HO 2024/8 : Inflation

INFLATION AND BUSINESS CYCLE:

INFLATION: Definition: A sustained/persistent increase in prices across the board in an economy is called Inflation.

DEFLATION/ Disinflation: When the general level of prices is falling over a period of time it is called Deflation/Disinflation.

Rate of Inflation is measured on the basis of price indices which are of two kinds viz WPI (Wholesale Price Index) and Consumer Price Index (CPI).

Rate of Inflation(Year x) = Average Price level(Year x) Minus Average Price level (Year x-1) Divided by Average Price level (Year x-1) then multiplied by 100.

Inflation is measured 'point to point ' basis.

REASONS OF INFLATION:

a) Demand Pull Inflation b) Cost Push Inflation.

MEASURES TO CHECK INFLATION:

a) Supply side measure: Govt may go for import for short term remedy , For long terms, Increase Production, storage, transportation, distribution

b) Cost side measures: Govt may as a short term measure cut taxes, customs etc . For long term measures govt may arrange for better production process, technological innovations etc.

c) Govt may uses tighter monetary policy to cool down demand pull or cost pus inflation.

TYPES OF INFLATION:

Low Inflation, 2.Galloping Inflation, 3. Hyperinflation, 4. Bottle neck inflation and 5 **CORE INFLATION** : Its composition is based on the inclusion or exclusion of the goods and services while calculating inflation. Popular in western economies, core inflation shows price rise in all goods & services other than Energy & Food Articles (Volatile Price Moment Goods). In India it was first used in 2000-01.

Stagflation: It is situation in an economy when inflation and unemployment both are at higher levels contrary to conventional belief(Philips Curve). When the economy is passing through the cycle of stagnation (ie long period of aggregate demand in relation to its production capacity) and the government shuffles with the economic policy, a sudden and temporary price rise is seen in some of the goods such inflation is also known as stagflation.

IMPORTANT TERMS:

Inflationary Gap: Excess of total govt spending over the National Income.
Deflation Gap: Shortfall in total spending against the National Income.

Inflation Tax: a) Erosion of value of money. b) Printing of Currency notes by RBI for deficit financing, it looks as if inflation is working as a tax also known as seigniorage,

Inflation Premium: Bonus/benefit to the borrowers on account of inflation as the rates of interest on their loans do not change with inflation.

Phillips Curve: It is the graphic curve which advocates a relationship between inflation and unemployment in an economy. As per the curve there is a 'trade off' between inflation and unemployment i.e., an inverse relationship between them. The curve suggests that lower the inflation, higher the unemployment.

By the early 1970s, two American economists, Miltron Friedman (Nobel Lauerate, 1976) and Edmund Phelps challenged the idea of the Phillips Curve. According to them the trade off between inflation and unemployment was only short term, because once people came to expect higher inflation they started demanding higher wages and thus unemployment will rise back to its natural rate (the unemployment rate that occurs at full employment when the economy is producing at potential output it is usually called the **Natural rate of unemployment**). They advocated there is no long term trade off between inflation and unemployment. In the long run, monetary policy can influence inflation.They suggested that if monetary policy tried to hold unemployment below its natural rate, inflation will be rising to higher level, which is also known as the **non-accelerating inflation rate of unemployment (NAIRU). NAIRU is that rate of unemployment which is consistent with a constant rate of inflation.**

Reflation: It is a situation often deliberately brought by the govt to reduce unemployment and increase demand by higher public expenditures, tax cuts, interest rate cuts etc.

Inflation Targeting: India commenced it formally in Feb 2015 when an agreement between GOI and RBI was signed related to it called the Agreement on Monetary Policy Framework. (4%+/-2%). This way India joined the club of inflation targeting countries such USA,UK, EU,Japan, South Korea, China, Indonesia and Brazil. New Zealand was the first country in 1989.

When the RBI fails to meet the inflation target, it will send a report to the central government stating reasons and the remedial actions that will be taken. A breach of the tolerance level for three consecutive quarters will constitute a failure of monetary policy.

"The central government notified the following as factors that constitute failure to achieve the inflation target: (a) the average inflation is more than the upper tolerance level of the inflation target for any three consecutive quarters, or (b) the average inflation is less than the lower tolerance level for any three consecutive quarters," the framework stated.

GDP DEFLATOR: This is the ratio between GDP at current prices and GDP at Constant Prices.

What is Imported Inflation?

