Lecture: Money supply

Learning objective: To gain in-depth knowledge of money supply and money Demand

Money Supply

Primary role of money is to serve as a medium of exchange.

Money is what we use to make payments.

Money also acts as measure of value and store of wealth.

The money supply is the entire stock of currency and other liquid instruments circulating in a country's economy at of a particular time.

The money supply includes cash, coins, and balances held in form of cheques and savings accounts, and other near money substitutes.

Money Supply is the total quantity of money in circulation at a point in time.

Changes in the money supply are closely watched because of the relationship between money and macro economic variables such as inflation.

The money supply can be measured in various ways using narrower or broader definitions of which classes of financial assets are considered to be money.

Economists analyze the money supply and develop policies revolving around it. Through controlling interest rates and increasing or decreasing the amount of money flowing in the economy.

Public and private sector analysis is performed because of the money supply's possible impacts on price level, inflation, and the business cycle.

Change in the money supply has long been considered to be a key factor in driving macroeconomic performance and business cycles.

An increase in the supply of money typically lowers interest rates, which in turn, generates more investment and puts more money in the hands of consumers, thereby stimulating spending.

Businesses respond by ordering more raw materials and increasing production.

The increased business activity raises the demand for labor.

The opposite can occur if the money supply falls or when its growth rate declines.

The various types of money in the money supply are generally classified as Ms, such as M0, M1, M2 and M3, according to the type and size of the account in which the instrument is kept.

The money supply reflects the different types of liquidity each type of money has in the economy.

- M0 and M1, are also called narrow money and include coins and notes that are in circulation and other money equivalents that can be converted easily to cash.
- M2 includes M1 and, in addition, short-term time deposits in banks and certain money market funds.
- M3 includes M2 in addition to long-term deposits.

M1 is the money supply that encompasses physical currency and coins, demand deposits, traveler's checks, and other checkable deposits.

M2 is a measure of the money supply that includes cash and checking deposits (M1) as well as near money.

M3 is a measure of money supply that includes M2, large time deposits, institutional money market funds and short-term repurchase agreements.

Lecture: Demand for money

Learning objective: To know how changes in monetary policy affects output and prices in the economy

Demand for money

The demand for money refers to how much assets individuals wish to hold in the form of money (as opposed to illiquid physical assets.)

It is sometimes referred to as liquidity preference.

The demand for money is related to income, interest rates and whether people prefer to hold cash(money) or illiquid assets like money.

- At high interest rates, people prefer to hold bonds (which give a high-interest payment).
- When interest rates fall, holding bonds gives a lower return so people prefer to hold cash.

Types of demand for money

- **Transaction demand** – money needed to buy goods – this is related to income.
- **Precautionary demand** – money needed for financial emergencies.
- **Asset motive/speculative demand** – when people wish to hold money rather than buy assets/bonds/risky investment.

Transaction demand for money

Transaction demand for money – the money we need to purchase goods and services in day to day life.

The demand for money is a function of prices and income (assuming the velocity of circulation is stable.)

If income rises, demand for money will rise.

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.

Hence, as income or GDP rises, the **transactions demand** for money also rises.

In an inventory model, the demand for holding money depends on the frequency of getting paid, and the cost of depositing money in a bank.

When employees are paid, they will hold some money to buy goods.

If they are paid once a month, they may deposit half to benefit from interest payments, and then withdraw after some time.

However, electronic transfers and debit cards have made this less relevant.

Precautionary demand for money

Precautionary demand for money – the money we may need for unexpected purchases or emergencies.

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.

- **Asset motive**

The asset motive states that people demand money as a way to hold wealth. This may occur during periods of deflation or periods where investors expect bonds to fall in value.

Speculative demand

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.

Example, if a stock market crash seemed imminent, the speculative motive for demanding money would come into play; those expecting the market to crash would sell their stocks and hold the proceeds as money.

