## INFLATION DECLINES

Consumers paid 1.5 per cent more in September 2017 than they did a year ago for the basket of goods and services included in the Consumer Price Index (CPI). The level of inflation decreased 0.8 percentage points from the 2.3 per cent measured in August 2017.

Between August 2017 and September 2017, the average cost of goods and services in the CPI increased by 0.2 percent. The all-items index rose to 104.2 in September. This means that the basket of goods and services that cost $\$ 100.00$ in April 2015 now costs \$104.20.

## YEAR-TO-YEAR ANALYSIS

The Transport \& Foreign Travel sector was the largest contributor to the year-over-year increase in September ( +3.2 per cent). The average cost of premium fuels continues to be the leading factor for the year-to-year increase for this sector up 13.7 per cent.

In addition, the Tobacco \& Liquor sector and the Food sector rose 9.0 per cent and 2.5 per cent, respectively.


Inflation

The compilation of the CPI involves the processing of several thousand price quotations. The
Department of
Statistics wishes to acknowledge the cooperation of the business community in supplying the required price data.

| SUMMARY STATISTICS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Monthly |  | Period | Quarterly |  |
| Period | Index | Annual per cent Change |  | Index | Annual per cent Change |
| 2016 |  |  | 2015 |  |  |
| Sep | 102.7 | +2.0 | Q1 | 98.9 | +1.5 |
| Oct | 102.7 | +2.1 | Q2 | 100.2 | +1.7 |
| Nov | 102.2 | +1.7 | Q3 | 100.6 | +1.5 |
| Dec | 102.1 | +1.6 | Q4 | 100.5 | +1.2 |
| 2017 |  |  | 2016 |  |  |
| Jan | 102.2 | +1.9 | Q1 | 100.2 | +1.3 |
| Feb | 102.1 | +1.9 | Q2 | 101.2 | +1.0 |
| Mar | 102.5 | +2.4 | Q3 | 102.2 | +1.6 |
| Apr | 102.8 | +1.7 | Q4 | 102.3 | +1.8 |
| May | 103.3 | +2.4 |  |  |  |
| Jun | 103.3 | +1.8 | 2017 |  |  |
| Jul | 103.9 | +1.7 | Q1 | 102.3 | +2.1 |
| Aug | 104.0 | +2.3 | Q2 | 103.1 | +1.9 |
| Sept | 104.2 | +1.5 | Q3 | 104.0 | +1.8 |

## MONTH-TO-MONTH ANALYSIS

Education, Recreation, Entertainment \& Reading

The Education, Recreation, Entertainment \& Reading sector rose 0.8 per cent in September. The average cost of tuition fees for local schools and overseas colleges rose 2.4 per cent and 2.5 per cent, respectively.

## Transport \& Foreign Travel

The Transport \& Foreign Travel sector advanced 0.2 per cent in September. The increase was a result of a shift in the average cost of overseas hotels ( +7.1 per cent) and premium fuels ( +6.7 per cent).


## Rent

The Rent sector reported no price movement in September.

## Fuel \& Power

The Fuel \& Power sector rose 0.2 per cent in September. The average cost of propane gas climbed 4.6 per cent.

## Household Goods, Services \& Supplies

After no price movement in August, the Household Goods, Services \& Supplies sector reported a 0.1 per cent increase in September. The average fee for child day care nurseries rose 1.1 per cent.

## Health \& Personal Care

Following a 0.5 per cent increase in August, the Health \& Personal Care sector reported no price movement in September.

## Tobacco \& Liquor

The average cost of spirits ( +0.4 per cent) and wines ( +0.2 per cent) led to a 0.1 per cent rise in the Tobacco \& Liquor sector for September.

## Clothing \& Footwear

The Clothing \& Footwear sector reported no price movement in September.

## Food

The Food sector fell 0.1 percent in September. Items behind the price decline were frozen spare ribs (-3.2 per cent), pasta ( -2.0 per cent) and rice ( -1.8 per cent).

## COMPUTING PRICE INCREASES

The Department of Statistics receives calls daily requesting the rate of inflation over specific periods of time. The following calculations are provided to guide users as to how to compute rates of price increases. The monthly index numbers can be obtained from our website www.gov.bm.

