BS2551 Money Banking and Finance

Money Demand

There are three fundamental reasons as to why people demand money:

1) Transitory demand – the amount of money that you require to survive.

2) Precautionary demand – the amount of money required in case of an emergency.

3) Speculative demand – the amount of money required for investment opportunities and / or luxury items.

Formally, the demand for money can be represented by the following equation:

$$M^d = kPy$$

Money demand (M^d) is assumed to be a proportion (k) of nominal income, the price level (P) multiplied by the level of real income (y). Since the primary objective of money demand is expenditure it seems logical that money demand is a function of expenditure (price * income).

In this set up if income is zero (i.e. if an individual is unemployed) then the demand for money is zero. This is unrealistic because money demand is required for survival (food). So a more appropriate relationship for money demand could be:

$$M^d = a + kPy$$

where a is an autonomous component of money demand that is independent of the income level.

In equilibrium, the exogenous stock of money (money supplied that is supplied by the central

bank, Bank of England) must equal the quantity of money demanded.

$$M = M^d = a + kPy$$

where k is treated as fixed in the short run and real output (y) determined, by supply side conditions.

Money Supply and Price Levels

The relationship between the price level and the money supply can be seen in periods of hyperinflation. These are periods when inflation explodes and when this happens the money supply follows suit. Empirical evidence of this can be seen for Germany, where between the time period 1922-1923 monthly inflation rates rose by 322% which subsequently caused the monthly growth rate in the money supply to increase by 314%.

Government Spending

Governments can increase spending by increasing taxation, selling additional bonds to the public or increasing the money supply. It is more common to implement the first two methods because inflation targeting has caused the Bank of England to control the level of the money supply.

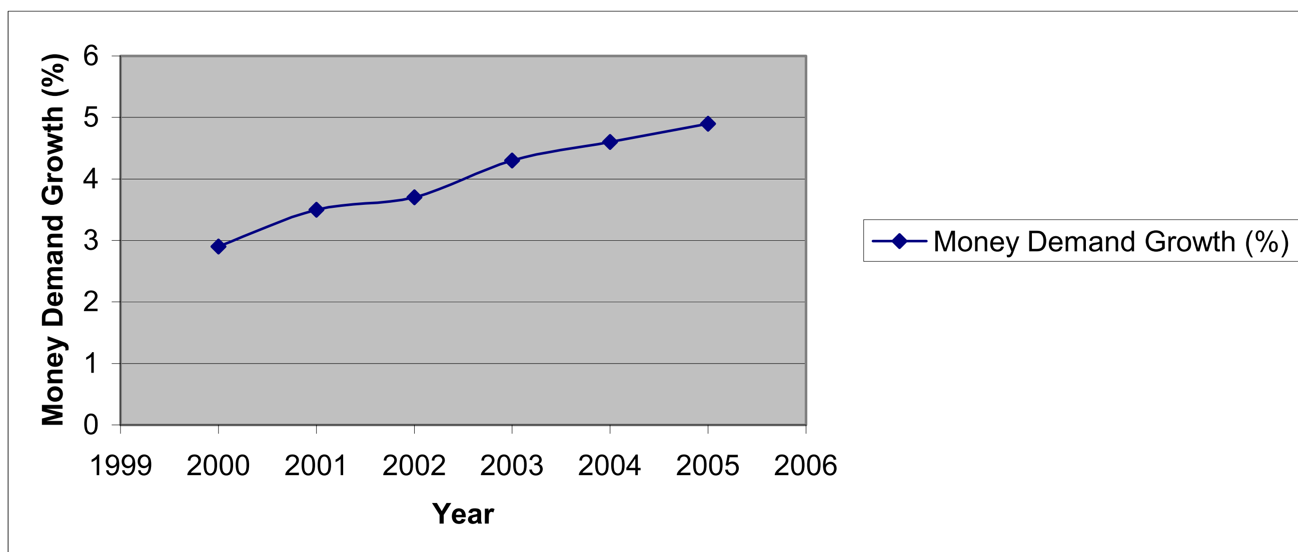
We assume that borrowers and lenders are in equilibrium. The government then sells bonds to the public creating an excess of borrowers over lenders. This in turn increases the interest rate to bring us back to equilibrium. The increased interest rates cause the public to save more (example, interest rate rises make it more expensive to borrow reducing the demand for mortgages, decreasing house prices), therefore reducing k (the proportion of income required for consumption) reducing money demand.

If the government reduces tax, more disposable income available, k increases and money demand is increased. If taxes increase, k falls, money demand falls.

Tax cuts are a very effective way to eliminate recession, for instance tax cuts of 30% in 1980 caused the UK to move away from recession.

Empirical UK Evidence on Money Demand

Money demand has been continuingly rising since 2000.



This is because of the influence of house prices, relatively low interest rates make mortgages relatively cheap, causing money demand to rise.

Factors affecting Money Demand

Interest Rates - The interest rates on three month US treasury bills (based on Bank of England base rates), for example fell from 14% in 1981 to 3% in 1993.

Inflation – Lower inflation rates (inflation targeting in UK sets inflation to 2.5% after 1992) make it cheaper to hold cash, thus increasing money demand.

Finally, changes in money deposits available to public make investments more liquid. For example, Stock, Cash ISA plans and instant access savings accounts are entirely liquid, increasing money demand.