

Supply of money



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INTRODUCTION:**DEFINITIONS OF MONEY SUPPLY**

The supply of money is a stock at their particular point of time, though it conveys the idea of a flow over time. The term the supply of money: is synonymous with such terms as money stock', ' stock of money', ' money supply' and ' quantity of money'. The supply of money at any moment is the total amount of money in the economy. There are three alternative views . regarding the definition or measures of money supply .

“ The most common view is associated with the traditional and Keynesian thinking which stresses the medium of exchange function of money.

According to this view money supply is' defined as currency with the public and demand deposits with commercial banks. Demand deposits are savings and current accounts of depositors in a commercial bank. They are the liquid form of money because depositors can draw cheques for any amount lying in their accounts and the bank has to make immediate payment on demand. Demand deposits with commercial banks plus currency with the public are together denoted as M1 the money supply.

This is regarded as a: narrower, definition of the money supply.

The second definition is broader and is associated with the modern quantify theorists headed by Friedman. Professor Friedman defines the money supply at any moment of time as “ literally the number of dollars people are carrying' around in their pockets, the number of dollars they have to their credit at banks or dollars they have their credit at banks in the form of demand deposits, and also commercial bank time deposits.”

Time deposits are fixed deposits” of customers in a commercial bank:. Such deposits earn a fixed rate of interest varying with the time period for which the amount is deposited. Money can be withdrawn before the expiry of that period by paying a penal rate of interest to the bank. So time deposits possess liquidity and are included in the 1. Money supply by Friedman. Thus this definition includes M1 plus time deposits of commercial banks in the supply of money. This wider definition is characterized as M2 in America and M3 in Britain and India. It stresses the store of value function of money or what Friedman says, ‘ a temporary abode of purchasing power.

The third definition is the broadest and is associated with Gurley and Shaw.

They include in the supply of money, M2 plus deposits of savings banks, building societies, loan associations, and deposits of other credit and financial institutions. The choice between, these alternative definitions of the money supply depends on two considerations:

One “ a particular choice of definition may facilitate or blur the analysis of the various motives for holding cash;” 2 and two from the point of view of monetary policy an appropriate definition should include the area over which the monetary authorities can have direct influence. If these two criteria are applied, none of the three definitions is wholly satisfactory.

The first definition of money supply may be analytically better because M1 is a sure medium of exchange. But M1 is an inferior store of value because it earns no rate of interest, as is earned by time deposits. Further, the central bank can have control over a narrower area if only demand deposits are included in the money supply.

The second definition that includes time deposits (M2) in the supply of money is less satisfactory analytically because “ in a highly developed financial structure, ‘ it is important to consider separately the motives for holding means of payment and time deposits.” Unlike demand deposits, time deposits are not a perfect liquid form of money. This is because the amount lying in them can be withdrawn immediately by cheques.

Normally, it cannot be withdrawn before the due date of expiry of the deposit. In case a depositor wants his money earlier, he has to give a notice to the bank which allows the withdrawal after charging a penal interest rate from the depositor. Thus time deposits lack perfect liquidity and cannot be included in the money supply. But this definition is more appropriate from the point of view of monetary policy because the central bank can exercise control over a wider area that includes both demand and time deposits held by commercial banks.

The third definition of money supply that includes M2 plus deposits of non bank financial institutions is unsatisfactory on both the criteria. Firstly, they do not serve the medium of exchange function of money. Secondly, they almost remain outside the area of control of the central bank. The only advantage they possess is that they are highly liquid store of value. Despite this merit, deposits of non-bank financial institutions are not included in the definition of money supply.

DETERMINANTS OF MONEY SUPPLY

There are two theories of the determination of the money supply. According to the first view, the money supply is determined exogenously by the central

bank. The second view holds that the money supply is determined endogenously by changes in the economic activity which affect people's desire to hold currency relative to deposits, the rate of interest, etc.

Thus the determinants of money supply are both exogenous and endogenous which can be described broadly as: the minimum cash reserve ratio, the level of bank reserves, and

the desire of the people to hold currency relative to deposits. The last two determinants together are called the monetary base or the high powered money..

1. The Required Reserve Ratio

The required reserve ratio (or the minimum cash reserve ratio or the reserve deposit ratio) is an important determinant of the money supply. An increase in the required reserve ratio reduces the supply of money with commercial banks and a decrease in required reserve ratio increases the money supply.

