



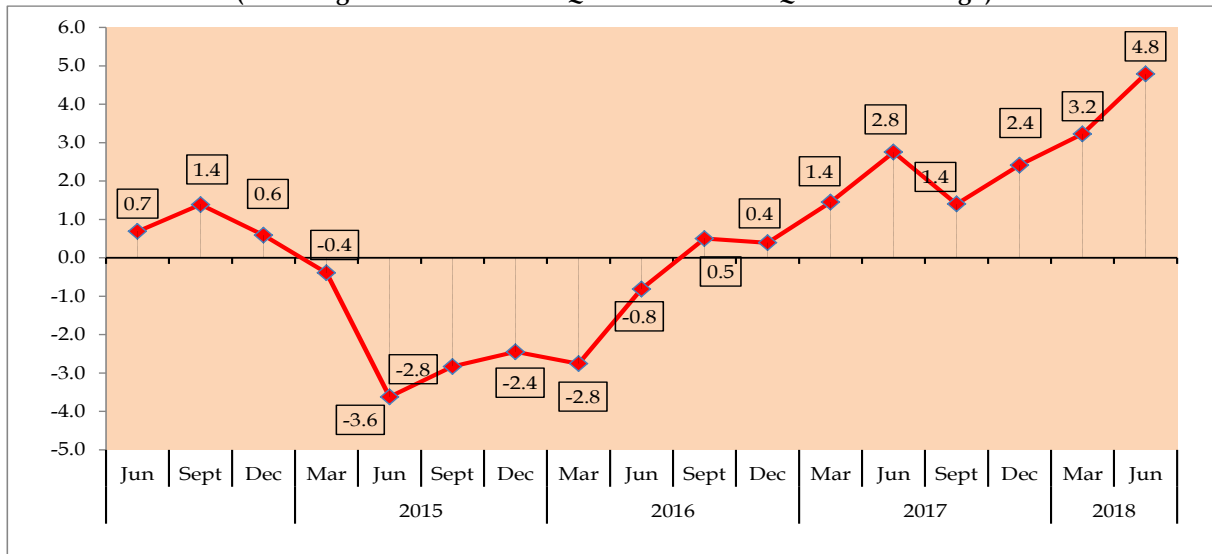
# THE CAYMAN ISLANDS' CONSUMER PRICE INDEX REPORT: APRIL TO JUNE 2018



The consumer price index (CPI) represents the overall level of prices of consumer goods and services generally purchased by households in the Cayman Islands. It increases or decreases in one quarter compared to the same quarter in the previous year. There are 2,227 goods and services from 203 providers surveyed by the ESO every quarter that are represented in the CPI. The first two pages of this Report present the highlights. The rest of the Report comprise of tables including the change in CPI indices from the current quarter compared to the previous quarter, and the technical notes on the compilation of the CPI.

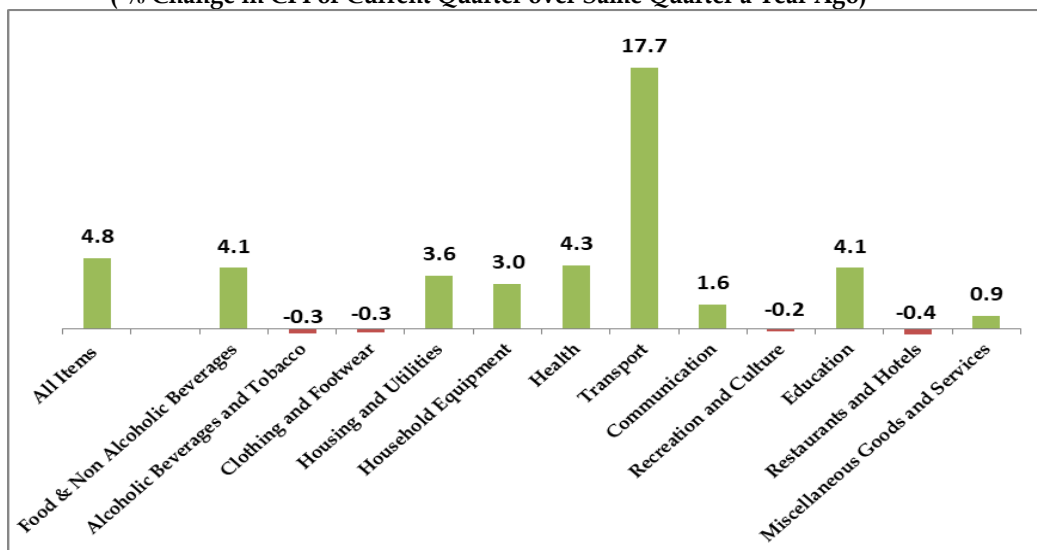
- The CPI increased in the 2nd quarter of 2018 by 4.8% compared to the 2nd quarter of 2017