- Imported inflation refers to the **rise in the prices of goods and services** in a country that is **caused by an increase in the cost of imports** into the country.
- It is believed that a **rise in input costs pushes producers to raise the price** they charge from their local customers, thus boosting inflation.
- It is a **variant of cost-push inflation** which states that a rise in the cost of inputs can lead to an inflation in the prices of final goods and services.

Why?

- **Depreciation of Domestic Currency: Rise in interest rates in the West tends to cause the currencies of developing countries to depreciate against western currencies**, which in turn can lead to higher import costs for these countries.
- **Increase of Money Supply in Domestic Economy:** The value of a currency depreciates against a foreign currency when its supply becomes relatively more abundant than the foreign currency in the forex market.
- **Without Depreciation of Domestic Currency:** For example, rise in international crude oil prices due to fall in oil output is expected to cause prices to rise across an economy which imports oil to produce goods and services.

How?

- When a country’s **currency depreciates** or **prices of imports rise** → People need to **shell out more of their local currency to purchase the necessary foreign currency** required to buy any foreign goods or services → They will **effectively be paying more for anything that** they import.

Understanding the Differences between CPI and WPI

Criteria	WPI	CPI
Level	Measures Inflation at Wholesale level	Measures Inflation at Retail Level
Who Calculates?	Office of Economic Advisor, Ministry of Commerce and Industry (Shri Piyush Goyal)	National Statistical Office, Ministry of Statistics and pr Implementation (Shri Rao Inderjeet Singh)(Other variants : Labour minis
Base year	2011-12	2012
Categories	Primary Articles Manufactured products Fuel and Power. Currently WPI does not include indirect taxes	Food and beverages Pan, Tobacco and Intoxicants Clothing and Footwear Housing Fuel and Light Miscellaneous- Education, Healthcare, Transportation et
Highest Weightage	Manufactured products	Food and Beverages
Impact of increase in Food items	The increase in food items would lead to increase in WPI. However, it would have less impact on WPI as compared to CPI since WPI provides higher weightage to manufactured products and lower weightage to Food items	The increase in the Food items would have larger impa as compared to WPI since it gives more weightage products.
Services included	No	Yes
Targeted by RBI?	No	Yes. The RBI is required to maintain CPI rate of inflati with a deviation of 2%.

Consumer Food Price Index (CFPI)

- The base year and methodology of calculation of CFPI is similar to CPI. However, in order to calculate CFPI, we take into account only the category of Food and Beverages. Within this category, there are 12 sub-groups such as cereals, Meat, fish, Fruits etc.
- Out of these 12 sub-groups, CFPI is based on ten sub-groups, excluding 'Non-alcoholic beverages' and 'Prepared meals, snacks, sweets etc.'.

GROUP DESCRIPTION	OLD SERIES OF CPI (Weights			REVISED SERIES OF CPI. (		

	computed on the basis CES 2004-05			Weights computed on the basis CES 2011-12).		
	Rural	Urban	Combd.	Rural	Urban	Combd.
Food & beverages	56.39	35.81	47.58	34.18	36.29	45.86
Pan, tobacco & intoxicants	2.72	1.34	2.13	3.26	1.36	2.35
Clothing & Footwear	5.36	3.91	4.73	7.36	5.57	6.53
Housing	-	22.54	9.77	-	21.67	10.07
Fuel and Light	10.42	8.40	9.49	7.94	5.50	6.84
Miscellaneous	24.91	28.00	26.31	27.26	29.53	28.32
Total	100	100	100	100	100	100

W P I:

Group	Weight		No. Of itmes		No. Of Quotations	
	2004-05	1993-94	2004-05	1993-94	2004-05	1993-94
All Commodities	100	100	676	435	5482	1918
Primary Articles	20.12	22.02	102	98	579	455
Fuel & Power	14.91	14.23	19	19	72	72
Manufactured Products	64.97	63.75	555	318	4831	1391

Real interest rate is essentially derived after subtracting the inflation rate from the nominal interest rate. So if the nominal interest rate is 10% and inflation is 8% then the real interest will be 2%.

Since RBI targets retail inflation, which is calculated by the Consumer Price Index (CPI), it is easy to believe that the real interest rates are coming down.

Real Interest (R) = Nominal Interest Rate (N) — Inflation Rate (I)

If N is falling sharply and I is increasing — the latest retail inflation was over 6% — then, R or the real interest rate must be falling.

