

# NATIONAL DIRECTORATE FOR ECONOMIC POLICY

## QUARTERLY INFLATION REVIEW

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MARCH – JUNE 2016  
n.18

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### EXECUTIVE SUMMARY

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In June 2016, year-on-year (YoY) inflation in Timor-Leste was -1.7%, this rate is below the 4%-6% target range set out in the Government's Strategic Development Plan and is the eighth month in a row that Timor-Leste has experienced deflation (YoY); this is the second quarter that the CPI 12 month rate is at its lowest since the introduction of the Series 2 CPI. Quarter-on-quarter (QoQ) inflation in June 2016 was -0.4%; this is lower than the rate seen in June 2015 (-0.3%) and the rate witnessed in March 2016 (-0.3%).

This episode of deflation in Timor-Leste can mainly be attributed to international factors such as the appreciation of the US dollar against the majority of Timor-Leste's trading partners' currencies and the decrease in the international price of oil and food prices. The sharp fall in the price of Food and non-alcoholic beverages is acting as the main driver of deflation as a consequence of the significant weight of this group in the Timor-Leste's CPI basket. YoY core inflation, which excludes the prices of these volatile items, was -0.4% in June 2016, down from 2.1% in June 2015. Looking ahead to the coming quarters, there are signs that upward pressure may be put on prices; money supply growth continues to be in double digits, averaging 13.6% over the past year, and international prices have been rising; international food prices increased 8.2% and crude oil 27.8% over the last three months.

### TRENDS IN INFLATION

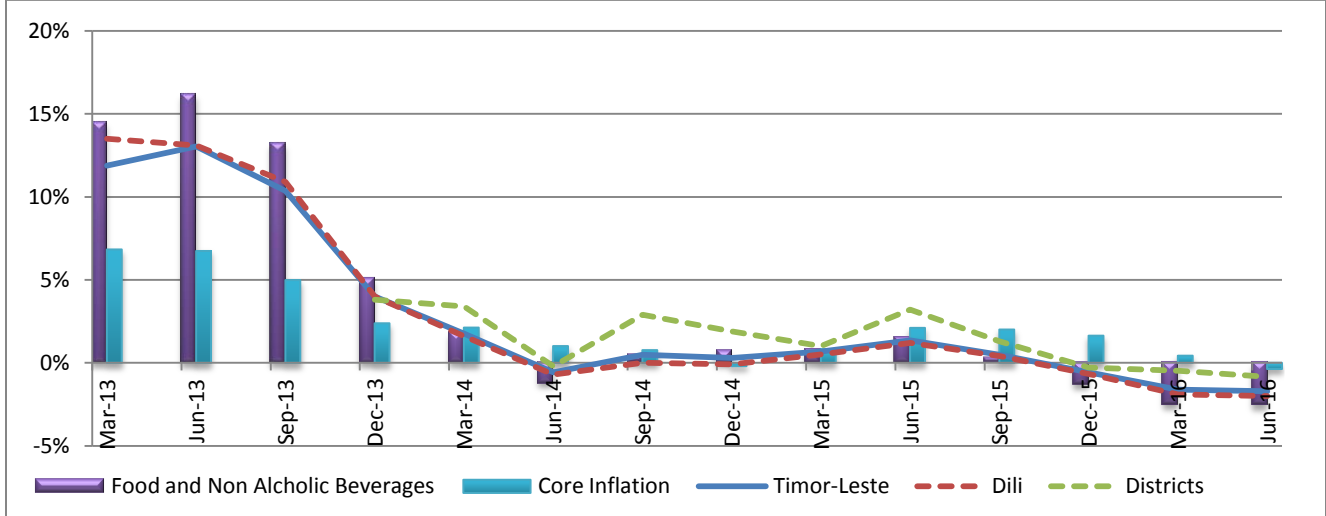
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In June 2016 YoY inflation in Timor-Leste was -1.7%; this means that a basket of goods and services that cost \$100.00 in June 2015 will now cost \$98.30 in June 2016. YoY inflation is lower than the rate seen in June last year (1.4%) and continues at the lowest rate seen since the introduction of the Series 2 CPI. QoQ inflation in June 2016 was -0.4%; this is lower than the rate of -0.3% seen in June 2015 and the rate witnessed in March 2016 (-0.3%).

