Money Supply and Banking System

B.A II

Banking– VII

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Session Outline

- What is money?
- Definition of money supply
- Measurement of money supply
- Financial development ratios

Measures of Money Supply

- What is Money?
- Definition of Money Supply

M1 =	Currency with the public + Demand Deposits with the Banking System + Other Deposits with the RBI (M1 is also known as **narrow money**). [Note: Currency in circulation = Currency with the public + Currency with the commercial banks]
M2 =	M1 + Post Office Savings Bank Deposits
M3 =	M1 + Time Deposits with the Banking System [M3 is known as '**broad money**']
M4 =	M3 + Total Post Office Deposits (excluding National Savings Certificates)

- Money Multiplier Approach
- Balance Sheet (or) Structural Approach

Measurement of Money Supply

Balance Sheet of the RBI

Liabilities	Assets
1. **Monetary Liabilities (ML)** a. Notes in circulation b. Other Deposits: i. Deposits of quasi-government and other financial institutions like IDBI, LIC and UTI ii. Balances in the accounts of foreign central banks and governments iii. Accounts of international agencies such as the IMF, etc. Deposits of Banks (Reserves) **2. Non-monetary Liabilities (NML)** a. Capital Account: (Net Worth) b. Government deposits c. IMF a/c (since 1948) d. Miscellaneous NML e.g. Bills payable, RBI Employees Pension Fund, etc.	**Financial Assets** 1. **Credit to Government** a. RBI credit to center b. RBI credit to the State Governments 2. Credit to the Commercial Sectors 3. RBI's gross claims on banks (such as holding shares/bonds/debentures e.g. holding of shares of the SBI) 4. Net foreign assets (e.g. gold coin and bullion, eligible foreign securities, balances held abroad netted for balances in IMF Account minus India's quota subscription in rupees) **Other assets (OA) [like physical assets]**

Money Multiplier Approach

- Money Supply = m. H $\left(\frac{1+c}{c+r}\right).H$

Where 'm' = money multiplier and 'H' is the high powered money.

High Powered Money (H) =	Monetary Liabilities of the RBI + Government money
	[Currency with the public (C) + Reserves (R) + Other Deposits with the RBI] + Government money
Money Multiplier, m =	$\left(\frac{1+c}{c+r}\right)$ Where 'c' currency deposit ratio and 'r' = Cash Reserve Ratio (CRR)

Response of Money Supply for a Change in Variable

Change in Variable	Money supply (Ms) Response	Whether under RBI control?
Rise in C/DD ratio, (c)	Contraction	No
Increase in reserve ratio (r)	Contraction	Yes
Rise in High Powered Money (H)	Expansion	Yes

The Balance Sheet of the Consolidated Banking Sector

Liabilities	Assets
Monetary Liabilities – Demand Deposits – Time Liabilities (e.g. Fixed deposits, Recurring deposits, staff security deposits) – Other Demand and Liabilities (ODTL) (e.g. interest accrued on deposits, bills payable, unpaid dividends) – External Liabilities (e.g. Non-resident deposits, Overseas borrowings, etc) **Non-monetary Liabilities**	**Financial Assets** – Investments – Reserves held at RBI – Loans and advances **Other Assets** • Physical and other assets

Thus, M3 (Money supply) = Monetary liabilities of the consolidated banking sector

Credit Creation

Typical Format of Balance Sheet of a Bank	
Liabilities	Assets
1. Share capital 2. Reserves 3. Deposits i. Time deposits ii. Demand deposits iii. Savings deposits 4. Borrowings 5. Other items	1. (a) Cash in hand (b) Cash with Central Bank (c) Cash with other banks 2. Money at call and short notice 3. Bills discounted including T-bills 4. Investments 5. Advances 6. Other items

Balance Sheet of Bank A			
Liabilities		**Assets**	
Deposits	1000	Reserves	1000

Balance Sheet of Bank A			
Liabilities		**Assets**	
Deposits	1000	Reserves	100
		Loans and Advances	900

Balance Sheet of Bank B			
Liabilities		**Assets**	
Deposits	900	Reserves	900

Balance Sheet of Bank B			
Liabilities		**Assets**	
Deposits	900	Reserves	90
		Loans and Advances	810

Balance Sheet of Bank C			
Liabilities		**Assets**	
Deposits	810	Reserves	81
		Loans and Advances	729

Credit Creation and Money Supply

- Creation of Money:

  = Rs.1000 + 900 + 810 + 729 + …..]