The RRI is the ratio of cash to current and time deposit liabilities which is determined by law. Every commercial bank is required to keep a certain percentage of these liabilities in the form of deposits with the central bank of the country. But notes or cash held by commercial banks in their tills are not included in the minimum required reserve ratio.

But the short-term assets along with the cash are regarded as the liquid assets of a commercial bank. In India the statutory liquidity ratio (SLR) has been fixed by law as an additional measure to determine the money supply.

The SLR is called ' Secondary reserve ratio in other countries while the required reserve ratio is referred to as the primary ratio.

The raising of the SLR has the effect of reducing the money supply with commercial banks for lending purposes, and the lowering of the SLR tends to increase the money supply with banks for advances.

2. The Level of Bank Reserves

The level of bank reserves is another determinant of the money supply.

Commercial bank reserves consist of reserves on deposits with the central bank and currency in their tills or vaults. It is the central bank of the country that influences the reserves of commercial banks in order to determine the supply of money.

The central bank requires all commercial banks to hold reserves equal to a fixed percentage of both time and demand deposits. These are legal minimum or required reserves. Required reserves (RR) are determined by the required reserve ratio (RRr) and the level of deposits (D) of a commercial bank: $RR = RRr \times D$. If deposits amount of Rs 80 lakhs and required reserve ratio is 20 per cent, then the required reserves will be $20\% \times 80 =$ Rs 16 lakhs.

If the reserve ratio is reduced to 10 per cent, the required reserves will also be reduced to Rs 8 lakhs. Thus the higher the reserve ratio, the higher the required reserves to be kept by a bank, and vice versa. But it is the excess reserves (ER) which are important for the determination of the money supply. Excess reserves are the difference between total reserves (TR) and required reserves (RR): $ER = TR - RR$.

If total reserves are Rs 80 lakhs and required reserves' are Rs 16 lakhs, then the excess reserves are Rs 64 lakhs (Rs 80 - 16 lakhs). When required reserves are reduced to Rs 8 lakhs, the excess

Open market operations refer to the purchase and sale of government securities and other types. of assets like bills, securities, bonds, etc., J both government and private in the open market. When the central bank buys or sells securities in the open market, the level of bank reserves expands or contracts. The purchase of securities by the central bank is paid for with cheques to the holders of securities who, in turn, deposit them in commercial banks thereby increasing the level of bank reserves. The opposite is the case when the central bank selling securities to the public and banks who make payments to the central bank through cash and cheques thereby reducing the level of bank reserves.

The discount rate policy affects the money supply by influencing the cost and! supply of bank credit to commercial banks. The discount rate, known as the bank rate in India, . is the interest rate at which commercial banks borrow from, . the central , bank. A high discount rate means that commercial banks get less amount by selling securities to the central bank.

The commercial banks, in turn raise their lending rates to the public thereby making advances dearer for them.

Thus there will be contraction . of credit and the level of commercial bank reserves. Opposite is the case when the bank rate is lowered. It tends to expand credit and the consequent bank reserves. It should be noted that commercial bank reserves are affected significantly only when open market

operations and discount rate policy supplement each other. Otherwise, their effectiveness as determinants of bank reserves and consequently of money supply is limited.

3. Public's Desire to Hold Currency and Deposits

People's desire to hold currency (or cash) relative to deposits in commercial banks also determines the money supply. If people are in the habit of keeping less in cash and more in deposits with the commercial banks, the money supply will be large. This is because banks can create more money with larger deposits. On the contrary, if people do not have banking habits and prefer to keep their money holdings in cash, credit creation by banks will be less and, the money supply will be at a low level.

4. Other Factors

The money supply is a function not only of the high-powered money determined by the monetary authorities, but of interest rates; income and other factors. The latter factors change the proportion of money balances that the public holds as cash. Changes in business activity can change the behavior of banks and the public and thus affect the money supply. Hence the money supply, is not only an exogenous controllable item but also an endogenously determined item.

Measures of money supply in India:

There are four measures of money supply in India which are denoted by M1, M2, M3, and M4. This classification was introduced by the Reserve Bank of India (RBI) in April 1977. Prior to this till March 1968, the RBI published only one measure of the money supply, M or M1, defined as currency and demand deposits with the public.

This was in keeping with the traditional and Keynesian views of the narrow measure of the money supply. From April 1968, the RBI ' also started publishing another measure of the money supply which it called Aggregate Monetary Resources (AMR). This included M, plus time deposits of banks held by the public. This was a broad measure of money supply which was 44 in line with Friedman's view.