## A) Month-to-Month Price Change

The price change between November and October, 2015 is calculated as Follows:
$=\frac{\text { Nov } 15 \text { index }- \text { Oct } 15 \text { index }}{\text { Oct } 15 \text { index }} \times 100$
$=\frac{100.5-100.6}{100.6} \times 100$
$=-0.1 \%$

## B) Year-to-Year Price Change

The price change between December 2015 and December, 2014 is calculated as follows:
$=\frac{\text { Dec } 15 \text { index }- \text { Dec } 14 \text { index }}{\text { Dec } 14 \text { index }} \times 100$
$=\frac{100.5-98.7}{98.7} \times 100$
$=1.8 \%$

## C) Particular Period Price Change

The price change between April 2014 and January, 2016 is calculated as follows:

$$
=\frac{\text { Jan } 16 \text { index }- \text { Apr } 14 \text { index }}{\text { Apr } 14 \text { index }} \times 100
$$

$$
=\frac{100.3-98.3}{98.3} \times 100
$$

$$
=2.0 \%
$$

APRIL 2015 = 100

|  | All Items | Food | Rent | Clothing \& Footwear | Tobacco \& Liquor | Fuel \& Power | Household Goods, Services \& Supplies | Transport \& Foreign Travel | Education, Recreation, Entertain. \& Reading | Health \& Personal Care |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 2013 \\ \text { WEIGHT } \end{gathered}$ | 1000 | 115 | 267 | 25 | 31 | 39 | 116 | 130 | 147 | 130 |


| ANNUAL AVERAGE ( per cent) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2012 | +2.4 | +3.5 | +0.2 | +4.3 | +2.5 | +9.3 | +1.0 | +1.6 | +2.7 | +6.6 |
| 2013 | +1.8 | +3.0 | -0.3 | +0.1 | +4.4 | -1.9 | +0.5 | +1.4 | +2.5 | +8.3 |
| 2014 | +2.0 | +3.1 | +0.8 | +2.0 | +2.4 | -2.4 | +0.8 | +1.7 | +1.9 | +6.7 |
| 2015 | +1.5 | +2.7 | +0.6 | +1.3 | +1.2 | -8.9 | +2.1 | -1.3 | +0.9 | +7.8 |
| 2016 | +1.5 | +1.9 | +1.0 | +0.4 | +5.1 | -3.3 | +1.6 | -2.2 | +3.3 | +4.5 |

MONTHLY ( per cent)

| 2015 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jul | -0.1 | +0.1 | Nil | +0.7 | Nil | +4.0 | +2.1 | -3.6 | -0.1 | Nil |
| Aug | -0.2 | +0.3 | +0.1 | Nil | +0.1 | Nil | Nil | -1.6 | -0.2 | +0.1 |
| Sept | +0.3 | -0.1 | Nil | Nil | +0.2 | Nil | +0.3 | +0.9 | +0.9 | -0.1 |
| Oct | -0.1 | +0.2 | +0.1 | Nil | Nil | -1.3 | Nil | -1.2 | +0.2 | +0.5 |
| Nov | -0.1 | -0.5 | Nil | Nil | Nil | -1.3 | Nil | +0.1 | Nil | Nil |
| Dec | Nil | -0.2 | +0.1 | Nil | +0.3 | -2.0 | Nil | +0.4 | +0.1 | Nil |
| 2016 |  |  |  |  |  |  |  |  |  |  |
| Jan | -0.2 | +1.2 | -0.1 | +0.1 | +0.4 | -3.7 | +0.1 | -1.6 | Nil | Nil |
| Feb | -0.1 | +0.6 | +0.1 | Nil | +1.1 | Nil | Nil | -1.4 | -0.3 | +0.1 |
| Mar | -0.1 | -0.1 | Nil | Nil | Nil | -0.8 | +0.1 | -0.7 | +0.2 | Nil |
| Apr | +0.9 | +0.3 | Nil | -0.5 | +2.0 | -2.6 | Nil | +0.8 | +2.7 | +3.2 |
| May | -0.1 | -0.3 | +0.1 | Nil | +1.5 | -5.0 | Nil | -0.3 | +0.5 | Nil |
| Jun | +0.5 | +0.2 | Nil | Nil | +0.8 | +10.4 | Nil | +1.0 | Nil | -0.1 |
| Jul | +0.8 | +0.3 | +1.0 | +0.1 | Nil | +4.3 | +0.1 | +2.5 | -0.2 | Nil |
| Aug | -0.5 | +0.1 | +0.1 | Nil | Nil | Nil | Nil | -4.3 | Nil | Nil |
| Sept | +1.0 | +0.1 | Nil | Nil | +0.1 | +6.0 | +0.1 | +4.5 | +1.1 | Nil |
| Oct | Nil | +0.1 | Nil | +0.3 | Nil | -0.9 | +0.1 | Nil | +0.1 | +0.1 |
| Nov | -0.5 | -0.1 | Nil | +0.1 | Nil | -2.3 | Nil | -2.8 | -0.2 | Nil |
| Dec | -0.1 | -1.3 | +0.1 | Nil | -0.4 | -3.1 | Nil | +1.3 | +0.1 | Nil |
| 2017 |  |  |  |  |  |  |  |  |  |  |
| Jan | +0.1 | +2.0 | Nil | +1.2 | +0.8 | -2.3 | Nil | -1.2 | Nil | Nil |
| Feb | -0.1 | Nil | -0.8 | Nil | -0.1 | Nil | Nil | +0.8 | -0.1 | Nil |
| Mar | +0.4 | +0.4 | +0.1 | Nil | +0.1 | +3.9 | Nil | +1.9 | Nil | Nil |
| Apr | +0.3 | -1.1 | Nil | Nil | +2.8 | +0.5 | +0.1 | +1.9 | +0.2 | +0.2 |
| May | +0.4 | +1.7 | Nil | Nil | +4.7 | +1.8 | -0.1 | Nil | +0.1 | Nil |
| Jun | Nil | +0.6 | +0.1 | Nil | Nil | +3.3 | +0.2 | -1.2 | -0.1 | Nil |
| Jul | +0.6 | +0.2 | Nil | +0.2 | +0.7 | +3.0 | +0.2 | +2.4 | +0.1 | Nil |
| Aug | +0.1 | +0.1 | +0.1 | Nil | Nil | Nil | Nil | Nil | +0.2 | +0.5 |
| Sept | +0.2 | -0.1 | Nil | Nil | +0.1 | +0.2 | +0.1 | +0.2 | +0.8 | Nil |
| Sept '17 | 104.2 | 105.3 | 101.2 | 102.2 | 116.2 | 108.3 | 103.4 | 103.1 | 106.5 | 104.6 |


