Quadrant II – Transcript

Course Code : CEG 102

Module Name : Demand for Money: Tobin's Portfolio Approach to Demand for Money

Welcome students. This is an initiative taken by the Directorate of Higher Education, Government of Goa to promote e-content learning in the subject of Economics.

This module is for the students of SYBCOM, Semester III, Course Code: CEG 102, Course Title: Macroeconomics.

I, Ms. Charmaine Savia Siqueira Lobo, Assistant Professor in Economics at Fr. Agnel College of Arts & Commerce, Pilar, Goa will introduce you to the topic "Demand for Money: Tobin's Portfolio Approach to Demand for Money" which is part of Unit 4: Behavioural Foundations.

In this module we will look at the Concept of Demand for Money and the Functions and Motives of Holding Money. Next we will see what are the Portfolio Theories of Money Demand and the Money Demand Function. Next we will study Tobin's Portfolio Approach to Demand for Money. Lastly we will have a look at Tobin's Liquidity Preference Function and Curve.

At the end of this module you will be able to comprehend the Concept of Demand for Money and you will understand the Functions and Motives of Holding Money. You will also be able to elucidate on the Portfolio Theories of Money Demand. You will be able to analyze Tobin's Portfolio Approach to Demand for Money. Lastly, you will understand Tobin's Liquidity Preference Function and Curve.

Concept of Money Demand

The demand for money is the desired holding of financial assets in the form of money: that is, cash or bank deposits rather than investments.

How much wealth shall be held as money versus assets will depend on the relative costs and benefits of holding each.

Demand for money is thus the relationship between the quantity of money people want to hold and the factors determining that quantity.

Why is Money Demanded? Because it serves certain Functions:

The 2 main Functions are the Primary Function and Secondary Function.

(a) Primary functions include

i) Medium of exchange: It means that money can be used to make payments for all the transactions of goods and services.

ii) Measure of value: The value of all goods and services is expressed in terms of money.

(b) Secondary functions include

i) Standard of deferred payments: It means that money acts as a 'standard' for making future payments, making it easier than before.

ii) Store of value: Money can be easily stored for future use

iii) Transfer of value: It facilitates buying and selling of goods not only in the domestic country but also in other parts of the world.

3 Main Motives of Holding Money

- **Transactionary Motive**– Money held on a regular basis to pay bills and finance their discretionary consumption
- P**recautionary Motive-** Money held to meet an unexpected need
- S**peculative Motive- Money held with the expectation that** its value will increase compared to other assets.

Portfolio Theories of Money Demand

- They are Theories of money demand that emphasize the role of money as a store of value. According to these theories, people hold money as part of their portfolio of assets.
- The key insight is that money offers a different combination of risk and return than other assets.
- Money offers a safe return, whereas the prices of stocks and bonds may rise or fall. Portfolio theories predict that the demand for money should depend on the risk and return offered by money and by the various assets households can hold instead of money.

Money Demand Function

- Money demand depends on total wealth as wealth measures the size of the portfolio to be allocated among money and alternative assets.
- Money demand function $(M/P)^d = L(r_s, r_b, \pi^e, W)$

  $(M/P)^d$ = Demand for Real money balances
  r_s = Expected real return on stock
  r_b = Expected real return on bonds
  π^e = Expected inflation rate
  W = Real Wealth
- An increase in r_s or r_b reduces money demand, because other assets become more attractive.
- An increase in π^e also reduces money demand, because money becomes less attractive.
- An increase in W raises money demand, because higher wealth means a larger portfolio.

Tobin’s Portfolio Approach to Demand for Money

- American economist James Tobin, explained that rational individuals should keep a portfolio of assets consisting of both bonds and money.
- He assumes that people prefer more wealth to less.
- An investor is faced with a problem of what proportion of his portfolio of financial assets he should keep in the form of money (which earns no interest) and interest-bearing bonds.
- The portfolio of individuals may consist of more risky assets like shares.
- Individuals diversify their portfolio by holding a balanced combination of safe and risky assets.
- Individual’s behaviour shows risk aversion.
- Individuals are uncertain about future rate of interest.
- If a wealth holder chooses to hold a greater proportion of risky assets he will earn a high average return but will bear a higher degree of risk.
- A risk averter will not opt for such a portfolio.
- A person who in his portfolio holds only safe and riskless assets such as money (in the form of currency and demand deposits in banks) will be taking almost zero risk but will also be having no return and as a result there will be no growth of his wealth.
- Therefore, people generally prefer a mixed diversified portfolio of money, bonds and shares, with each person opting for a little different balance between riskiness and return.

Tobin’s Portfolio Approach Overcoming the Limitations of Keynes’ Speculative Demand for Money

- By introducing speculative demand for money, Keynes made a significant departure from the classical theory of money demand which emphasized only the transactions demand for money. However, as seen above, Keynes’ theory of speculative demand for money has been challenged.
- The main drawback of Keynes’ speculative demand for money is that it visualises that people hold their assets in either all money or all bonds. This seems quite unrealistic as individuals hold their financial wealth in some combination of both money and bonds.
- This gave rise to portfolio approach to demand for money put forward by Tobin, Baumol and Freidman. The portfolio of wealth consists of money, interest-bearing bonds, shares, physical assets etc.
- While according to Keynes’ theory, demand for money for transaction purposes is insensitive to interest rate, the modem theories of money demand put forward by Baumol and Tobin show that money held for transaction purposes is interest elastic.

Tobin’s Liquidity Preference Function

- Tobin’s Liquidity Preference Function depicts the relationship between rate of interest and demand for money.

- With the increase in the rate of interest, wealth holders will be attracted to hold more bonds and thus reduce their holding of money.
- That is, at a higher rate of interest, their demand for holding money (i.e., liquidity) will be less and therefore they will hold more bonds in their portfolio.
- On the other hand, at a lower rate of interest they will hold more money and less bonds in their portfolio.

<u>Diagrammatic Presentation of Money Demand or Liquidity Preference Curve</u>

- On the horizontal axis, asset demand for money is shown and on the y axis we have the Rate of interest.
- The money demand or liquidity preference curve slopes downwards as is shown in the figure.
- This downward-sloping liquidity preference function curve shows that the asset demand for money in the portfolio increases as the rate of interest on bonds falls.
- In this way Tobin derives the aggregate liquidity preference curve by determining the effects of changes in interest rate on the asset demand for money in the portfolio of individuals.
- Tobin's liquidity preference theory has been found to be true by the empirical studies conducted to measure interest elasticity of the demand for money. This means that most of the people in the economy have liquidity preference function similar to the one shown by curve Md in the figure.
- Thus at a higher rate of interest, their demand for holding money (i.e., liquidity) will be less and therefore they will hold more bonds in their portfolio and vice versa.