Money & Price Level and Banking & Monetary Policy

Mr. Murugiah Greshan

JMC Jayasekera Management Centre (Pvt) Ltd
Pioneers in Professional Education
65/2A, Chittampalam Gardiner Mawatha, Colombo 02 | T: +94 112 430451 | E: info@jmc.lk | F: +94 115 377917

Banking and Monetary Policy - Chapter 1

Money can be defined as anything that generally accepted in the discharge of financial obligations. Therefore, money is any accepted means of payment for delivery of goods or the settlement of debt.

In the absence of money, exchange must take the form of barter, which is the direct exchange of a commodity for another commodity. This method served man's requirements adequately in an era when his needs were few and he provided for his needs directly through his own efforts. But with increased specialization, barter system became cumbersome, slowing down transactions.

The difficulties that occurred in the past when goods were directly exchanged without the use of money are listed below.

- Absence of a double coincidence of wants between two parties
- Absence of a standard measure of value
- Absence of a fixed rate of exchange
- Difficulty of dividing valuable goods into small parts without loss of value
- The difficulty of exchanging services
- The perishability of the goods to be exchanged
- Problems of transporting goods

Money was invented to facilitate the exchange process. Money serves as a common medium of exchange. Money is used to pay for goods and services including payments for factors of production such as labor.

Functions of Money

The primary four functions of money are identified as:

Medium of exchange – The most significant function of money is as a medium of exchange in order to facilitate transactions. If there is no money, all business transactions would have to be carried out through barter system. Money allows economic agents to exchange goods without the needs for barter.

Store of value – Individuals can choose to forgo consumption in the current time period and save to increase their spending power in the future. They are more likely to do this when there is confidence that money will hold its value. Inflation has the effect of reducing the internal purchasing power of money.

Unit of account – money as a common unit of account enables us to compare the relative prices of goods and services in rupees and cense. Changes in relative prices cause switches in demand as consumers respond to the incentive of lower prices for some goods and services.

Standard of deferred payment – Allows payment for goods and services consumed today in a future time period, for example, the mortgage on a house or a loan to purchase a car.

JMC vLearning your virtual learning partner

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

Demand for and Supply of Money, Interest Rate and Monetary Aggregates

Demand for Money

The demand for money is the desired holding of financial assets in the form of money.

The demand for money is affected by several factors, including the level of income, interest rates, and inflation as well as uncertainty about the future. The way in which these factors affect money demand is usually explained in terms of the three motives for emending money: the transactions, the precautionary, and the speculative motives.

- **Transactions Motive:** The transactions motive for demanding money arises from the fact that most transactions involve an exchange of money. Because it is necessary to have money available for transactions. Money will be demanded. The total number of transactions made in an economy tends to increase over time as income rises. Therefore, the transactions demand for money is positively related to real incomes and inflation.

- **Precautionary motive:** People often demand money as a precaution against an uncertain future. Unexpected expenses, such as medical or car repair bills, often require immediate payment. The need to have money available in such situations is referred to as the precautionary motive for demanding money. Similar to the transactions demand for money, precautionary demand for money is also positively correlated with real incomes and inflation.

- **Speculative motive:** Money, like other stores of value, is an asset. The demand for an asset depends on both its rate of return and its opportunity cost. Typically, money holdings provide no rate of return and often depreciate in value due to inflation. The opportunity cost of holding money is the interest rate that can be earned by lending or investing one's money holdings. The speculative motive for demanding money arises in situations where holding money is perceived to be less risky than the alternative of lending the money or investing it in some other asset.

The demand curve for money illustrates the quantity of money demanded at a given interest rate. Notice that the demand curve for money is downward sloping, which means that people want to hold less of their wealth in the form of money if the interest rate is higher on bonds and other alternative investments.

Question

Explain the relationship between increase in real GDP and demand for money.