**Figure 1: Inflation Rates, June 2014 – June 2018**  
(% Change in CPI of Current Quarter over Same Quarter a Year Ago)



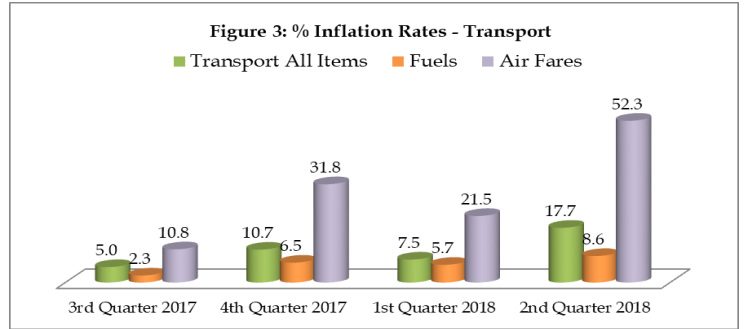
- Among the 12 types of goods and services comprising the CPI, the highest overall increase was recorded in **transport** (17.7%), followed by health, education, food, and housing and utilities.

**Figure 2: Inflation Rates, June 2014 – June 2018 by Major Types of Goods and Services**  
(% Change in CPI of Current Quarter over Same Quarter a Year Ago)



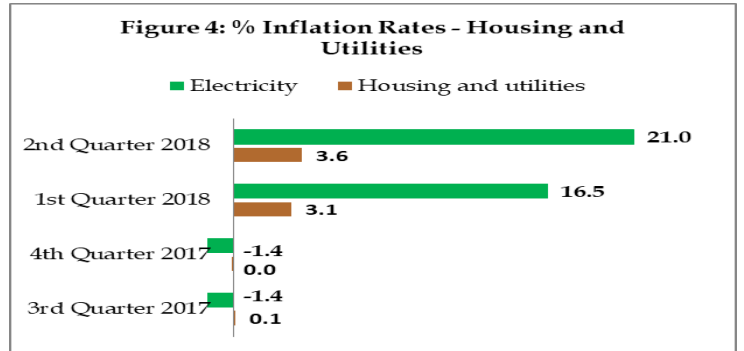
- **Transport-related** items increased by 17.7%, mainly from:

- Air fares which rose by 52.3%
- Fuel prices which increased by 8.6%



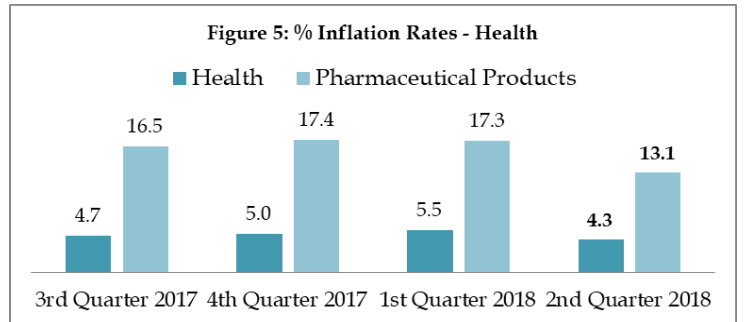
- **Housing and utilities** increased by 3.6%

- Largely due to **electricity rates which went up 21.0%** on average
- Offsetting the above is the average actual rentals paid by tenants which did not record any increase



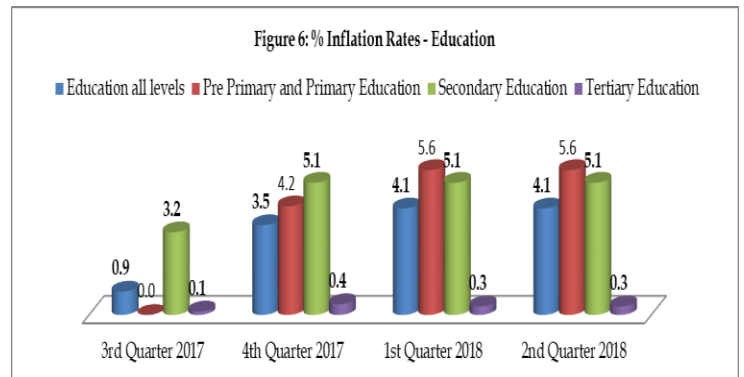
- **Health-related** goods and services increased by 4.3%

