



THE CAYMAN ISLANDS' CONSUMER PRICE INDEX REPORT: DECEMBER 2014

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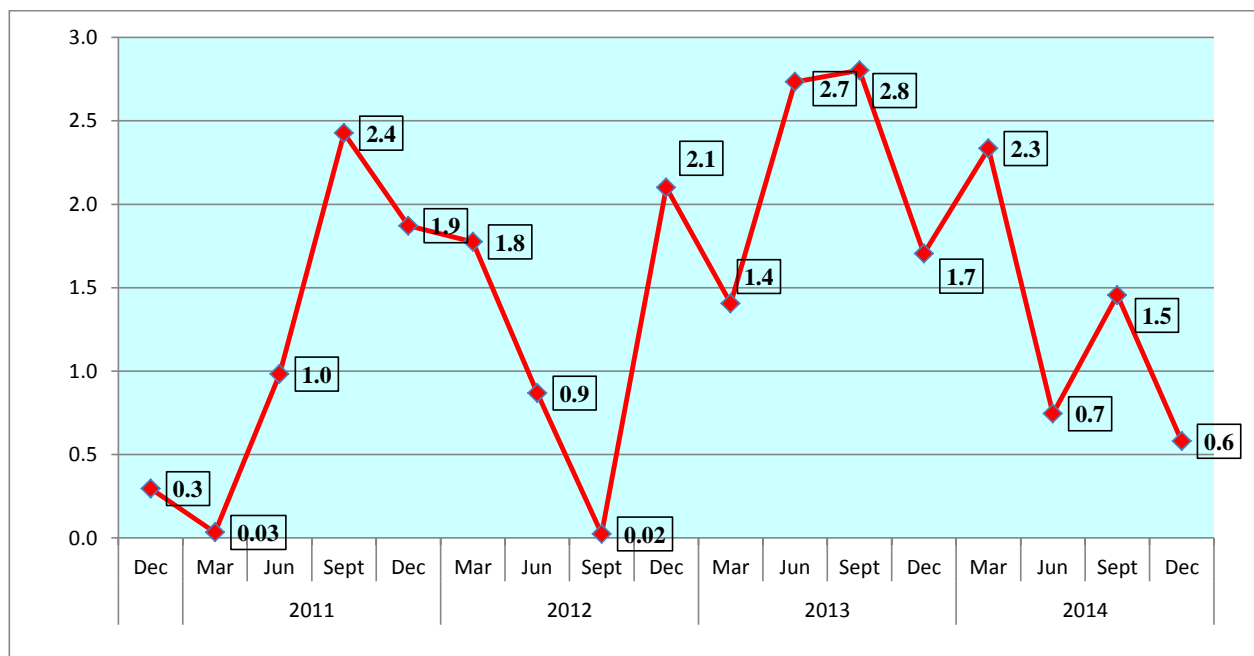
Average CPI Increased by 1.3% in 2014

This report presents the average CPI in 2014 and the results of the December 2014 CPI survey.

Average CPI in 2014

The average Consumer Price Index (CPI) in 2014 was **104.9**, reflecting an increase of 1.3 from the average CPI in 2013. In 2014, all quarters recorded increases, consisting of 2.3 percent in the first quarter to 0.7 percent in the second quarter, 1.5 percent in the third, and 0.6 percent in the fourth.

Figure 1: Inflation Rates (Dec 2011 – Dec 2014)
(% Change in CPI of Current Quarter over Same Quarter a Year Ago)



A look at the major divisions of goods and services in the CPI basket indicates that there were increases in nine (9) out of the twelve (12) divisions as follows:

- Food and non-alcoholic beverages, 2.4%;
- Alcoholic Beverage and tobacco, 0.1%;
- Household equipment, 7.4%;
- Transport, 2.3%;

- Communication, 0.9%;
- Recreation and culture, 2.2%;
- Education, 2.7%
- Restaurants and Hotels, 4.5%; and
- Miscellaneous Goods and Services, 0.7%

The major divisions that registered declines in the average price were clothing and footwear (-0.7%), housing and utilities (-1.6%), and health (-0.2%).

