



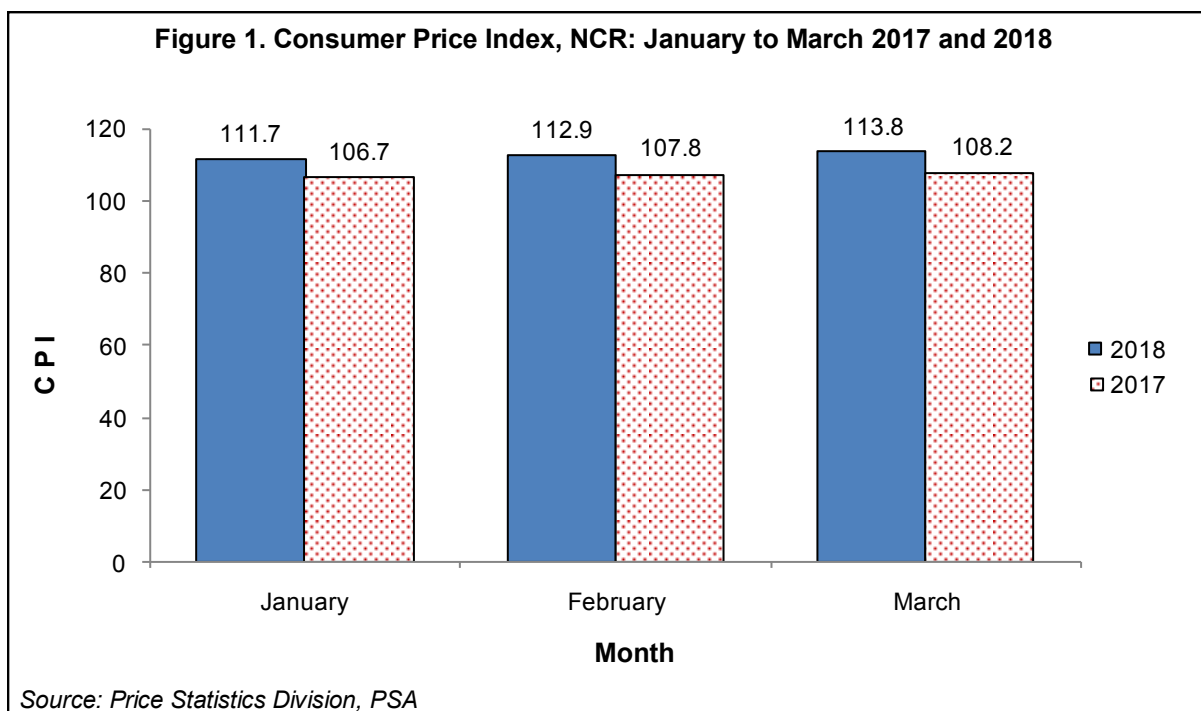
# **SPECIAL RELEASE**

## **CONSUMER PRICE INDEX: January to March 2018 National Capital Region (2012=100)**

**Date Released:** May 9, 2018  
**Reference No.** 2018-06

The Consumer Price Index (CPI) is an indicator of the change in the average retail prices of a fixed basket of goods and services commonly purchased by households relative to a base year. It shows how much, on the average, prices of goods and services have increased or decreased from a particular reference period known as the base year. Since price is the cost or the amount of money for which something can be bought or sold, CPI therefore compares the current cost of certain goods and services with their cost at an earlier time.

To illustrate, an index of 113.8 in NCR in March 2018 means that consumer prices, on the average, have increased by 13.8 percent from 2012. It also means that a basket of commodities which can be purchased at Php100.00 by an average Filipino household in NCR in 2012 can be bought at Php113.8 in March 2018.



## Higher CPI in NCR noted for 2018 than in 2017

The CPI in NCR registered at 111.7 in January 2018 and slightly accelerated to 112.9 in February 2018. By the end of the first quarter of 2018, CPI further accelerated by 0.9 point. Higher trend in CPI was recorded for all months during the first quarter of 2018 compared to the same period of the previous year. *Refer to Table 1 for details.*