But since April 1977, the RBI has been publishing data on four measures of the money supply which are discussed as under.

M, The first measure of money supply, M1 consists of:

- * Currency with the public which includes notes and coins of all denominations in circulation excluding cash on hand with banks:
- * demand deposits with commercial and cooperative banks, excluding inter_bank deposits; and
- * ' other deposits' with RBI which include current deposits of foreign central banks, financial institutions and quasi-financial institutions such as ! DBI, IFCI, etc, other than of banks, IMF, IBRD, etc.

The RBI characterizes M1 as narrow money.

M2. The second measure of money supply is M2 which consists of M1 plus post office savings bank deposits. Since savings bank deposits of commercial and cooperative banks are included in the money supply, it is essential to include post office savings bank deposits. The majority of people in rural, and urban India have preference for post office deposits from the safety viewpoint than bank deposits.

M3' The third measure of money supply in India is M3 which consists of M1 plus time deposits with commercial and cooperative banks, excluding inter bank time deposits. The RBI calls M3 as broad money. M4' The fourth measure of money supply is M4 which consists of M3 plus total post office deposits comprising time deposits and demand deposits as well. This is (he broadest measure of money supply.

Of the four inter-related measures of money supply for which the RBI publishes data, it is M3 which is of special significance. It is M3 which is taken into account in formulating macroeconomic objectives of the economy every year. Since M1 is narrow money and includes only demand deposits of banks.

Along with currency held by the public, it overlooks the importance of time deposits in policy making. That is why, the RBI prefers M3 which includes total deposits of banks and currency with the public in credit budgeting for its credit policy. It is on the estimates of increase in M3 that the effects of money supply on prices and growth of national income are estimated. In fact, M3 is an empirical measure of money supply in India, as is the practice in developed countries. The Chakravarty Committee also recommended the use of M3 for monetary targeting without any reason.

MONEY SUPPLY AND LIQUIDITY:

Of the four measures of money supply in India, M, which consists of currency with the public and demand deposits with commercial and cooperative banks, is the most liquid form of money. Currency' consists of notes, rupee

coins, two rupee coins, five rupee coins and small coins: and cash on hand with banks, are the most liquid assets.

Demand deposits are savings bank accounts and current accounts in banks from which depositors can withdraw cheques for any amount lying in their accounts. Thus like currency, demand deposits are the most liquid and possess the medium of exchange function of money.

A Liquid asset is one which is easily spend able, and transferable at face value anywhere and at any time.

It can be turned into the generally acceptable medium of exchange quickly without any risk of loss. The phrase ' without risk of loss" refers to the currency unit (Rs, \$ or £) and not. to real purchasing power. Government bonds, time deposits (also known as savings deposits which are different from savings bank deposits, shares, real estate, etc.. are ' frozen' assets which can be sold or exchanged for money on short notice only. They are thus less liquid than money.

M2 consists of M, plus post office savings bank deposits. In India, die majority of people in rural and urban areas prefer to keep their cash in post office savings bank deposits from the safety viewpoint because they think th1). t post offices are government owned and managed. With the nationalisation of 20 commercial banks and opening of their branches in almost all rural areas of the country, the distinction between post office savings banks deposit and commercial savings bank deposits has disappeared. Still the majority of rural people being illiterate, they prefer post offices to banks even by force of habit.

The inclusion of post office savings bank deposits in M₁, is meant to measure, the increase in total money supply which affects the economy. But post office savings bank deposits are less liquid than currency and demand deposits because they cannot be easily withdrawn. There are no chequing facilities, except in metropolitan cities and that too in main post offices.

The depositors have to undergo a cumbersome process of cash withdrawals in post offices. M₃ includes M₁ plus time deposits (also known as savings deposits in developed countries) with commercial banks and cooperative banks. This is broad money which stresses the store of value function of money along with the medium of exchange function.

Time deposits with banks are less liquid than currency and demand deposits because they are held for a fixed time period at a fixed rate of interest. . 70 to 90 per cent of the total money deposited in this account can be withdrawn before the expiry of full period by paying a penal interest rate to the bank. So time deposits do possess liquidity but less than demand deposits. The fourth measure of money supply is M₄ which includes M₃ plus total post office deposits comprising time deposits and savings bank deposits. They tend to increase the money supply in the country manifold. But these total post office deposits are less liquid than total bank deposits for the reasons already given in the case of M₂. If deposits with non-bank financial institutions such as mutual savings banks, building societies, insurance companies, loan associations and other credit and financial institutions are also included along with total post office deposits.