December 2014 Consumer Price Index

Annual changes: December 2014 over December 2013

The CPI for the quarter ended December 2014 increased by **0.6** percent compared to the same period a year ago. This movement was mainly due to increases in the following divisions:

- **Household equipment:** the index for this division increased by **7.3** percent. This upward movement was largely the result of higher prices for goods and services for routine household maintenance (9.2%); tools and equipment for house and garden (4.1%); glassware, tableware and household utensils (2.8%); and furniture and furnishings (1.6%). Among the contributors to the increase in goods and services for routine household maintenance were the costs of residential housework, baby-sitting, and fumigation services.
- **Recreation and culture:** the inflation rate for the division was **3.4** percent, mainly the result of newspapers, books and stationery (11.4%), recreational and cultural services (5.5%) as well as other major durables for recreation and culture (1.2%). The group audio-visual, photographic and information processing equipment recorded a decline of 3.9 percent while prices for other recreational items and equipment, gardens and pets were stable.
- **Education:** the price index was **2.7** percent above the level in December 2013. The average cost of two of the three levels of education rose. Pre-primary and primary education rose by 4.3 percent; and secondary level rose by 2.2 percent.
- **Food and non-alcoholic beverages:** this index rose by **2.4** percent as the average cost of items in most groups increased, led by fruits (6.2%) followed by meat and meat products (4.8%); bread and cereals (4.6%); and milk, cheese, and eggs (4.4%). There were reduced prices for mineral water, soft drinks, fruit and vegetables juices (-1.5%); and oils and fats (-1.2%).
- **Communication:** there was a **0.4** percent rise in this price index as all sub-groups registered at higher levels: telephone and telefax equipment (27.5%), postal services (1.1%) and telephone and telefax services (0.2%).

- **Alcohol and tobacco:** the index for this division moved upward by **0.2** percent due to alcohol price increases (0.3%). On average, tobacco prices were stable.

Meanwhile, the following divisions recorded declines in December 2014 compared to December 2013:

- **Housing and utilities:** the price index registered a downward movement of **4.6** percent year on year. The main contributor to the decline was the 5.7 percent fall in the index for electricity, gas and other fuels. Average imputed rentals for owner-occupied housing was stable. However, actual rentals averaged higher by 0.6 percent due to an upward movement for one-bedroom units while, water supply and miscellaneous services rose by 1.4 percent. The group that recorded the most significant increase was maintenance and repair of the dwelling (8.8%) as some materials and labour costs rose.
- **Restaurants and hotels:** the index declined on average by **2.2** percent following the fall of 14.9 percent in the index for accommodation services. However, catering services (0.1%) showed a slight price increase.
- **Miscellaneous goods and services:** this price index fell by **1.3** percent as a result of reduced prices for personal effects not elsewhere classified (-5.8%), particularly some jewellery items. Average prices for other services n.e.c. and insurance fell by 2.6 percent and 1.5 percent respectively. There was however a 2.9 percent increase for social protection.
- **Clothing and footwear:** this divisional index was lower by **0.6** percent as clothing moved down by 0.7 percent. However, the index for footwear was stable.
- **Transport:** there was a decline of **0.4** percent due to changes in the average cost of operations of personal transport equipment (-0.2%) and transport services (-0.3%) which includes vehicle fuel and airfares for a variety of routes. However, the purchase cost of vehicles moved upward (0.2%).

However, for the division Health, the overall index was stable.

Quarterly changes: December 2014 compared to September 2014

The following divisions were the main contributors to the **0.3** percent CPI decrease over the third quarter:

- **Housing and utilities:** this index, which accounts for almost 2/5 of the entire CPI basket, declined by **5.4** percent when compared to last quarter. Electricity, gas and other fuels recorded a 3.5 percent fall, while, the average cost of actual rentals for housing fell by 3.1 percent. Imputed rental for owner-occupied housing was stable. All other components of the division had a quarterly upturn: maintenance and repair of dwelling (3.3%), and water supply and miscellaneous services (0.6%).

