HEADLINE AND CORE INFLATION

Meaning:

Inflation is the price level of all the goods and services which surges in a given economy over time. It means that the respective country's purchasing power reduces over a given period of time for the respective goods and services available in the market. The units of measurement used to gauge this percentage rise are called the Consumer Price Index (CPI). A plethora of factors contribute to this price surge. Some of them include an increased demand, injection of currency into the economy by the central bank, and an increase in the prices of raw materials, hence increasing the production cost. Some amount of inflation is necessary and even considered healthy but there has to be a balance since too much of it can weaken the economic stability.

The Roots of Inflation:

The origination of inflation lies in the steady increase in the demand side of goods and services, the injection of currency into the economy, and the steady increment in the cost required to produce those goods. All these factors give reduce the actual purchasing power (real value) of the currency i.e. you now buy less for the same price tag for that particular good. The Central banks make an attempt to keep a steady and stable inflation rate that is within acceptable limits.

1-Demand-Pull Effect:

An inflation that is a result of a surge in the total demand with respect to the total supply of the goods and services present in the economy is called the Demand-Pull Effect. A general cause of this is an upsurge in the spending habits of consumers, government expenditure, and investment which results in a rise in price when demand overlaps supply.

2-Cost-Push Effect:

An inflation that is caused by an increase in the production cost is termed a cost-effect pressure effect. Generally, it is caused by factors like an incremental rise in wages, an increase in the prices of raw materials, and surges in the prices of energy being used which is ultimately passed on to the consumers, thereby increasing the price levels. It can be both a temporary and a permanent effect on the economy.

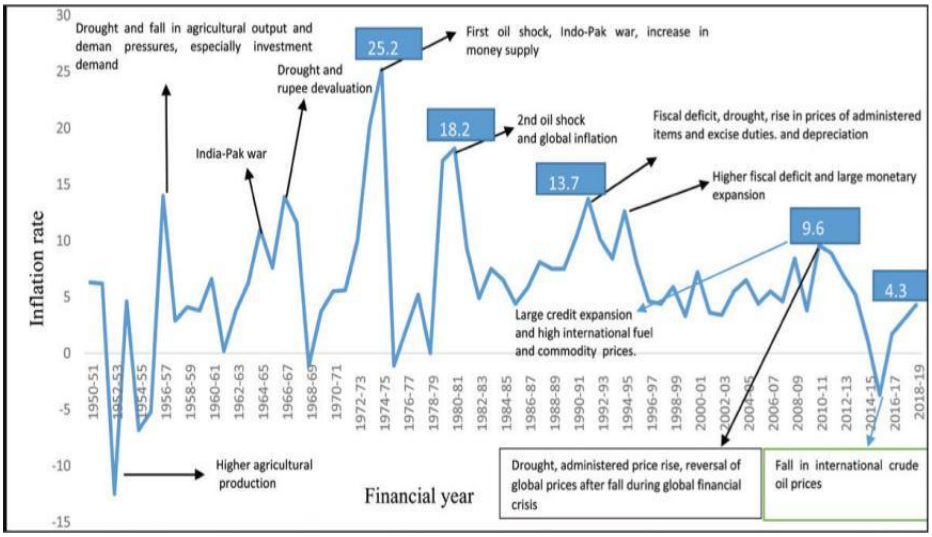


Fig. 1 Inflation vs Years

Core Inflation:

Inflation that excludes food and energy prices is called core inflation. This enables a better bird's eye view of the actual inflation and its trend thereby helping the policymakers to gauge the real inflationary pressures in an economy. By focusing on core inflation, analysts aim to better understand long-term price movements and make informed decisions regarding monetary policy and economic stability.

Reasons for Food and Energy Price Exclusion

Food and energy prices are excluded from core inflation calculations because they are highly volatile and subject to short-term fluctuations influenced by a lot of factors including sudden changes in the weather, substantially large geopolitical events, and supply chain disruptions. It is necessary to exclude these factors to get a better perspective on the true trends that affect inflation,_making it easier for policymakers to assess the economy's true inflationary pressures and implement effective monetary policies.

Headline Inflation

Headline inflation, tracked by agencies such as the Bureau of Labor Statistics, serves as a critical indicator of the economy's overall price movements. It includes all goods and services, including volatile components such as food and energy prices, giving a broad view of inflationary pressures. Policymakers rely on this data to make informed decisions about monetary policy and assess economic health. While headline inflation can be subject to short-term fluctuations, it is an important tool for understanding and managing the inflation dynamics of the economy.

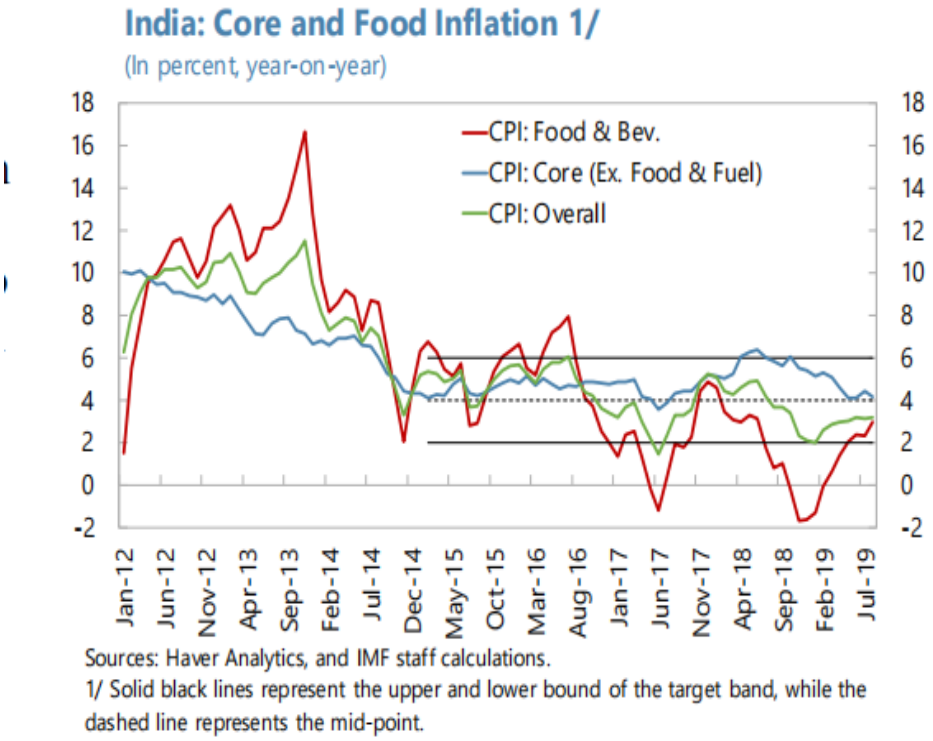


Fig.2 Core & Headline Inflation

Business Cycle:

The business cycle is represented by a series of economic proliferations, peaks, and recessions. and trough. It reflects the cyclical fluctuations in economic activity, including GDP growth, employment, and overall economic health, with periods of growth and decline.

