METHODOLOGY ON REBASING THE CONSTRUCTION MATERIALS WHOLESALE PRICE INDEX (CMWPI) TO BASE YEAR 2018

1. Identification of the Base Year

The base period is the year at which the index number is set to 100. It is the reference point of the index number series. The CMWPI is now rebased to 2018 from the current 2012 base year.

The year 2018 was chosen as the next base year in accordance with the PSA Board Resolution No.1, Series of 2017-146, which approved the synchronized rebasing of the price indices to base year 2006 and every six years thereafter.

2. Determination of the Market Basket

Market basket refers to a sample of construction materials that represent a large variety of construction materials used in the construction industry relative to a base year.

The 2018-based CMWPI covers 129 items in the market basket. The CMWPI market basket includes selected construction materials identified from the different lateral and vertical construction projects in 2018 with accompanying bills of materials provided by the Department of Public Works and Highways (DPWH), National Housing Authority (NHA), and Subdivision and Housing Developers Association (SHDA). Items with high expenditure of the submitted bills of materials were included under each commodity group. Some items were excluded due to absence of available stores within National Capital Region (NCR) or relocation of stores outside NCR. Materials were grouped according to the different categories based on the 2012-based CMWPI market basket and as recommended by the members of the Interagency Committee on Price Statistics (IACPS) on the rebasing of the CMWPI. The number of items, which differ for each commodity group, was based on the recommendation of the Technical Working Group on Wholesale Price Index on Construction Materials. Complete specifications of the new items selected for the market basket were then identified based on the available specifications in the markets.

3. Determination of the Weights

The weights represent the relative importance of the construction materials in the total wholesale price index of construction materials.

The weights for the 2018-based CMWPI utilized the total bills of materials included in the computation of the cost of construction projects by the DPWH, NHA, and SHDA. The weight of a commodity group is the percent share of the total average cost of materials for the commodity group to the total average cost of materials for all commodity groups. The average cost of materials for a commodity group per agency is obtained by dividing the agency cost of materials for a commodity group by the number of projects of the agency. The total weight of the commodity groups is equivalent to 100 percent.

4. Monitoring of Prices of Items in the Market Basket

This involves establishing baseline information for prices of the items in the base year and monitoring the prices of the items on a regular basis. Collection of data for the

CMWPI is done by the price collectors of the NCR of the Philippine Statistics Authority (PSA). Prices of selected construction materials are monitored on a monthly basis, that is, from the first week to third week of the reference month. Data are collected from the sample outlets (outlets or establishments where prices of commodities are collected or quoted) which are chosen using the following criteria:

a. Popularity of an establishment along the line of goods to be priced - this means the sample outlet is publicly noted in the locality for selling construction materials included in the list and the outlet is patronized by a large segment of the population.

b. Consistency and completeness of stock

Consistency of stock - the outlet has a constant, steady or regular stock of commodities as well as of those commodities of the same kind and within the same commodity group.

Completeness of stock- the outlet carries in its stock many, if not all, of the items included in the list relative to the other outlets in the area.

c. Permanency of outlet - the outlet is an established construction materials outlet.

d. Geographical location- the outlet is conveniently located and is accessible.

5. Computation of the CMWPI

Below are the steps in the computation of CMWPI using 2018 as the base year:

Step 1: Compute the monthly average price for each item

$$\text{Monthly Average Price of Item} = \frac{\text{Price for Outlet 1} + \text{Price for Outlet 2} + \ldots + \text{Price for Outlet k}}{k}$$

where:

k = number of outlets for each item

Step 2: Compute the price relative (P) for each item

$$P = \frac{\text{Current Month's Average Price}}{\text{Previous Month's Average Price}} \times 100$$

Step 3: Compute the index for each commodity group

Step 3.1: Compute the geometric mean of price relatives of the items under each commodity group

$$\text{Geometric Mean of P} = \left(\prod_{i=1}^{n} P_i \right)^{\frac{1}{n}}$$

where:

P_i= Price Relative of item i under Commodity Group g

n = number of items under Commodity Group g

Step 3.2: Compute the index for the Commodity Group

where:

I_{gt} = Geometric Mean of P x I_{gt-1}

where:

I_{gt} = Commodity Group Index at month t

I_{gt-1} = Commodity Group Index for the previous month

Step 4: Compute the index for All Commodity Groups:

$$I_t = \frac{\sum_{g=1}^{G} W_g I_{gt}}{\sum_{g=1}^{G} W_g}$$

where:

I_t = All Commodity Groups Index at month t

I_{gt} = Index of Commodity Group g at month t

W_g = Weight of Commodity Group g

G   = total number of Commodity Groups