The presence of a speculative motive for demanding money is also affected by *expectations of future interest rates and inflation.*

If interest rates are expected to rise, the opportunity cost of holding money will become greater, which in turn diminishes the speculative motive for demanding money.

Similarly, expectations of higher inflation presage a greater depreciation in the purchasing power of money and therefore lessen the speculative motive for demanding money.

Keynes explained the asset motive through what he termed ‘speculative demand’.

He argued that demand for money is a choice between holding cash and buying bonds.

If interest rates are low, then people will tend to expect rising interest rates, and therefore a fall in the price of bonds. In this case, demand for holding wealth in the form of money will be higher.

If interest rates are high, and people expect interest rates to fall, then there is likely to be greater demand for buying bonds and less demand for holding money. If interest rates fall, then the price of bonds will rise.

The demand for money can vary due to many factors other than income and interest rates.

- Technological changes – e.g. debit cards, make holding cash less important. Easy access to current accounts can enable people to hold less cash.

- Availability of credit. If credit is more available, precautionary demand for money will fall as individuals feel they can borrow – if they meet short-term difficulties.

Irrational behaviour of asset prices.

Markets can enter boom and busts driven by psychological factors. In these bubble periods, demand for assets will rise and demand for holding money will fall.

- It depends on how you define money. Narrow definitions such as M0 and M1 are quite different from broader definitions. Also, there is near-money which includes short-term gilts with the maturity of fewer than six months.

- The demand for money can refer to narrow definitions of the money supply (M0, M1) or broad measures of the money supply like M3 or M4.

Lecture: Monetary policy transmission

Learning objective: To know how changes in monetary policy affects output and prices in the economy

Monetary transmission mechanism

It is the process by which asset prices and general economic conditions are affected as a result of monetary policy decisions.

Such decisions are intended to influence the aggregate demand, interest rates, and amounts of money and credit in order to affect overall economic performance.

The traditional monetary transmission mechanism occurs through interest rate channels, which affect interest rates, costs of borrowing, levels of physical investment, and aggregate demand.

In short, the monetary transmission mechanism can be defined as the link between monetary policy and aggregate demand.

Monetary transmission mechanism describes the routes through which a monetary policy change affects output and prices.

It first impacts the financial variables.

Changes in financial variables, in turn, affect consumer and business spending, and thereby, aggregate demand for goods and services.

Finally, a change in aggregate demand impacts output and prices in the economy.

There are many monetary policy signals by the RBI; the most powerful one is the repo rate.

When repo rate is changed, it brings changes in the overall interest rate in the economy as well.

As a result of a decrease in repo rate, the interest rate on loans by banks also changes and this encourages consumption and investment activities of businesses and households.

In an economy, both consumption and investment are often financed by borrowings from banks.

As the repo rate brings changes in market interest rate, the repo rate channel is often referred as interest rate channel of monetary transmission.

Impact on financial variables

Interest rate

The first impact of change in monetary policy (change in money supply) is felt on the interest rates in the economy.

If the monetary policy stance is perceived to be temporary, the pressure initially is on short term interest rates.

If it is sustained, the pressure may extend to long term rates as well.

Changes in interest rates, caused by monetary policy changes, in turn, affect several financial variables in the market place.

In case of expansionary monetary policy where an increase in money supply will result in a fall in interest rates.

Asset Prices

A policy induced decrease in interest rates raises the value of long lived assets like stocks, bonds, and real estate.

This increases the net worth of households and businesses (positive wealth effect).

The value of the collateral they offer for obtaining loans correspondingly will go up.

Exchange rates

Depending on how free the movement of capital is between countries, a fall in interest rates in one country relative to another country will make investment in the other country’s markets more attractive.

Capital will flow out of the country.

People will sell local currency to buy more foreign currency to invest in that country’s markets, because of more attractive interest rates.

The demand of foreign currency will go up compared to supply of foreign currency.

The local currency will depreciate in value vis-à-vis the foreign currency.

Consumer spending (C)

A fall in interest rates affects consumer spending in two ways.