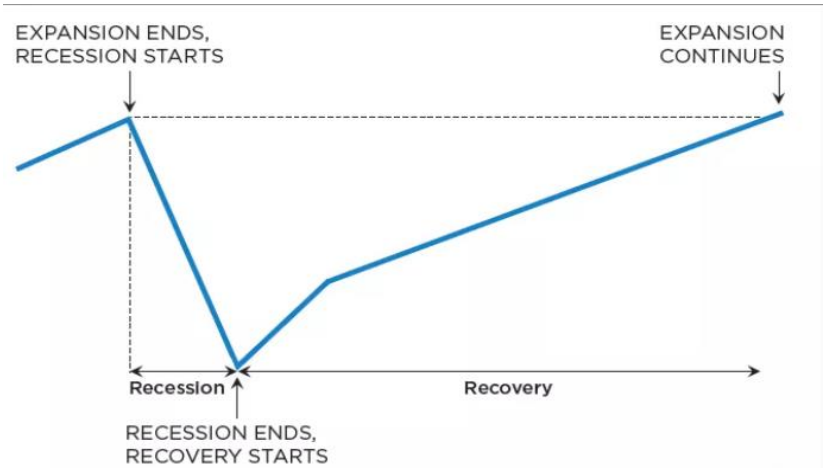


Fig.3 Business Cycle

Inflation Dynamics:

Inflation dynamics refer to the ever-changing patterns of rising or falling prices in an economy. These patterns result from a combination of factors, including increased demand, rising production costs, monetary policies, and external shocks. These dynamics impact consumers' purchasing power, the cost of living, and economic stability. Policymakers aim to manage inflation within acceptable bounds to promote a healthy and sustainable economy.

Macro-Economic Objective:

Macroeconomic objectives are the key goals that governments and policymakers aim to achieve in managing an economy. These objectives serve as guiding principles for economic policy formulation and implementation to promote overall economic well-being and stability.

PRICE STABILITY:

The European Central Bank (ECB) states that "price stability is a [HCIP] year-on-year increase of below 2%."As opposed to short-term (below one year) or long-term (beyond three years), it was also stated that "price stability is to be maintained over the medium term," which is a time of one to three years. Price stability decreases the inflation risk premiums in interest rates since creditors are less likely to impose additional fees to offset the inflation risk when they are more certain that prices will remain steady. This helps to enhance economic activity and employment rates. Price stability also aids in preventing wealth redistribution brought on by unforeseen price volatility. History has proven that periods of both excessive inflation and deflation are frequently accompanied by societal turmoil. Low-income households are disproportionately impacted by unstable inflation since they have fewer resources available to them for protection. Everyone benefits from price stability because it promotes economic growth and employment and enables individuals to make more reliable plans when making decisions about borrowing money, saving money, and growing their enterprises.

Low unemployment and higher levels of inflation:

The greater the number of people employed, more is the amount of money circulated in the economy. As a result, there is a rise in price levels since the total demand outweighs the total supply side of the economy.

In September 2022, there was a price level rise of 10.1% (compared to September 2021).

On the other hand, the unemployment rate fell by 3.5%(as of July 2022).

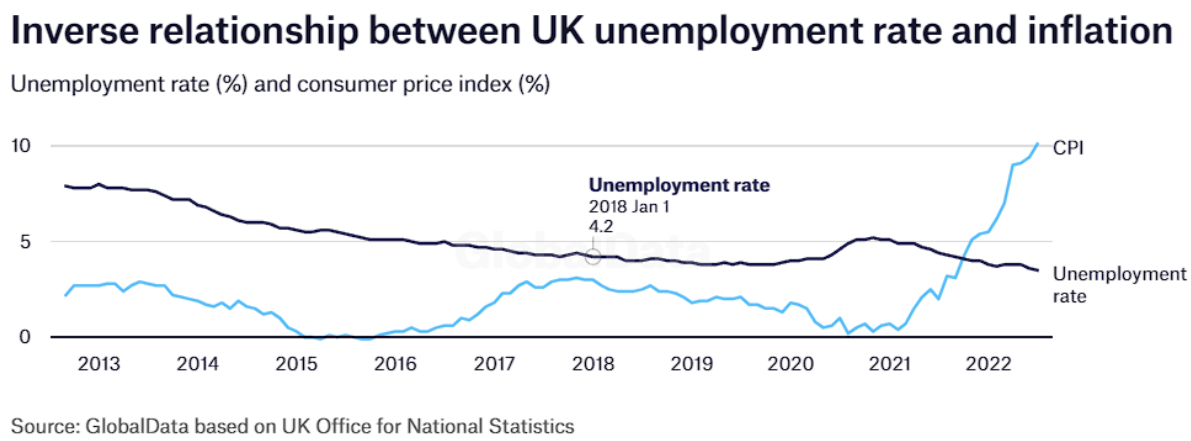


Fig.4

Measurement Of Inflation:

Measuring inflation is essential to understanding how prices for goods and services are changing over time in an economy. This is done using indices such as the Consumer Price Index (CPI) and Producer Price Index (PPI), which track the prices of a representative basket of goods and services. Data collectors gather information on prices, and a base year is used for comparison. Different items in the basket are given varying weights based on their importance. The inflation rate, expressed as a percentage, is used to inform monetary policy, wage adjustments, investments, and overall economic health assessments.

1-Consumer Price Index (CPI):

The Consumer Price Index (CPI) is an important economic measure that tracks the average price changes of goods and services commonly bought by households. It helps determine the cost of living for the average consumer. To calculate the CPI, data on prices for items like food, housing, transportation, and healthcare are collected regularly. These prices are then compared to a base year, which has a value of 100. The percentage difference between the current and base year prices is used to determine the CPI. The CPI is crucial for policymakers, businesses, and individuals to comprehend how inflation affects purchasing power and make informed economic choices.