Answer

Consider a period of sustained economic growth in the economy. Rising real incomes and increasing numbers of people employed will increase the demand for money at each rate of interest. Therefore higher real national income causes an outward shift in the demand for money. This is shown in the diagram below

Supply of Money

The money supply of an economy is the entire stock of currency and other liquid instruments in that economy as of a particular time. The money supply can include cash, coins and balances held in various deposit accounts. Analysis of the money supply is very important in developing economic policies.

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

Money supply data is collected, recorded and published periodically, typically by the country's government or central bank. Public and private sector analysis is performed because of the money supply's possible impact on price level, inflation and the business cycle.

The central bank controls the supply of money, and they interact with other financial institutions. The supply curve for money illustrates the quantity of money supplied at a given interest rate. Notice that unlike a typical supply curve in the product market, the supply curve for money is vertical, because it does not depend on interest rates. It depends entirely on decisions made by the central bank.

Equilibrium in The Money market and interest rates

Equilibrium in the money market takes place when the money demand of the economy is equal to its money supply.

The interest rate determined at the point of intersection of money demand and money supply curves is known as the equilibrium interest rate. When there is a change in money demand or money supply of the economy, the equilibrium interest rate will also be changed.

If the economy is doing well and real GDP increases, the higher economic output leads to higher incomes. When income increases people choose to hold in the form of money, so this leads to an increase in the demand for money. When money demand increases, the demand curve for money shifts to the right, and as a result the equilibrium interest rate will increase.

On the other hand, if the central banks decided to increase the money supply of the economy it will lead to a rightward shift the money supply curve, and result in a lower interest rate.

Monetary Aggregates

Money supply is considered as a "stock variable" with reference to a particular point of time. Money supply has many dimensions associated with time and liquidity.

Therefore, it is analyzed under different type of monetary aggregates.

Monetary aggregates are examined closely by economists and investors, as they give a clear picture of the true size of the money supply of the economy. Frequent reporting of the monetary aggregates allows investors to measure the rate of change in the monetary aggregates and overall monetary velocity.

If the monetary aggregates are growing too quickly, it could generate inflationary fears and cause central bank to raise interest rates or take other measures to halt money supply growth

- **Narrow Money Supply (M1):** Narrow money supply refers to the aggregate of the currency held by public and the demand deposits held by public at commercial banks.

- **Broad Money Supply (M2):** Broad money supply refers to the aggregate of Narrow money supply and time and savings deposits held by public at commercial banks.

- **Consolidates Broad Money Supply (M2b):** Consolidated broad money supply refers to the aggregate of Broad money supply and foreign currency deposits.

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

- **Monetary Base (MB):** Monetary Base refers to the total of currency held by public and the deposits of commercial banks at the Central Bank (SRR).

- **Broad Money Multiplier:** Broad Money Multiplier refers to the impact on the broad money supply when the monetary base increased by a certain amount. It is calculated by dividing Broad money supply from the monetary base.

Value of Money

Value of money can be classified into the following two main categories.

- Internal Value of Money
- External Value of Money

Internal value of Money can be considered under two aspects.

- Internal Official Value
- Internal Real value

The internal official value refers to the face value of money which is stated on the notes or coins.

The Internal Real value means the quantity of goods and services that can be purchased in the domestic market with a unit of money. Generally the value of money refers to the Internal Real Value.

The External value of Money too can be considered with respect to two aspects.

- Official External value
- Real External value

The official External value is the exchange rate. It is the number of foreign currency units that will be exchanged with a unit of the domestic currency. In other words, it refers to the amount of the domestic currency that should be paid to obtain a unit of a foreign currency.

The Real External value is the amount of goods and services which could be purchased in a foreign market with a unit of the domestic currency. It is the external purchasing power of the domestic currency.

The index of the value of money is used for measuring the internal value of the currency. The decline in the value of money determined by the variations in the general price level over a period of time. An increase in the price index causes a fall in the value of money.

$$\text{Value of Money} = \frac{1}{\text{price index of the current Year}} \text{x}100$$

The Velocity of Money

The velocity of money refers to the number of times a unit of money exchanges among people over a given period of time.

$$\text{Velocity of Money} = \frac{\text{Nominal GDP}}{\text{Broad Money Supply}}$$

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

Price level, inflation and price indices

Inflation means a considerable and persistent increase in the general price level over a long period of time (continuous increase in the general price level). It measures the annual rate of change of the general price level in the economy. The overall level of prices throughout the economy should be considered rather than prices in one particular market or industry.

