# Monetary economics

Economics

1. Outline the various theories of money demand and discuss their strengths and weaknesses. Word count : Money demand is defined as the desired holding of money balances in the form of cash or bank deposits. The Quantity Theory of Money Demand is most prominently found in the work of Irving Fisher who examined the relationship between total quantity of money M and the total spending in the economy P x Y, where P is the price level and Y is aggregate output. V is the velocity of money and can be defined as: $V = P ? YM$ By rearranging this equation to $MV = PY$ we obtain the " equation of exchange".

Fishers view that velocity remains fairly constant in the short run converts the " equation of exchange" into the " quantity theory of money", which states that only changes in quantity of money would determine nominal income. If we rearrange the above equation to: $M = 1VP. Y$ When the money market is in equilibrium the quantity of money held M equals the money demand Md. If we substitute M as Md and 1V as k we obtain: $Md = k ? P. Y$ Since k is a constant, the total spending in the economy, P. Y, controls the quantity of money Md that is demanded.

Thus the theory establishes that demand for money is exclusively dependant on income and that it is not affected by interest rates. Keynes pointed out that this model neglected the important effect that interest rates had on money demand. He and Ludwig von Mises both also criticised the fact that the model tries to explain money supply without adequately explaining the demand for money. Mises said the theory" fails to explain the mechanism of variations in the value of money". The Cambridge Approach to Money demand was developed by Alfred Marshall and A. C. Pigou.

In their model people are considered to be more flexible in their decisions to hold money. Marshall and Pigou suggested that nominally, wealth is proportional to income and that the wealth component of money is proportional to nominal income. They also defined the demand for money as: $Md= k ? P. Y$ Since individuals have the power to choose how much money they wish to hold. This implied that K could fluctuate in the short run as the amount of money held would vary depending on the rate of return of other assets. The Cambridge approach focused more on explaining " money demand" which the Quantity Theory lacked.

The approach also lead economists to realise that velocity was not constant as though previously and played an important role in the assessment of money demand. The Keynes Liquidity Preference Theory emphasises that there were three motives for holding money. First, the transactions motive which is holding money to be able to spend it. Second, the precautionary motive which is to hold money in case of an unexpected need for it and third, the Speculative motive which is the amount of money held for the potential purchase of assets based on their expected returns.

Keynes believed that people may want to hold a certain amount of " real" money which would be related to real income Y and interest rates i. Thus Keynes defined the demand for real money as: $MdP= f(i, Y)$ The equation is the liquidity preference function and states that the demand for real money balances MdP and depends negatively i and positively on Y. Since velocity is not constant and is considered to change with interest rates the liquidity function can be re written as: $PMd= 1f(i, Y)$ Then if we rearrange and

substitute Md by M (since they must equal in the money market equilibrium), we can solve for velocity obtaining: V= PYM= YF(i, Y)

Thus we can conclude that the Liquidity Preference Theory for money gives incorporates interest rates into the model and indicates the procyclicality of velocity. The Liquidity preference theory has been criticised because the problem with Keynes's speculative demand is that it assumes people would hold wealth as either money or bonds but not both at once, which is unrealistic. Murray Rothbard said " The rate of interest depends solely on time preference and not at all on " liquidity preference. " In fact, an increased demand for money will cause interest rates to fall - because time preferences have fallen. "

The Baumol-Tobin Model is based on the trade off between liquidity provided by holding money and the interest foregone by holding an asset. The main determinants of the demand for money are: 1. The nominal interest rate 2. The level of real income which corresponds to the amount of desired transactions 3. The fixed cost of transferring one's wealth between liquid money and interest bearing assets. Friedman's Modern Quantity Theory of Money states that money demand should be a function of wealth and the returns of other assets relative to money. He defined the money demand function as: MdP= K(Y, rb-rm, re-rm, ? -rm) Y= permanent income rb= the expected return on bonds rm= the expected return on money re= the expected return on stocks ? e= expected inflation rate Friedman argued that even though money demand and permanent income are positively related, it is a long run average and thus more stable than current income. Therefore it will not cause many fluctuations in money demand. The Quantity Theory of

Money, developed by Milton Friedman, is probably the most stable because in his model permanent income is very steady, meaning a stable spread between returns as they would either rise or fall at the same time.

Thus interest rates have little or no effect on money demand. References Friedman (1987), " quantity theory of money", p. 19. Milton Friedman (2005), " The Quantity Theory of Money: A Restatement" in Studies in the Quantity Theory of Money". Gauti B. Eggertsson (2008), " liquidity trap," The New Palgrave Dictionary of Economics, 2nd Edition. Bibow, J. (1998), " On Keynesian Theories of Liquidity Preference". The Manchester School 66, p. 238-73. Frederic S. Mishkin (2009), " the economics of money, banking, financial markets", ninth edition.