The formula for calculating the Consumer Price Index (CPI) is as follows:

$$CPI = \left(\frac{\text{Cost of Basket in Current Year}}{\text{Cost of Basket in Base Year}}\right) \times 100$$

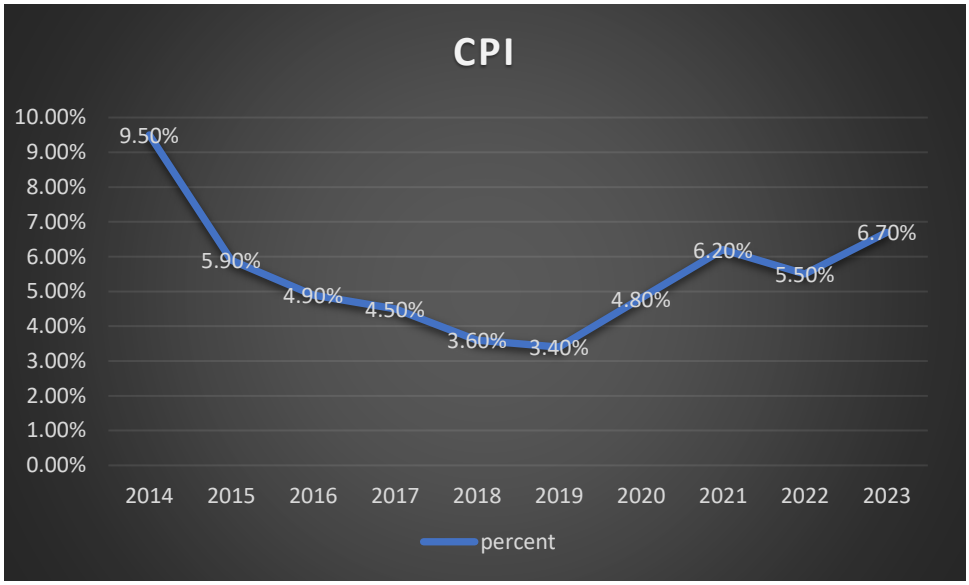


Fig.5

2- Wholesale Price Index (WPI):

The Wholesale Price Index (WPI) measures the average change in prices at the wholesale or producer level.

Its formula is:

$$WPI = \left(\frac{\text{Current Cost of Basket of Goods}}{Base Year Cost of Basket of Goods} \right) \times 100$$

The WPI monitors changes in prices across different industries and products as they move towards consumers. This helps to determine if there are inflationary or deflationary pressures in the production and distribution sectors. Policymakers, businesses, and economists rely on the WPI to make informed decisions and to gain a better understanding of the overall economic condition.

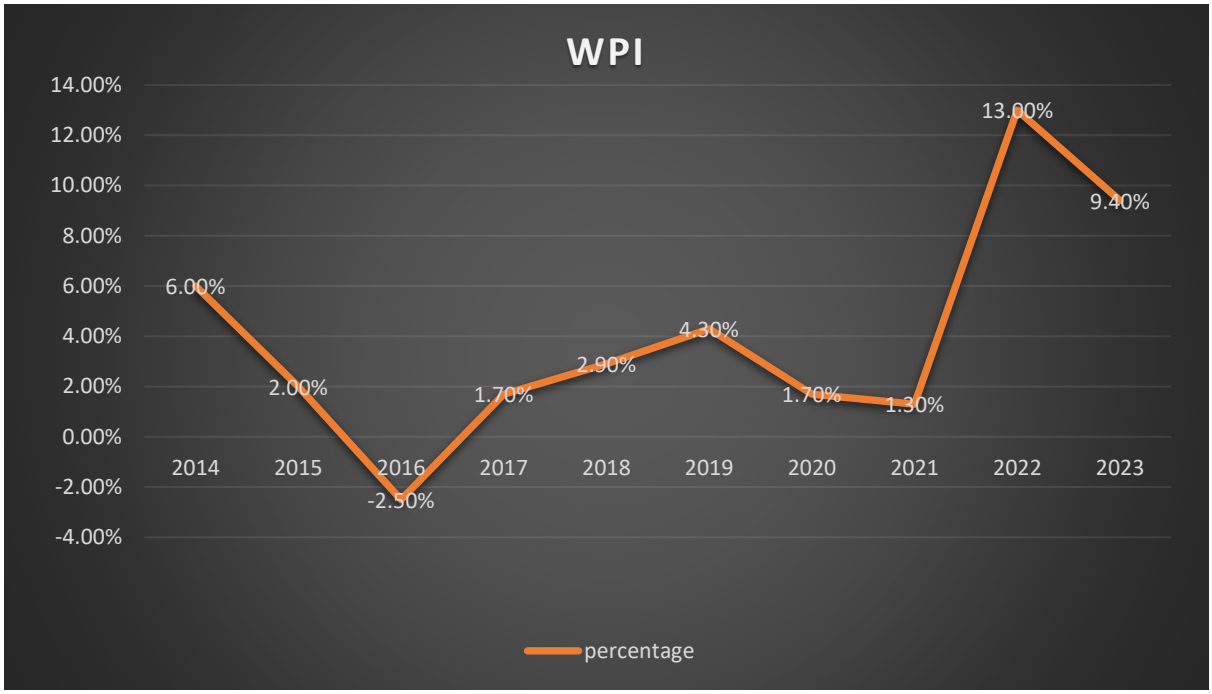


Fig.6 WPI from 2014-23

3- GDP Deflator –

The GDP Deflator is an economic indicator that shows the average price change of all goods and services produced within an economy. It's a useful measure of inflation or deflation and takes into account consumer, business, and government spending.

The formula for calculating the GDP deflator is:

$$GDP\ Deflator = \left(\frac{\text{Nominal GDP}}{\text{Real GDP}}\right) \times 100$$

It is used to assess inflation trends, compare international price levels, and inform economic policy decisions.

4- Producer Price Index –

The Producer Price Index (PPI) measures the average change in prices received by producers for their goods and services at the wholesale level.

Its formula calculates the index as follows:

$$PPI = \left(\frac{\text{Current Cost of Producer Basket}}{Base Year Cost of Producer Basket} \right) \times 100$$

The PPI monitors price changes in different industries such as raw materials, intermediate goods, and finished products. This helps identify inflationary or deflationary pressures in production and distribution sectors. Businesses use it to understand cost trends, policymakers rely on it for informed economic decisions, and economists analyze inflation patterns. There are different versions of PPI designed for specific sectors or stages of production.

