Wholesale Price Index Number

Index numbers are the indicators which reflect changes over a specified period of time in respect of prices of different commodities, industrial production, sales, imports and exports, cost of living, etc. These indicators are important tools for review and management of present economic positions and plan formulation. Some of the important indices like Wholesale Price Index (WPI), Index of Industrial Production (IIP), Consumer Price Index (CPI), etc. give a fairly good idea as to what is happening in the economy.

WPI is an important measure to monitor the dynamic movement of prices at the wholesale level. In a dynamic world, prices keep on changing. WPI is used as a deflator of various nominal macroeconomic variables including Gross Domestic Product (GDP). The WPI based inflation estimates also serve as an important determinant, in formulation of trade, fiscal and other economic policies by the Government. WPI is also used for the purpose of escalation clauses in the supply of raw materials, machinery and construction work. Business firms in search of effective methods for coping with changes in prices often employ price adjustment (escalation) clauses in long-term sales and purchase contracts. WPI is widely recognized among business people, economists, statisticians, and accountants as a useful objective indexing tool in price adjustment clauses.

Therefore, the Wholesale Price Index represents the price of a basket of wholesale goods. WPI focuses on the price of goods that are traded between corporations. It does not concentrate on goods purchased by the consumers.

- The main objective of WPI is monitoring price drifts that reflect demand and supply in manufacturing, construction and industry.
- WPI helps in assessing macroeconomic as well as microeconomic conditions of an economy.

Difference between WPI and CPI:

Wholesale Price Index (WPI) and Consumer Price Index (CPI) are two commonly used measures that are effective in determining the inflation in the country.

- Wholesale Price Index is a measure of the average change in the price of good at a wholesale level or in the wholesale market. While, Consumer Price Index

is the price index that calculates price changes of goods and services that a consumer has to pay for consuming a basket of goods.

- WPI measures the initial or first stage of a transaction and CPI measures the final or last stage of a transaction.
- WPI focuses on goods that are traded only between wholesalers or businesses while CPI focuses on goods that are being purchased by consumers.

How is WPI (Wholesale Price Index) calculated?

In this method, a set of commodities and their price changes are used for the calculation. The selected commodities are supposed to represent various strata of the economy and are supposed to give a comprehensive WPI value for the economy.

WPI is calculated on a base year and WPI for the base year is assumed to be 100. To show the calculation, let's assume the base year to be 1970. The data of wholesale prices of all the 435 commodities in the base year and the time for which WPI is to be calculated is gathered.

Let's calculate WPI for the year 1980 for a particular commodity, say wheat. Assume that the price of a kilogram of wheat in 1970 = Rs 5.75 and in 1980 = Rs 6.10. The WPI of wheat for the year 1980 is,

$$\frac{(\text{Price of Wheat in 1980} - \text{Price of Wheat in 1970})/}{\text{Price of Wheat in 1970}} x100$$

Or, $\frac{(6.10 - 5.75)/}{5.75}$x100 = 6.09

Since WPI for the base year is assumed as 100, WPI for 1980 will become 100 + 6.09 = 106.09.

In this way individual WPI values for all commodities are calculated and then the weighted average of individual WPI figures are found out to arrive at the overall Wholesale Price Index. Commodities are given weightage depending upon its influence in the economy.

How is inflation rate calculated?

If we have the WPI values of two time zones, say, beginning and end of year, the inflation rate for the year will be,

(WPI of end of year – WPI of beginning of year)/WPI of beginning of year x 100

For example, WPI on Jan 1st 1980 is 106.09 and WPI of Jan 1st 1981 is 109.72 then inflation rate for the year 1981 is,

(109.72 – 106.09)/106.09 x 100 = 3.42%

and we say the inflation rate for the year 1981 is 3.42%.

Since WPI figures are available every week, inflation for a particular week (which usually means inflation for a period of one year ended on the given week) is calculated based on the above method using WPI of the given week and WPI of the week one year before. This is how we get weekly inflation rates in India.