- Largely due to pharmaceutical products which increased on average by 13.1%



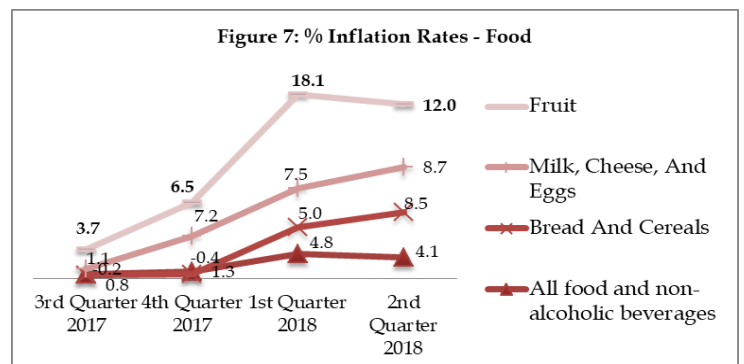
- In **education**, some fees prevailing in the second quarter were higher on average by 4.1% compared to the same quarter in 2017

- Fees for pre-primary and primary schooling increased by 5.6%
- Secondary education went up by 5.1%



- **Food** prices went up by 4.1%, due mainly to rises in prices for

- Fruits by 12%
- Milk, cheese and eggs by 8.7%
- Bread and cereals by 8.5%



**Table 1: Quarterly Consumer Price Index and Inflation Rates**
**September 2016 = 100**

Year	Quarter Ending	INDEX	Percentage change in CPI:	
			3 months ago	1 year ago
2011	March	96.6	0.6	0.0
	June	97.9	1.3	0.9
	September	98.2	0.3	2.4
	December	97.8	-0.4	1.9
2012	March	98.3	0.5	1.8
	June	98.8	0.5	0.9
	September	98.2	-0.6	0.00
	December	99.8	1.6	2.0
2013	March	99.7	-0.1	1.4
	June	101.5	1.8	2.7
	September	101.0	-0.5	2.9
	December	101.5	0.5	1.7
2014	March	102.0	0.5	2.3
	June	102.2	0.2	0.7
	September	102.4	0.2	1.4
	December	102.1	-0.3	0.6
2015	March	101.6	-0.5	-0.4
	June	98.5	-3.1	-3.6
	September	99.5	1.0	-2.8
	December	99.6	0.1	-2.4
2016	March	98.8	-0.8	-2.8
	June	97.7	-1.1	-0.8
	September	100.0	2.4	0.5
	December	100.0	0.0	0.4
2017	March	100.2	0.2	1.4
	June	100.4	0.2	2.8
	September	101.4	1.0	1.4
	December	102.4	1.0	2.4
2018	March	103.5	1.0	3.2
	June	105.2	2.7	4.8

\* The CPI series from 2011 to June 2016 were re-based to September 2016.

**Table 2: Annual Averages 2011 to 2017**

**(September 2016 = 100)**

YEAR	INDEX	Percentage change from a year ago
2011	97.6	1.3
2012	98.8	1.2
2013	100.9	2.2
2014	102.2	1.2
2015	99.8	-2.3
2016	99.1	-0.7
2017 <sup>R</sup>	101.1	2.0