Table 1 - CPI and WPI (2013-23)

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11
Consumer Price Index (2010=100) (All India)	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
		10	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
General Index (All Groups)	9.5	5.9	4.9	4.5	3.6	3.4	4.8	6.2	5.5	6.7
Food, beverages and tobacco	11.1	6.5	5.1	4.4	2.2	0.7	6	7.3	4.2	6.7
Fuel and light	7.4	4.2	5.3	3.3	6.2	5.7	1.3	2.7	11.3	10.3
Housing	10.4	6.9	4.9	5.2	6.5	6.7	4.5	3.3	3.7	4.3
Clothing, bedding and footwear	9.3									
Miscellaneous	6.8	4.6	3.7	4.5	3.8	5.8	4.4	6.6	6.7	6.3
Excluding Food and Fuel	8.1	5.6	4.6	4.8	4.6	5.8	4	5.5	6	6.1
Other Price Indices	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
1. Wholesale Price Index (2004-05=100)										
All Commodities	6	2	-2.5	1.7	2.9	4.3	1.7	1.3	13	9.4
Primary Articles	9.8	3	0.3	3.4	1.4	2.7	6.8	1.6	10.2	10
of which : Food Articles	12.8	6.1	3.4	4	2.1	0.3	8.4	3.1	4.1	7.3
Fuel and Power	10.2	-0.9	-11.7	-0.3	8.2	11.5	-1.8	-8	32.8	28.1
Manufactured Products	3	2.4	-1.1	1.3	2.7	3.7	0.3	2.7	11	5.6
Non-Food Manufactured Products	2.9	2.4	-1.5	-0.1	3	4.2	-0.4	2.2	10.9	5.8
2. CPI-Industrial Workers (IW)	9.7	6.3	5.6	4.1	3.1	5.4	7.5	5	5.1	6.1
of which : CPI- IW Food	12.3	6.5	6.1	4.4	1.5	0.6	7.4	5.8	4.7	6.1
3. CPI-Agricultural Labourers	11.6	6.6	4.4	4.2	2.2	2.1	8	5.5	4	6.8
4. CPI- Rural Labourers	0	6.9	4.6	4.2	2.3	2.2	0	5.5	4.2	7

INFLATION ANALYSIS :

In Inflation analysis, through the following sources, (IMF, Monetary Policy, NCAER, RBI Bulletin), we see an outlook on India's inflation trends for 2023

(IMF)

IMF has analyzed the inflation in India as high. Due to a surge in domestic demand, resulting in spikes in commodity prices and supply chain disruptions the inflation rate has been over 4.2% which is RBI's tolerance zone. September showed an overall increase in consumer prices at 7.4% which was majorly contributed by food prices to 8;4%. Core Inflation remained at a healthy rate at 6%. Long-term inflation is expected at grounded rates but predictions say the gasoline and commodity price shocks would result in negative effects in the long run.

The inflation rate is expected to gradually reduce in the following two years. The expected inflation rate for FY2022/2023 is 6.9%, taking into account relatively steady core inflation, also taking into account short-term fluctuations in food prices and input costs. In the following year, resulting from positive base effects, the impact of tighter monetary policy, and a strongly anchored inflation expectation, inflation is expected to gradually return to within the tolerance band.

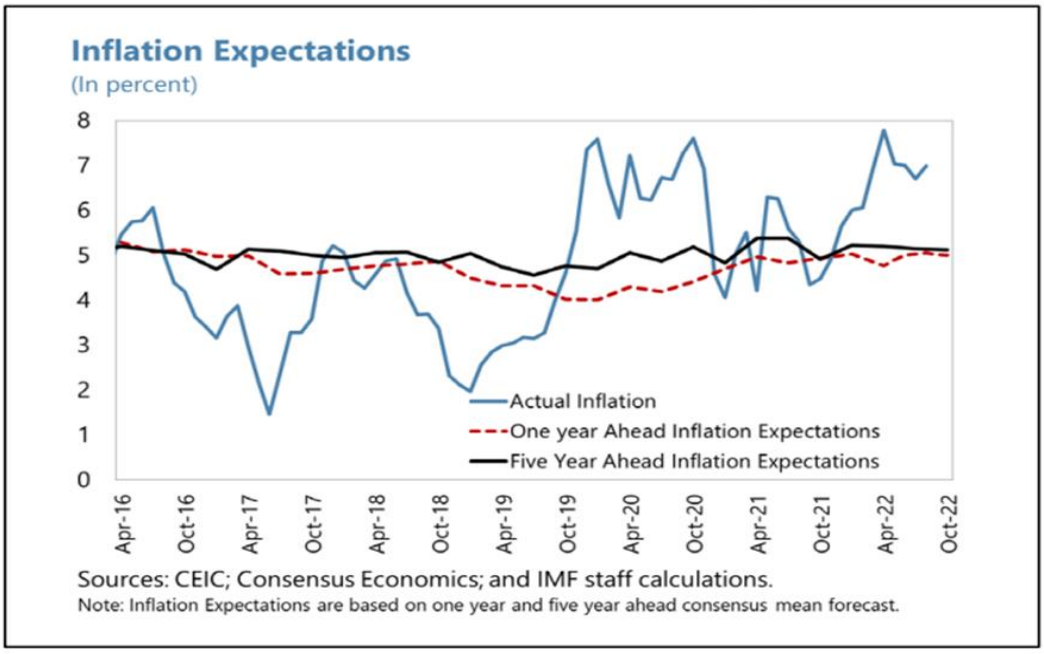


Fig.7 Inflation Expectation

(Monetary Policy)

The CPI headline Inflation was 7.0 percent in August 2022, when the MPC convened. Earlier to the festive season, the domestic economic activity was at a high pace which was denoted by a double-digit GDP growth in Quarter 1 of 2022-23. The predicted headline inflation threshold for the first three quarters of 2022-23 was 6 %. The MPC advocated for a more calibrated and meticulous monetary policy that was needed to sustain inflation expectations to relax the price pressures and avoid a domino effect. This resulted in an increase in the repo rate by 50 basis points to 5.9% by a vote of 5-1. One member backed the increase of 35 bps. By a vote of 5-1, the MPC also decided to resume their focus on the removal of accommodation which would ensure that the inflation stays within the expected values while encouraging and promoting development.

The inflation Forecast Input cost pass-through and unfavorable supply shocks gave the CPI a continuous surge in inflation. The urban resident's median inflation forecasted by RBI poll in March 2023 for the next 3 months and one year showed a decrease of 30 bps each. Contrary to the previous, less number of respondents reported anticipating the overall price to surge by more than the current pace for both horizons. The industrial outlook (January -March 2023) expected the growth rate in raw materials to stay constant and a surge in selling price would plummet in Quarter 1 of 2023-24.

