

Ch-8 Money Market

* Functions of Money

- Store of Value
- Unit of Account
- Medium of Exchange

* Characteristics

- Generally Acceptable
- Effortlessly Recognizable / Cognizable
- Difficult to Counterfeit / duplicate
- Relatively Scarce, but has elasticity of Supply *

* Narrow Money

- Currency & Transferable Deposits * MCQ

* Broad Money

- Currency & Transferable Deposit

- ↳ Demand Deposit
- ↳ Bank / Travelers checks * *
- ↳ Foreign Currency Deposits

- Non Transferable Deposit

- ↳ FD (Term Deposit)
- ↳ Repurchase Agreements
- ↳ Securities other than Shares

* Demand for Money

- * • Known as Derived Demand * MCQ

- Determine interest rate, Price & Income
- Factors Affecting Demand

1) Income

Higher Income means High Exp.; means high hold of money.

2) General level of Price

Higher Price means Higher Holding of Money

* 3) Rate of Interest

High Opportunity cost, Int Rate, = High Opportunity Cost =
low demand for money ~~MC~~

4) Financial Innovation

GPAY → E-Innovation means low holding of cash

* Theories of Demand for Money

1) Classical or Fisher's Approach: The Quantity theory of Money
(QTM)

Given by Irving Fisher of Yale University in his book
'The Purchasing Power of Money', Published in 1911.

* QTM demonstrate strong relationship b/w Money & Price Level

* Also, Quantity of Money is Main Determinant of Price Level

* Acc to QTM Theory, Money is Demanded only for Transaction Purpose.

$$\text{(Supply)} \quad MV = PT \quad \text{(Demand)}$$

* M = Total Amount of Money in Circulation

* V = Velocity of Circulation (Assumption, velocity = constant)

* P = Average Price Level ($P = \frac{MV}{T}$)

* T = Total No of Transaction

* Real Money is Nominal Money Adjusted to Price Level

MCA

Further Extension,

(Supply) $MV + M'V' = PT$ (Demand)

* M' = Total quantity of Credit Money

* V' = Velocity of Circulation of Credit Money

* 2) Cambridge / Neo Classic / Cash Balance Approach

In 1900's Cambridge Economists Alfred Marshall, A.C. Pigou, D.H. Robertson and John Maynard Keynes give Different Approach to QTM Theory, known as ---

Money is utilised in two ways

1) Transaction Motive

2) Precautionary Motive

$$M_d = k(PY)$$

* M_d = Demand For Money

* Y = Real National Income

* P = Average Price level of Produced Goods & Services

* PY = Nominal Income

* k = Proportion of Nominal Income that People wanted to hold as Cash.

k is called
Cambridge k

3) The (Keynesian) Theory of Demand for Money

"Liquidity Preference Theory"

In the Book the General Theory of Employment, Int & Money 1936, denote people desire to hold money rather than to invest.

Three Motive to hold cash people hold, because income is elastic & Not very sensitive to Int Rate

i) Transaction ii) Precautionary iii) Speculative

• If current Int rate is high:
People will expect fall in Int rate &
Rise in Bond price

↓
Keynes assume that
Int is earned from Bonds
only, not any other
Investment. Also Capital
gain From Bond

iii) Speculative \div market value of Bond and
market Rate of Interest are
* inversely related. Demand for Money & Mkt Int Rate, also Inversely Related

Liquid Trap

- RBI
- Monetary policy is powerless to affect int rate.
 - Speculative money demand Curve become parallel to X axis.
 - Investor would hold Cash rather than Bonds.

* Post Keynesian Developments in the Theory of Demand for Money.

i) Inventory Approach to Transaction Balance

Baumol (1952) & Tobin (1956) determine that
Inventory is held for transaction purpose.

Explain
Negative Relation
Btw Money Demand
& Int Rate

Two Media for storing Value \leftarrow Money
Financial Asset

* MCD

Inventories Approach

Square root rule

Cash withdrawal which minimal cost is given

Cash held by Public

$$\sqrt{\frac{2by}{r}}$$

b = broker fee
y = Income
r = Int rate

2) Friedman's Restatement of Quantity Theory

Demand for Money is affected by ^{MCA} Permanent Income and Return on Asset

Four Determinants of the Demand for Money

The Nominal Demand For Money: ^{General}

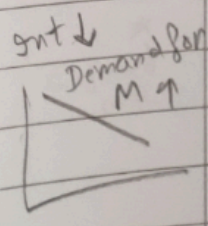
MCA

- 1) is positively related to price level
- 2) Rise if opportunity cost of holding Money decline
- 3) Inverse Relation with Inflation
- 4) is a function of total wealth, ^{Permanent Income} Discounted Rate

3) Demand for Money as Behaviour toward Risk

- James Tobin, problem of proportion of Portfolio of Financial Asset
- People prefer the balance b/w risk & Return

Tobin's Liquidity Preference Function



Downward Sloping L.P. Function Curve Shows asset demand for money in portfolio increase as the Rate of Interest on bonds falls.

Real $Y \uparrow$ — Positive — Demand for $M \uparrow$
Int \uparrow Negative " " " " \downarrow

Conclusion \div All these theories establish a Positive relation of Demand for Money and Real Income, an inverse relation to the rate of Return on earning Asset (Investment).

UNIT-2 Concept of Money Supply

• Money Supply is the total Amount / Quantity of Money available to 'Public'

Excluding

- Producers of Money
- Bank (Except Demand Deposit)

• Sources of Money Supply

- Central Bank
- Banking System

- Currency issued by RBI is ('Fiat Money')

- High Powered Money is source of all other forms of Money.

MCA * - Currency must be backed by equal value of Asset such as "Gold & Foreign Reserve".

