



Interest Rate Determination

MEGA LECTURE

A2 Economics

Determination of Interest Rates

- Apart from prioritization of macroeconomic objectives and management of macroeconomy, Keynesians and Monetarists schools of economics also have disagreement concerning how equilibrium is reached in money/capital markets.

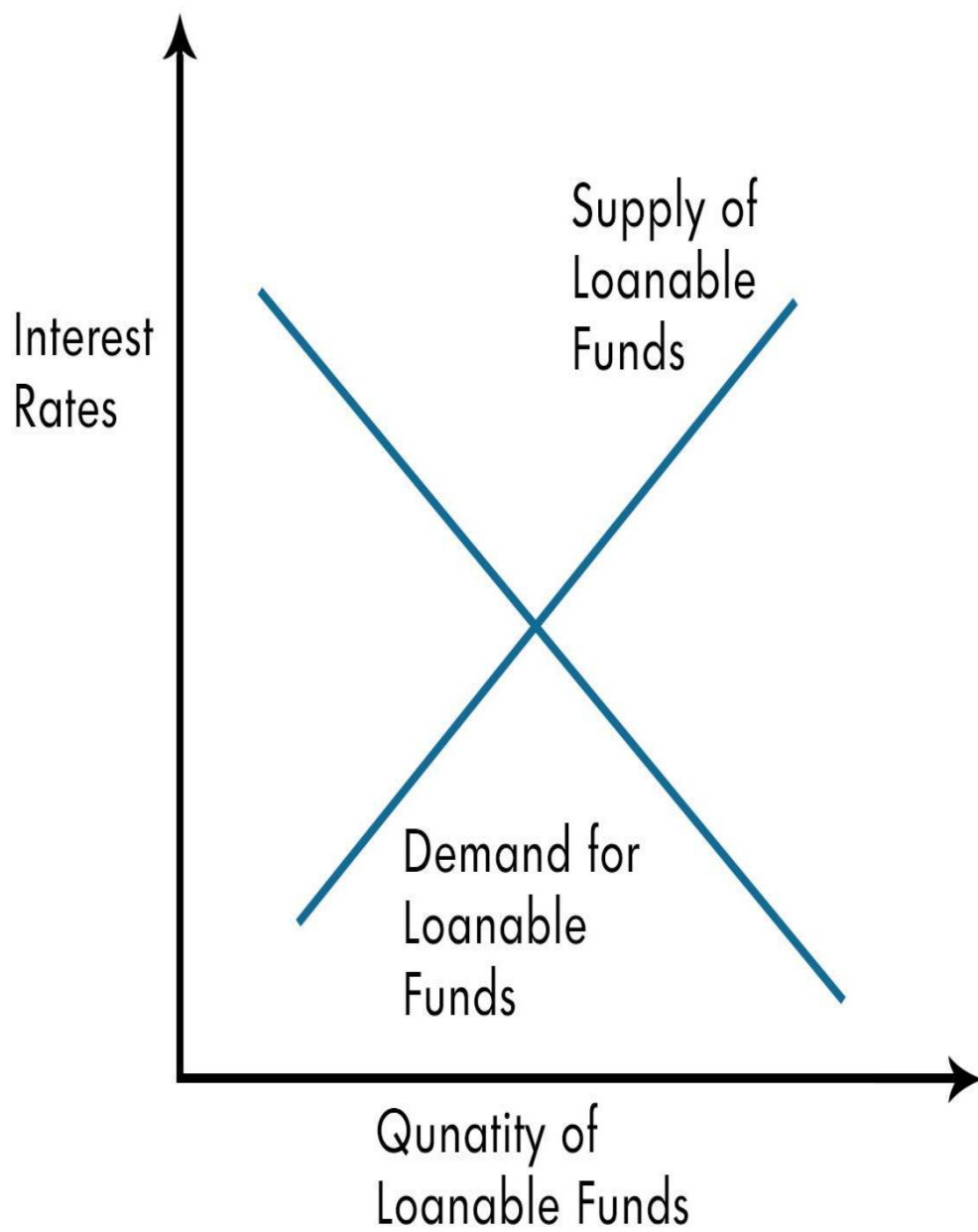
Determination of Interest Rates

- Money/Capital markets include all financial institutions that channelize economy's saving into real and financial investments.
- Unlike Monetarists that claim that interest rates are determined through interaction of demand for and supply of “loanable funds”, Keynesians argue that demand and supply of “money” influence level of interest rates.

Determination of Interest Rates

- Loanable funds refer to excess money/cash that is available in economy for lending purposes.
- Demand for loanable funds is determined by individuals who are potential borrowers and therefore want to borrow money for consumption and/or investment purposes.
- Supply of loanable funds is determined by individuals who wish to lend their savings to earn additional income through **interest payments**.

Loanable Funds Theory



Liquidity Preference Theory

- Keynesians explained individuals' demand for money through Liquidity Preference Theory. According to this theory demand for money exists because of following three reasons:

1. Transaction Motive

2. Precautionary Motive

3. Speculative Motive

- As the names suggest, individuals hold money for making expected transactions to meet their daily consumption needs.

