

ECON4010 : Monetary Economics

Course Code : ECON4010

Unit II : Demand for Money

By...

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Portfolio Theories of Demand for Money : **Baumol Transactions Demand for Money**

Based on Keynes' liquidity preference theory Baumol and Tobin have developed an alternative approach to transactions demand for money called "Portfolio Balance Approach" in which the Portfolio behaviour of individuals and institutions has been stressed in the process of monetary management.

In this approach the demand for money is viewed as a joint demand for all liquid assets holding of money is professed by the people because it enacts them to maintain cash disbursement and carry on transaction when there is lack of synchronisation between timing or receipts of income and payment.

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He assumes that an individual invests his money income in interest bearing bonds and these bonds are converted for money in equal lots of amount M each to finance his expenditure.

It is also assumed that the individual has uniform expenditure or transactions to make over a given time period. Each conversion will involve a brokerage fee. The total brokerage fee will be equal to number of conversions into money times the brokerage fee.

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i.e. $b(T/M)$ where T represents total transaction, M is the amount of bonds converted to money and b is the brokerage fee.

Every time when bonds are converted into money, the individuals forgoes interest income foregone over the expenditure period is equal to the average money holding per conversion period ($M/2$) multiplied by the interest rate (i).

Total cost of holding cash balances over the expenditure period (C) will be written as

$$C = b (T/M) + i (M/2)$$

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The aim of the investor is to minimise the cost associated with money holding which can be done by differentiating (with respect to M).

$$\frac{dC}{dM} = \frac{d}{dM} \left\{ b \left(\frac{T}{M} \right) + i \left(\frac{M}{2} \right) \right\} = 0$$

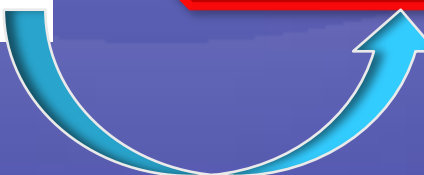
$$\Rightarrow -bTM^{-2} + \frac{i}{2} = 0$$

$$\Rightarrow \frac{i}{2} = \frac{bT}{M^2}$$

$$\Rightarrow M^2 = \frac{2bT}{i}$$

$$\Rightarrow M = \sqrt{\frac{2bT}{i}}$$

This is known as Baumol's Square root-Low of the demand for Money.



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Then, the demand for money function which implies that the nominal money holding for the cost-minimising individuals will vary directly with the square root of nominal expenditure and inversely with the square root of market interest rate.

THANK YOU