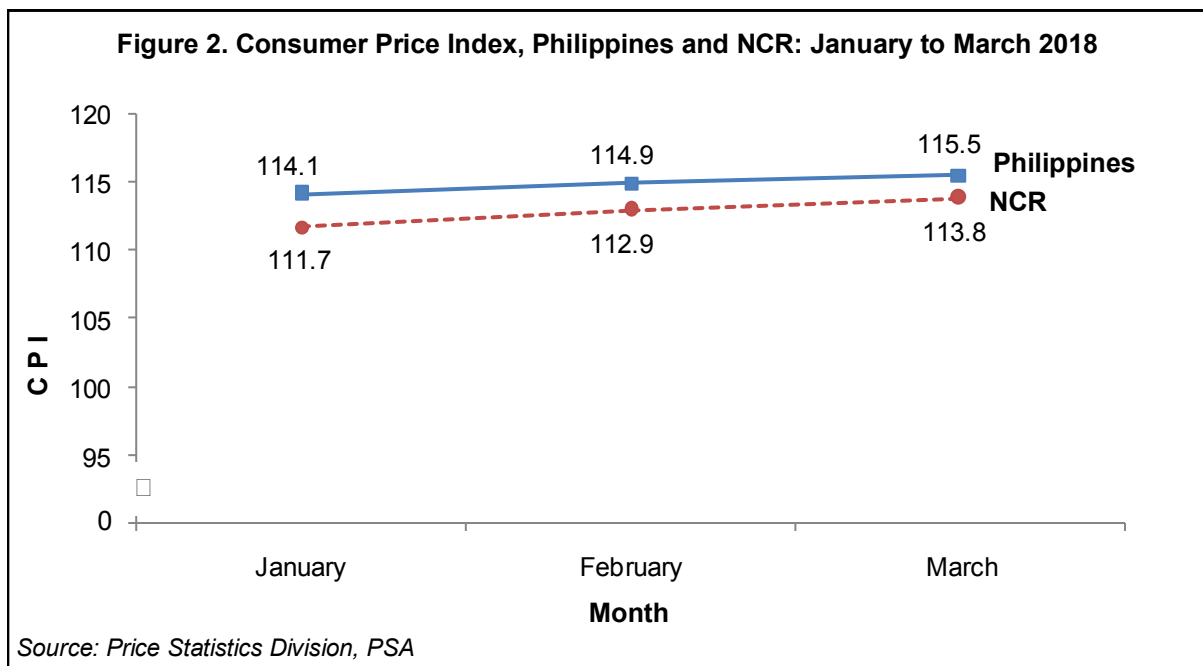
**Table 1. CPI for All Income Household by Commodity Group, NCR  
January- March 2017 and 2018**

Commodity Group	January		February		March	
	2018	2017	2018	2017	2018	2017
All Items (Philippines)	114.1	110.3	114.9	110.7	115.5	110.7
All Items (NCR)	111.7	106.7	112.9	107.8	113.8	108.2
Food and Non-Alcoholic Beverages	124.4	117.3	125.6	117.8	125.7	117.5
Alcoholic Beverages and Tobacco	164.9	140.0	173.7	143.3	177.5	145.8
Clothing and Footwear	117.3	114.3	117.3	114.5	117.6	115.2
Housing, Water, Electricity, Gas and Other Fuels	101.7	97.6	103.8	99.8	105.8	101.1
Furnishing, Household Equipment and Routine Maintenance of the House	113.2	110.7	113.6	110.9	114.7	111.7
Health	115.1	115.5	115.2	112.3	115.7	112.7
Transport	100.9	93.5	101.7	95.3	101.3	96.3
Communication	100.8	100.5	100.9	100.6	101.0	100.6
Recreation and Culture	110.3	109.2	110.4	109.2	110.6	109.3
Education	121.1	119.2	121.1	119.2	121.1	119.2
Restaurants and Miscellaneous Goods and Services	107.3	104.2	107.6	104.3	109.0	104.4

