, the ***supply of money*** is:

$$\mathbf{L + kM = M + E}$$

$$\mathbf{(1 - k)M = L - E}$$

$$\mathbf{M^S = -E/(1 - k) + L/(1 - k)}$$

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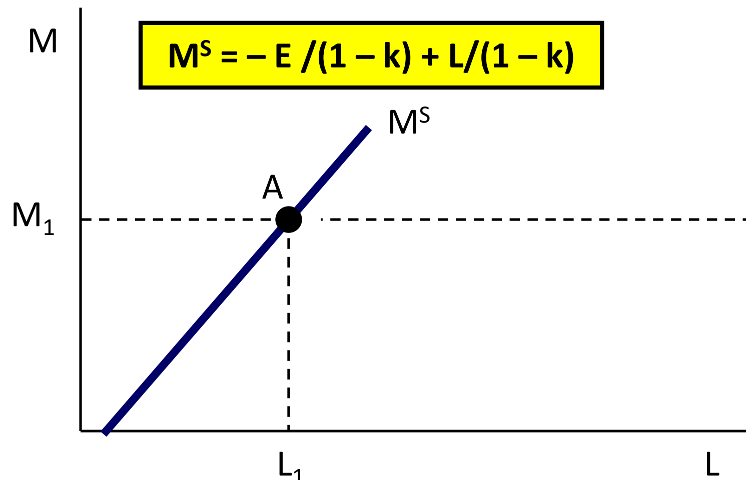
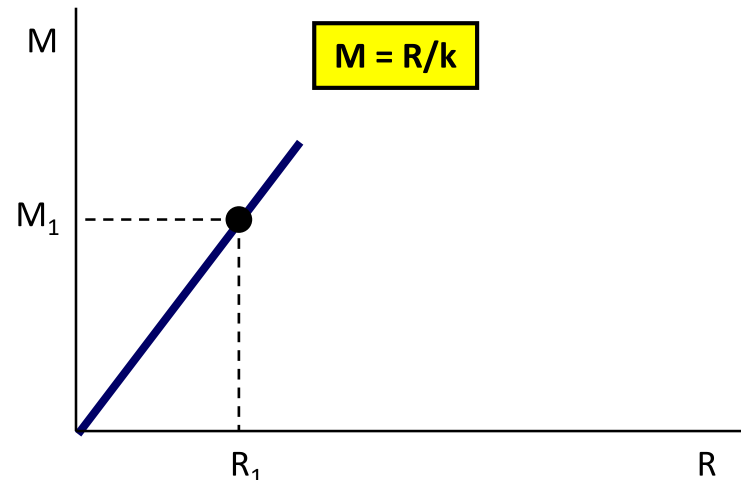
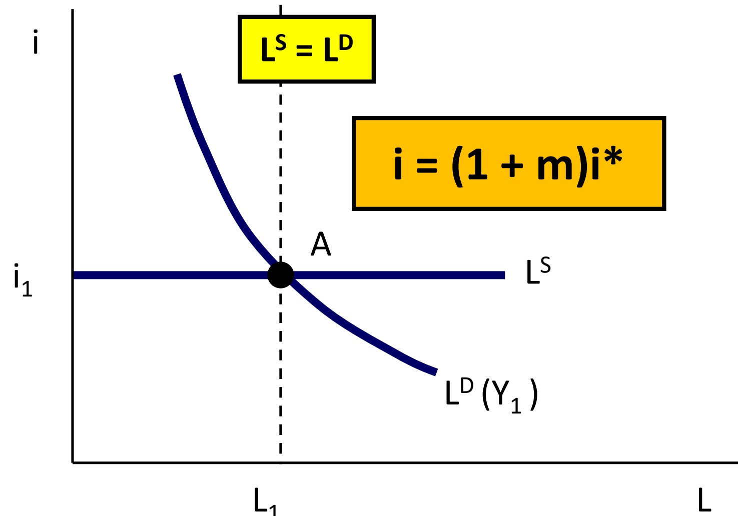
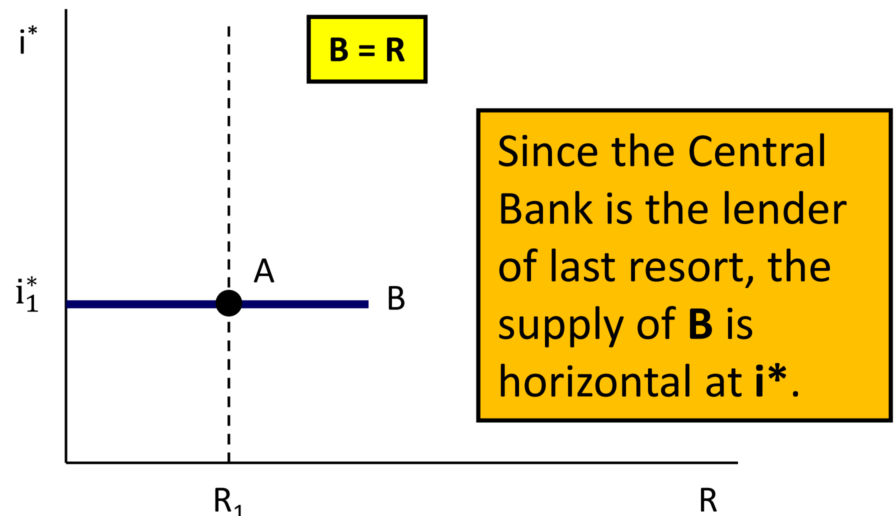
Endogenous Monetary Base in the Horizontalist Model









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