- Money Created by Commercial Bank is ('Credit Money')

- High Powered Money & Credit Money broadly constitute the Common measure of Money Supply.

$$M_1 = CC + DD + OD$$

$$M_2 = M_1 + SD \text{ with Post office}$$

$$M_3 = M_1 + \text{Time Deposit with Bank}$$

$$M_4 = M_3 + \text{Total Dep with Post office (except NSC)}$$

Measurement of Money (Monetary Aggregate)

$M_1 =$ Currency Notes & Coins held by Public +
Net Demand Deposit with Bank (current + Saving)
+ other Deposit with RBI

DD-Inter Bank Deposit

$M_2 = M_1 +$ Saving Deposit with Post office saving Bank

$M_3 = M_1 +$ Time Deposit with Banking System (FD, RD)

$M_4 = M_3 +$ total Deposits with Post office saving (Excluding National Saving certificate (NSC))

* M_1 is narrow and Most Liquid

* M_4 is Broad and least Liquid

Determinants of Money Supply

- Money Supply is Exogenously determined by Central Bank.
- Money Supply is Endogenously determined by change in people desire to hold Money (Public Behaviour)

These Determinants are Explained Through 'Money Multiplier Approach'

* Monetary Base is Sum of Currency in Circulation & Bank Reserves.

* confirmed meq

Money Multiplier is the Ratio that relates to Δ in Money Supply to given Δ in Monetary base

* Money Multiplier Approach to Determine Supply of Money.

Three Factors

- 1) Stock of High Powered Money
- 2) Reserve to Deposit Ratio (OR) Reserve Ratio
- 3) Currency to Deposit Ratio

a) Behaviour of Central Bank

\Rightarrow \uparrow Issue of Money or Currency $\xrightarrow{H.P.}$ \uparrow Money Supply

b) Behaviour of Commercial Bank

\Rightarrow Smaller Reserve Ratio \rightarrow \uparrow Money Multiplier \rightarrow \uparrow in Money Supply

[vice versa]

\uparrow Interest Rate \rightarrow Ratio of Excessive Reserve to Deposit will \downarrow

• Deposit Outflow \uparrow \rightarrow Excess Reserve will also \uparrow Likely to Increase

c) Behaviour of the Public * MCD

* MCD • \downarrow Cash to Deposit Ratio \rightarrow \uparrow Multiplier \rightarrow Supply of Money \uparrow

• \uparrow Time Deposit to Demand Deposit \rightarrow \uparrow Money Multiplier \rightarrow Supply of Money \uparrow

Represent Behaviour of Public

* \uparrow Currency Ratio \rightarrow Multiplier \downarrow \rightarrow Supply \downarrow

- _/_/_
- r = Reserve to Deposit Ratio (or) Reserve Ratio
 c = Currency to Deposit Ratio (or) Currency Ratio
 e = Excessive reserve to Deposit Ratio (or) Excessive Reserve Ratio
- H = Monetary Base
 M = Money Supply
 m = Money Multiplier

Generally $M = C + D$

further Derivation done and $\div \cdot m = \frac{1+c}{r+c}$

When there is Excessive Reserve (or)

$$\cdot m = \frac{1+c}{r+c+e}$$

By *Gautam Gogia*

- $M = m \times H$
- $m = \frac{M}{H}$

* MCB

Money Multiplier is a function of

- c a) Currency Ratio set by Public
- e b) Excess Reserve Ratio set by Bank
- r c) Reserve Ratio set by Central Bank

Reserve Money is also known as

- 1) Central Bank Money
- 2) Base Money
- 3) High powered money
- 4) All

RBI Act 1934

Money MarketUNIT-3 Monetary Policy

RBI uses Monetary Policy to achieve Price Stability, which means, by adjusting Supply of Money, through Buying & Selling Securities in Open Market. *MCO

- Monetary Policy Framework

- 1 - Objectives
- 2 - Transmission Mechanism
- 3 - Operating Targets & Instruments

2) Transmission of Monetary Policy

- changes to M.P. affect interest Rate in Economy
- changes to Int Rate, affect Economic Activity

① Saving & Investment channel SBI

② Cash Flow channel CF

③ Asset Price & Wealth channel ABW

④ Exchange Rate channel ER

3) Operating Target & Instruments

① Quantitative Tools [Impact Money Supply in Entire Economy]

*MCO

- _ / _ / _
- i) Reserve Ratio [Reserve kept By Bank with RBI]
- CRR [In cash]
 - SLR [In form of Gold & other Securities]

- ii) Open Market operations [Objective is to check Temporary liquidity Mismatches in market]

② Qualitative Tools [effect the money supply in specific Sector]

- i) Margin Requirement [Margin Against collateral]

- ii) Moral Suasion [By way of Persuasion]

- iii) Selective Credit Control

③ Market Stabilisation Scheme (MSS)

- ≡ i) Bank Rate [Rate at which RBI lends long term funds to Banks]

Now, Bank Rate is Mostly used as Penalty to Bank for not Maintaining CRR @ SLR

- ≡ ii) Liquidity Adjustment Facility (LAF)

- Repo rate [RBI Lend for short term Agst security]

- Reverse Repo Rate [RBI gives Interest to Bank]

$$\text{Reverse Repo} = \text{Repo Rate} - 1\%$$

$$\begin{array}{l} \downarrow \\ 10\% - 1\% \\ = 9\% \end{array}$$

//_

iii) Marginal Standing Facility (MSF) ÷ It is Penal rate at which RBI lends at rate available under Repo Policy.

Bank Availing MSF can use Maximum 1% of SLR securities.

MSF rate = Repo rate + 1%

Mcq From Book, Must

By Gautam Gogia