Problems of Inflation

- If the prices of goods and services within the country increase too much then people and businesses may start to import more goods from abroad because they are cheaper.

- On the other hand, high prices will cause to reduce the exports of the country, since other countries will not buy from the country where the prices are very high. This will cause major problems for the economy.

- As a result of this "Balance of Payment" will be affected badly.

- Production within the country will be discouraged (Due to decrease in exports and increase in imports) and the economy will not be able to achieve an economic growth.

- When the production decreased in the country, there will be reduction in employment opportunities and as a result of that 'unemployment' will be increased in economy.

- People need to keep asking for pay increases to match price rises. This can cause problems at work.

- If people are on fixed incomes e.g. pensioners or students. They will be worse off because they will be able to buy fewer goods.

- he costs to businesses may increase. They may cut back on production.

Inflation and the Price Level

When price of goods and services increase, the value of money falls. There is an inverse relationship between the price level and the internal purchasing power of money. When there is inflation money buys less in real terms. People can protect themselves against the effects of inflation by investing in financial assets that give a rate of return at least equal to the rate of inflation.

According to the value of the inflation rate, several categories of inflation can be identified. They are 'Moderate inflation', 'Galloping inflation' and 'hyperinflation'.

Moderate Inflation

When the general level of price rises at a moderate rate over a long period of time it is called 'moderate rate of inflation' or 'creeping inflation'. The moderate rate of inflation varies from country to country. However, a single digit rate of inflation is called moderate inflation. An important feature of moderate inflation is that it is predictable and does not harmful to the economy. It is healthy for an economy.

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

Galloping Inflation

Galloping inflation refers to an inflation that proceeds at an exceptionally high rate. Generally, inflation in the double or triple digit range of per cent per year is labeled as galloping inflation.

Hyper Inflation

When the general price level begins to rise at more than three-digit rate per annum, it is called hyperinflation. During the period of hyperinflation, paper currency becomes worthless and demand for money decrease drastically.

When hyperinflation occurs, the value of money becomes worthless and people lose all confidence in money both as a store of value and also as a medium of exchange. Often drastic action is required to stabilize an economy suffering from high and volatile inflation and this leads to political and social instability.

The economy is continuously experiencing changes in relative prices as demand supply conditions alter in individual markets. For example the relative price of hi-tech goods including PCs and Multi-Media equipment is falling whilst the relative price of cigarettes and fuels has increased in recent years because of rising levels of indirect taxes applied on these goods by the government in successive budget announcements.

Deflation is also fairly unusual although some countries such as Japan and China have experienced price deflation in their economies in recent years.

Demand pull inflation

In an open economy, there are many potential sources of inflationary pressure. Some come direct from the domestic economy, for example the decisions of the major utility companies on their prices for the year ahead, or the pricing strategies of the leading food retailers based on the strength of demand and competitive pressure in their markets.

But inflation can also come from external sources, for example a sudden rise in the cost of crude oil or other imported commodities, foodstuffs and beverages. Fluctuations in the exchange rate can also have a powerful effect on inflation in the short and medium term, for now, we focus on the two main causes of cost and price inflation in an economy.

Demand pull inflation

Demand pull inflation occurs when total demand for goods and services exceeds total supply. This type of inflation happens when there has been excessive growth in aggregate demand and there is an inflationary gap.

Demand-pull inflation is often monetary in origin. When the authorities allow the money supply to grow faster than the ability of the economy to supply goods and services, this type of inflationary condition will arise. The phrase that is often used is that there is “too much money chasing too few goods”.

Figure 5.4 Demand pull inflation

Cost push Inflation

Cost-push inflation originates from the supply side and it is usually the result of increases in the cost of production. Cost push inflation occurs when firms increase prices to maintain or protect profit margins after experiencing a rise in their costs of production.

