Lecture 4: Financial Markets

• Goal: Determine equilibrium interest rate
• Short run
• Main cyclical instrument (Central Bank)
• Monetary policy (as opposed to fiscal policy) -- both are (primarily) aggregate demand policies
Financial Assets

- Money, bonds, stocks, mutual funds, derivatives...
- Reduce to two:
  - *Money*: transaction (liquidity) role.
  - *Bond*: investment -- pays an interest rate: $i$
- Key question: How much of each?
  - Tradeoff: transaction services vs return.
Money Demand

Fix (nominal) wealth at: \( P_{\text{Wealth}} \)

\[
M^d + B^d = P_{\text{Wealth}}
\]

\( \Rightarrow \) determine only one of them

\[
M^d = P \cdot Y \cdot L(i)
\]
Money Demand Diagram

High U.S. nominal interest rates during late 70s - early 80s => sharp decline in M/PY
Equilibrium Interest rate

- **Simple model:**
  - Money supply is constant (i.e. it doesn’t depend on interest rate or P or Y)

- **Equilibrium:**
  - \( M = P \cdot Y \cdot L(i) \)

- Our interest is to determine the interest rate, so we fix P and Y.
Equilibrium
Monetary Policy
Open Market Operation

- Central Bank buys bonds in the open market
- As a result, price of bonds rises

\[ i = \frac{100 - P_B}{P_B} \]

\[ \Rightarrow \text{interest rate falls} \]
Equilibrium in M rather than Central Bank M

\[ M^s = \frac{H}{c + \theta(1-c)} \]

\[ M^s = M^d \implies \]

\[ \frac{H}{c + \theta(1-c)} = \frac{1}{P Y L(i)} \]

Examples: a) Y2k; b) Prudence; c) OMO with multiplier