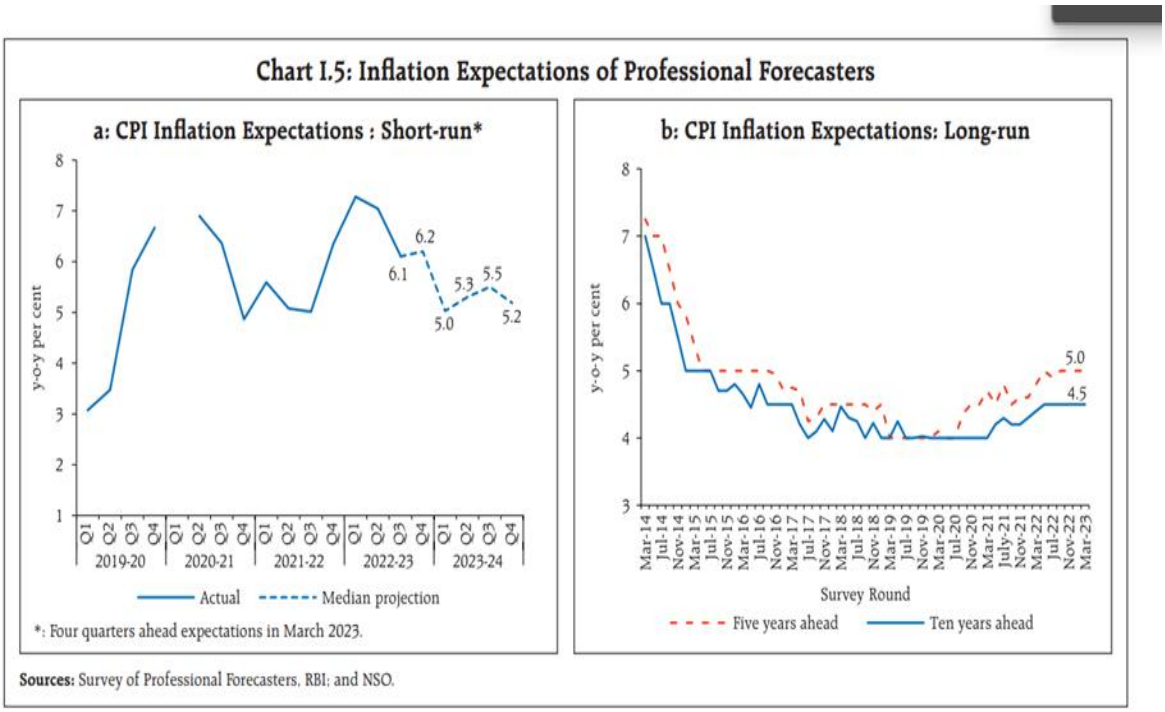


Fig.8

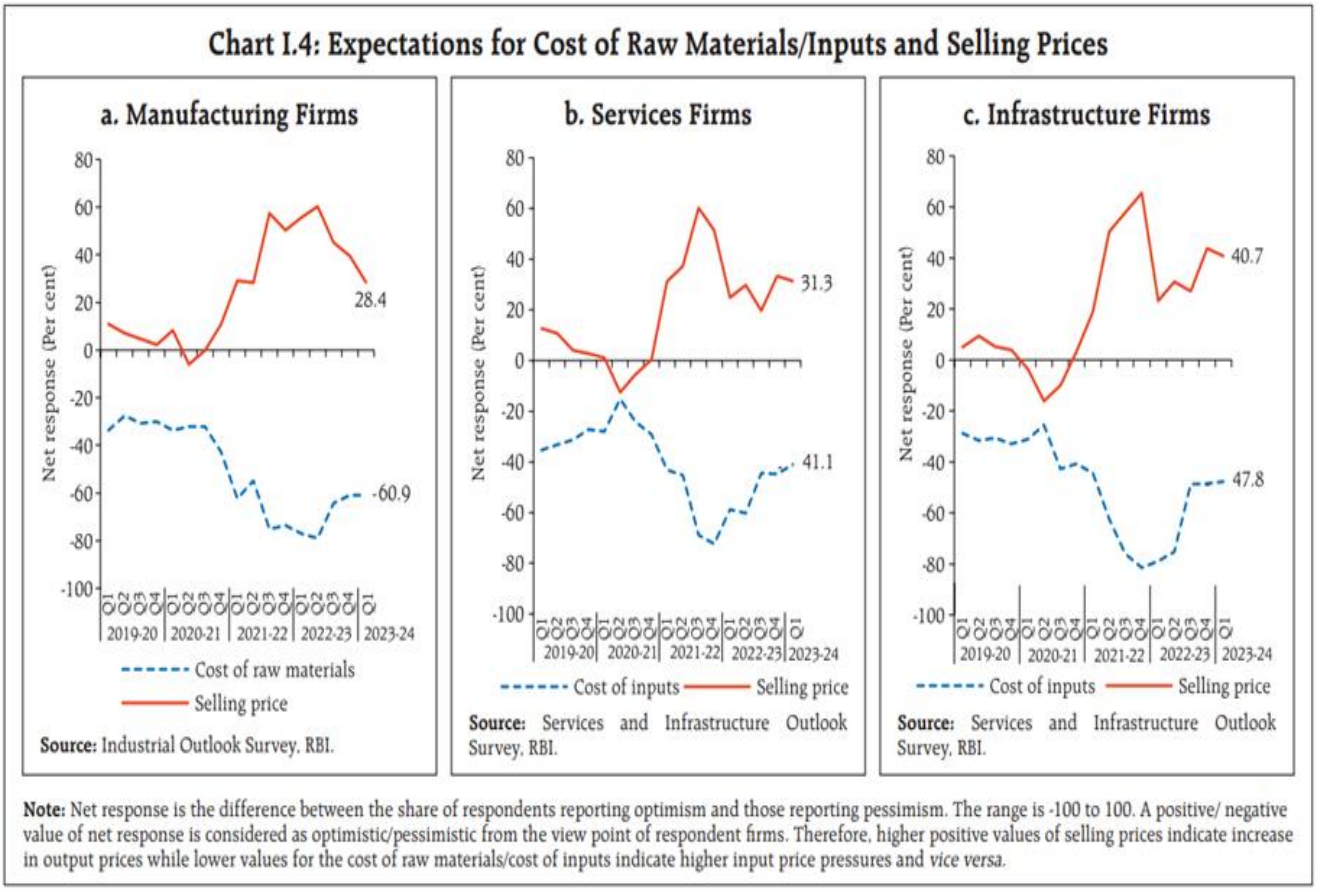
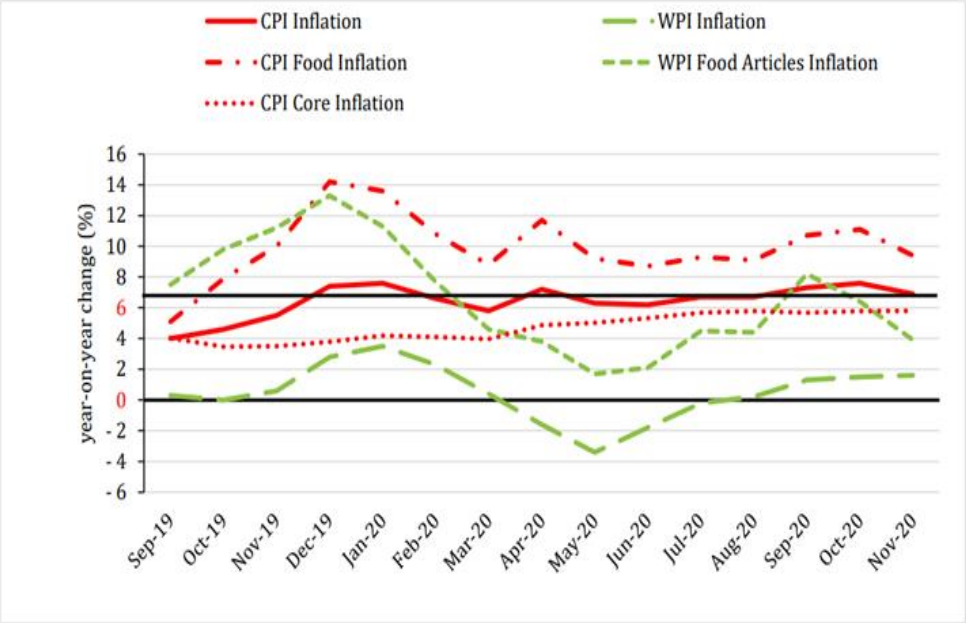