JMC vLearning
© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

This can be shown by an inward shift of the short run aggregate supply curve which leads to a contraction in aggregate demand and a fall in real output, but an increase in the general price level.

Figure 5.4 Cost push inflation

Price Indices

A price index refers to the price of an item in a specific year to the price in a reference year. It is calculated by dividing each year by the reference year and multiplying by 00. A price index is a weighted average of price relatives for a given class of goods or services in a given economy, during a given interval of time. It is a statistic designed to help to compare how these price relatives, differ between time periods or geographical locations.

Price indexes have several potential uses and especially it can be used to measure the economy's general price level or a cost of living. The consumer price index (CPI), the producer price index (PPI) and the GDP deflator are frequently used measures of the price level.

- The CPI measures price changes for goods and services purchased by urban consumers.
- The PPI measures price changes for goods at the wholesale level. Specifically, it measures the price changes in finished goods, intermediate goods and raw materials.
- The GDP deflator measures changes in prices for goods and services included in GDP. It is price index calculated by dividing nominal GDP by Real GDP and then multiplying by 100. Therefore, the GDP Deflator is measure of changes in prices for aggregate output relative to prices that existed in the base year used to calculate real GDP.

Question

If the Colombo consumer price index for year 1 was 142 and for year 2 was 152, what was the rate of inflation prevailed between the two years?

1. 47.00%
2. 10.00%
3. 6.60%
4. 7.04%

Answer

7.04%

Colombo consumer price index has increased from 142 to 152, by 7.04%

JMC vLearning
© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

Formation of Monetary Data vs. Physical data for Accounting

Use of only monetary data is not sufficient to obtain the information required for sustainable development, though they are effective to explain the value relations of the elements between the economy and natural assets. Physical data are complementary to them. So, physical data were introduced into the System of Environmental and Economic Accounting (SEEA). Moreover, human comprehension of the environment is expanded by the linkage between physical and monetary data through introduction of imputed valuation for physical data.

The linkage also means the one between the SEEA and the System of National Accounts (SNA). The physical data system of the SEEA is based on the concept of material/ energy balance. The concept is very effective to explain the flows of materials necessary or unnecessary for humans between the economy and the environment, and, if related to the input-output table, is further useful as a tool for the analysis of material flows between them.

JMC vLearning "your virtual learning partner"

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

Banking and Monetary Policy - Chapter 2

Banking system of country

In any economy, banks play an important and sensitive role. Their performance directly affects the growth, efficiency and the stability of the economy. A country needs sound monetary and banking policies, transparent fiscal and financial regimes, and functioning capital and insurance markets to efficiently participate in international trade.

Developing economies have been heavily involved in international trade, and a sound financial and banking system is essential for promoting trade. An efficient system helps in managing cash flows, providing loans, mitigating risk etc.

Central Bank

A central bank is the institution that manages a country's currency, money supply, and interest rates. Central banks also regulate and supervise the commercial banks and other financial institutions (registered finance companies, specialized leasing companies etc.) of their respective countries. In contrast to a commercial bank, a central bank possesses a monopoly on increasing the money supply (monetary base) in the country, and usually also prints the national currency, which usually serves as the country's legal tender.

The central Bank's functions have developed since its incorporation, in response to the changing economic environment. In line with the trends in central banking, the objectives of the Central Bank of Sri Lanka (CBSL) were streamlined by amending the Monetary Law Act (MLA) in 2002, to permit it to perform its function in order to achieve its core objective.

Objective of Central Bank

The Central Bank has two core objectives:

- Maintaining economic and price stability
- Maintaining financial system stability

The Central Bank had multiple objectives prior to the amendment of the law, which could be in conflict or inconsistent with each other. The two objectives are correlated and complement each other. Safeguarding financial system stability is very important and essential requirement to achieve price stability. Therefore, the two objectives are in agreement and this supports the Central Bank to perform its main functions more effectively.