A low real interest rate should encourage businesses to borrow more and make new investments in the economy.
In common perception "inflation rate" refers to the "retail" (CPI) inflation in the economy — that is the inflation that you and I face as consumers.
But businesses are not exactly like consumers. For instance, a steel-producing firm cares little what the inflation in fruits and vegetables is. What it bothers about is the wholesale inflation, especially in steel.
It helps to think of inflation as a proxy of the "pricing power" that a firm or industry enjoys. In any economy, this pricing power varies between businesses — say a steel producer, a sanitiser maker, a vegetable grower and a travel agency — depending on the market conditions such as the demand for their product, ability to store inventories etc.
So while calculating that "R" or the real interest rate for a firm in the manufacturing sector — say a steel manufacturer or a TV or car manufacturer — it would be odd to use "retail" inflation.
Since these products are sold wholesale, one should use Wholesale Price Index-based inflation. And while we are at it, even within the wholesale inflation we should only look at the non-food manufacturing inflation — otherwise called the "core-WPI".

Other Variants of CPI:

The Labour Bureau under the Ministry of Labour and Employment publishes three other variants of CPI which are specific to a particular target group. (***Please note the CPI for the general population is measured by NSO as highlighted above***)

- **CPI-IW:** It is used to calculate the Dearness Allowance (DA) of the Government employees and Industrial workers. Base Year revised from 2001 to 2016.
- **CPI-RL:** Measures the rate of Inflation in the commodities which are commonly consumed by Rural labourers. Base year: 1986-87.
- **CPI-AL:** Measures the rate of Inflation in the commodities which are commonly consumed by Agricultural labourers. Base year: 1986-87.
- **Core Inflation** - An inflation measure which excludes transitory or temporary price volatility as in the case of some commodities such as food items, energy products etc. It reflects the inflation trend in an economy.
- **Headline Inflation -**
- Headline inflation refers to the change in value of all goods in the basket.
- **What to Target: Headline or Core Inflation?**
- Presently, the RBI targets CPI headline rate of inflation and not the Core Inflation. In this regard, the Economic Survey 2020-21 has highlighted that

sole focus on CPI headline rate of Inflation may not be appropriate on account of number of reasons. Accordingly, it has recommended that a greater focus on core inflation is warranted.

- Reasons:
- **Firstly**, Headline inflation may take place due to **volatility** in prices of Crude oil and Food commodities, over which RBI has no control. For example, failure of monsoons, lack of cold chain infrastructure, supply side bottlenecks etc. usually lead to increase in Food prices.
- **Secondly,** most of the time inflation in Food commodities is transitory and may not require any policy action by the RBI
- **Thirdly**, if the RBI tries to control inflation due to volatility in prices of food commodities, it can prove to be counter productive. For example, to control inflation, rate of interest would increase--> Decline in Investment and Consumption Expenditure--> Economic Slowdown.
- **Fourthly,** to measure inflation correctly, weightage must be assigned to different categories of commodities depending upon their share in the household expenditure. Higher the share, higher should be weightage. The share of food commodities in the household expenditure has declined since 2011-12, yet the CPI gives a weightage of almost 45% to the food commodities.
- **New series of the WPI with base year 2012** (i.e. 2011-12) along with Commodity basket was revised.
- **CONSUMER PRICE INDEX:** Other than WPI, India also calculates inflation at the consumer level, similar to all the economies of the world. As Consumers India show wide differentiation of their choice of consumption, purchasing power etc , a single consumer price index (CPI) has not been possible yet which can encompass all the India Consumers . Therefore we had
- **a/** CPI-IW for Industrial Workers (260 items)
- **b/** CPI – UNME Urban Non Manual Employees (365 commodities). It is basically for determing dearness allowances of employees of some foreign companies, banking, insurance, embassies and other financial services. Also for Income tax Act to determine Capital Gains.
- **c/** CPI – AL for Agricultural labourers (260 items in basket)
- **d/** CPI – RL for the Rural Labourers (260 commodities).
- Revision in the CPI: It was in 2011 that the govt announced a new consumer Price Index CPI Rural and CPI Urban and by combining them in to national **CPI-c (Combined). The base year also revised from the existing 2005-06 to 2010-11.** In February 2015 , the CPI was again revised by the CSO (Latest Now published by NSO). The major changes are : 1. Base Year changed to 2012=100, 2. The basket of items and their weighing diagrams have been prepared using the **Modified Mixed**

Reference Period (MMRP) data of Consumer Expenditure Survey (CES), 2011-12, of the 68th Round of National Sample Survey (NSS). This has been done to make it consistent with the international practice of shorter reference period for most of the food items and longer reference period for the items of infrequent consumption.