Those who have debt, the interest outgo will be less than before, the remaining disposal income will go up.

This will enable them to spend more on goods and services.

Those who are not in debt, a fall in interest rates (returns on savings) makes current consumption more attractive, than future consumption.

They will spend more and save less.

Similarly, with an increase in asset prices, net worth of individuals is increased, consumer spending goes up.

Also the collateral value will gone up, it will be easier to borrow and spend on goods and services.

Finally, currency depreciation makes imports relatively more expensive than before.

The competitiveness of domestic producers of goods and services, therefore, goes up.

This encourages spending away from imports to domestically produced goods and services.

Domestic spending goes up.

Lecture: Commercial banking and Investment banking

- Learning objective: To understand about different sectors of banking in an economy, their main functions, and role in development of economies.

Investment Banking *vs* Commercial Banking

Investment banks and commercial banks represent two divisions of the banking industry, and each type provides substantially different services.

Investment Banks

Investment banks are primarily financial middlemen, helping corporations set up IPOs, get debt financing, negotiate mergers and acquisitions, and facilitate corporate reorganization.

Investment banks also act as a broker or advisor for institutional clients.

Investment banks underwrite new debt and equity securities, help with selling securities, and drive mergers and acquisitions, reorganizations, and broker trades.

Most financial services firms operate as either an investment bank or a commercial bank, although some combine functions.

Some eminent investment banks include JPMorgan Chase (JPM), Goldman Sachs (GS), Morgan Stanley (MS), Credit Suisse (CS), and Deutsche Bank (DB).

Clients include corporations, pension funds, other financial institutions, governments, and hedge funds.

Many investment banks also have retail operations for small, individual customers.

Commercial Banks

Commercial banks take deposits, provide checking and debit account services, and provide business, personal, and mortgage loans.

They also offer basic bank products such as certificates of deposit (CDs) and savings accounts to individuals and small businesses.

Most people hold a commercial bank account, rather than an investment bank account, for their personal banking needs.

Commercial banks largely make money by providing loans and earning interest income from the loans.

Commercial banks act as managers for deposit accounts belonging to businesses and individuals, although they are primarily focused on business accounts, and they make public loans from the deposited money they hold.

Since the financial crisis and economic downturn beginning in 2008, many entities that mixed investment banking and commercial banking have fallen under intense scrutiny.

There is substantial debate over whether the two divisions of the banking sector should operate under one roof or if the two are best kept separate.

Key differences

The main difference between investment banking and commercial banking is that investment banking typically deals with purchasing and selling bonds and stocks for companies, and also helping them issue IPOs, while commercial banks primarily deal with deposits or loans for companies or individuals.

basically, investment banks deal with trading securities, whereas commercial banks do not.

However, there are still several other key differences between investment banking and commercial banking in their regulation, risk level, and benefits.

Risk and Regulation

Commercial banks have strictly regulated compared to investment banks.

Commercial banks must be regulated by several government entities including the central banks and other monetary agencies.

whereas investment banks only need be regulated by the Securities and Exchange Commissions (SEBI in India).

which allows for more freedom in making decisions and investments.

Because of this difference in regulation, commercial banks are often less risky than investment banks but, on the flip side, investment banks provide more room to maneuver strategic decisions than commercial banks do.

Combination Benefits

While not many large banks combine their divisions, some of the benefits of combination include banks being able to issue companies IPOs (using its investment bank capabilities) and then extend lines of credit to them (using the commercial bank side).

This allows banks to receive benefits from higher commissions and trading revenue from the stock.

By having both the issuing securities and extending lines of credit sides covered, combination banks are able to boost the growth of companies and reap the rewards.

However, concerns still remain over the temptation of combination banks to keep undeserving companies afloat - which was a major aspect of the bubble/burst cycle seen during the depression.

Lecture: Hedge funds

- Learning Objectives: To understand how financial markets and financial institutions work, and the role of different instruments in working of these financial institutions in economies.