Liquidity Preference Theory

- Similarly often people keep more cash than what they expect to spend during certain time period. This is known as precautionary motive.
- Lastly since excess money carries opportunity cost for its owner which can be calculated in terms of lost interest rate, therefore in times of low interest rates individuals might prefer to hold cash instead of depositing it in banks to earn income through interest payments.

Liquidity Preference Theory

- As we can well imagine, individuals demand for money for transaction and precautionary motive is interest **inelastic**.
Fluctuations in interest rates do not affect people demand for money. If I need certain amount for my daily expenditure purposes then higher interests rates will not convince me to give up my current consumption in expectations of higher future consumption.

Liquidity Preference Theory

- However this is opposite for speculative motive through which people generally hold less money/cash following economy's higher interest rates. Hence speculative motive is interest elastic and is inversely related to interest rates. Higher interest rates encourage saving which result in **lower quantities of money** held for speculative purposes.

Liquidity Preference Theory

- Since Keynesians believe that money supply is determined by monetary authorities like economies' central banks therefore it will be constant at any given point in time.
- According to Keynesian view of money **market equilibrium** exists where demand for money equals/intersects supply of money.

Liquidity Preference Theory

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Money Supply and Credit Creation

- As mentioned earlier, money supply of an economy is also affected through commercial banks' credit creation.
- Issuing loans to general public is referred to as credit creation. Since often commercial banks are creating loans that are in excess of liquid cash deposited by their depositors therefore credit creation increases money supply.

Money Supply and Credit Creation

- With latest inventions in banking sector people often rely on more secure payment methods than always paying in cash. Use of cheque, paying through debit/credit cards and making online transactions are all examples of money being used as medium of cash without money actually changing hands. This concept is also referred as electronic money.

Credit Creation

- This minimal use of cash has allowed banks to lend more amounts that is actually available to them through depositors' savings.
- For instance if any bank has \$100 cash available then it will most probably lend much more than \$100 to its potential borrowers.

Credit Creation

- Credit Multiplier is used to calculate banks ability to create credit following certain change in their liquid assets (cash deposited).
- $100/\text{Liquidity Ratio}$ is banks' credit creation multiplier.

Credit Creation

- Liquidity Ratio is proportion of liquid assets (deposited cash) that banks are expected to keep in cash. This ratio is often set by economies' Central Banks and is in accordance with their monetary policy targets.
- Higher the liquidity ratio set by Central Banks lower will be economies' money supply through credit creation. This basically means that commercial banks of an economy are expected to keep larger proportion of liquid assets in cash and therefore their lending ability is greatly restraint as a result.

Credit Creation

- For instance if any bank's liquid assets/cash deposits increase by \$ 40 and 10% is economy's prevailing liquidity ratio then Credit Multiplier being $100/\text{liquidity ratio}$ will be $100/10=10$. So this bank will be able to issue loans worth 10 times the proportion of cash deposit that need not be kept as liquid cash. Therefore it will be $10*\$36 = \360

Credit Creation (Practical Example)

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Credit Creation (Practical Example)

- As can be inferred from the example above, on \$40 additional deposits received by a commercial bank its lending increased by \$360.

Open Market Operations

- Other than Central Banks directly influencing economies' commercial banks lending ability, governments can also increase or decrease commercial banks' liquid assets that enhances or reduces their lending ability respectively.
- Open Market Operations are referred to governments' sale/purchase of Government Bonds to affect economy's money supply.

Open Market Operations

- Sale of Government Bonds to general public is generally financed from drawing cash deposited in commercial banks which reduces their liquid assets and hence reduces their lending ability.

Open Market Operations

- Similarly on the other hand, Purchase of Government Bonds back from general public would provide them with additional cash which they will most probably deposit in commercial banks increasing banks' cash deposits and as a result increasing their **lending ability**.

Total Currency Flow and Money Supply

- Other than printing of money and credit creation, currency flow between economies also affect their money supply. In times when more foreign currency is converted in local currency because of
- increased demand for local goods then economies' money supply will increase and vice versa.

- However unless economies are not *persistently facing surplus or deficit* then its money supply will experience negligible change due to international currency flows.

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Money Supply

- Since changes in money supply directly influence all macroeconomic variables including employment, real GDP and inflation hence economists closely observe **fluctuations** in economies' money supply to predict their future performance. Similarly money supply calculations allow economists to devise appropriate monetary policies to regulate countries' economic outcomes.

Money Supply

- Increased money supply results in **lower interests rates** and results in **expansionary monetary policy** with higher aggregate demand. For any given supply of output, (at least in short-run) this increased aggregate demand will result in higher price levels (causing inflation in the economy).
- With invention of complex financial instruments economists update their definition of money supply to accurately estimate changes in this variable.

Narrow and Broad

measures of Money Supply

- Unlike “Narrow” measures of money supply that only includes money that is being used as medium of exchange in any economy, “Broad” measures of money supply also include value of financial instruments that are used as **store of value**.

Narrow and Broad measures of Money

Supply

- Notes and coins in circulation and money kept at commercial banks in current accounts is “Narrow” measure of money

supply and that is also often referred to as “monetary base”. On the other hand, “Broad” measure of money supply also includes pension and mutual funds that people use for **saving purposes.**