- **Miscellaneous goods and services:** the index had a quarterly decline of **1.6** percent, resulting mainly from reduced prices for personal effects n.e.c. (-5.5%) particularly jewellery, other services n.e.c. (-2.6%) and insurance (-2.3%).
- **Communication:** this experienced a price fall of **1.1** percent which is traced to telephone and telefax services (-1.1%). Prices for postal services and telephone and telefax equipment were stable.
- **Transport:** there was a decline of **0.8** percent as a result of reduced prices for the purchase of vehicles (-3.0%), transport services (-0.9%), and operations of personal transport equipment (-0.2%).
- **Health:** the price index was lower by **0.1** percent due to reductions in average prices for medical products, appliances and equipment of 0.7 percent. However, hospital services rose by 1.4 percent, and outpatient services had stable prices.

The following divisions recorded increases in the indices compared to September 2014:

- **Education:** the price index rose **2.7** percent above the September 2014 price. The average cost of pre-primary and primary education rose by 4.3 percent; and secondary rose by 2.2 percent. The prices for tertiary education were stable.
- **Restaurants and hotels:** the index moved up by **2.0** percent as accommodation services recorded a significant average price increase (15.3%) as demand for the services grew. There was a slight 0.1 percent rise in prices for catering services.
- **Food and non-alcoholic beverage:** this recorded a **1.0** percent increase, as a result of price increases for a number of items led by vegetables (5.8%); bread and cereals (1.7%); and food products n.e.c. (1.6%). Meat and meat products (1.0%); and coffee, tea and cocoa (1.0%) recorded similar increases. These increased prices were moderated by price reductions for fish and seafood (-2.5%); mineral water, soft drinks, fruit and vegetable juices (-0.5%); and milk, cheese and eggs (-0.3%).
- **Recreation and culture:** this price index increased by **1.0** percent, coming mainly from a 5.9 percent rise in the average cost of newspapers, books and stationery. Other recreational items and equipment, gardens and pets recorded a 1.6 percent rise in the index. While the prices for other major durables for recreation and culture were stable those for audio-visual, photographic and information processing equipment and recreational and cultural services were reduced by 1.3 and 0.1 percent respectively.

Meanwhile, the index for the divisions; household equipment and routine maintenance and alcohol and tobacco showed no price changes over the previous quarter.

Table 1: Quarterly Consumer Price Index and Inflation Rates
JUNE 2008 = 100

Year	Quarter Ending	INDEX	Percentage change in CPI:	
			3 months ago	1 year ago
2006	March	91.9	-0.9	-0.9
	June	93.3	1.5	0.9
	September	94.4	1.2	1.4
	December	94.2	-0.2	1.6
2007	March	95.9	1.8	4.4
	June	96.3	0.4	3.2
	September	96.7	0.4	2.4
	December	95.8	-0.9	1.7
2008	March	99.2	3.5	3.4
	June	100.0	0.8	3.8
	September	101.8	1.8	5.3
	December	99.5	-2.3	3.9
2009	March	98.8	-0.8	-0.4
	June	98.8	0.1	-1.2
	September	98.7	-0.2	-3.1
	December	98.2	-0.5	-1.3
2010	March	99.1	0.9	0.4
	June	99.5	0.4	0.7
	September	98.4	-1.1	-0.3
	December	98.5	0.1	0.3
2011	March	99.2	0.7	0.03
	June	100.5	1.4	1.0
	September	100.8	0.3	2.4
	December	100.4	-0.4	1.9
2012	March	100.9	0.6	1.8
	June	101.4	0.5	0.9
	September	100.8	-0.6	0.02
	December	102.5	1.6	2.1
2013	March	102.3	-0.1	1.4
	June	104.2	1.8	2.7
	September	103.7	-0.5	2.8
	December	104.2	0.5	1.7
2014	March	104.7	0.5	2.3
	June	104.9	0.2	0.7
	September	105.2	0.2	1.5
	December	104.8	-0.3	0.6