Effects of Inflation:

1. On Creditors and Debtors: Lenders suffer and borrowers benefit out of inflation.
2. On lending: Institutions don't revise the nominal rate of interest as the real cost of borrowing (ie nominal rate of interest minus inflation) falls by the same percentage with which inflation rises.
3. On Aggregate Demand: Indicates lower supply and higher purchasing capacity among the consumers. Which means rising aggregate demand .
4. On Investment: Investment in the economy is boosted by the inflation (in the short run) because of two reasons: i/ Higher Inflation indicates higher demand and suggests entrepreneurs to expand their production level, and ii/ Higher the inflation, lower the cost of loan.
5. On income: An increase in inflation , erodes the purchasing power of the money in the short run, but in the long run income levels also increase .
6. Savings: In the long run inflation depletes the Savings rate in an economy.
7. On Expenditure: Inflation makes both the forms of expenditures – consumption as well as investment. Increased prices make our consumption levels fall as goods and services we buy get costlier.
8. On Tax: As indirect taxes are imposed ad valorem (on value) hence increase in taxes for the consumers. Similarly, due to inflation, direct tax (income tax, interest tax etc) burden of the tax payers also increases as tax payers gross income moves to the upward slabs of official tax

brackets (but the real value of money does not increase due to inflation, in fact it falls). This problem is also known as **bracket creep – i.e inflation induced tax increases.**

9. **On Exchange Rate:** With every inflation the currency of the economy depreciates (loses its exchange value in front of a foreign currency)provided it follows the flexible currency regime.

10. **On Export:** Export increases.

11. **On Imports:** Advantage to economy of lower imports .

BUSINESS CYCLE:

The fluctuations in the level of economic activity between the depressions and booms has been called by the economists as ***business cycle*** or ***trade cycle*** with recession and recovery as the main intermediate stages. Stagnation and slowdown may be considered as other intermediate stages of the business cycle. We intend here to understand the actual meanings of each of the stages. Economists have pointed out that the business cycle is characterised ***by four*** phases or ***stages*** in which economies alternate:

(i) Depression
(ii) Recovery
(iii) Boom
(iv) Recession

|DEPRESSION

Though depression has visited the world economy only once in 1929, economists have pin-pointed enough number of traits to recognise it. The ***major*** traits of depression could be as given below:
(i) an extremely low aggregate demand in the economy causes activities to decelerate;
(ii) the inflation being comparatively lower; (iii) the employment avenues start shrinking forcing unemployment rate to grow fast; (iv) to keep the business going, production houses go for ***forced labour-cuts*** or ***retrenchment (to cut down production cost and be competitive in the market,)*** etc.
The economic situations become so chaotic in the phase of depression that governments have almost no control over the economy. The Great Depression of 1929gave rise to the ideas of ***strong government intervention*** in the economy, such as deficit financing, monetary management, etc.
What the governments may do if depression visits the economy? The simple answer the world has been able to find is to repeat the policy measures of 1929. The best way to avoid depression is not to let it visit. This is why every modern economy keeps extra-vigil on the major symptoms of its economy so that the prevention-measures can be taken in time and depression is avoided.

RECOVERY:

The business cycle of recovery may show the following ***major*** economy traits:
(i) an upturn in aggregate (total) demand which has to be accompanied by increase in the level of production;
(ii) production process expands and new investments become attractive;

(iii) as demand goes upward, inflation also moves upward making borrowing cheaper for investors;
(iv) with an upturn in production, new employment avenues are created and unemployment rate starts declining; etc.

With the above symptoms, people's income go for a certain increase which creates new demand and a cycle of demand and production (supply) starts playing hand-in-hand to recover the economy. To recover an economy, governments usually go for tax-breaks, interest cuts, an increase in salaries of its employees, etc.

BOOM:

A strong upward fluctuation in the economic activities is called boom. As economies try to recover out of the phases of slowdown, recession and depression at times the measures taken by the governments as well as the private sector might put economic activities as such which the economic systems fail to digest. This is the phase of the ***boom.*** The ***major*** economic traits of boom may be listed as given below:

(i) an accelerated and prolonged increase in the demand;
(ii) demand peaks up to such a high level that it exceeds sustainable output/production levels;
(iii) the economy heats up and a demand supply lag is visible;
(iv) the market forces mismatch (***ie demand and supply disequilibrium)*** and tend to create a situation where inflation start going upward;
(e) the economy might face structural problems like shortage of investible capital, lower savings, falling standard of living, creation of a sellers' market.