Functions of Central Bank

In order to achieve its core objectives as well as to discharge its responsibilities as economic advisor and banker to, and agent of the government, the CBSL undertakes the following functions.

Core functions

- Economic and Price Stability
- Financial System Stability

Ancillary to core functions

- Currency Issue and Management

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

JMC vLearning "your virtual learning partner"

Agency functions

- Employee's Provident Fund Management
- Foreign Exchange Management
- Public Debt Management
- Regional development

The Central Bank has many different types of relationships with commercial banks. The key relationships are as follows.

- The regulator and supervisor of the commercial banks
- The banker to the commercial banks
- The lender of the last resort
- Provider of facilities to manage liquidity of commercial banks
- The advisor to commercial banks

Licensed Bank

Banks play a central role within the financial system, as they have the capacity to provide liquidity to the entire economy. Banks are also responsible for providing payment services, thereby facilitating all entities to carry out their financial transactions.

The financial system in Sri Lanka comprises two categories of banks, namely Licensed Commercial Banks (LCBs) and Licensed Specialized Banks (LSBs).

In terms of the asset base and the magnitude of services provide, the LCBs are the single, most important category of financial institution within the banking sector. Therefore, the health of the financial system depends to a large extent on the soundness of the financial institution, particularly the LCBs.

Commercial Bank

Commercial bank is a financial institution providing services for businesses, organizations and individuals. Services include offering current, deposit and saving accounts as well as giving out loans to businesses. Commercial banks make their profits by taking small, short-term, relatively liquid deposits and transforming these into larger, longer maturity loans. This process of asset transformation generates net income for the commercial bank.

Like any other private organization, commercial banks are profit oriented institutions. Their main functions are summarized below.

- Attract deposits from public. These can take different forms. First, current accounts are deposits made by public which they can withdraw on demand and which are subject to transfer by cheque (Demand deposits). Usually, these do not yield any interest to the bank's customer. Second, there are time deposits which earn interest but which cannot be transferred by cheque or withdrawn on demand. Some period of notice of withdrawal is normally required but banks may waive this requirement subject to sacrifice of interest by the bank's customer.
- Lending money in the form of loans or overdrafts. Banks lend to all businesses, public authorities and government. The interest charged on loans remains a primary source of a bank's income.

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

- Banks provide a payment mechanism, whereby individuals, firms and government can make payments to each other.
- Provide a place for individuals, firms and government to store their wealth.
- Providing safety vaults for individuals to store jeweler and other valuables.
- Advising and assisting individuals and companies on investment matters.
- Provide assistance for exporters and importers by opening letters of credit.
- Facilitating foreign currency transactions.
- Debt factoring services

Question

Explain the meaning and role of “financial intermediaries”.

Answer

The main functions of financial institutions that make up the banking system is to collect deposits from those with surplus cash and lend the funds to those with an immediate need for them. A financial intermediary is an institution that links lenders with borrowers at a higher interest rate. This process can be illustrated as follows.

There are many financial intermediaries and they are playing different roles in the economy.

Monetary Policy and its instruments

Monetary policy has been defined in different ways. ‘The actions taken by the monetary authorities to change the quantity, availability and cost of money’ can be defined as monetary policy. In other words, it is the actions taken by the monetary authority of an economy to control the money supply.

Therefore, the monetary policy is essentially a program of actions undertaken by the monetary authorities (generally the Central Bank) to control and regulate the supply of money with the public and the flow of credit with a view to achieving macroeconomic goals. The instruments of the Monetary Policy can be categorized as follows.

- Quantitative Controls
- Qualitative Controls

Quantitative Controls

Quantitative increases or decreases in the money supply are called as quantitative controls.

Open Market Operations

This refers to the purchase and sale of treasury bills by the Central Bank in the open market.

If the objective is to reduce the money supply, treasury bills will be sold in the open market. The buyers pay for these securities through cheques drawn on their current accounts in the commercial banks. It will reduce the ability of the commercial banks to create credit.