Fig.9

(NCAER)

The Q3 inflation trend has been over the RBI tolerance zone of 2% to 6% which currently sits at 6.9%. Major contributing factors include food prices. We see a trend of 5% and 4.5% in the month of March respectively. Furthermore, quite a number of domestic and global factors influence the inflation picture as well. Albeit the correction policies for crude oil and commodity prices, the future is quite unpredictable due to rising geopolitical issues which would likely create a demand rebound. There is instability in the financial markets currently.

Figure 6.1: CPI and WPI Inflation: Overall and Food Inflation October 2019– November 2020, (% change y-o-y)



Sources: MoSPI and Office of Economic Advisor

Fig.10

(RBI Bulletin)

The CPI inflation took a plunge from March-April 2023 to 4.7 in the month of April, indicating the lowest figure since November 2021. This trend was accompanied by supply-side initiatives and stringent monetary policy. The three major areas of inflation i.e. food, fuel, and core saw a decline in prices. Inflation for food saw a drop to 4.2% in the month of April, however, the core inflation was slowed to 5.1%. A steady alignment of headline inflation accompanied by the objective would require a long-lasting deflationary measure as a core component. The contemporary rabi crop harvest seemed to be mostly resistant to ill weather occurrences going forward, making the upcoming term inflation outlook much better than it was predicted at the time of the April MPC meeting. The India Meteorological Department (IMD) prediction for a typical southwest monsoon is beneficial to the kharif crops. However, questions about the timing and scatter of the monsoon are still unanswered. The upside risks to inflation consist of geopolitical, monsoon uncertainty, and wavering global commodity prices. Especially for goods like rice, crude oil and sugar, and the ongoing market volatility experienced globally. Keeping this in consideration and predictions of a typical monsoon, the CPI inflation rate is expected to be 5.1% for 2023-2024 with Q1 at 4.6%, Q2 at 4.6%, Q3 at 5.4%, and finally Q4 at 5.2%

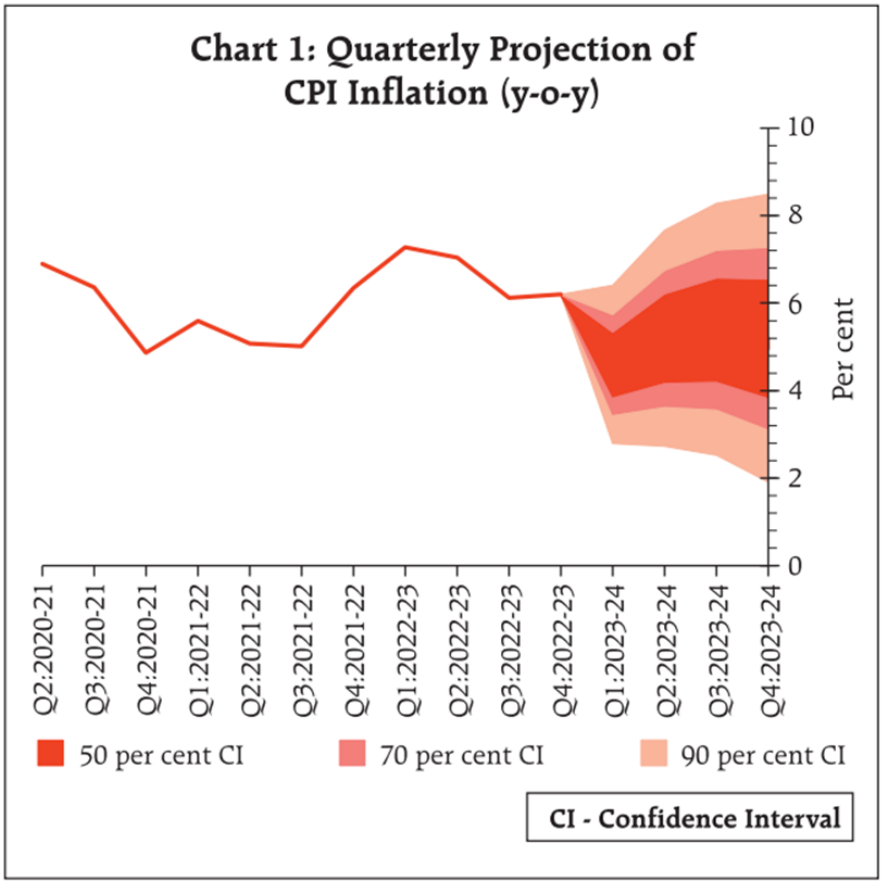


Chart 1: Quarterly Projection of CPI Inflation (y-o-y)
10
8
6
4
2
0
Per cent
Q2:2020-21
Q3:2020-21
Q4:2020-21
Q1:2021-22
Q2:2021-22
Q3:2021-22
Q4:2021-22
Q1:2022-23
Q2:2022-23
Q3:2022-23
Q4:2022-23
Q1:2023-24
Q2:2023-24
Q3:2023-24
Q4:2023-24
50 per cent CI
70 per cent CI
90 per cent CI
CI - Confidence Interval