The phase of recovery is considered good for the economy and it reaches the stage of boom which is considered better. But the boom has its negative side also. Boom is usually followed by price rise.

|RECESSION This is somewhat similar to the phase of 'depression' we may call it a *mild form* of depression , fatal for economies as this may lead to depression if not handled with care and in time.

Major traits of recession, to a great extent, are similar to that of 'depression' may be summed up as follows:

(i) there is a general fall in demand as economic activities takes a downturn;
(ii) inflation remains lower or/and shows further signs of falling down;
(iii) employment rate falls/unemployment rate grows;
(iv) Industries resort to 'price cuts' to sustain their business.

DOUBLE-DIP RECESSION:

The concept of 'recession' in the USA and Euro Zone is quite precise and technical *'two consecutive quarters of falling* GDP'—— is how it is defined in these economies. And the idea of the 'double-dip recession' is an extension of it. A double-dip recession refers to a recession followed by a short-lived recovery, followed by another recession the GDP growth sliding back to negative after a quarter or two of positive growth. The causes for such a recession vary but often include a slowdown in the demand for goods and services because of layoffs and spending cutbacks done in the previous downturn. A double-dip (which may be even 'triple-dip') is a worst-case scenario—— fear/speculation of it moves the economy into a deeper and longer recession and recovery becomes too difficult. As the world saw in the case of the Euro Zone crisis there was a fear of such a recession by first quarter of 2013.

Average Inflation Rate in India (last year)

India’s retail inflation, which is measured by the consumer price index (CPI), eased to 5.10% in January 2024 from 5.69% in December 2023, according to the latest data from the Ministry Of Statistics and Programme Implementation. Last year, the CPI hit the lowest in May at 4.25%, and the highest of 7.44%.

The wholesale Price Index (WPI), on the other hand, which calculates the overall prices of goods before selling at retail prices, stood at 0.73% in December 2023, from 0.26% in November last year.

Key Differences between Real & Nominal Interest Rate:

Nominal Interest Rate	Real Interest Rate
Equals real interest rate plus inflation	Equals nominal interest rate less inflation
Rate advertised by financial institutions for loans, savings accounts, and investments	Shows the real cost of borrowing and real returns from investing
Is higher than the real interest rate to provide profit to lenders and investors, given inflation rate	Can be negative if inflation is higher than nominal rates
Often used more by borrowers and lenders	Often used more by investors and analysts

In addition to having impacts on investors, real and nominal rates and used by a variety of users. These users may include but aren't limited to:

- **Borrowers and Lenders.** When individuals, businesses, or governments borrow or lend money, they use nominal rates to determine the interest payments. Borrowers use this nominal interest rate to calculate the total amount they need to repay, while lenders use it to determine their income from interest.
- **Monetary Policy Makers.** Central banks set nominal interest rates as a tool to influence the overall economy. By adjusting these rates, central banks can encourage or discourage borrowing and spending, which in turn affects inflation and economic growth.
- **Financial Institutions.** Banks and financial institutions base the terms of various financial products, such as savings accounts, certificates of deposit, and loans, on nominal rates.

- **Economic Analysts.** Economists and financial analysts use real rates to understand economic trends accurately. Real interest rates help to evaluate the health of an economy, the attractiveness of investments, and the potential impact of policy changes as economists may want to track changes without pricing implications.
- **Businesses and Governments.** Businesses and governments use real rates to evaluate the feasibility of projects. This approach ensures that investment decisions are based on the actual return on investment in real terms, accounting for inflation's impact.
- **International Firms.** Real rates are essential when comparing economic conditions between countries. Since inflation rates vary, comparing nominal rates directly could be misleading. Real rates provide a standardized metric for comparing economic performance.

In case of any doubt, suggestion or clarification , please feel free to contact BUSHAN LAL JALALI @ cell no: 9419186088, email: nancyfoundations2015@gmail.com, bushanlaljalali@gmail.com, www.nancfoundation.in without any fee or charges. Voice or Text messages welcomed. Economy is a dynamic subject so prone to frequent changes. One must be abreast of day to changes in the World and update notes accordingly.