**THEORY OF MONEY**

The study of the effect of money on the economy is called monetary theory. In this topic, we discuss the demand and supply of money and the effects on the economy. The supply of money is an essential building block in understanding how monetary policy affects the economy, because it suggests the factors that influence the quantity of money in the economy. Demand for money is also key in the understanding of monetary theory. There are several theories on the demand for money that we shall explore.

**Quantity theory of money**

This has been discussed earlier. Please revisit it.

Note that it is the assumption that velocity of money is fairly constant that turns the equation of exchange (MV=PY) into the quantity theory of money. Another notable feature is that this theory suggests that the level of interest rate has no effect on the demand for money.

In summary, the quantity theory of money is a theory of how nominal value of aggregate income is determined. It tells us how much money is held for a given level of aggregate income. Thus movements in price level result solely from changes in the quantity of money.

**Keynes’s Liquidity Preference Theory**

In 1936, John Keynes developed a theory of money that emphasized the importance of interest rates. His theory of demand for money, referred to as liquidity preference theory, asked the question: why do people hold money? He suggested three motives behind the demand for money: the transactions motive, the precautionary motive and the speculative motive.

**Transactions motive**

Individuals are assumed to hold money because it is a medium of exchange that can be used to carry out every day transactions. Keynes emphasized that this component of the demand for money is determined primarily by the level of people’s transactions. Because he believed that the level of transactions is proportional to income, he took the transactions component of the demand for money to be proportional to income.

Dt is the transactions component of demand for money.

Y is the income level.

K is a constant.

**Precautionary motive**

In addition to holding money to carry out current transactions, people hold money as a cushion against an unexpected need like car repairs and medication. Keynes believed that the precautionary money balances people want to hold are determined primarily by the level of transactions that they expect to make in the future, and that these transactions are proportional to income. He therefore took the transactions component of the demand for money to be proportional to income.

NB: IN THE TWO MOTIVES ABOVE, INCOME IS THE ONLY MAJOR DETERMINANT OF THE DEMAND FOR MONEY.

**Speculative Motive**

Keynes also held the view that people hold money as a store of wealth. He called this reason the speculative reason. Keynes divided the assets that can be used to store wealth into two categories: Money and Bonds. He asked himself; why would an individual decide to decide to hold their wealth in the form of money rather than bonds? From your finance background, you would prefer money over bonds if the expected return of money is greater than that of bonds. Keynes assumed that the return on money was zero. For bonds, however, the return is in the form of interest payments and expected capital gains.

What is the relationship between interest and price of a bond? You know that higher the expected interest rates, the lower the expected price of a bond. If interest rates rise, the price of a bond falls, and therefore you may suffer a capital loss. If you expect that the interest rates will rise by a substantial amount, then the capital loss may outweigh the interest payments on the bond, resulting in a negative return.

Keynes assumed that interest rates gravitate to some normal value. If interest rates are below this normal value, you expect them to rise in the future, lowering the price of bonds thus leading to capital losses. In this case, people will prefer to hold their wealth in the form of money and not bonds. The opposite is true.

**Putting the three motives together**

Putting the three motives together we get the money equation. Note that Keynes emphasized on the real quantities, not nominal quantities

Md/P is the real demand for money.

Y is income level. The + signs means the higher the income, the higher the demand for money.

I is the real interest rate. The – sign means that the demand for real money balances is inversely related to expected levels of interest rates.

The money equation is used in the IS-LM analysis later on.

Taking reciprocals on both sides of equation above, the money equation can be written as;

=

If we multiply both sides by Y, income level, we get

Recall from the Fischer equation (MV=PY) that V= and thus we can write the above equation as:

Using logic we can reason that;

Because demand for money is inversely related to the level of interest rates, that is, the higher the expected interest rates the demand for money goes down. Thus the velocity of money   
 rises.

We can see why V is unlikely to be constant but rather positively related to interest rates, contrary to the assumption by Fischer.

**FRIEDMAN’S MODERN QUANTITY THEORY OF MONEY**

In 1956, Milton Friedman developed a theory of demand for money in a famous article, “the Quantity Theory of Money: A restatement”. His analysis was very close to Keynes theory, although he did refer to Irving fisher.

Friedman, like his predecessors pursued the question of why people chose to hold money. He postulated that the demand for money must be driven by the same factors that influence the demand for any asset. He applied the theory of asset demand to money. Thus the demand for money is influenced by wealth (Y), and the expected return of other assets relative to the expected return of money.

Y is the measure of wealth, reffered to as permanent income.

Rm is the expected return on money.

Rb is the expected return on bonds.

Re is the expected return on equity, common stock.

is the expected inflation rate.

The signs indicate whether the demand for money is either positively (+) or negatively (-) related to the terms that precede them.

An individual can hold wealth in several forms besides money. Friedman categorised them into three; bonds, equity (common stock), and goods. The incentives for holding these stocks other than money are represented by the expected return on each of the assets relative to the expected return on money. As return on these other assets rises relative to that of money, the demand for money will fall.

DISTINGUISHING BETWEEN THE FRIEDMAN AND KEYNESIAN THEORIES

There are several differences between Friedman’s theory of demand for money and the Keynesian theory.

* By including many assets as alternatives to money, Friedman recognised that more tahn one interest rate is important to the operation of the aggregate economy. Keynes lumped all other assets other than money into one big category- bonds, because he felt that their returns move generally together. If this is so, there will be no need to include them separately in the money demand function.
* In contrast to Keynes, Friedman viewed money and goods as substitutes; that is people chose between them when deciding how much to hold. This indicates that changes in the quantity of money may have a direct effect on the aggregate spending.
* Friedman did not take the expected return on money to be constant as Keynes did. When interest rates rise in the economy, banks make more money on their loans, and they want to attract more deposits to make even more loans. If there are no restrictions on the deposit rate, this is likely to rise. Thus interest is not a constant.

**THE IS-LM MODEL**

Summary

1. In the simple Keynesian framework in which the price level is fixed, output is determined by the equilibrium condition in the goods market that aggregate output equals aggregate demand. Aggregate demand equals the sum of consumer expenditure, planned investment spending, government spending, and net exports. Consumer expenditure is described by the consumption function, which indicates that consumer expenditure will rise as disposable income increases. Keynes analysis shows that aggregate output is positively related to autonomous consumer expenditure, planned investment spending, government spending, and net exports, and negatively related to the level of taxes. A change to any of these factors leads, through the expenditure multiplier, to a multiple change to aggregate output.
2. The ISLM model determines aggregate output and the interest rate for a fixed price level using the IS and LM curves. The IS curve traces out the combinations of the interest rate and aggregate output for which the goods market is at equilibrium. The LM curve traces out the combinations for which the market for money is in equilibrium. The IS curve slopes downwards because higher interest rates lower planned investment spending and net exports and so lower equilibrium output. The LM curve slopes upward, because higher aggregate output raises the demand for money and so raises the equilibrium interest rate.
3. The simultaneous determination of output and interest rates occurs at the intersection of the IS and LM curves, where both the goods market and the market for money are in equilibrium. At any other level of interest rates and output, at least one of the markets will be out of equilibrium, and the forces will move the economy towards the general equilibrium point at the intersection of the IS and LM curves.