CA Foundation – Business Economics

Economics Chp 8
Last Minute Notes
(Only Important Points)

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CHAPTER 8 – Money Market| UNIT 1 - THE CONCEPT OF MONEY DEMAND: IMPORTANT THEORIES

1	**Fiat Money** • Aka. token money→ **no intrinsic value.** • Used as **medium of exchange** as govt made them **"legal tender"**
2	**Definition of Money** **For policy purposes** →set of **liquid financial assets→ variation in stock** of which→ **impact** on **agg. economic activity**. As **statistical concept**→ include **liquid liabilities** of **financial intermediaries/issuers (RBI)**
3	**Characteristics of Money** Generally **acceptable, durable**, effortlessly **recognizable**, **difficult to counterfeit**, relatively **scarce, portable**, possessing **uniformity, divisible** into smaller parts **without losing value**
4	**Functions of Money** 1) Convenient medium of exchange 2) Explicitly defined unit of value or unit of account 3) Serves as a unit or standard of deferred payment 4) Store of value
5	**Demand for money** ➢ If **people desire to hold money (in cash)**, we say there is demand for money. ➢ Demand for money is **derived demand**
6	**Theories of demand for money** **I) Classical Approach: Quantity Theory of Money** ➢ Given by **Irving Fisher** → book 'The Purchasing Power of Money' (1911). ➢ As per QTM, **money in circulation (M)** & **price level (P)** are directly **related** to each other. ➢ Aka. '**equation of exchange**' or '**transaction approach**' **MV = PT** PT = Total demand of money ; MV = Total supply of money ➢ Later, Fisher **extended above equation** to include **credit money (M')** & its **velocity (V')** **Expanded Form : MV + M'V' = PT** ➢ As per QTM→ More Transactions → More Demand of Money

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6.1

II) Cambridge Approach (Aka **Cash Balance Approach**)

- **Money increases utility** in **two ways-**
  1) **Split-up of sale and purchase** to two different point of time
  2) **hedge against uncertainty.** (money- a temporary store of wealth)
- **Higher income -> greater transactions -> greater demand for money.**

$$Md = k\,PY$$

Where; k = Cambridge k = proportion of nominal income (PY) that people want to **hold as cash**

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III) Keynesian Theory of Demand for Money (Liquidity Preference Theory)

Demand for money = **Transactions Demand** (+) **Precautionary Demand** (+) **Speculative Demand**

7.1

a) Transactions motive

Money demanded to **bridge time gap** between receipt of **income** & planned **exp**.

Trans. demand → **directly related** to income

$$Lr = kY$$

Where, k→ ratio of earnings kept for trans. Purposes

7.2

b) Precautionary motive

Keeping a portion of income to finance unanticipated exp→ due to unforeseen contingencies.

Prec. demand is income elastic & interest inelastic

7.3

c) Speculative motive

Money demand to **take advantage of future changes in rate of interest** or bond prices.

To **exploit attractive investment opportunity**

Return on money→ **zero**

Returns on bonds→ two types→ **interest payment** & **expected rate of capital gain**

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Market Value of Bond inversely related to Market Rate of Interest

Current rate of interest (rn) **>** Critical rate of interest (rc)

- People **expect a fall in intt** rate **(rise** in bond prices**)**
- People will **convert their cash balances into bonds**

Current rate of interest (rn) **<** Critical rate of interest (rc)

- People **expect a rise in intt** rate **(fall** in bond prices**)**
- People would hold their wealth in the form of **liquid cash** rather than bonds

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Liquidity Trap

- When after a huge fall in interest rates → expectation is it cannot further fall.
- So now when in future→ interest rates will rise→ bond prices will fall
- To hold bonds at this low interest rate is to take almost certain risk of a capital loss

- Thus,
  - ❑desire to hold bonds is very low & approaches zero, and
  - ❑demand to hold money in liquid form approaches infinity.

- Speculative money demand (SMD) curve becomes perfectly elastic with respect to interest rate & becomes parallel to X axis.

- This is 'Liquidity trap' → aka. ineffective monetary policy.

- Empirical evidence of Liquidity Trap is found during "Global Financial Crisis of 2008"

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Post-Keynesian developments in Theory of Demand for Money

IV) Inventory Approach to Transaction Balances

- Given by Baumol & Tobin
- Aka Inventory Theoretic Approach), in which money is viewed as inventory held for transaction purposes.

- People hold optimum combination of bonds & cash balance→ which minimizes opp. cost.