R : Revised

**TABLE 3: CONSUMER PRICE INDICES AND INFLATION BY DIVISIONS AND GROUPS - SECOND QUARTER 2018  
(September 2016=100)**

Major Groups	Index				Percentage Change	
	Weight	June 17	Mar 17	June 18	3 months ago	1 year ago
<b>Overall</b>	<b>1,000.0</b>	<b>100.4</b>	<b>103.5</b>	<b>105.2</b>	<b>1.7</b>	<b>4.8</b>
<b>01 Food and non-alcoholic beverages</b>	<b>66.1</b>	<b>100.6</b>	<b>104.5</b>	<b>104.8</b>	<b>0.3</b>	<b>4.1</b>
Bread and Cereals	8.6	99.8	105.1	108.4	3.1	8.5
Meat & Meat Products	8.9	99.5	97.5	98.4	0.9	-1.0
Fish and Seafood	3.0	105.4	106.6	108.0	1.3	2.4
Milk, Cheese and Eggs	7.2	101.0	109.1	109.8	0.6	8.7
Oils and Fats	1.7	100.3	104.5	104.9	0.4	4.6
Fruits	6.7	104.4	118.6	117.0	-1.4	12.0
Vegetables	8.4	100.2	104.2	102.3	-1.8	2.2
Sugar, Sugar Confectionary and Snacks	3.1	100.7	100.5	99.0	-1.5	-1.7
Other Food Products (Not Elsewhere Specified)	4.3	99.8	100.8	101.6	0.8	1.8
Tea, Coffee and Cocoa	1.4	100.0	95.5	97.2	1.7	-2.8
Mineral Waters, Soft Drinks, Fruit and Vegetable Juices	12.9	99.4	101.7	101.7	0.0	2.3
<b>02 Alcoholic beverages and tobacco</b>	<b>22.3</b>	<b>103.3</b>	<b>102.7</b>	<b>102.9</b>	<b>0.2</b>	<b>-0.3</b>
Spirits and Alcoholic Cordials	3.2	102.0	102.2	102.5	0.3	0.5
Wine	6.7	101.7	101.7	101.5	-0.2	-0.1
Beer	8.5	105.4	103.6	104.1	0.5	-1.2
Tobacco	3.9	102.6	102.8	103.1	0.3	0.5
<b>03 Clothing &amp; Footwear</b>	<b>33.3</b>	<b>101.9</b>	<b>102.2</b>	<b>101.6</b>	<b>-0.6</b>	<b>-0.3</b>
Clothing	14.4	102.9	103.0	102.2	-0.8	-0.7
Footwear	3.9	104.6	100.5	98.0	-2.5	-6.3
Clothing purchased abroad	11.9	100.2	101.9	102.1	0.2	1.9
Footwear purchased abroad	3.0	100.3	101.4	101.5	0.1	1.2
<b>04 Housing, water, electricity, gas and other fuels</b>	<b>334.5</b>	<b>100.4</b>	<b>103.3</b>	<b>104.0</b>	<b>0.7</b>	<b>3.6</b>
Actual Rentals paid by Tenants	85.7	101.6	101.6	101.6	0.0	0.0
Imputed Rentals for Owner Occupiers	170.3	100.3	100.8	100.8	0.0	0.5
Materials for the Maintenance and Repair of the Dwelling	2.5	100.9	101.4	101.0	-0.3	0.1
Services for the Maintenance and Repair of the Dwelling	1.1	100.0	100.0	100.0	0.0	0.0
Water Supply	18.7	98.1	100.4	96.9	-3.4	-1.2
Electricity	54.7	99.7	115.0	120.6	4.9	21.0
Gas (LPG/Propane)	1.5	100.0	100.3	100.3	0.0	0.3
<b>05 Furnishings, household equipment and routine household maintenance</b>	<b>42.7</b>	<b>102.7</b>	<b>106.4</b>	<b>105.8</b>	<b>-0.6</b>	<b>3.0</b>
Furniture and Furnishings	8.7	102.2	115.9	113.3	-2.3	10.8
Household Textiles	2.2	98.1	99.3	99.2	-0.1	1.1
Major Household Appliances	4.6	100.4	102.0	101.1	-0.9	0.7
Small Electric Household Appliances	1.0	101.4	104.0	103.3	-0.6	1.8
Repair of Household Appliances	2.2	100.0	104.6	104.6	0.0	4.6
Glassware, Tableware and Household Utensils	1.8	104.0	107.3	109.2	1.8	5.1
Small Tools and Miscellaneous Accessories	1.6	100.3	103.0	102.9	0.0	2.6
Non-Durable Household Goods	11.9	107.5	108.2	107.9	-0.2	0.4
Employed Staff (Paid Staff Privately Employed)	8.6	100.0	100.0	100.0	0.0	0.0
<b>06 Health</b>	<b>20.9</b>	<b>101.5</b>	<b>105.3</b>	<b>105.8</b>	<b>0.5</b>	<b>4.3</b>
Pharmaceutical Products	6.1	105.6	118.3	119.5	1.0	13.1
Other Medicinal Products	0.6	108.1	110.2	110.0	-0.2	1.8
Therapeutic Appliances and Equipment	2.1	100.0	96.9	96.9	0.0	-3.1
Medical Services	5.2	98.3	100.0	100.0	0.0	1.7
Dental Services	1.7	100.0	100.0	100.0	0.0	0.0
Paramedical Services	1.0	100.0	100.0	100.0	0.0	0.0
Hospital Services	4.2	100.0	100.0	100.7	0.7	0.7