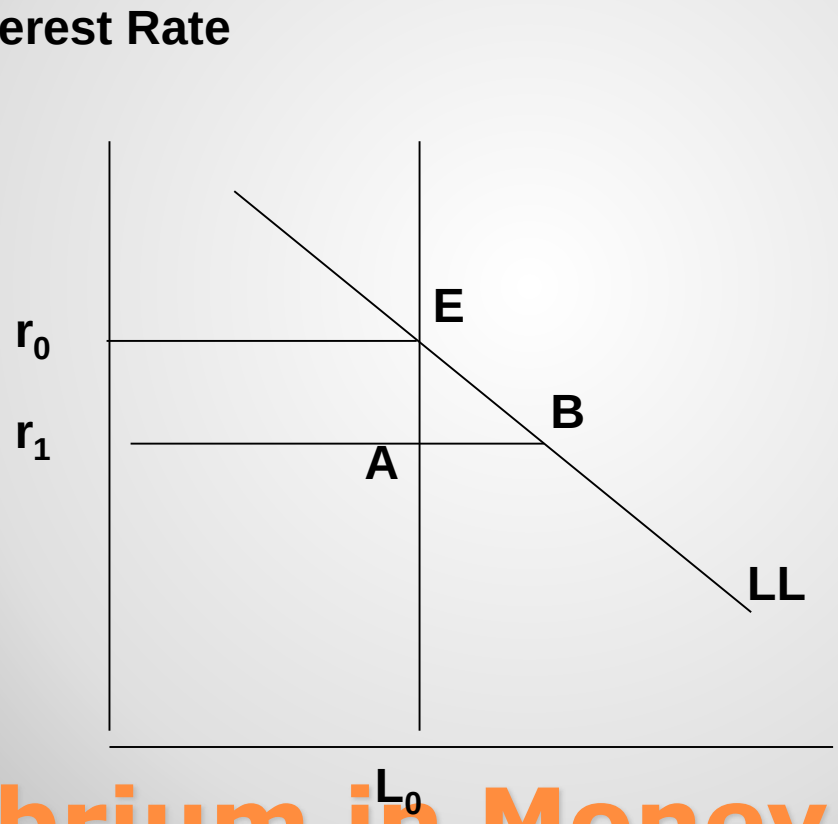
  = Rs.1000 [1 + 0.9 + $(0.9)^2$ + $(0.9)^3$ + ….]

  = 1000 [1/(1 – 0.9)] = Rs.10,000.