After a lengthy period of double-digit inflation between March 2011 and September 2013, inflation decreased dramatically and fell below the Government's 4%-6% target range in January 2014. Inflation has been

negative for the last eight consecutive months. Given low international food prices, we expect this trend to continue throughout 2016. As seen in Figure Two, Food and non-alcoholic beverages account for approximately 65% of Timor-Leste’s CPI basket<sup>1</sup>, as nearly two thirds of Timorese household expenditure is spent on this group. Thus price movements in this group will have a significant impact on the overall rate of inflation and the purchasing power of the Timorese citizens. YoY food and non-alcoholic beverage inflation in June 2016 was -2.5%, the same rate as in March 2016.

**Figure One: Year-on-Year Inflation in Timor-Leste**

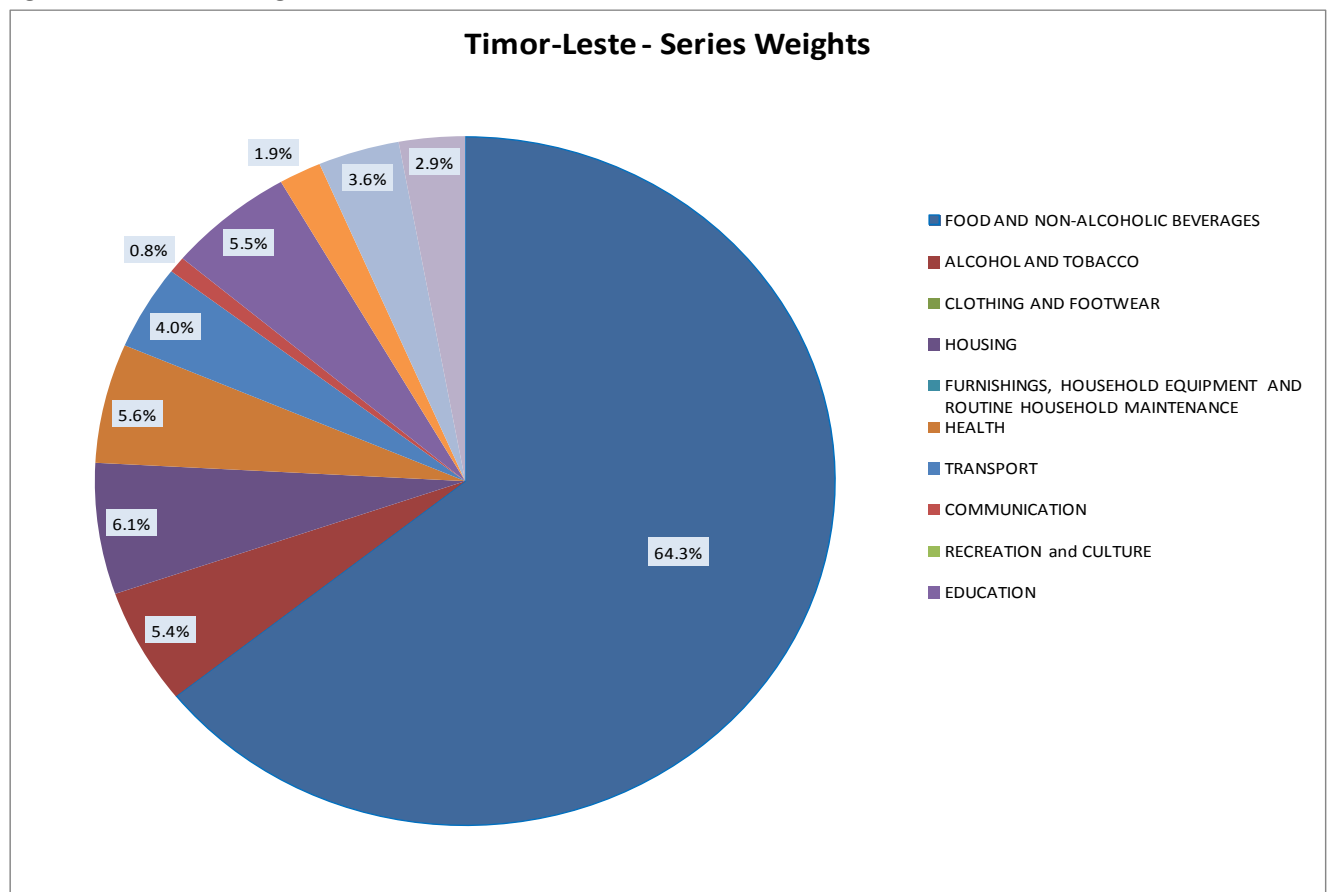


YoY core inflation<sup>2</sup>, which excludes the prices of particularly volatile items, namely food and non-alcoholic beverages, was -0.4% in June 2016, down significantly from 2.1% in June 2015, illustrating that it is not only international food prices driving inflation. Core / non-food inflation may provide a more accurate measure of long-term inflationary trends as it is less susceptible to being impacted by temporary food price shocks.