- Level of inventory holding (money demand)- is DIRECTLY RELATED to
  - ❑Income
  - ❑Cost of making transfer from money to bonds

& is INDIRECTLY RELATED to
- ❑Carrying cost (opp. cost)– (interest income foregone by holding money)
- ❑Number of bond transactions

CHAPTER 8 – Money Market | UNIT 1 - THE CONCEPT OF MONEY DEMAND: IMPORTANT THEORIES

10.1	**V) Friedman's Restatement of Quantity Theory** Given by **Milton Friedman** → **asset price theory.** Friedman's **4 determinants** of demand for money **1) Total wealth = Permanent Income / discount rate** 2) Positively related to the **Price Level, P** 3) Rises if **opportunity costs** of money holdings decline **4) Inflation** - Positive inflation rate reduces real value of money & increases opportunity costs of money holdings
10.2	**VI) Demand for Money as Behaviour toward Risk** Given by **Tobin** in Based on principles of **Portfolio Management** People hold an **optimally structured wealth portfolio** which **comprises both** > **Bonds-** (provides return for risk) > **Money-** (No return, but also no risk) Demand for money **depends negatively** on **interest rate**.

UNIT 2 - CONCEPT OF MONEY SUPPLY

11	**Money supply = Total qty of money available with public** **'Public' is defined to include all economic units except the producers of money (i.e. Govt., & banking system- RBI & banks).**
12	Supply of money → **stock variable** Change in stock of money → **flow variable** Stock of money **available to 'public'** → **always smaller** than total stock of money in an **economy**. **Total money stock of a country** **= High powered money + Credit Money**
13	➢ **Supply of money' EXCLUDES** ❑ **interbank deposits** and ❑ money held by **government** and ❑ money held by **banking system**
14	**Empirical analysis** of money supply is important as it- 1) Facilitates **analysis of monetary developments** 2) Evaluate whether stock of money in economy is consistent **standards for price stability** & helps RBI in **making monetary policy**

CHAPTER 8 – Money Market | UNIT 2 - CONCEPT OF MONEY SUPPLY

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Measurement of money supply

Reserve money (M0) is also known as-
central bank money, base money or, high-powered money

	Currency in circulation
+	Bankers' deposits with RBI
+	Other deposits with the RBI
	Reserve Money (M0)

	Currency with Public
+	Demand deposits with banks (Current A/c & Saving A/c)
+	Other deposits with RBI
	M1 (Narrow Money)

	M1
+	Savings dep with Post Office
	M2

	M1
+	Time deposits with Banks
	M3 (Broad Money)

	M3
+	Total dep. with Post Office (excl. National Savings Cert.)
	M4

	Notes in Circulation
+	Circulation of Rupee Coin
+	Circulation of Small Coins
-	Cash on Hand with Banks
	Currency with Public

➢ **Descending order of liquidity –**
M1 (Most Liquid) &
M4 (Least Liquid)

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Money Multiplier (m)

Money multiplier process explains **how an increase in monetary base** the **money supply to increase by a multiplied amount**.

1st Formula

$$\text{Money Multiplier (m)} = \frac{\text{Money supply (M)}}{\text{Monetary Base (MB)}}$$

2nd Formula

$$\text{Money Multiplier (m)} = \frac{1 + c}{r + e + c}$$

where,
c = currency ratio = currency / deposits
r = required reserve ratio = required reserves / deposits
e = excess reserve ratio = excess reserves / deposits

3rd Formula

If we **assume-**
1) **Banks never hold excess reserves**. (e = 0)
2) People **never hold currency** (c = 0) Then,
Money Multiplier (m) = 1 / Required Reserve Ratio = 1 / R
Above can aka.→ **Credit Multiplier or Deposit Multiplier or Deposit Expansion Multiplier**

CHAPTER 8 – Money Market

17	**Determinants of Money Supply** (By Milton Friedman & Anna Schwartz) **1) Stock of high-powered money (H)** Depends upon Behaviour of Central Bank
17.1	**2) Reserve-ratio (r) = R / D** ✓ Depends upon Behaviour of Commercial Bank If required reserve ratio **increases** - ➢ banks will decrease lending, ➢ causing a decline in deposits and hence money supply will **decline**. ✓ **Smaller** r → **larger** the money multiplier
17.2	**Excess Reserves (ER)** ER are funds that bank keeps as reserve beyond what is required → **buffer against unexpected events requiring cash**. **ER = Total reserve (TR) – Reqd. Reserve (RR)** ✓ Excess Reserves of commercial banks **do not lead to any additional loans**, and thus, do **not lead to creation of money** ✓ **Smaller** the excess reserve ratio -> **larger** will be the money multiplier ✓ When **costs to bank of holding ER** (market rate of interest) **rises** , level of **ER falls** -> **m will be larger**
17.3	**3) Currency Deposit Ratio (c) = C / D** Depends upon Behaviour of Public ✓ If public keeps **more money in their pocket** & less in bank→ **increase in currency ratio → banks create less credit money→ m falls.** ✓ **Increase** in Time deposit-demand deposit ratio TD/DD ratio → **higher the multiplier**

