Basics of Money Supply

- ✓ Money plays a crucial role in the smooth functioning of an economy.
- ✓ Money supply is considered as a very important macroeconomic variable responsible for changes in many other significant macroeconomic variables in an economy.

Estimating Money Supply

Economic stability requires that the supply of money at any time should to be maintained at an optimum level. A pre-requisite for achieving this is to accurately estimate the stock of money supply on a regular basis and appropriately regulate it in accordance with the monetary requirements of the country.

Meaning		✓ The term money supply denotes the total quantity of money available to the people in an economy.
Measurable Concept		✓ The quantity of money at any point of time is a measurable concept.
Important Points		✓ The supply of money is a stock variable i.e. it refers to the total amount of money at any particular point of time. ✓ The stock of money always refers to the stock of money available to the 'public' as a means of payments and store of value. ✓ This is always smaller than the total stock of money that really exists in an economy.
Public	Inclusions	✓ All economic units ❖ households, ❖ firms and ❖ institutions ✓ Local authorities, ✓ Non-banking financial institutions, ✓ Non-departmental public-sector undertakings, ✓ Foreign central banks, ✓ Foreign governments, and ✓ International Monetary Fund
	Exclusions	*Producers of money (i.e. the government and the banking system).* ✓ Government ❖ central government, ❖ all state governments, and ❖ local bodies ✓ Banking system ❖ RBI ❖ Banks that accept demand deposits

Rationale of Measuring Money Supply

Analysis of Monetary Developments	✓ It facilitates analysis of monetary developments in order to provide a deeper understanding.
Evaluating Deviations	✓ It is essential to evaluate whether the stock of money in the economy is consistent with the standards for price stability and to understand the nature of deviations from this standard. ✓ The central banks all over the world adopt monetary policy to stabilise price level and GDP growth by directly controlling the supply of money.

The Sources of Money Supply

Decision of Central Bank	✓ The central banks of all countries are empowered to issue currency and, therefore, the central bank is the primary source of money supply in all countries. ✓ The currency issued by the central bank is 'fiat money'.
Supply responses of Commercial Banking system	✓ The total supply of money in the economy is also determined by the extent of credit created by the commercial banks in the country. ✓ Banks create money supply in the process of borrowing and lending transactions with the public. ✓ Money so created by the commercial banks is called 'credit money'.

Theories for Determinants of Money Supply

First View	✓ Money supply is determined exogenously by the central bank.
Second View	✓ The money supply is determined endogenously by changes in the economic activities which affect people's desire to hold currency relative to deposits, rate of interest, etc.
Current Practice	✓ The current practice is to explain the determinants of money supply based on 'money multiplier approach'.

Money Multiplier Approach to Supply of Money

Basics	

<table>
<tr><td></td><td colspan="2"></td></tr>
<tr><td>Origin</td><td colspan="2">✓ The money multiplier approach to money supply was propounded by <u>Milton Friedman and Anna Schwartz</u> in 1963.</td></tr>
<tr><td>Determinants of money supply</td><td colspan="2">✓ The stock of high-powered money
✓ The ratio of reserves to deposits
✓ The ratio of currency to deposits