<sup>1</sup> Timor-Leste’s CPI basket is made up of the ten expenditure groupings seen in Figure Two.

<sup>2</sup> Calculated by the National Directorate of Economic Policy

**Figure Two: Series weights in CPI Basket, June 2016**



Over the past 12 months there have been significant price changes in the following expenditure classes<sup>3</sup>:

- Food and non-alcoholic beverages (-2.5%)
- Furnishing, household equipment and routine household maintenance (-3.1%)
- Transport (-5.1%)
- Education (6.0%)

The largest **upwards** contributions (see Figure Three) to the overall year-on-year inflation rate in June 2016 came from:

- Education (0.16 pp (percentage points))
- Alcohol and Tobacco (0.07pp)

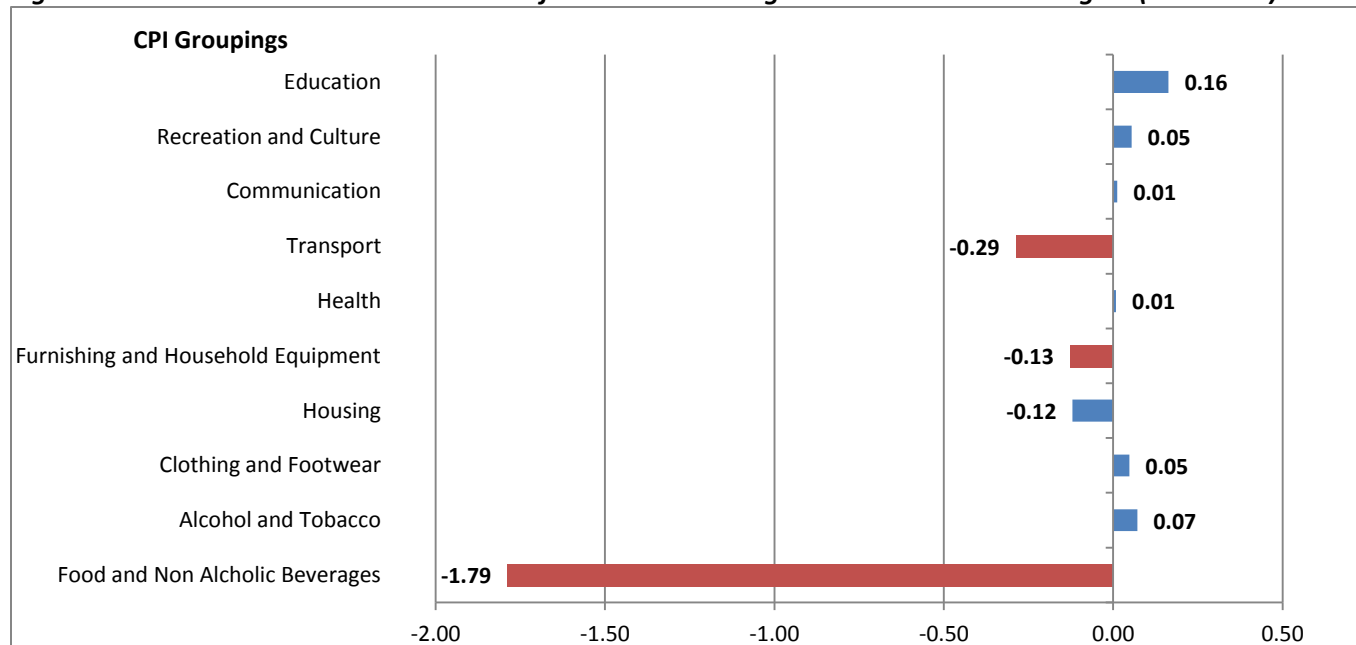
The large increase in the price of education is a consequence of an increased cost of school admission fees in Dili in order to improve the quality of facilities and teaching in local schools. The largest **deflationary** contributions (see Figure Three) to the overall year-on-year inflation rate in June 2016 came from:

- Food and Non-Alcoholic Beverages (-1.79pp)
- Transport (-0.29 pp)

<sup>3</sup> Expenditure classes are the sub-categories within an expenditure group in a CPI index

The large decrease in the price of food is largely driven by a fall in the price of Vegetables (-2.9%), Sugar, jam, honey, chocolate and confectionary (-10.5%), Rice (-2.2%), Meat (-2.4%) and Oils and fats (-5.4%). Vegetables hold a 16% weight in the CPI basket.

**Figure Three: Contribution to Overall YoY Inflation Rates taking into account the CPI weights (June 2016)<sup>4</sup>**



## CAUSES OF INFLATION<sup>5</sup>

### International Factors

An appreciation (depreciation) of the US dollar against the currencies of Timor-Leste's major trading partners will put downward (upward) pressure on the price of imports in Timor-Leste. However, the effects of exchange rate and international commodity price movements on prices in Timor-Leste are likely to be felt some time after they occur<sup>6</sup>, as it takes time for the change in the price of imported goods to feed through to a change in the price of consumer goods. For this reason exchange rate movement over the March 2015 to March 2016 period is analysed.

Between March 2015 and March 2016 Timor-Leste's nominal effective exchange rate (NEER) appreciated by 2.1% this was largely driven by the 1.3% appreciation of the US dollar against the Indonesian rupiah, the currency of Timor-Leste's largest trading partner<sup>7</sup>. Over this period the US dollar also appreciated by 4.9% against a weighted Thai baht and Vietnamese dong basket. This appreciation placed downward pressure on rice prices (as these countries export large quantities of rice to Timor-Leste) and therefore inflation, as rice has a large weight in the CPI index.

<sup>4</sup> See concepts and terminology section for further explanation

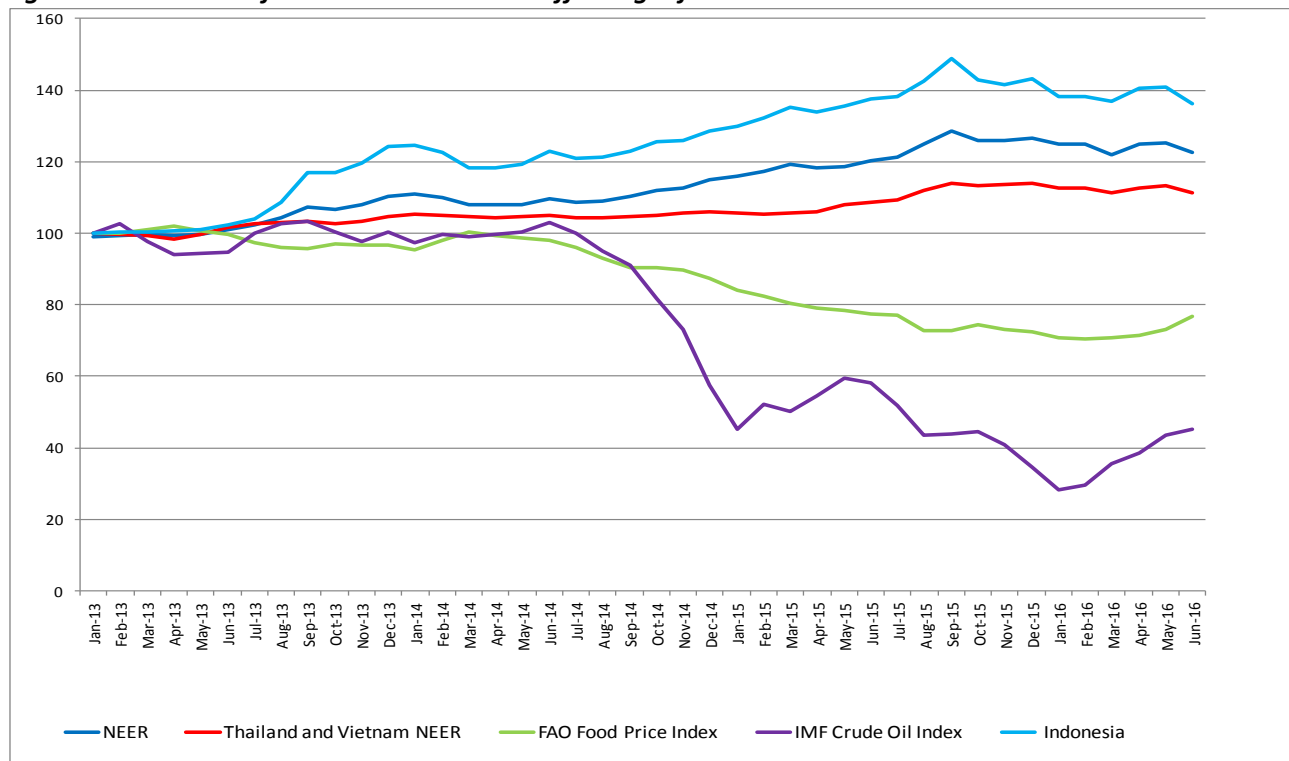
<sup>5</sup> Within this section inflation refers to YoY inflation