Major Groups	Index			Percentage Change		
	Weight	June 17	Mar 17	June 18	3 months ago	1 year ago
<b>07 Transport</b>	<b>162.0</b>	<b>99.3</b>	<b>108.9</b>	<b>116.9</b>	<b>7.4</b>	<b>17.7</b>
Purchase of Motor Vehicles	35.8	101.1	96.7	101.4	4.9	0.3
Spare Parts and Accessories for Personal Transport Equipment	4.8	106.5	107.0	106.6	-0.3	0.1
Fuels	43.4	102.3	106.1	111.1	4.7	8.6
Maintenance and Repair of Personal Transport Equipment	12.9	109.2	112.0	124.0	10.8	13.6
Other Services In Respect of Personal Transport Equipment	11.9	94.9	97.8	95.0	-2.8	0.1
Passenger Transport by Road	3.0	100.0	100.0	100.0	0.0	0.0
Passenger Transport by Air	46.8	92.4	123.8	140.8	13.7	52.3
Other Purchased Transport Services	3.4	104.0	105.2	105.2	0.0	1.1
<b>08 Communication</b>	<b>39.1</b>	<b>102.2</b>	<b>101.2</b>	<b>103.9</b>	<b>2.6</b>	<b>1.6</b>
Telephone and Telefax Equipment	3.4	100.1	115.1	115.1	0.0	15.0
Telephone and Telefax Services	35.7	102.4	99.9	102.8	2.9	0.4
<b>09 Recreation and Culture</b>	<b>59.2</b>	<b>100.4</b>	<b>98.3</b>	<b>100.2</b>	<b>1.9</b>	<b>-0.2</b>
Reception and Recording Equipment	2.3	96.1	89.2	84.3	-5.4	-12.2
Information Processing Equipment	1.9	103.2	103.9	103.9	0.0	0.7
Recording Media (Audio Visual, Media)	0.5	100.9	99.7	101.7	2.0	0.8
Major Durables for Outdoor Recreation	2.8	102.2	97.4	100.4	3.0	-1.8
Games, Toys and Hobbies	1.3	97.6	94.6	94.7	0.1	-3.0
Equipment for Sport, Camping and Open-Air Recreation	1.5	102.2	107.8	107.8	0.0	5.5
Gardens, Plants and Flowers	1.3	99.6	99.6	99.6	0.0	0.0
Pets and Related Products	3.1	100.0	100.7	100.7	0.0	0.7
Veterinary and Other Services For Pets	3.8	100.0	100.0	100.0	0.0	0.0
Recreation and Sporting Services	8.9	98.9	99.3	99.3	0.0	0.4
Cultural Services	17.2	100.3	99.9	99.9	0.1	-0.3
Books	1.3	100.9	99.7	99.6	-0.1	-1.2
Newspapers and Periodicals	1.3	100.0	100.0	100.0	0.0	0.0
Package Holidays (Abroad)	12.2	101.8	93.9	103.1	9.8	1.3
<b>10 Education</b>	<b>38.2</b>	<b>100.0</b>	<b>104.1</b>	<b>104.1</b>	<b>0.0</b>	<b>4.1</b>
Pre Primary and Primary Education	18.1	100.0	105.6	105.6	0.0	5.6
Secondary Education	10.5	100.0	105.1	105.1	0.0	5.1
Tertiary Education	7.1	100.1	100.4	100.4	0.0	0.3
Education Not Definable by Level	2.5	100.0	100.0	100.0	0.0	0.0
<b>11 Restaurants and Hotels</b>	<b>83.5</b>	<b>99.3</b>	<b>99.3</b>	<b>98.9</b>	<b>-0.4</b>	<b>-0.4</b>
Restaurants, Cafes and the Like	64.3	99.5	99.5	99.5	0.0	-0.1
Canteens at Educational Establishments Or Work	8.8	100.0	100.7	100.7	0.0	0.7
Accommodation Services (Local & Abroad)	10.3	97.3	97.1	94.1	-3.1	-3.3
<b>12 Miscellaneous Goods and Services</b>	<b>98.2</b>	<b>100.0</b>	<b>100.7</b>	<b>100.8</b>	<b>0.1</b>	<b>0.9</b>
Hairdressing Salons and Personal Grooming Establishments	12.8	99.9	101.1	101.6	0.4	1.7
Other Appliances, Articles and Products for Personal Care	15.6	98.9	100.1	100.3	0.1	1.3
Jewellery and Watches	2.3	114.8	113.9	113.9	0.0	-0.8
Other Personal Effects	1.9	98.9	114.0	114.0	0.0	15.2
Social Protection	5.6	100.0	102.7	102.7	0.0	2.7
Housing Contents Insurance	3.1	100.0	102.9	104.8	1.9	4.8
Health Insurance	33.6	100.0	100.1	100.1	0.0	0.0
Vehicle Insurance	11.7	98.4	97.1	97.1	0.0	-1.3
Other Financial Services	7.8	100.0	100.0	100.0	0.0	0.0
Other Services Not Elsewhere Classified	3.9	100.0	100.0	100.0	0.0	0.0