Fig.11

Table 2. State Wise Analysis

STATE WISE AVERAGE INFLATION RATE								
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
State/Union Territory	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
Andaman & Nicobar	6.7	6.4	6.2	3.6	6.9	6.5	6.3	5.2
Andhra Pradesh	5.5	7.4	5.2	3.4	1.1	3.5	9	5.2
Assam	6	4.8	2.6	4.4	5.9	6	8.5	3.2
Bihar	6.7	4.5	3.9	2.7	3.9	2.2	7.3	3.8
Chandigarh	6.4	3.6	3.9	3.8	4	4.8	4.8	4.8
Chhattisgarh	6.4	6.8	3.5	2.7	2.4	2.5	8	4.2
Dadra & Nagar Haveli	4.3	5.3	5.6	2.8	1.8	4.7	4.2	6.9
Daman & Diu	7	9.2	5	6.5	-1.9	0.8	6.9	6
Delhi	5.6	4.9	5.3	4.8	2.7	3.7	3.3	5.4
Goa	6.5	4.7	5.1	3.8	2.6	4.3	6.9	4.2
Gujarat	5.5	4.9	5.1	2.6	2.5	3.7	5.9	4.9
Haryana	5.6	4	4.4	4.1	2.9	4.3	5.9	5.6
Himachal Pradesh	6.2	4.3	4.6	4.6	0.5	3.5	5.2	6
Jammu & Kashmir	6	6	5.3	6.8	5.3	4.3	6.3	6.5
Jharkhand	4.7	5.1	5.3	3.9	3.7	4.1	6	3.7
Karnataka	6.5	6.7	4.4	3	3.3	5.6	5.8	5.6
Kerala	7.3	4.2	4.3	6	4.9	6.1	6	4
Lakshadweep	7.6	5.1	1.1	5	5.7	8.3	11.1	2.3
Madhya Pradesh	5.5	4.4	3.5	2.7	3.5	5.5	7.6	5.9
Maharashtra	5.5	4.4	4.4	4.1	3.1	4.4	6.8	5.2
Manipur	4.7	5.1	10.1	12.4	8.7	6.9	6.7	1.4
Meghalaya	12.3	7.5	0.6	1.5	2.2	2.8	9.2	3
Mizoram	6.5	4	2.1	1.9	2.5	5.1	10.3	5.7
Nagaland	10.5	5.8	5.1	3.4	6	3.8	4.8	4.8
Odisha	6.8	6.4	4.9	2.2	2.6	4.6	7.9	3.1
Puducherry	6.9	8.4	1.3	2.3	4.2	6.2	8.4	4.8
Punjab	5.7	3.5	4.4	3.7	3.8	5	5.3	4.4
Rajasthan	6.6	5.7	5.4	3.2	2.3	5.3	4.4	4.2
Sikkim	6.2	7	9.9	4	3.9	3.2	7.1	6.6
Tamil Nadu	6.2	5.7	3.9	4.9	3.7	5.7	7.5	5.2
Telangana	4.7	5.5	6.1	3.9	2.6	4.5	8.7	6.4
Tripura	13	2.7	4.1	3.4	4.3	6.3	9.5	3.2
Uttar Pradesh	5.9	4.1	4.3	2.4	3.8	5.9	6.1	5.1
Uttarakhand	5	3.2	3.7	3.9	4	5.9	8.1	5.1
West Bengal	5.4	3.5	5	3.7	5.1	4.6	8.7	5.1
All India	5.9	4.9	4.5	3.6	3.4	4.8	6.2	5.5

Controlling Inflation

Anchoring Inflation

Expectation Reference: Monetary Policy

2013-2014

Concerns about GDP slowdown significantly influenced monetary policy in 2013–2014. Further, with little room for future monetary easing, there were concerns about inflation perceived as escalating from a number of aspects.

Therefore, the following measures were taken to control inflation

➢ In the monetary policy statement issued by the RBI on May 3, 2013, the key interest rate was cut by 25 basis points (bps) to 7.25%.

➢ Due to the growing risks for the inflationary trajectory, monetary policy was changed during the mid-quarter review on September 20, 2013. Hence the key the base interest rate was increased by 25 basis points to 7.5%.

➢ Furthermore, in the second quarter on October 29, 2013, the consumer price Inflation was expected to remain high in the coming months and is likely to remain so exceed 9%, leading to an increase in the repo rate to 7.75%.

➢ By setting a target of 8% consumer price index (CPI) inflation by January 2015 and 6% CPI inflation by January 2016, the Expert Commission for Revision and Strengthening the monetary policy framework recommended a "downward path" for disinflation in its report which was submitted on 21 January 2014. the key policy rate was again raised by 25 basis points to 8%.

In June 2013, the Reserve Bank of India issued inflation-indexed bonds to make it possible to anchor inflation expectations. These bonds offer wholesale price certainty inflation of both principal and interest.

2014-2015 –

The conduct of monetary policy in India was undergoing a transformation, a transition to a flexible inflation targeting (FIT) framework. On the recommendation of the expert, several new reforms were made to the committee in the previous year in order to transition easily.

Further, to make sure that disinflation is following the downward trajectory that has been announced the following steps were taken in January 2014.

➢ The base interest rate remained constant in Q1 2014-2015 in response to pro-inflationary developments and risks to inflation arising from the impact of a sub-normal

monsoon on food prices and continued high international oil prices. This continued in Q2 and Q3 as well.

➢ It should be noted that inflation exceeded 300 basis points in January 2015 (bps) below the 8% target, which again showed strong deflation a trend has occurred. The base rate was thus reduced by 25 basis points to 7.75%.

➢ In March 2015, the repo rate was further reduced to 7.5%.

2015-16-

The MPFA which was signed on 20 February 2015 by the Reserve Bank and The Government of India guided the course of monetary policy in the 2015–16 Fiscal year.

The agenda for 2015-2016 was the persistence of disinflation in the economy.

➢ Despite fears of a below-average southwest monsoon and its effects on food inflation persisted in June 2015, the Reserve Bank reduced the base repo rate by 25 bps.

➢ Until September 2015, as a result, there was more room for monetary policy measures waning inflationary pressure caused by stable grain prices and domestication of the price of oil internationally, which led to a reduction in the repo rate by 50 basis points in the year in order to increase domestic investment.

➢ In February 2016, it became clear that disinflation in January 2016 the target would be met due to a slowdown in food and fuel inflation and a subsequent data release that pegged January 2016 CPI inflation at 5.7%.

2017-18

The aim is to achieve the medium-term target of consumer price index (CPI) inflation 4% within the +/-2% tolerance band, while maintaining growth as the driving force behind monetary policy implementation in 2017-18. With risks equally spread around this base trajectory, inflation was forecast to average 4.5% per year in the first half of 2017–18 and 5% in the second half.

➢ The MPC unanimously decided to keep the base repo rate at 6.25 percent in its first bimonthly monetary policy statement for 2017-2018 on 6 April 2017, which was followed in the second bi-monthly monetary policy statement.

➢ In the 3rd bi-monthly statement, the MPC decided to reduce the repo rate by 25 bps, which was held constant in the 4th and 5th bi-monthly statements and the 1st bi-monthly statement for the years 2018-2019.

2018-2019

The Monetary Policy Committee (MPC) target for 2018-2019 was similar to that from 2017-2018.

➢ Due to several factors, the MPC was forced to increase the base interest rate by 25 bps in June 2018, followed by an increase of 25 bps in Q3 and Q4. bimonthly statement.

➢ In the 6th bi-monthly statement, the repo rate was reduced by 25 bps to 6.25%.

2019-2020

The 2017-2018 goal remained the 2019-2020 goal. To continue the following steps were taken to achieve this goal.