*Source: Price Statistics Division, PSA*

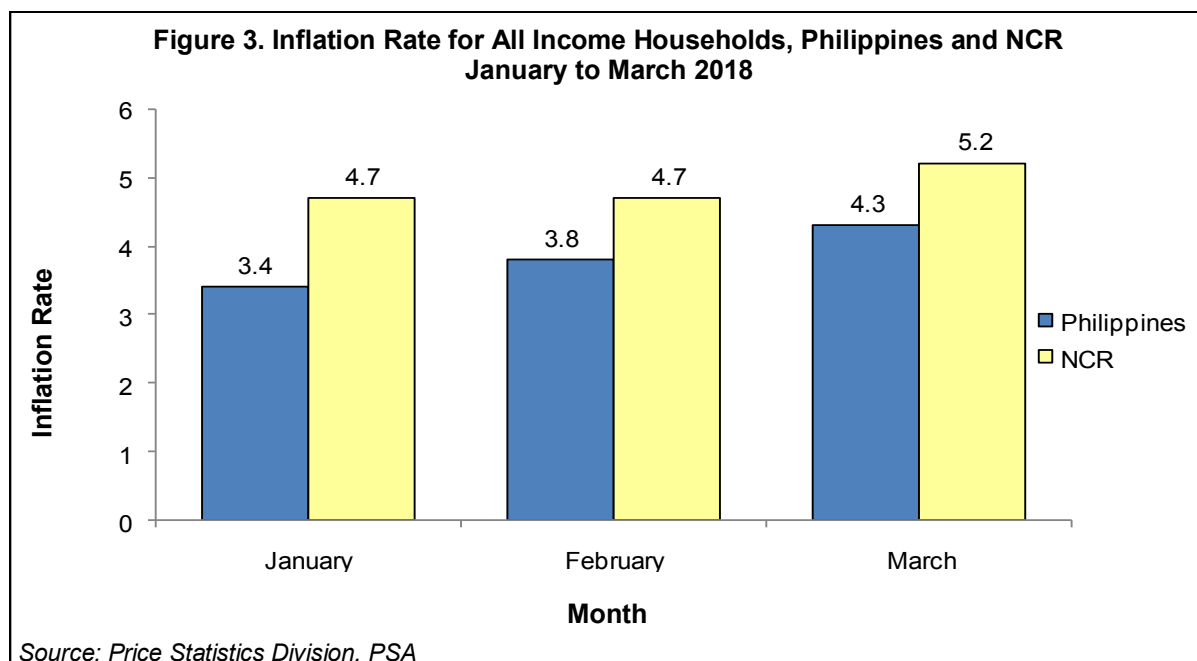
## NCR records lower CPI than the national figures in the first quarter of 2017

The CPIs for NCR were consistently lower than the national CPI for all months of the first quarter of 2018. The Philippines and NCR figures showed linear trend.



## NCR records highest inflation rate in March for the first quarter of 2017

Inflation Rate (IR) in NCR increased from 4.7 in January 2018 and reach 5.2 in March 2018, or higher by 0.5 percentage point from the previous months of the first quarter 2018. IRs for Philippines and NCR exhibited similar trend.



## NCR Inflation Rate is higher than the national figure for the first quarter of 2018

NCR registered higher IR for the first quarter of 2018 compared to the national figures. The monthly IRs for NCR in the first quarter of 2018 were considerably higher than those of the same period of 2017. Refer to Table 2 for details.

**Table 2. Inflation Rate for All Income Households by Commodity Group, NCR  
January to March 2017 and 2018**

Commodity Group	January		February		March	
	2018	2017	2018	2017	2018	2017
All Items (Philippines)	3.4	2.9	3.8	3.1	4.3	3.1
All Items (NCR)	4.7	2.5	4.7	3.4	5.2	3.9
Food and Non-Alcoholic Beverages	6.1	5.2	6.6	5.4	7.0	6.0
Alcoholic Beverages and Tobacco	17.8	5.7	21.2	8.0	21.7	9.7
Clothing and Footwear	2.6	2.1	2.4	2.2	2.1	2.9
Housing, Water, Electricity, Gas and Other Fuels	4.2	-0.1	4.0	1.5	4.6	3.3
Furnishing, Household Equipment and Routine Maintenance of the House	2.3	1.6	2.4	1.7	2.7	2.5
Health	3.2	1.4	2.6	2.1	2.7	2.5
Transport	7.9	3.9	6.7	7.8	5.2	8.0
Communication	0.3	0.2	0.3	0.3	0.4	0.3
Recreation and Culture	1.0	1.7	1.1	1.6	1.2	1.7
Education	1.6	3.0	1.6	3.0	1.6	3.0
Restaurants and Miscellaneous Goods and Services	3.0	1.9	3.2	2.0	4.4	1.3

Source: Price Statistics Division, PSA

### Lower PPP for NCR during the first quarter of 2018 compared to 2017 figures

Purchasing Power of Peso (PPP) for NCR were lower throughout January to March 2018 as compared to the same months in 2017. Both periods also showed the similar trend. The same trend was likewise observed for the national PPP.