Table 2
CAYMAN ISLANDS CONSUMER PRICE INDEX
 ANNUAL AVERAGES 1995 TO 2014
 (June 2008 = 100)

YEAR	INDEX	Percentage change from a year ago
1995	66.7	
1996	68.4	2.5
1997	70.3	2.7
1998	72.4	3.0
1999	77.3	6.9
2000	79.4	2.7
2001	80.3	1.1
2002	82.3	2.5
2003	82.8	0.5
2004	86.5	4.5
2005	92.8	7.3
2006	93.5	0.8
2007	96.2	2.9
2008	100.1	4.1
2009	98.6	-1.5
2010	98.9	0.3
2011	100.2	1.3
2012	101.4	1.2
2013	103.6	2.2
2014	104.9	1.3

TABLE 3: CONSUMER PRICE INDICES AND INFLATION BY DIVISIONS AND GROUPS - FOURTH QUARTER 2014

Major Group	Weight	Index			Percentage Change	
		Dec-14	Sept- 14	Dec-13	3 months Ago	1 year ago
All Divisions - All items	1,000.0	104.8	105.2	104.2	-0.3	0.6
01 Food & Non Alcoholic Beverage	79.6	125.6	124.4	122.7	1.0	2.4
Bread & cereals	9.9	124.7	122.6	119.3	1.7	4.6
Meat & meat products	10.4	131.5	130.2	125.4	1.0	4.8
Fish & seafood	4.2	124.9	128.1	122.0	-2.5	2.4
Milk, cheese & egg	8.3	124.3	124.7	119.0	-0.3	4.4
Oils & fats	2.0	109.0	108.4	110.4	0.5	-1.2
Fruits	6.7	139.0	137.8	130.8	0.9	6.2
Vegetables	8.6	137.5	129.9	135.0	5.8	1.8
Sugars, jam, honey, chocolate & confectionery	5.5	124.9	124.9	124.0	0.0	0.7
Food products n.e.c.	5.6	121.3	119.4	119.8	1.6	1.2
Coffee, tea & cocoa	1.6	114.3	113.1	110.4	1.0	3.5
Mineral water, soft drinks, fruit & vegetable juices	16.9	116.7	117.2	118.4	-0.5	-1.5
02 Alcohol and Tobacco	6.5	131.9	131.9	131.6	0.0	0.2
Alcohol	5.6	114.3	114.3	113.9	0.0	0.3
Tobacco	0.9	246.0	246.0	246.0	0.0	0.0
03 Clothing and Footwear	34.3	112.6	112.3	113.3	0.3	-0.6
Clothing	29.5	111.5	110.7	112.3	0.7	-0.7
Footwear	4.8	119.9	122.0	119.9	-1.8	0.0
04 Housing and Utilities	394.4	84.7	89.6	88.8	-5.4	-4.6
Actual rentals for housing	78.7	78.4	80.9	77.9	-3.1	0.6
Imputed rentals for owner-occupied housing	223.4	80.6	80.6	80.6	0.0	0.0
Maintenance and repair of dwelling	28.5	125.9	121.8	115.7	3.3	8.8
Water supply and miscellaneous services	16.4	117.0	116.3	115.4	0.6	1.4
Electricity, gas and other fuels	47.3	113.4	117.5	120.2	-3.5	-5.7
05 Household Equipment	56.4	118.5	118.6	110.4	0.0	7.3
Furniture and furnishings	5.7	107.0	106.7	105.3	0.3	1.6
Household textiles	1.1	128.3	134.2	127.7	-4.4	0.4