UNIT 3 - MONETARY POLICY

18	**Monetary Policy Defined** ➢ RBI uses monetary policy to **manage economic fluctuations** & achieve **price stability** (**inflation is low** & **stable**) ✓ When RBI **lower interest rates**, monetary policy is **easing**. ✓ When it **raises** interest rates, monetary policy is **tightening**
19	**The Monetary Policy Framework** 3 basic components- (i) **objectives** of monetary policy, (ii) **analytics** of monetary policy (transmission mechanisms) (iii) **operating procedure**

20	**Objectives of monetary policy** Primary objective → maintaining **balance** between **price stability** & **economic growth**.
21	**Objectives of Monetary Policy in case of developing countries** 1) maintaining **economic growth** **2) adequate flow of credit to productive sectors** 3) sustaining **moderate structure of interest rates**, 4) creation of **efficient market for govt. securities**.
22	**Transmission of Monetary Policy** How changes to monetary policy **affect interest rates** & further **affect economic activity** & **inflation** **1) Saving and Investment Channel** **2) Cash-flow Channel** **3) Asset Prices and Wealth Channel** **4) Exchange Rate Channel**
23	**Instrument of Monetary Policy** **Direct Instruments** a) CRR & SLR **b) directed credit** in form of **prescribed targets** for preferred sectors **c) administered interest rates.**
	Indirect Instruments- **a) Repos** **b) Open market operations** **c) Standing facilities** **d) Market-based discount window**
24	**Operating Procedures and Instruments** Quantitative tools **1. Reserve Ratio** → Banks keep aside % **of Net Demand & Time Liabilities**. They have two types- **2. Cash Reserve Ratio (CRR)** → Banks set aside this portion in **cash with RBI**. Bank can **neither lend** it **nor can it earn any interest** on CRR **3. Statutory Liquidity Ratio (SLR)** → Banks set aside this **portion in liquid assets-** like **cash** or **gold** or **RBI approved securities** (unencumbered). Banks **are allowed to earn interest** on these securities. **4. Open Market Operations (OMO)** → To **control money supply** → RBI **buys & sells govt securities**. ✓ When RBI **sells** govt securities → **liquidity is sucked** from market (done to **control inflation**), ✓ When RBI **buys** securities → **Money Supply increases** (done during **contraction/depression**)

25	**Qualitative tools - Selective tools that impact money supply of specific sector of economy** **1. Margin requirements →** When margin req is **raised**, customers will be able to **borrow less** 2. **Moral suasion →** By way of **persuasion**, **RBI convinces banks** to keep money in govt securities, rather than certain sectors. 3. **Selective credit control →** Controlling credit by **not lending to selective industries** or speculative businesses.
26	**Market Stabilisation Scheme (MSS)** Under MSS, **Govt** of India **borrows from RBI** & issues treasury-bills/dated securities→ done to **absorb excess liquidity** from banking system→ caused by large foreign capital inflows
27	**Policy Rates** **1. Bank Rate →** Interest rate at which **RBI lends long term funds to banks →** bank rate. Now used to prescribe **penalty** to bank if it **does not maintain** the prescribed **SLR or CRR** **2. Liquidity Adjustment Facility (LAF) →** RBI uses LAF as an instrument **to adjust liquidity & money supply**. The following types of LAF are-
	2a. Repo Rate → Repo rate is rate at which **banks borrow from RBI** on a **short-term basis** against a **repurchase agreement** **2b. Reverse Repo Rate → Rate RBI pays to banks** in order to keep additional funds in RBI. It is **linked** to repo rate: **Reverse Repo Rate = Repo Rate – 1** **3. Marginal Standing Facility (MSF) Rate → Penal rate** at which RBI lends money to banks, **over rate available** under repo policy. Banks availing MSF Rate can use **maximum of 1% of SLR securities→ MSF Rate = Repo Rate + 1**
28	**Monetary Policy Framework Agreement** ➢ **Agreement** between **Govt & RBI** on **maximum tolerable inflation rate** that RBI should target to **achieve price stability**. ➢ Announcement of an official target range for inflation is known as **inflation targeting**. ➢ **Inflation target → set by Govt** in **consultation with RBI**, **once in every five years**. Accordingly, Central Government has notified- ➢ **4 % → Consumer Price Index (CPI) → target** for **Aug 5, 2016 to Mar 31, 2021,** with the- ✓ **upper tolerance limit of 6%,** ✓ **lower tolerance limit of 2%**

29	The RBI is mandated to publish a **Monetary Policy Report** every **six months**
30	**Monetary Policy Committee (MPC)** A **6-member committee** consisting of- ➢ **RBI Governor** (Chairperson), ➢ **RBI Deputy Governor** in charge of monetary policy, ➢ **One official** nominated by **RBI Board** and ➢ **Remaining three CG nominees**. MPC is required to **meet at least 4 times a year** MPC shall determine **policy rate** (repo rate) required to achieve inflation target.