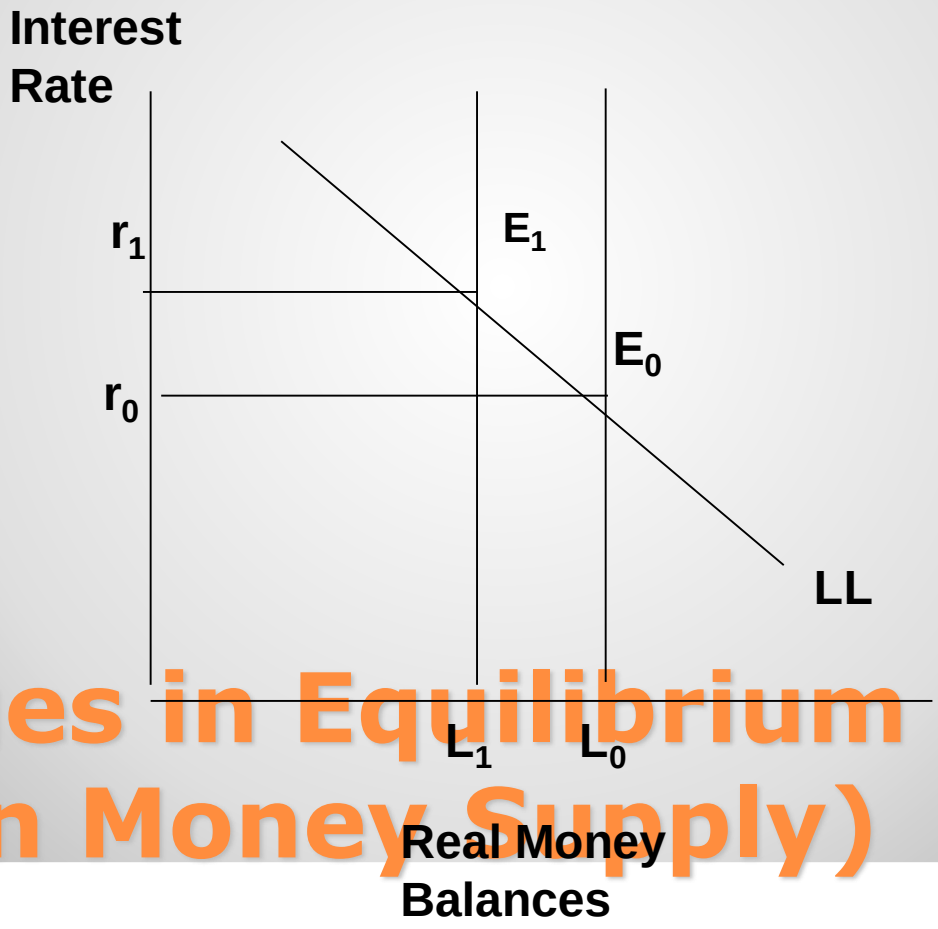
- With the inclusion of 'Currency-Deposit' ratio, Money supply (Ms) =

$$M_s = \left(\frac{1+c}{c+r}\right).H$$

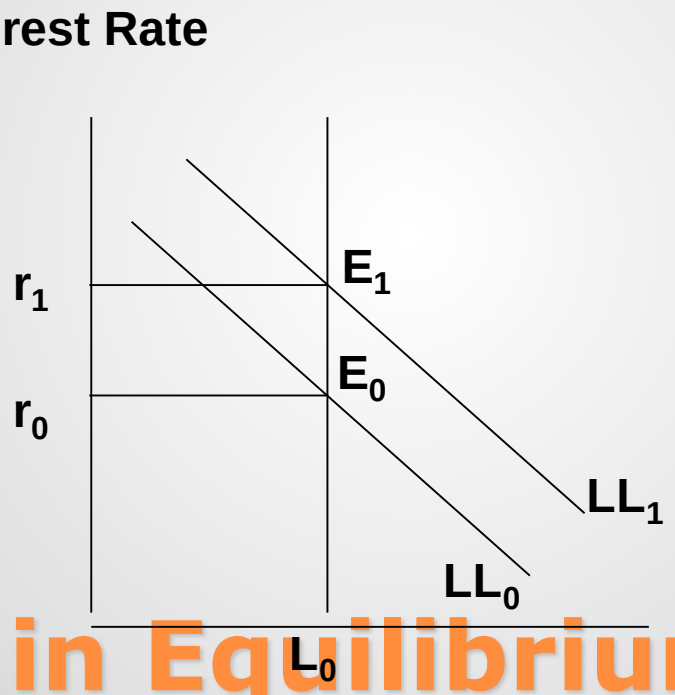
Equilibrium in Money Market



Changes in Equilibrium (Fall in Money Supply)



Change in Equilibrium (Increase in Income)



Financial Development

- Total Issues = Primary Issues + Secondary Issues
- Finance Ratio (FR) = Total Issues/National Income
- Financial Interrelations Ratio (FIR) = Total Issues/Net Physical Capital Formation
- New Issues Ratio (NIR) = Primary Issues/Net Physical Capital Formation
- Intermediation Ratio (IR) = Secondary Issues/Primary Issues