TABLE 4: CONSUMER PRICE INDEX, AVERAGES BY MAJOR GROUPS

PERIOD / DIVISION	Food & Non-alcoholic beverages	Alcoholic Beverages & Tobacco	Clothing & Footwear	Housing and Utilities	Household Furnishings & Equipment	Health	Transport	Communication	Recreation & Culture	Education	Restaurants & Hotels	Miscellaneous Goods & Services	ALL ITEMS
<b>WEIGHT</b>	<b>66.1</b>	<b>22.3</b>	<b>33.3</b>	<b>334.5</b>	<b>42.7</b>	<b>20.9</b>	<b>162.0</b>	<b>39.1</b>	<b>59.2</b>	<b>38.2</b>	<b>83.5</b>	<b>98.2</b>	<b>1000</b>
<b>2014</b>													
MARCH	97.1	98.8	95.6	107.0	99.9	100.4	105.6	95.0	95.8	93.8	104.3	101.4	102.0
JUNE	97.7	98.6	96.2	108.3	100.3	100.3	106.5	96.5	95.8	93.8	95.0	101.1	102.2
SEPTEMBER	98.1	99.0	96.5	109.1	100.7	100.3	106.4	96.4	95.8	93.8	93.4	101.0	102.4
DECEMBER	99.1	99.0	96.8	108.3	100.7	100.2	105.8	95.3	96.7	96.3	95.2	99.4	102.1
<b>ANNUAL AVERAGE 2014</b>	<b>98.0</b>	<b>98.8</b>	<b>96.2</b>	<b>108.2</b>	<b>100.4</b>	<b>100.3</b>	<b>106.1</b>	<b>95.8</b>	<b>96.0</b>	<b>94.4</b>	<b>97.0</b>	<b>100.7</b>	<b>102.2</b>
<b>2015</b>													
MARCH	99.9	99.1	97.3	105.9	100.7	100.8	105.5	97.3	97.6	96.3	95.8	99.0	101.6
JUNE	98.8	99.4	98.8	98.1	100.5	100.5	98.3	99.4	97.6	98.0	93.7	99.5	98.5
SEPTEMBER	99.7	99.5	100.2	99.5	100.5	100.6	100.8	99.5	97.5	98.8	93.8	100.2	99.5
DECEMBER	99.9	99.6	100.2	99.1	100.5	100.5	98.9	99.5	97.1	98.8	99.0	100.9	99.6
<b>ANNUAL AVERAGE 2015</b>	<b>99.6</b>	<b>99.4</b>	<b>99.1</b>	<b>100.7</b>	<b>100.6</b>	<b>100.6</b>	<b>100.9</b>	<b>98.9</b>	<b>97.4</b>	<b>98.0</b>	<b>95.6</b>	<b>99.9</b>	<b>99.8</b>
<b>2016</b>													
MARCH	100.2	99.7	99.2	96.5	100.3	100.7	98.4	99.5	97.0	98.8	95.8	102.8	98.8
JUNE	98.7	99.7	99.3	95.2	100.5	100.7	98.4	99.5	99.5	98.8	92.7	99.8	97.7
SEPTEMBER	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DECEMBER	99.8	100.5	100.7	100.2	100.3	100.3	100.1	100.0	98.5	100.0	99.5	100.0	100.0
<b>ANNUAL AVERAGE 2016</b>	<b>99.7</b>	<b>100.0</b>	<b>99.8</b>	<b>98.0</b>	<b>100.3</b>	<b>100.4</b>	<b>99.2</b>	<b>99.8</b>	<b>98.7</b>	<b>99.4</b>	<b>97.0</b>	<b>100.6</b>	<b>99.1</b>
<b>2017</b>													
MARCH	99.7	101.7	101.5	100.2	102.6	99.8	101.3	100.0	97.9	100.0	99.1	99.7	100.2
JUNE	100.6	103.3	101.9	100.4	102.7	101.5	99.3	102.2	100.4	100.0	99.3	100.0	100.4
SEPTEMBER	100.8	103.3	103.6	100.1	103.5	104.7	105.0	100.3	100.5	100.9	99.5	100.1	101.4
DECEMBER	101.1	102.8	101.2	100.2	106.1	105.4	110.8	101.3	98.5	103.5	98.9	100.7	102.4
<b>ANNUAL AVERAGE 2017</b>	<b>100.6</b>	<b>102.8</b>	<b>102.0</b>	<b>100.2</b>	<b>103.7</b>	<b>102.8</b>	<b>104.1</b>	<b>100.9</b>	<b>99.3</b>	<b>101.1</b>	<b>99.2</b>	<b>100.1</b>	<b>101.1</b>
<b>2018</b>													
MARCH	104.5	102.7	102.2	103.3	106.4	105.3	108.9	101.2	98.3	104.1	99.3	100.7	103.5
JUNE	104.8	102.9	101.6	104.0	105.8	105.8	116.9	103.9	100.2	104.1	98.9	100.8	105.2
<b>% CHANGE OVER PREV YEAR</b>	<b>4.1</b>	<b>-0.3</b>	<b>-0.3</b>	<b>3.6</b>	<b>3.0</b>	<b>4.3</b>	<b>17.7</b>	<b>1.6</b>	<b>-0.2</b>	<b>4.1</b>	<b>-0.4</b>	<b>0.9</b>	<b>4.8</b>
<b>% CHANGE OVER PREV QTR</b>	<b>0.3</b>	<b>0.2</b>	<b>-0.6</b>	<b>0.7</b>	<b>-0.6</b>	<b>0.5</b>	<b>7.4</b>	<b>2.6</b>	<b>1.9</b>	<b>0.0</b>	<b>-0.4</b>	<b>0.1</b>	<b>1.7</b>
<b>ANNUAL AVERAGE % CHANGE 2015</b>	<b>1.6</b>	<b>0.6</b>	<b>3.0</b>	<b>-6.9</b>	<b>0.2</b>	<b>0.3</b>	<b>-4.8</b>	<b>3.3</b>	<b>1.5</b>	<b>3.8</b>	<b>-1.5</b>	<b>-0.8</b>	<b>-2.3</b>
<b>ANNUAL AVERAGE % CHANGE 2016</b>	<b>0.1</b>	<b>0.6</b>	<b>0.7</b>	<b>-2.7</b>	<b>-0.3</b>	<b>-0.1</b>	<b>-1.7</b>	<b>0.8</b>	<b>1.3</b>	<b>1.5</b>	<b>1.5</b>	<b>0.7</b>	<b>-0.7</b>
<b>ANNUAL AVERAGE % CHANGE 2017</b>	<b>0.9</b>	<b>2.8</b>	<b>2.2</b>	<b>2.3</b>	<b>3.4</b>	<b>2.4</b>	<b>4.9</b>	<b>1.2</b>	<b>0.6</b>	<b>1.7</b>	<b>2.2</b>	<b>-0.5</b>	<b>2.0</b>