<sup>6</sup> This analysis lags the impact by one quarter

<sup>7</sup> External Trade Statistics Annual Report 2013, General Directorate of Statistics

International oil prices also fell over the March 2015 to March 2016 period; the IMF's crude petroleum price index fell<sup>8</sup> by -29.6% over the period placing significant downward pressure on prices, especially transport prices. International food prices also fell over the period with the Food and Agricultural Organization's (FAO) food price index falling by -12.0% placing further downward pressure on imported food prices.

**Figure Four: Indices of International Factors affecting Inflation in Timor-Leste**



**Domestic Factors**

Increases in Government expenditure, particularly recurrent expenditures such as transfers and salaries & wages, can have an inflationary impact on the economy. This is currently not the case in Timor-Leste; however, this is likely the result of a combination of other factors:

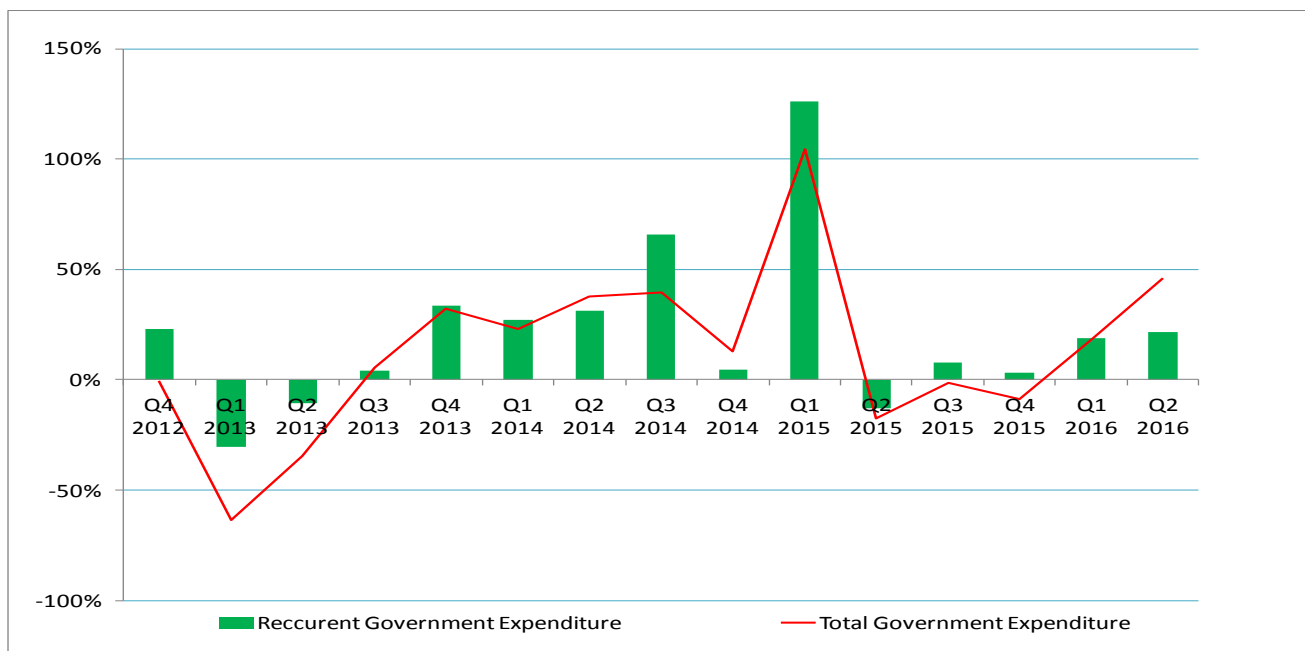
- The favourable international conditions, as discussed above, may outweigh the domestic inflationary pressure coming from Government expenditure.
- Increases in government expenditure often result in an increase in imports which can mediate the inflationary impact.
- Downward inflationary pressure may be coming from other domestic factors on both the supply and demand side such as improvements in the supply side of the economy<sup>9</sup> and decreased non-Government aggregate demand.

