Monetary Policy and The Theory of Liquidity Preference

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Outline: Unit V, Section SF2

I. Introduction
II. Liquidity Market
III. AD Curve Revisited
    A. Slope
    B. Shifts

I. Introduction

$$Y = AD = C + I + G + NX$$

AD curve

- Relationship between:
  - P = Price level
  - Y = Quantity of (real) output demanded, in the economy

- AD curve slope: If P↓=> Y↑

II. Liquidity Market

- Liquidity Market = (SR) Money Market
  - Keynes Theory of Liquidity Preference
  - (X,Y) axis labels: (M, i)
- Building Block Model
  - Useful in AD/AS model
- Focus on how i affects:
  - AE = C + I + G + NX

Money Supply (M^S)

- Assume the Fed controls M^S through FOMC
  - If the Fed wants to increase M^S
    - Buy or Sell T-bills?
- Practically:
  - Fed sets i, not M^S
  - Money supply can be difficult to control
    - E>>0 during 08 financial crisis
      - Firms do not want to expand their businesses (D of LF)
      - Banks do not want to make bad loans (S of LF)

Liquidity Market: Money Supply

Money Demand (M^D)

M^D = The amount of cash or liquidity you want to hold, at every nominal interest rate, i

- Holding liquidity:
  - Ben: Useful for purchasing G&S
  - Cost: i = Opportunity cost of cash
    - What could you have done with the cash in your pocket?

Money Demand (M^D)

- Factors that shift the M^D curve
  - P = Price level
    - If P ↑=> Households hold more cash to buy G&S
  - Y = Real GDP or real income
    - If Y ↑=> Households are richer, and hold more cash to buy G&S
  - **PxY** = Nominal GDP
    - See above

Liquidity Market: Money Demand

Money Market Equilibrium

- Liquidity market
  - Determines i and M in the economy
    - In LR, P adjusts to equilibrate M^D and M^S [FYI pp. 472 (466)]
    - In SR, P (and π) are fixed => i equilibrates M^D and M^S

- Assume π, or E[π] is fixed in SR
  - Fisher equation: $i = r + \pi$
  - Slight modification: $i = r + E[\pi]$
  - If $i \uparrow \Rightarrow r \uparrow$ and if $i \downarrow \Rightarrow r \downarrow$

Liquidity Market Equilibrium

Money Market Equilibrium

- Case 1: $i_1 > i^*$
  - Excess supply => Households begin placing excess funds into bonds or interest-bearing bank accounts => banks lower i
- Case 2: $i_2 < i^*$
  - Excess demand => Households take money out of bonds and interest-bearing bank accounts => banks raise i

III.A. AD Curve Revisited

- AD curve slope: If P↓=> Y↑

- Using Liquidity Market => Show AD curve slopes downward
  - If P ↓=> M^D ↓=> i ↓ =>