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

When it is necessary to increase the money supply, the Central Bank will repurchase the securities so that there will be a flaw of money from the Central Bank to the public and increase in the money supply.

Statutory Reserve Ratio

The Central Bank stipulates that the commercial banks should keep a certain proportion of their deposit liabilities as reveres with the Central Bank. An increase in the reserve ratio will reduce the credit creation of the commercial banks while a reduction in the reserve ratio increases the ability to create credit.

Bank Rate Policy

The Central Bank of Sri Lanka provides loans to the commercial banks as the lender of the last resort. In such cases the Central Bank may raise the interest rates in order to reduce the money supply and lower the bank rate to increase the money supply. The monetary authority of an economy sets interest rates with the aim of keeping inflation under control over the coming years. Monetary Policy can control the growth of demand through an increase in interest rates and a contraction in the real money supply.

Qualitative Controls

These controls regulate the direction of the flow of funds instead of increasing or decreasing the money supply.

Moral Suasion

A persuasion tactic used by the Central Bank to influence and pressure, but not force, banks into adhering to policy. Tactics used are closed-door meeting with bank directors, increased severity of inspections, appeals to community spirit, or vague threats.

- Fixing maturity period for commercial bank credit
- Portfolio ceiling
- Provision of refinance facilities
- Fixing selective interest rates

Question

Explain the meaning of Monetary Policy

Answer

Monetary policy has been defined in different ways. 'The actions taken by the monetary authorities to change the quantity, availability and cost of money' can be defined as monetary policy.

Therefore, the monetary policy is essentially a program of actions undertaken by the monetary authorities (generally the Central Bank) to control and regulate the supply of money with the public and the flow of credit with a view to achieving macroeconomic goals.

JMC vLearning "your virtual learning partner"

© 2020 JMC Jayasekera Management Centre (Pvt) Ltd

Profitability and liquidity in relation to commercial banks.

The intermediary process of commercial banks involves collecting funds from the surplus units as deposits and providing facilities to deficit units as loans and advances.

Therefore, commercial banks do their business with funds collected from others. The value of deposits that the bank can generate is depending on the confidence that people have about the financial soundness of such banks. To maintain that requirement, banks have to maintain liquidity. That is banks have to keep sufficient funds with them to maintain liquidity. On the other hand, banks have to generate profit through lending. They want to give more and more loans if they want to generate more profits.

Maximum safety can be attained only if the banks keep high amount of cash against the deposits they accept. But if they do this, this will not bring any profits for banks. Thus, if the bank goes for maximum safety then they will have to sacrifice the profitability objective. Similarly if they go other way round that is they only keep on investing and trying to increase the profitability and they will have the problem if customer demands for cash. Therefore, it is very difficult for the banks to reconcile the twin objective of bringing the profitability factor and liquidity factor go hand in hand.

Accordingly, banks face the challenge of maintaining optimal balance between the two conflicting objectives of liquidity and profitability.

Role of banks in financial inclusion and business expansion

Banks accept deposits and make loans and generate a profit from the difference in the interest rate paid and charged to depositors and borrowers respectively. The process performed by banks of taking in funds from a depositor and then lending them out to a borrower is known as financial intermediation.

Through the process of financial intermediation, certain assets are transformed into different assets or liabilities. Accordingly, financial intermediaries channel funds from people who have extra money or surplus savings (savers) to those who do not have enough money to carry out a desired activity (borrowers).

Financial inclusion is a tool for combating poverty. It is estimated that globally over two billion people are excluded from access to financial services, of which one third is in India. Access to various financial services enables the poor people to participate in the growth of the economy. Many banks are forced to adopt financial inclusion rather than their own interest. The banks have encountered various problems while adopting financial inclusion, such as improper repayment, need for additional workforce, more time consumption, heavy work load, high cost etc.

Banks are vital institutions in any society as they significantly contribute to the development of an economy through facilitation of business. Banks also facilitate the development of saving plans and are instrument of the government's monetary strategy among others.

JMC vLearning
© 2020 JMC Jayasekera Management Centre (Pvt) Ltd