**Table 3. Purchasing Power of the Peso in Philippines and NCR  
January to March 2017 and 2018**

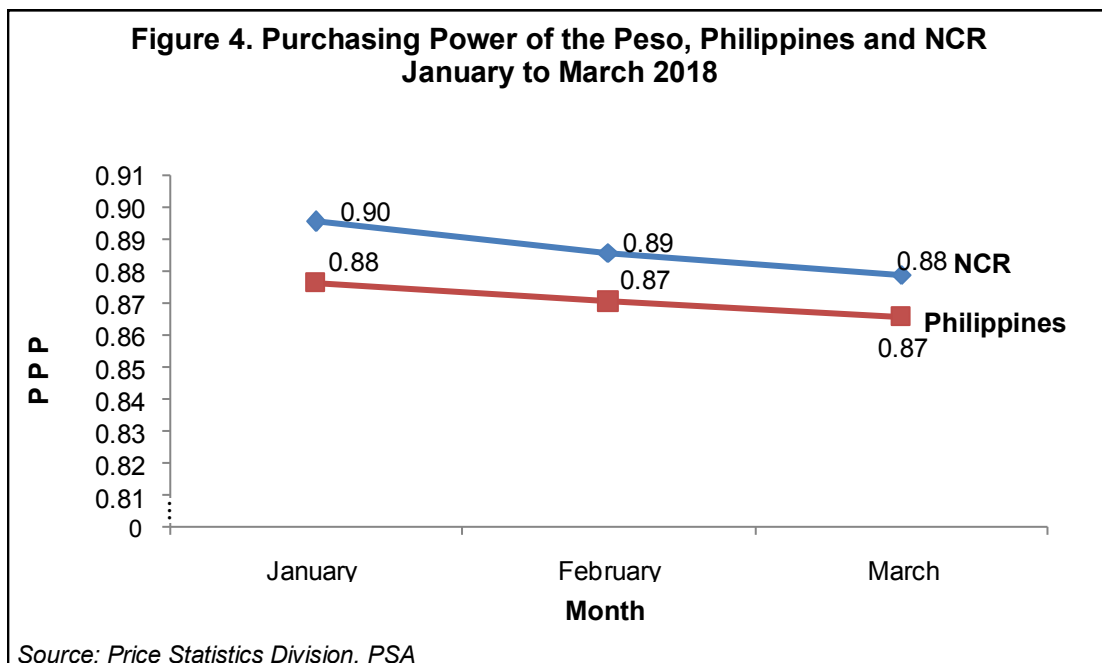
Year	January		February		March	
	PHL	NCR	PHL	NCR	PHL	NCR
2018	0.88	0.90	0.87	0.89	0.87	0.88
2017	0.91	0.94	0.90	0.93	0.90	0.92

Source: Price Statistics Division, PSA

Comparatively, the NCR PPPs were consistently higher than the national PPP throughout the first quarter of 2018.

### Lower PPP in NCR from January to March 2018

NCR exhibited lower PPP throughout January to March 2018 as compared to the same months in 2017. Both periods also showed the similar trend. The same trend was likewise observed for the national PPP.



**PACIANO B. DIZON**  
(Chief Statistical Specialist)  
Officer-in-Charge, PSA-NCR

## TECHNICAL NOTES ON CONSUMER PRICE INDEX (CPI)

### I. INTRODUCTION

Consumer Price Index (CPI) provides a general measure of the changes in average retail prices of commodities bought by specific group of consumers in a given area and in a given period of time. It mainly measures the composite change in the retail prices of the various commodities over time.

### II. SEASONALITY

The seasonal adjustment of a time series mainly refers to the isolation of seasonal fluctuations, leaving the basic trend of the observed series. Seasonal fluctuations can be due to composite effect of climates and institutional events which repeat more or less regularly each year. Specific factors that may affect the CPI include seasonality due to production cycles, demand due to school year or holidays, and practices such as increase in rental rates during the beginning of the year. After the removal of seasonal variations, the resulting series is referred to as the seasonally adjusted series or the depersonalized series. By removing the effects of seasonality on the CPI series, analysis can be made on a month-on-month basis. Thus, seasonal adjustment allows comparisons over recent months and gives short-term trend movements for the series. In general, if seasonally adjusted CPI levels are lower than the unadjusted series, it means that seasonal factors push up prices relative to the expected trend.