**Figure Five: Year-on-Year Nominal Growth in Quarterly Recurrent and Total Expenditure (%)<sup>10</sup>**

<sup>8</sup> The crude oil (petroleum) price index is a simple average of three spot prices; Dated Brent, West Texas Intermediate, and the Dubai Fateh.

<sup>9</sup> The amount of money that can be spent in an economy before inflation begins to increase

<sup>10</sup> This measures the year-on-year growth in quarterly nominal expenditure, i.e. the growth rate in Q2 2015 measure the change between nominal expenditure in Q2 2014 and Q2 2015.



The growth in the money supply of an economy is also likely to have some influence on inflation. In Timor-Leste money supply growth strengthened in the quarter at 4.4% (QoQ) compared to -14% (QoQ) in the last quarter. Taking the average change in money supply across the year<sup>11</sup>, a 13.6% increase was witnessed. This may have impacted upon inflation.

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## CONSEQUENCES OF INFLATION

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Inflation will cause households' purchasing power to fall, if increases in household income are lower than the increases in inflation. This situation is more likely to occur in a high inflation environment. Inflation which reduces consumers' purchasing power can reduce living standards and may increase poverty. Thus the recent negative inflation seen in Timor-Leste is consistent with the Government's poverty reduction strategy. Given the high weight of food in Timor-Leste's basket of goods, it is unlikely that deflation will lead to delayed-purchasing and is not, therefore, currently a concern for the Government.

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## INFLATION OUTLOOK

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YoY inflation is likely to remain below the SDP target range (4%-6%) in the near term. The following factors are likely to have an impact on future rates of inflation in Timor-Leste:

**International commodity prices:** between March 2016 and June 2016, international food prices increased by 8.2% and the price of crude oil by 27.8%. As changes in commodity prices have a lagged effect on inflation in Timor-Leste it is likely that these increases will place some upward pressure on inflation in Q3 2016. In the

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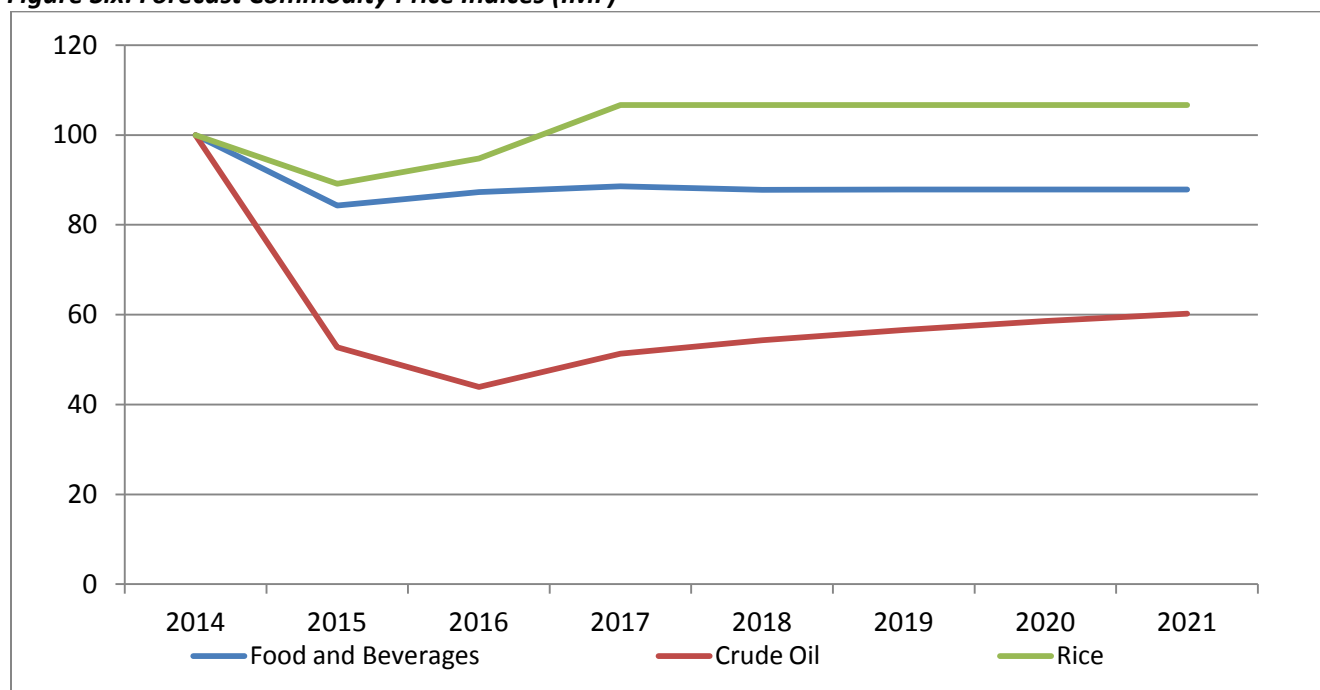
<sup>11</sup> Taking average money supply for the last 12 months and compare to average money supply in the previous 12 months.