Household appliances	2.8	103.5	103.2	103.2	0.3	0.3
Glassware, tableware and household utensils	2.8	131.7	134.4	128.1	-2.0	2.8
Tools and equipment for house and garden	1.5	95.0	93.1	91.3	2.1	4.1
Goods and services for routine household maintenance	42.4	120.8	120.7	110.7	0.1	9.2
06 Health	24.2	101.8	101.9	101.8	-0.1	0.0
Medical products, appliances and equipment	5.0	107.5	108.3	108.9	-0.7	-1.3
Outpatient services	17.9	99.2	99.2	99.0	0.0	0.1
Hospital services	1.4	114.6	113.1	112.5	1.4	1.9
07 Transport	96.1	117.3	118.3	117.8	-0.8	-0.4
Purchase of vehicles	6.1	116.9	120.4	116.6	-3.0	0.2
Operations of personal transport equipment	57.4	121.2	121.5	121.4	-0.2	-0.2
Transport services	32.6	111.3	112.3	111.7	-0.9	-0.3
08 Communication	69.7	105.1	106.2	104.7	-1.1	0.4
Postal services	0.5	96.4	96.4	95.3	0.0	1.1
Telephone & telefax equipment	0.3	107.6	107.6	84.4	0.0	27.5
Telephone & telefax services	68.9	105.2	106.3	104.9	-1.1	0.2
09 Recreation and Culture	40.5	99.4	98.4	96.1	1.0	3.4
Audio-visual, photographic and information processing equipment	4.2	71.7	72.6	74.6	-1.3	-3.9
Other major durables for recreation and culture	3.4	91.3	91.3	90.1	0.0	1.2
Other recreational items and equipment, gardens and pets	10.5	113.8	112.0	113.8	1.6	0.0
Recreational & cultural services	17.6	98.2	98.3	93.1	-0.1	5.5
Newspapers, books and stationery	4.8	102.2	96.6	91.8	5.9	11.4
10 Education	27.9	116.0	113.0	113.0	2.7	2.7
Pre-primary and primary education	16.1	117.4	112.5	112.5	4.3	4.3
Secondary education	2.4	121.0	118.4	118.4	2.2	2.2
Tertiary education	9.4	112.5	112.5	112.5	0.0	0.0
11 Restaurants and Hotels	40.2	119.2	116.9	121.9	2.0	-2.2
Catering Services	33.8	122.2	122.0	122.0	0.1	0.1
Accommodation Services	6.4	103.1	89.4	121.1	15.3	-14.9
12 Miscellaneous Goods and Services	130.2	116.9	118.8	118.5	-1.6	-1.3
Personal care	26.5	113.9	112.9	114.0	0.9	-0.1
Personal effects n.e.c.	7.7	120.7	127.7	128.2	-5.5	-5.8
Social protection	8.4	107.8	104.8	104.8	2.9	2.9
Insurance	74.8	120.2	123.0	121.9	-2.3	-1.5
Financial services n.e.c.	0.5	91.8	91.8	91.8	0.0	0.0
Other services n.e.c.	12.2	108.7	111.7	111.7	-2.6	-2.6