**TABLE 5: Average Prices of Selected Items  
Quarter Ending June 2018**

Item	Quantity	Average Prices		
		Jun 17	Mar 18	Jun 18
Sliced Brown Bread	20 oz	2.69	2.86	2.89
Enriched Parboiled Long Grain Rice	5 lb	7.52	9.62	9.62
Cornflakes (original)	24 oz	5.39	5.46	5.46
Stew Beef	per lb	5.40	4.94	5.36
Corned Beef - regular	340 g	4.19	4.49	4.49
Salmon Steaks - Fresh	per lb	12.02	12.49	12.82
Canned Tuna in water	5 oz	1.67	1.66	1.66
Eggs (Grade A Extra Large)	1 doz	2.12	3.42	3.44
Butter - Salted	227 g	3.76	4.26	4.29
Condensed Milk	395 g	1.99	1.99	2.02
Vegetable Oil	48 oz	6.39	5.96	5.96
Plantain	per lb	1.11	1.27	1.03
Potatoes - Irish	5lb bag	3.75	3.78	3.87
Lettuce - Iceberg	each	2.31	2.09	2.42
Sweet Potatoes	per lb	2.76	3.21	3.18
Tomatoes - Slicing	per lb	3.16	3.12	3.05
Bananas - Ripe	per lb	1.04	1.04	1.05
Apple - Red Delicious	per lb	1.73	2.16	2.13
Grapes - Red Seedless	per lb	4.28	4.24	3.97
Tea - 100% Natural	100 bags	5.68	5.68	5.68
Coffee - Instant -Classic Roast - Bottle	7 oz	8.12	8.12	8.66
Soda	20 oz	1.11	1.24	1.24
Cane Sugar	4 lb	2.66	2.59	2.08
Iodized Salt	26 oz	1.06	1.06	1.16
Petrol - Regular Full Service	per gal	4.27	4.44	4.65
Petrol - Premium Full Service	per gal	4.50	4.65	4.87
Diesel - Full Service	per gal	4.17	4.24	4.42