Taking all such assets vis-à-vis money, they differ in the degree of liquidity. Since currency is easily spend able and transferable, and has more stability in value, it possesses the highest degree of liquidity. Demand deposits of banks are also as liquid as currency because they are chequing accounts and easily serve as medium of exchange.

But demand deposits of post offices do not possess the same degree of liquidity as bank deposits. Time deposits of banks, post offices and of other non-bank financial institutions are less liquid than “ demand deposits because they cannot be easily transferred to depositors in the form Of cash and spent. They serve more as a store of value. So far as shares of corporations are concerned, they are also less liquid because they take more time to be sold and transferred. They involve cost In the act of transferability in the form qf brokerage or commission. They cannot be easily converted into cash and spent.

Hence they possess less liquidity than demand deposits. Bonds of companies also possess less liquidity because they can be converted⁴ into cash after the expiry of the bond maturity period. But they are transferable and earn higher interest return. Government securities are issued in the name of initial’ purchases and, as such, are non-marketable, because they cannot be sold to someone else. So they are not liquid. On the other hand, money market mutual fund shares, post office savings bonds and national savings certificates possess the advantage of being cashable though they are also non-transferable.

They can be returned for repayment of principal plus a fixed amount interest after a short waiting period before the actual maturity date. They are thus as liquid as fixed deposits of banks and post offices.

It is on account these reasons that economists prefer M1 as the measure of money supply' because among all the assets, currency and demand deposits possess the highest degree of liquidity. However, for practical purposes in policy formulation and for empirical studies, governments and researchers use M3 as the measure Of money supply which is less liquid than M2.

But how does a change in money supply affect liquidity? A change in the money supply affects liquidity by bringing changes or readjustments in the portfolio holdings of the assets of the people. This depends on the effect of money supply on aggregate spending. If people decide to spend the increased money supply in purchasing such assets as shares and debentures, there will be less money available in liquid form with the public.

If the stock market ' R' is bullish, people may convert assets in their portfolios in buying more shares. On the other hand, if there is uncertainty in the stock market, people may hold the increased money supply in Dank deposits or invest it in real estate if they expect property prices to rise. But it is the money authority that influences money supply in the economy by following " easy': or " tight" monetary policy. It does so by controlling aggregate spending and thereby influencing business activity, Output and employment.

But the monetary authority is not always successful in controlling spending by increasing' or decreasing, the money supply and hence liquidity. This is

because the central bank has little control over the velocity of circulation of money, non-bank financial intermediaries, business expectations, time lags in monetary policy, etc. It is, therefore, very difficult to predict the effects of changes in money supply on liquidity.

Poverty is arguably the most pressing economic problem of our time. And because rising inequality, for a given level of income, leads to greater poverty, the distribution of income is also a central concern. At the same time, monetary policy is one of the modern age's most potent tools for managing the economy. Given the importance of poverty' and the influence of monetary policy, it is natural to ask if monetary policy can be used as a tool to help the poor.

Analysing the macroeconomic policy challenges arising from the price surges, the study argues that many governments will have to adjust policies in response to the price shock while the international community will need to do its share to address this global problem.

In advanced countries higher food and fuel prices are reducing people's living standards and making it more difficult for governments and central banks to support growth while containing inflation.

In emerging economies, and especially in some low-income countries, the stakes are even higher. For the very poor, high food prices can mean deep poverty, hunger, and malnutrition.

Key findings:

* Higher food prices have cost a group of 33 poor net food importers \$2. 3 billion, or 0. 5 percent of 2007 annual GDP, since January 2007. In the same period, the effect of rising oil prices on 59 low-income net oil importers was \$35. 8 billion, or 2. 2 percent of their GDP.

* Annual food price inflation for 120 low-income and emerging market countries rose to 12 percent at the end of March 2008 from 10 percent three months earlier, while fuel prices accelerated to 9 percent from 6. 7 percent in the same period. Preliminary data indicate the problem is worsening.

* Poor countries that are highly dependent on food imports are particularly vulnerable to rising food prices. The share of household spending on food in emerging and developing economies typically exceeds 50 percent.