Table 4: Consumer Price Index, Averages by Major Groups

(JUNE 2008 = 100)

PERIOD / DIVISION	Food & Non-alcoholic beverages	Alcoholic Beverages & Tobacco	Clothing & Footwear	Housing and Utilities	Household Equipment	Health	Transport	Communication	Recreation & Culture	Education	Restaurants & Hotels	Miscellaneous Goods & Services	ALL ITEMS
WEIGHT	79.6	6.5	34.3	394.4	56.4	24.2	96.1	69.7	40.5	27.9	40.2	130.2	1000
2009													
MARCH	105.9	104.4	102.4	96.2	101.8	95.6	89.3	98.4	98.3	101.8	108.8	104.1	98.8
JUNE	106.9	104.6	102.4	95.2	101.6	96.3	90.8	101.6	98.5	102.0	107.1	104.3	98.8
SEPTEMBER	105.6	104.1	100.3	94.9	100.9	97.2	92.7	99.5	97.6	103.5	109.7	104.5	98.7
DECEMBER	105.1	104.7	99.9	93.8	100.5	97.1	93.2	102.7	96.7	103.5	109.2	103.1	98.2
ANNUAL AVERAGE 2009	105.9	104.5	101.2	95.0	101.2	96.6	91.5	100.5	97.7	102.7	108.7	104.0	98.6
2010													
MARCH	107.5	114.5	99.8	93.5	100.8	97.4	96.1	102.8	98.1	103.5	116.4	104.1	99.1
JUNE	110.6	115.3	102.1	93.1	102.9	97.7	97.4	102.7	97.5	103.5	113.6	105.0	99.5
SEPTEMBER	109.3	115.6	101.1	89.1	101.8	97.8	100.5	102.9	100.1	105.4	113.4	106.4	98.4
DECEMBER	108.6	115.1	101.1	89.2	101.7	97.8	101.8	102.1	99.7	105.4	113.3	107.1	98.5
ANNUAL AVERAGE 2010	109.0	115.1	101.0	91.2	101.8	97.7	98.9	102.6	98.9	104.5	114.2	105.6	98.9
2011													
MARCH	110.4	115.0	100.2	89.2	102.5	97.9	105.0	102.1	99.5	105.4	117.5	107.2	99.2
JUNE	112.4	115.7	100.9	90.4	102.2	99.1	110.3	105.4	99.4	105.4	115.5	107.4	100.5
SEPTEMBER	113.6	115.5	101.0	91.2	103.5	98.9	111.5	104.1	99.2	105.4	115.7	105.6	100.8
DECEMBER	114.7	115.7	102.2	90.1	103.3	98.9	110.7	104.4	99.3	105.4	112.8	106.0	100.4
ANNUAL AVERAGE 2011	112.8	115.5	101.1	90.3	102.8	98.7	109.4	104.0	99.3	105.4	115.4	106.5	100.2
2012													
MARCH	116.3	115.6	103.8	90.0	102.9	100.5	111.8	104.4	98.1	105.4	117.8	107.3	100.9
JUNE	116.7	116.2	106.4	90.5	103.1	100.4	114.0	103.6	98.6	105.4	114.5	107.7	101.4
SEPTEMBER	118.3	116.2	110.0	89.7	104.6	101.8	110.4	103.6	96.9	106.4	108.0	108.3	100.8
DECEMBER	119.0	131.6	110.6	91.5	104.3	101.9	114.2	104.0	96.4	106.4	110.1	110.6	102.5
ANNUAL AVERAGE 2012	117.6	119.9	107.7	90.4	103.7	101.2	112.6	103.9	97.5	105.9	112.6	108.5	101.4
2013													
MARCH	120.1	131.8	112.5	89.4	110.2	102.1	113.1	104.0	96.6	106.4	116.9	110.8	102.3
JUNE	121.0	131.6	111.2	90.2	109.8	102.1	114.4	104.9	96.6	110.6	109.7	122.3	104.2
SEPTEMBER	121.9	131.5	114.5	88.4	110.0	102.4	115.3	104.8	96.8	113.0	116.1	119.2	103.7
DECEMBER	122.7	131.6	113.3	88.8	110.4	101.8	117.8	104.7	96.1	113.0	121.9	118.5	104.2
ANNUAL AVERAGE 2013	121.4	131.6	112.9	89.2	110.1	102.1	115.2	104.6	96.5	110.8	116.2	117.7	103.6
2014													
MARCH	123.1	131.7	111.3	87.9	117.6	102.0	117.3	104.7	98.4	113.0	130.5	119.3	104.7
JUNE	123.8	131.4	112.0	88.9	118.0	101.8	118.4	106.4	98.5	113.0	118.9	119.0	104.9
SEPTEMBER	124.4	131.9	112.3	89.6	118.6	101.9	118.3	106.2	98.4	113.0	116.9	118.8	105.2
DECEMBER	125.6	131.9	112.6	84.7	118.5	101.8	117.3	105.1	99.4	116.0	119.2	116.9	104.8
ANNUAL AVERAGE 2014	124.2	131.7	112.0	87.8	118.2	101.9	117.8	105.6	98.7	113.8	121.4	118.5	104.9
% CHANGE PREV YEAR	2.4	0.2	-0.6	-4.6	7.3	0.0	-0.4	0.4	3.4	2.7	-2.2	-1.3	0.6
% CHANGE PREV QTR	1.0	0.0	0.3	-5.4	0.0	-0.1	-0.8	-1.1	1.0	2.7	2.0	-1.6	-0.3
% CHANGE ANNUAL AVERAGE	2.4	0.1	-0.7	-1.6	7.4	-0.2	2.3	0.9	2.2	2.7	4.5	0.7	1.3