| Sept '17 |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sept '16 | $\mathbf{+ 1 . 5}$ | $\mathbf{+ 2 . 5}$ | $\mathbf{- 0 . 4}$ | $\mathbf{+ 1 . 8}$ | $\mathbf{+ 9 . 0}$ | $\mathbf{+ 3 . 7}$ | $\mathbf{+ 0 . 6}$ | $\mathbf{+ 3 . 2}$ |
| $\mathbf{+ 1 . 3}$ | +0.9 |  |  |  |  |  |  |  |

## WHAT IS THE CONSUMER PRICE INDEX?

The Consumer Price Index (CPI) is a statistical tool used for measuring changes in the general level of prices of consumer goods and services purchased by private households.
The index measures price movements of a given quality and quantity of goods and services. The mix of these consumer goods and services comprising the index, are figuratively thought of as a "shopping basket." In constructing this "shopping basket", the selected goods and services are organized first by commodity type. They are then divided into subcomponents and assigned to a major expenditure group. The Bermuda CPI is structured into nine expenditure groups or sectors:

- Food
- Rent
- Clothing \& Footwear
- Tobacco \& Liquor
- Fuel \& Power
- Transport \& Foreign Travel
- Household Goods, Services \& Supplies
- Education, Recreation, Entertainment \& Reading
- Health \& Personal Care


## CONCEPTS AND DEFINITIONS

## Base Period

The time period which is used as a reference point for measuring the price change of goods and services. The base period for the Bermuda CPI is April 2015.

## Price Index Number

A single figure that shows how a set of prices has changed over a specified period of time. An index number on its own means nothing. It must be compared with an index number from another period to have meaning. For example, a comparison of the index number 97.2 for January 2014 with 100.4 for January 2016, reveals that prices have increased by 3.3 percent.

## Laspeyres Equation

The CPI is computed using this statistical equation. This formula calculates the total amount of money a household needs today to purchase the same basket of goods and services that it bought in the base period, April 2015.

## WEIGHTED AVERAGE

A mathematical formula that takes into account the relative importance of an item's price change compared to the overall change in the sector or CPI.

## Inflation

Inflation is the process of rising prices, resulting in diminishing purchasing power of a given sum of money.

## Cost of Living Index

Many individuals refer to the CPI as a cost-of-living index. The CPI is an index of pure price change only. A cost-of-living index reflects the changes in buying or consumption patterns that consumers would ordinarily make to adjust to any change in the price of a good or service.

## A COMPARISON OF RATES OF INFLATION (\%) Selected Countries \& Bermuda

|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | Sept 17 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Bermuda | 1.8 | 2.0 | 1.5 | 1.5 | +1.5 |
| United States |  |  |  |  |  |
| Canada $^{2}$ | 1.5 | 0.8 | 0.7 | 2.1 | +2.2 |
| United Kingdom $^{3}$ | 0.9 | 2.0 | 1.1 | 1.4 | +1.6 |
|  | 3.0 | 2.4 | $1.0 r$ | 1.8 | +3.9 |

## Sources:

1. US Bureau of Labour Statistics
2. Statistics Canada
3. UK Office of National Statistics

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