**Table 6: Core Consumer Price Index  
and Inflation Rates\***

September 2016 = 100

Period	INDEX	Percentage change 1 year ago
Dec-16	100.1	0.1
<b>Dec-17</b>	102.7	2.5

\*CPI Inflation excluding food, gas piped and electricity,  
fuel oil and other household fuels, and motor fuels.

## NOTES ON THE INDEX COMPILATION

### 1. Data collection

This report uses the 2016 CPI basket based on the results of the 2015 Household Budget Survey (HBS) as updated between August 2016 and August 2017. The goods and services in the basket are classified into twelve (12) divisions using the United Nations' Classification of Individual Consumption According to Purpose (COICOP). In all, there are **2,227** items (7th-digit COICOP level) included in the basket collected from **203** providers/outlets in Grand Cayman, compared to 2008 when there were **1,647** items collected from **147** providers/outlets. The items are classified as follows:

**Summary Table: Number of Items and Weights for the CPI Baskets of 2008 and 2016**

	2008		2016	
	Number of Items	Weights	Number of Items	Weights
<b>Total</b>	<b>1,647</b>	<b>1,000</b>	<b>2,227</b>	<b>1,000</b>
<b>01.</b> Food & Non Alcoholic Beverage	540	79.6	551	66.1
<b>02.</b> Alcohol and Tobacco	66	6.5	153	22.3
<b>03.</b> Clothing and Footwear	153	34.3	273	33.3
<b>04.</b> Housing and Utilities	59	394.4	153	334.5
<b>05.</b> Household Equipment	212	56.4	316	42.7
<b>06.</b> Health	111	24.2	124	20.9
<b>07.</b> Transport	107	96.1	198	162.0
<b>08.</b> Communication	62	69.7	40	39.1
<b>09.</b> Recreation and Culture	75	40.5	94	59.2
<b>10.</b> Education	18	27.9	46	38.2
<b>11.</b> Restaurants and Hotels	57	40.2	103	83.5
<b>12.</b> Miscellaneous Goods and Services	187	130.2	176	98.2

All price indices for goods and services purchased abroad were taken from price indices published by the US Bureau of Labour Statistics.

ESO collection periods and price averaging methodologies follow updated international standards, in particular the *Consumer Price Index Manual: Theory and Practice* (August 2004) published by the International Labour Organization (ILO). Prices of selected items are collected every second month of the quarter. Vulnerable items which change monthly, such as vegetables and fruits, fish and meat, and gas are collected on a monthly basis. Prices across outlets are averaged using the geometric mean formula to reduce the impact of extreme or outlier prices (please see below).

## 2. CPI formula

The CPI is computed using Lowe’s formula. The Lowe indices is one of the widest and popular class of price indices which is obtained by defining the index as the percentage change, between the periods compared, in the total cost of purchasing a given set of quantities, generally described as a “basket”.<sup>1</sup> The Lowe index, P<sub>Lo</sub>, is defined as follows<sup>2</sup>:

$$P_{Lo} = \frac{\sum_{i=1}^n p_i^t q_i}{\sum_{i=1}^n p_i^0 q_i}$$

Where n = number of products in the basket with prices p<sub>i</sub> and quantities q<sub>i</sub>  
 0 = base period  
 t = later period being compared

### Geometric mean

The price p = [p<sub>1</sub>, p<sub>2</sub>, . . . , p<sub>n</sub>] for each item from different outlets is the average of prices of the outlets using geometric mean or the formula:

$$p = \left( \prod_{i=1}^n p_i \right)^{1/n} = \sqrt[n]{p_1, p_2, \dots, p_n}$$

**Inflation:** this refers to the percentage change in the Consumer Price Index from one period to another. Typically, this period would be a year or a quarter.

**Annual Inflation Rate:** the percentage change of the CPI in the quarter under review over the CPI of the same quarter a year ago. This is also known as **year-on-year inflation rate**.

**Quarterly Inflation Rate:** the percentage change of the CPI in the quarter under review over the immediate previous quarter. This is also known as **quarter-on-quarter inflation rate**.

<sup>1</sup> ILO by 2004, p. 2). Consumer price index manual

<sup>2</sup> Ibid, p.3