### III. SEASONALITY IN THE CPI

The over-all CPI is tabulated using six major commodity groups in the Philippines, Metro Manila (MM) and Areas Outside Metro Manila (AOMM). The six groups are: Food, Beverages and Tobacco; Clothing; Housing and Repairs; Fuel, Light and Water; Services; Miscellaneous. The last five groups listed comprise the non-food items. Initially, the CPI series for all items as well as the Food, Beverages and Tobacco (FBT), and non-food items for MM and AOMM were tested for the presence of seasonality assuming stability. In MM and AOMM, presence of stable seasonality were observed both for FBT and Non-food items. However, the CPI for all items indicated that there is no seasonality in the series mainly due to the exhibited opposite direction of peaks and troughs of the FBT and non-food items, thus, canceling out. Presence of stable seasonality though, was observed both for FBT and non-food items when analyzed separately. The current seasonally adjusted series are based on X11ARIMA88 built-in model (Multiplicative with log-transformation (0,1,1) (0,1,1) and Additive (0,1,1) (0,1,1)) fit to the 2001 data series.

### IV. DATA COLLECTION

Collection of data for the CPI is done through the collective effort of the Bureau of Agricultural Statistics and the National Statistics Office (now part of Philippine Statistics Authority under RA 10625). BAS collects price data for agricultural commodities in NCR and in provincial capitals where there are BAS offices while NSO collects prices for all other commodities in all other areas.

Except for FBT which is monitored on a weekly basis in NCR, price collection is done twice a month. First collection phase is done during the first five days of the month while the second phase is on the 15th to 17th day of the month.

About 459,000 price quotations gathered throughout the country are entered into the computation of the monthly CPI. Data are collected from the sample outlets (outlets or establishments where prices of commodities/services are collected or quoted) which were chosen using the following criteria:

1. 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 goods included in the CPI survey forms and the outlet is patronized by the large segment of the population.
2. Consistency and completeness of stock

*Consistency of stock* - the outlet has a constant, steady or regular stock of commodities listed in the CPI survey forms as well as of those commodities of the same kind and belonging to the same commodity.

*Completeness of stock* - the sample outlet carries in its stock many if not all of the items included in the CPI survey forms relative to the other outlets in the area.

3. Permanency of outlet - the outlet to be chosen should be an established store or stall in the market area. It should not be an ambulant or transient vendor.

4. Geographical location - the outlet should be in a convenient place and is accessible to the majority if not all consumers in the area.

## V. COMPUTATION OF THE CPI

The formula used in computing the CPI is the weighted arithmetic mean of price relatives, a variant of the Laspeyres formula with fixed base year period weights. In computing the CPI, the formula is:

$$\text{CPI} = \frac{\text{sum}[(P_n/P_o)W]}{\text{sum}(W)} \times 100$$

**Where:**

**P<sub>n</sub>** = current price  
**P<sub>o</sub>** = base period price  
**W** = P<sub>o</sub>Q<sub>o</sub> = weights

## VI. ECONOMIC INDICATORS DERIVED FROM THE CPI

### 1. Inflation Rate

Inflation rate is defined as the annual rate of change or the year-on-year change in the CPI. That is,

$$\text{Inflation Rate} = \frac{\text{CPI}_2 - \text{CPI}_1}{\text{CPI}_1} \times 100$$

**Where:**

**CPI<sub>2</sub>** = is the CPI in the second period  
**CPI<sub>1</sub>** = is the CPI in the previous period

### 2. Purchasing Power of Peso (PPP)

Another important economic indicator derived from the CPI is the PPP. The PPP is a measure of the real value of the peso in a given period relative to a chosen reference period. It is computed by getting the reciprocal of the CPI and multiplying the result by 100. That is,

$$\text{PPP} = \frac{1}{\text{CPI}} \times 100$$

## VII. INDEX FORMULA

The construction of the CPI basically uses a Laspeyres Formula (fixed base year weights). The formula is modified as the weighted arithmetic mean of price relatives. That is,

$$\text{INDEX} = \frac{\text{sum} ((P_n/P_o) \times (P_o \times Q_o))}{\text{sum} (P_o \times Q_o)} \times 100$$

**Where:**

**P<sub>n</sub>** = current price  
**P<sub>o</sub>** = base year price or base price  
**P<sub>o</sub> x Q<sub>o</sub>** = base year weights