➢ In April 2019, the MPC decided to cut in the 1st bimonthly statement repo rate by 25 bps, followed by another 25 bps cut in June 2019.

➢ In August 2019, there was a loss of growth momentum and thus the MPC decided to cut the repo rate by 35 basis points, followed by a further cut of 25 basis points bps in October 2019.

➢ At the 6th bimonthly meeting, it was found that the total inflation in December was 7.4%, the most since July 2014. However, the MPC decided to maintain the status quo.

2020-2021

During 2020-2021, monetary policy operations aimed to reduce the impact of Covid-19 on the Indian economy.

➢ The MPC stated at its meeting in March 2020 that the pandemic could represent serious macroeconomic risks on both the supply and demand sides, viz it was necessary to take all necessary measures to protect the household economy from the pandemic. The repo rate was thus reduced by 75 bps to 4.40% and by 40 bps to 4% in May 2020.

➢ During this period, overall inflation remained above the upper limit tolerance threshold.

➢ At the 5th bimonthly meeting, it was found that inflationary pressures were much higher than expected, with CPI rising to 7.6%. However, in politics, the rate remained unchanged.

2021–2022

The objective of monetary policy in 2021–22 was to ensure that inflation remained contained shifting the target while continuing to offset the impacts of COVID-19 on the economy and restoring and sustaining growth on a sustained basis.

➢ The MPC decided to keep the repo rate at 4% throughout the period 2021-2022 despite the second wave of Covid-19 hitting in June 2021.

➢ By August 2021, the second wave had subsided measures had been reduced and eased and the domestic economy showed signs of recovery which was supported by record kharif foodgrain production and promising rabi conditions.

2022–2023

In 2022–2033, upward pressure on local inflation came from high spillovers of global food, energy, and other commodity prices, as well as erratic international price movements in the financial market. The objective of monetary policy is still to keep inflation below the level of control and stabilize inflationary expectations.

➢ Due to worsening geopolitical circumstances caused by the war in Ukraine, inflation expectations rose to 5.7% in April 2022.

➢ In May, the MPC decided to raise the key repo rate by 40 bps to 4.40% in 2022 to anchor inflation expectations and sustain the second round effects of supply shocks followed by a 40 bps hike in June 2022.

➢ Cumulatively, the repo rate was increased by 250 bps to 6.5% during the period 2022–2023

Forecasting Of Core Inflation:

We used Microsoft Excel to forecast core inflation with the help of historical data and a simple regression model. Here's a step-by-step -

Step 1: Data Collection and Preparation

1. Gather historical data on core inflation and relevant macroeconomic variables like GDP growth. For this example, use the data from the previous response:

Step 2: Regression Analysis:

Using the above data and with the aid of Excel, we forecasted the expected inflation rate by using the regression analysis method. Excel performed the linear regression analysis and provided the results, including coefficients (β0 and β1).

- β0 (Intercept): This is the constant term.

- β1 (GDP Growth Coefficient): This represents the impact of GDP growth on core inflation.

Table 3. Source. RBI Bulletin 2023

Column 1	Column 2	Column 3
YEAR	CORE INFLATION (in %)	GDP GROWTH (in %)
2012	9.48	5.46
2013	10.02	6.39
2014	6.67	7.41
2015	4.91	8
2016	4.95	8.26
2017	3.33	6.8
2018	3.94	6.45
2019	3.73	3.87
2021	5.13	9.05
2022	6.7	7

In a new cell, you can calculate the forecast for core inflation for a given GDP growth rate.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.102806103
R Square	0.010569095
Adjusted R Square	-0.130778177
Standard Error	2.201884703
Observations	9

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.362526291	0.362526291	0.074773956	0.79240098
Residual	7	33.93807371	4.848296244		
Total	8	34.3006			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	4.474433006	3.77379897	1.185657488	0.27444019	-4.44918356	13.3980496	-4.4491836	13.39804957
GDP Growth Coefficient	0.144078807	0.526896026	0.27344827	0.79240098	-1.10183232	1.38998993	-1.1018323	1.389989929

Core Inflation Forecast = β0 + β1 * GDP Growth

Core Inflation Forecast = Intercept + GDP Growth Coefficient *GDP Growth

****The Reserve Bank Of India (RBI) has maintained its GDP growth projection for the fiscal year 2023-24 at 6.5 %.**

From the above table –

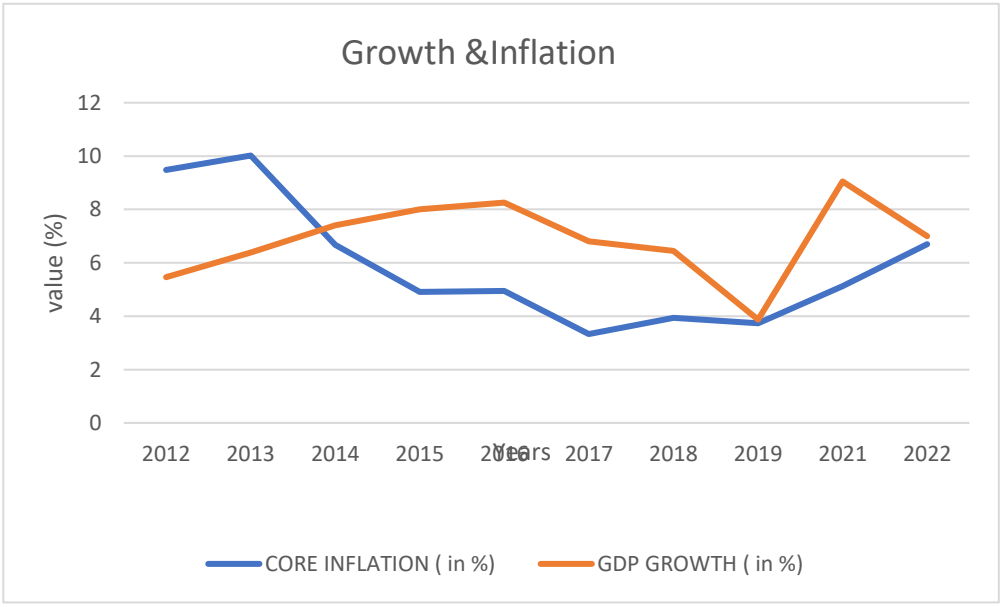
Intercept (β0) = 4.474 & GDP Growth Coefficient(β1) =0.144

Now put in the value in the formula –

Core Inflation Forecast= 4.474 +0.144 *6.5 =**5.41**

So Forecasted Inflation Rate is 5.41.

Fig no.12



REFERENCES

1-RBI Bulletin

2-IMF Report

3-NCAER

4-Monetary Policy

5-Economic Survey

6-Deloitte

7-European Bank

8-NBER

9-Goldman Sach