↑ ↑ ↑

  - AD = C + I + G + NX

AD Curve

Liquidity Market

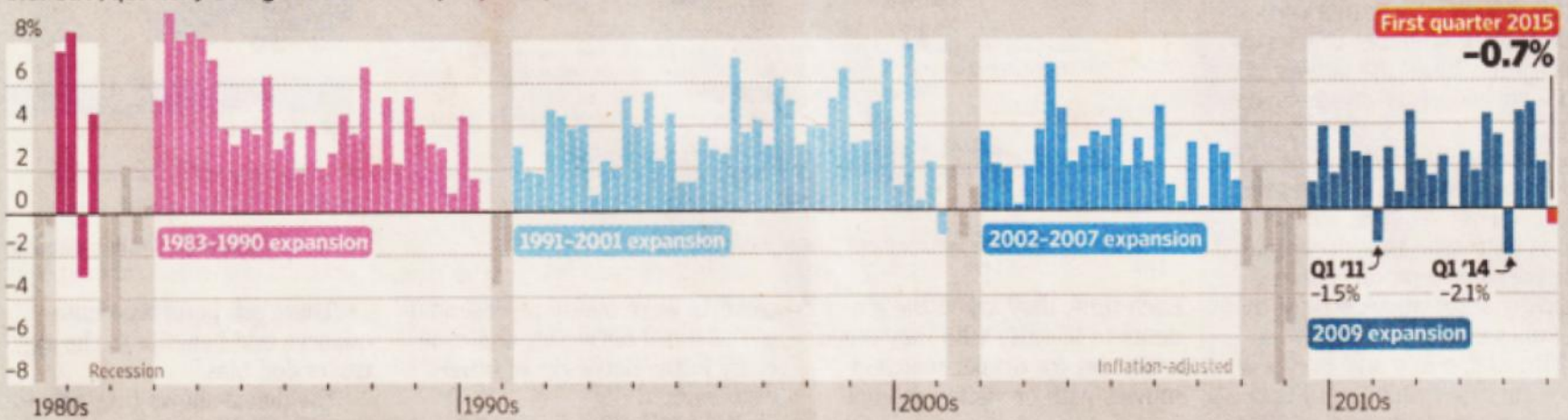
III.A. AD Curve Revisited: Slope

1. P & C:
   a) Wealth Effect: If P↓=> Value of Money (1/P)↑ => Real value of cash ↑ => C ↑
   b) Interest-Rate Effect on C: If P↓=> M^D↓=> i↓ => r↓ => Cost of borrowing ↓ => C ↑
2. P & I: Interest-Rate Effect
   – If P↓=>=> Households hold less cash to buy G&S
   => M^D↓=> i↓ => r↓ => Cost of borrowing ↓ => I ↑
3. P & NX: Exchange Rate Effect
   – If P↓=> Households hold less cash to buy G&S
   => M^D↓=> i↓ => r↓ => NCO ↑ => E↓ => NX ↑

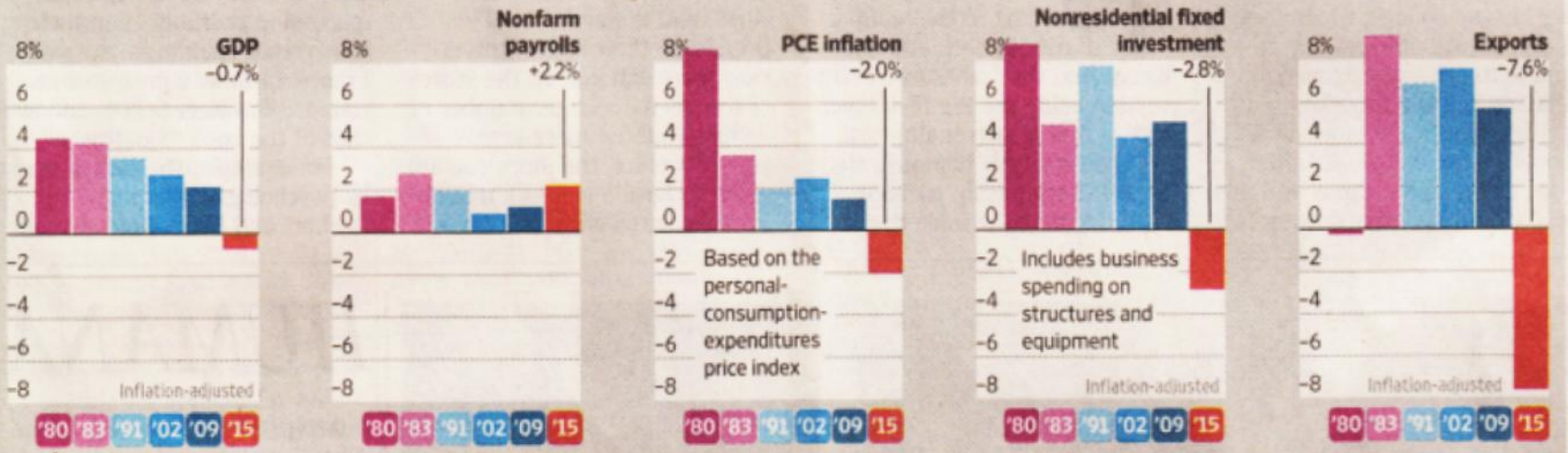
Slow Growing

The nearly six-year-old expansion has been notably slower by many metrics than other recoveries since 1980, with quarterly GDP turning negative three times since the recession ended.

U.S. GDP, quarterly change at a seasonally adjusted, annualized rate



Average for each expansion, quarterly change at a seasonally adjusted, annualized rate



Source: Commerce Department (GDP); Labor Department via the Federal Reserve Bank of St. Louis (quarterly payroll change, annualized)

Andrew Van Dam/THE WALL STREET JOURNAL.

Current Event

- Federal Reserve has tough decisions
- Economic recovery fairly slow
- Our models are very simplified
- Macroeconomics inherently difficult
  - The One-handed Economist, President Truman.

"Recovery Stumbles yet Again," WSJ, 05-30-15

III.B. AD Curve Revisited: Shifts

$$AD = C + I + G + NX$$

- Expansionary Fiscal Policy
  - G ↑
  - T ↓ => Y_D ↑ => C ↑
- Contractionary Fiscal Policy
  - G ↓
  - T ↑ => Y_D ↓ => C ↓

AD Curve

Monetary Policy

- Fed is independent from other parts of Gov

- Fed's Expansionary Monetary Policy
  - $M^S \uparrow$ => i $\downarrow$ => r $\downarrow$ => C $\uparrow$, I $\uparrow$, NX $\uparrow$
    => AD curve shifts out

- Fed's Contractionary Monetary Policy
  - $M^S \downarrow$ => i $\uparrow$ => r $\uparrow$ =>C $\downarrow$, I $\downarrow$, NX $\downarrow$
    => AD curve shifts in

Liquidity Market

AD Curve