Hedge Funds

A **hedge fund** is an investment fund that pools capital from accredited investors or institutional investors and invests in a variety of assets, often with complicated portfolio-construction and risk management techniques.

Hedge funds are alternative investments using pooled funds that employ different strategies to earn active return, for their investors.

Hedge funds may be aggressively managed or make use of derivatives and leverage in both domestic and international markets with the goal of generating high returns.

It is important to note that hedge funds are generally only accessible to accredited investors as they require less regulations than other funds.

One aspect that has set the hedge fund industry apart is the fact that hedge funds face less regulation than mutual funds and other investment vehicles.

Each hedge fund is constructed to take advantage of certain identifiable market opportunities.

Hedge funds use different investment strategies and thus are often classified according to investment style.

There is substantial diversity in risk attributes and investments among styles.

Legally, hedge funds are most often set up as private investment limited partnerships, that are open to a limited number of accredited investors and require a large initial minimum investment.

Investments in hedge funds are illiquid as they often require investors to keep their money in the fund for at least one year, a time known as the lock-up period.

Withdrawals may also only happen at certain intervals such as quarterly or bi-annually.

They are more expensive as compared to conventional investment instruments because they have a Two And Twenty fee structure, meaning they charge two percent for asset management and take 20% of overall profits as fees.

They have had an exceptional growth curve in the last twenty years and have been associated with several controversies.

Characteristics

They're only open to "accredited" or qualified investors .

They offer wider investment latitude than other funds: A hedge fund can basically invest in anything land, real estate, stocks, derivatives, and currencies. Mutual funds, by contrast, have to basically stick to stocks or bonds and are usually long-only.

They often employ leverage: Hedge funds will often use borrowed money to amplify their returns.

As we saw during the financial crisis of 2008, leverage can also wipe out hedge funds.

Fee structure: Instead of charging an expense ratio only, hedge funds charge both an expense ratio and a performance fee.

This fee structure is known as "Two and Twenty“ a 2% asset management fee and then a 20% cut of any gains generated.

Financial Panic

A financial panic is a sudden, drastic, widespread economic collapse.

Events during which bank depositors attempt to withdraw their deposits, equity holders sell stock, and market participants in general seek to liquefy their assets.

All at once, many people become convinced that their money or investments are at risk and rush to the institutions holding their assets.

Unable to pay back all their customers at once, the institutions go bankrupt, starting a domino effect that brings down the whole economy.

Typical symptoms of a panic are many bankruptcies, loan defaults, or bank failures at the same time; It also includes a period of intense stock market or real estate speculation followed by a steep decline in prices; and/or a sudden run on banks by large numbers of people trying to withdraw their deposits.

Deregulation of financial industry

Deregulation is the reduction or elimination of government power in a particular industry, usually enacted to create more competition within the industry.

Over the years the struggle between proponents of regulation and proponents of no government intervention have shifted market conditions.

Finance has historically been one of the most heavily scrutinized industries in the United States.

Proponents of deregulation argue that overbearing legislation reduces investment opportunity and impasses economic growth, causing more harm than it helps.

The U.S. financial sector wasn't heavily regulated until the stock market crash of 1929 and the resulting Great Depression.

Then administration enacted many forms of financial regulation, including the Securities Exchange Acts of 1933 and 1934 and the U.S. Banking Act of 1933 (Glass-Steagall Act.).

The Indian banking system was characterized by dominant government ownership and stringent regulation of entry, branch licensing, administrated structure of interest rates, direct credit allocation as well as high mandatory reserve ratio prior to deregulation.

Reform in the Indian commercial banking was initiated in 1992 with the intention to facilitate a healthy and productive financial system to support the sustainable growth of the real economy.

The reform package was guided by the recommendation of two Narasimhan Committee reports (in 1991 and 1998 respectively).

The deregulation process can therefore be divided in two stages: the first stage refers to the period 1992-1997; the second started in 1998 and is still being implemented.