TABLE 5: AVERAGE PRICES OF SELECTED ITEMS
Quarter Ending Dec 2014

Item	Quantity	Average Prices (C\$)		
		Dec-13	Sept-14	Dec-14
Loaf - Harddough	2 lb	3.64	3.94	4.05
Long Grain Rice	5 lb	2.49	2.46	2.46
Cornflakes (original)	24 oz	5.39	5.16	5.16
Stew Beef	per lb	4.07	4.84	4.67
Bacon	12 oz	5.22	6.66	6.66
Snapper Fillets (frozen)	per lb	9.71	9.47	8.86
Canned Tuna in water	6 oz	1.76	1.80	1.79
Eggs (Grade A Large)	1 doz	2.58	3.12	3.32
Margarine -Shedds Spread	45 oz	5.94	5.79	5.79
Fresh Milk (McArthur - Regular Vitamin D)	1 gal	6.42	6.72	6.72
Evaporated milk (Nestle Carnation)	14 oz	1.59	1.69	1.46
Vegetable Oil	24 oz	4.46	4.66	4.66
Plantain	per lb	0.99	1.01	1.19
Potatoes - Irish	per lb	1.01	1.09	0.98
Lettuce - Iceburg	each	2.36	2.30	2.65
Sweet Potatoes	per lb	2.63	2.67	2.51
Tomatoes - Slicing	per lb	3.12	2.68	3.20
Bananas - Ripe	per lb	0.87	0.93	0.90
Apple - Golden Delicious	per lb	2.56	2.47	2.80
Grapes - Red Seedless	per lb	3.38	4.02	3.94
Tea (Lipton Decaffeinated)	48 bags	3.81	4.02	4.02
Coffee - Instant -Classic Roast - Bottle	8 oz	6.72	6.86	6.86
Soda	12 oz	0.78	0.78	0.78
Sugar - Light Brown (Bag)	2 lb	2.09	2.09	2.10
Corned Beef - regular	340 g	3.99	3.97	3.97
Iodized Salt	26 oz	0.91	0.92	1.06
Petrol - Regular Full Service	per gal	5.64	5.64	5.48
Petrol - Premium Full Service	per gal	5.75	5.77	5.61
Diesel - Full Service	per gal	5.76	5.71	5.61

NOTES ON THE INDEX COMPILATION

1. Data collection

This report uses the 2008 CPI basket based on the results of the 2007 Survey of Living Conditions/Household Budget Survey (HBS) as updated in June 2008. 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 1,393 items (7th-digit COICOP level) included in the basket collected from 147 providers/outlets in Grand Cayman, classified as follows:

Number of Items in the 2008 CPI Basket

Division		
1	Food and non-alcoholic beverages	47
2	Alcoholic beverages and tobacco	5
3	Clothing and footwear	13
4	Housing, utilities and fuels	6
5	Furnishings, household equipment and routine household maintenance.	19
6	Health	4
7	Transport	7
8	Communication	4
9	Recreation and Culture	6
1	Education	1
1	Restaurants and hotels	13
1	Miscellaneous goods and services	9
Total		1,393

ESO also adopted new collection periods and price averaging methodologies in accordance with updated international standards and as advised by the Caribbean Technical Assistance Centre (CARTAC). Beginning in the fourth quarter of 2009, price data for all items are collected every second month of the quarter (whereas they were previously collected every third month). Prices of selected items that are vulnerable to monthly changes such as vegetables and fruits, fish and meat, and gas are now also 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”.¹ The Lowe index, PLo, is defined as follows²:

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

Where n = number of products in the basket with prices p_i and quantities q_i

0 = base period

t = later period being compared

Geometric mean

The price p = [p₁, p₂, . . . , p_n] 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**.

¹ ILO (2004, p. 2). Consumer price index manual

² Ibid, p.3