* Oil and food prices are expected to stay at high levels. Supply has been slow to respond to rising demand for commodities, which was largely the result of rapid economic growth in emerging and developing economies.

Economic growth is the single most important factor influencing poverty. Numerous statistical studies have found a strong association between national per capita income and national poverty indicators, using both income and nonincome measures of poverty.

One recent study consisting of 80 countries covering four decades found that, on average, the income of the bottom one-fifth of the population rose one-for-one with the overall growth of the economy as defined by per capita GDP.

Moreover, the study found that the effect of growth on the income of the poor was on average no different in poor countries than in rich countries, that the poverty-growth relationship had not changed in recent years, and that policy-induced growth was as good for the poor as it was for the overall population. Another study that looked at 143 growth episodes also found that the “ growth effect” dominated, with the “ distribution effect” being important in only a minority of cases.

These studies, however, establish association, but not causation. In fact, the causality could well go the other way. In such cases, poverty reduction could in fact be necessary to implement stable macroeconomic policies or to achieve higher growth.

Studies show that capital accumulation by the private sector drives growth. 6 Therefore, a key objective of a country’s poverty reduction strategy should be to establish conditions that facilitate private sector investment. No magic bullet can guarantee increased rates of private sector investment.

Instead, in addition to a sustainable and stable set of macroeconomic policies, a country’s poverty reduction policy agenda should, in most cases, extend across a variety of policy areas, including privatization, trade liberalization, banking and financial sector reforms, labor markets, the regulatory environment, and the judicial system. The agenda will certainly include increased and more efficient public investment in a country’s health, education, and other priority social service sectors.

Macroeconomic Instability Hurts the Poor

In addition to low (and sometimes even negative) growth rates, other aspects of macroeconomic instability can place a heavy burden on the poor. Inflation, for example, is a regressive and arbitrary tax, the burden of which is typically borne disproportionately by those in lower income brackets. The reason is twofold.

First, the poor tend to hold most of their financial assets in the form of cash rather than in interest-bearing assets. Second, they are generally less able than are the better off to protect the real value of their incomes and assets from inflation. In consequence, price jumps generally erode the real wages and assets of the poor more than those of the non-poor.

Moreover, beyond certain thresholds, inflation also curbs output growth, an effect that will impact even those among the poor who infrequently use money for economic transactions. ⁸ In addition, low output growth that is typically associated with instability can have a longer-term impact on poverty (a phenomenon known as “ hysteresis”).

This phenomenon typically operates through shocks to the human capital of the poor. In Africa, for instance, there is evidence that children from poor families drop out of school during crises. Similarly, studies for Latin American countries suggest that adverse terms-of-trade shocks explain part of the decline of schooling attainment.

Conclusion:

Despite being one of the fastest growing economies, India needs far-reaching reforms to grow faster for bringing down poverty and reducing fiscal deficit, International Monetary Fund (IMF) said today.

Stating that fiscal sustainability remained a serious concern, the report said despite some commendable structural measures, the Union Budget for 2000-01 envisaged “disappointingly modest” fiscal adjustment in the coming year. Stressing on further deregulation and privatisation, IMF urged for “prompt and credible” progress in reducing deficit.

With budgetary slippages at central and state government levels, the consolidated public sector deficit is now expected to have risen to around 11 per cent of GDP which is two per cent higher than the budgeted , IMF noted. The report said, large fiscal imbalances raised public debt to 80 per cent of GDP while ‘crowding out’ private investment and constraining the monetary authorities to ease the high real interest rate without diluting gains from the low inflation rate.

Lauding India’s progress in literacy and mortality, the report said poverty rates remain high with more than a third of the population still living below poverty line. “This uneven progress raises questions about the impact of economic and structural reforms implemented since the mid-1980’s on growth in India,” IMF said while admitting the recovery from 1991 crisis was rapid.

However, per capita growth has slowed recently, averaging four per cent 2000 compared to 4.75 per cent in 1997, it said. To some extent, this

reflected the completion of cyclical catch-up following the 1991 balance of payments crisis, as well as the adverse impact of the 1997 regional crisis and agricultural supply shocks.

To sustain high growth in all sectors and alleviate poverty, IMF suggested durable fiscal consolidation to raise National saving and crowd-in private investment spending, further liberalization of foreign trade and investment flows and labour market reforms. Reforms to remove price distortions, would promote efficiency and export competitiveness, it said adding that fiscal priorities also need to be redirected towards investment in human and physical capital.

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