These variables are designated as the <u>'proximate determinants'</u> of the nominal money supply in the economy.</td></tr>
<tr><th colspan="3">Behaviour of Central Bank</th></tr>
<tr><td>How does it effect?</td><td colspan="2">✓ Behaviour of Central Bank is reflected in the <u>supply of the nominal high-powered money</u> as Central bank of the country controls the issue of currency.</td></tr>
<tr><td>What is the Effect?</td><td colspan="2">✓ If govt. issues High Powered Money, the <u>money supply will increase largely due to money multiplier approach.</u></td></tr>
<tr><th colspan="3">Behaviour of Commercial Banks</th></tr>
<tr><td>How does it effect?</td><td colspan="2">✓ The behaviour of the commercial banks in the economy is reflected in the ratio of their cash reserves to deposits known as the <u>'reserve ratio'.</u></td></tr>
<tr><td rowspan="3">Effect of this ratio</td><td>Increase</td><td>✓ If this ratio increases while all the other variables remain the same, <u>more reserves</u> would be needed.
✓ This implies that banks must <u>contract their loans</u>, causing a <u>decline in deposits and hence in the money supply.</u></td></tr>
<tr><td>Decrease</td><td>✓ If this ratio falls, there will be <u>greater expansions of deposits</u> because the same level of reserves can now support more deposits and the <u>money supply will increase</u>.</td></tr>
<tr><td colspan="2"><u>Thus, money multiplier and the money supply are negatively related to the Reserves ratio.</u></td></tr>
<tr><td>Actual Practice by Commercial Banks</td><td colspan="2">✓ For the commercial banking system as a whole, the <u>actual reserves ratio is greater than the required reserve ratio</u> since the banks keep with them a higher than the statutorily required percentage of their deposits in the form of cash reserves.</td></tr>
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	✓ The additional units of high-powered money that goes into 'excess reserves' of the commercial banks do not lead to any additional loans, and therefore, these excess reserves do not lead to creation of money. ✓ Therefore, if the central bank injects money into the banking system and these are held as excess reserves by the banking system, there will be no effect on deposits or currency and hence no effect on money supply.		
Extent of Holding Excess Reserves/ Excess Reserve Ratio	Falls	✓ When cost of holding Excess Reserves increases.	
	Rises	✓ When cost of holding Excess Reserves decreases.	
Factors affecting Excess Reserve Ratio	Market Interest Rates	Increase	✓ If interest rate increases, it means that the opportunity cost of holding excess reserves rises because the banks have to sacrifice possible higher earnings and hence the desired ratio of excess reserves to deposits falls.
		Decrease	✓ A decrease in interest rate will reduce the opportunity cost of excess reserves, and excess reserves will rise.
		Thus, the banking system's excess reserves ratio is negatively related to the market interest rate.	
	Expected Deposit Outflows	Increase	✓ If banks fear that deposit outflows are likely to increase (that is, if expected deposit outflows increase), they will want more assurance against this possibility and will increase the excess reserves ratio.
		Decrease	✓ If banks have an apprehension that deposit outflows are likely to decrease (that is, if expected deposit outflows decrease), they will decrease the excess reserves ratio.
		Thus, the banking system's excess reserves ratio is positively related to the expected deposit outflows.	
Behaviour of Public			
How does it effect?	✓ The public, by their decisions in respect of the amount of nominal currency in hand (how much money they wish to hold as cash) is in a position to influence the amount of the nominal demand deposits of the commercial banks. ✓ The behaviour of public influences bank credit through the decision on ratio of currency to the money supply designated as the 'currency ratio'.		

<table>
<tr><td></td><td colspan="3"></td></tr>
<tr><td>What is Currency Ratio?</td><td colspan="3"></td></tr>
<tr><td>Factors affecting currency ratio</td><td colspan="3">✓ The currency-deposit ratio (c) represents the <u>degree of adoption of banking habits</u> by the people.
✓ It is influenced by
❖ the degree of <u>financial sophistication</u> in terms of ease and access to financial services,
❖ availability of a richer array of <u>liquid financial assets</u>,
❖ <u>financial innovations</u>, etc.</td></tr>
<tr><td rowspan="3">What is the Effect?</td><td>Increase</td><td colspan="2">✓ Higher is this ratio, means higher is currency holding and less amount being deposited in banks.
✓ Thus, <u>less is the credit creation</u>.</td></tr>
<tr><td>Decrease</td><td colspan="2">✓ Lower is this ratio, means lower is currency holding and more amount being deposited in banks.
✓ Thus, <u>higher is the credit creation</u>.</td></tr>
<tr><td colspan="3"><u>Thus, money multiplier and the money supply are negatively related to the currency ratio.</u></td></tr>
<tr><td rowspan="4">TD – DD Ratio</td><td>Meaning</td><td colspan="2">✓ It means how much money is kept as <u>time deposits compared to demand deposits.</u>
✓ This ratio also has an important implication for the money multiplier.</td></tr>
<tr><td rowspan="3">Effect</td><td>Increase</td><td>✓ An increase in TD/DD ratio means that <u>greater availability of free reserves</u> and consequent <u>enlargement</u> of volume of multiple deposit expansion and <u>monetary expansion</u>.</td></tr>
<tr><td>Decrease</td><td>✓ A decrease in TD/DD ratio means that <u>less availability of free reserves</u> and consequent <u>less</u> volume of multiple deposit expansion and <u>monetary expansion</u>.</td></tr>
<tr><td colspan="2"><u>Thus, money multiplier and the money supply are positively related to the TD-DD ratio.</u></td></tr>
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