medium to long-term, while still low, the IMF have revised their commodity price forecast<sup>12</sup> upwards; again, this may place upward pressure on inflation.

**International exchange rates:** between March 2016 and June 2016 Timor-Leste's NEER appreciated by 0.4%. This puts some downward pressure on inflation by reducing the cost of imported goods and services.

**Government expenditure:** the increase in Government expenditure over the last four quarters will result in increased inflationary pressure, the extent to which this will result in higher inflation depends on the impact of other factors and the economies absorptive capacity.

**Figure Six: Forecast Commodity Price Indices (IMF)**



## ANNEX 1: CONCEPTS AND TERMINOLOGY

**Consumer price inflation** the rate at which the prices of goods and services bought by households increase or decrease.

**The Consumer Price Index (CPI)**<sup>13</sup> is used to measure consumer price inflation. To understand CPI think of a large basket containing the goods and services bought by households, the CPI estimates the change to the total cost of the basket on a monthly basis.

**Year-on-year (YoY) inflation** is the most commonly used measure and is calculated by comparing the price index from a given period with the same month in the previous year. For example, the year-on-year inflation in June 2015 measures the percentage change in prices between June 2014 and June 2015.

<sup>12</sup> Primary Commodity Prices, IMF (<http://www.imf.org/external/np/res/commod/index.aspx>)

<sup>13</sup> The CPI is a weighted index meaning that the influence on the CPI index of a given item is dependent on the item's share in total household consumption.

**Quarter-on-quarter inflation (QoQ)** is calculated by comparing the price index from the last month of a given quarter (March, June, September or December) with the last month of the previous quarter<sup>14</sup>. Thus quarter-on-quarter inflation in June 2015 measures the percentage change in prices between March 2014 and June 2015.

**Month-on-month inflation (MoM)** is calculated by comparing the price index from the latest month to the previous month. Thus the month-on-month inflation in June 2015 measures the percentage change in prices between May 2015 and June 2015.

**Contribution to inflation rate** measures the contribution to the overall rate of inflation of a grouping of goods and services, a groups contribution to the overall rate of inflation is determined by its growth rate and weight within the series<sup>15</sup>.

**Nominal effective exchange rate (NEER)** is the weighted average value of a country's currency relative to the currencies of its major trading partners.

**Core inflation** is a measure of inflation which excludes certain items that face volatile price movements. Core inflation eliminates products<sup>16</sup> that can have temporary price shocks because these shocks can cause a divergence from the overall trend in inflation giving a false measure of inflation.

**Purchasing Power** measures the quantity of goods and services which can be purchased with a unit of currency. All else being equal inflation decreases the amount of goods and services a consumer is able to purchase with their monthly salary.

Timor-Leste's Consumer Price Index is published monthly by General Directorate of Statistics (MoF)<sup>17</sup>. This index is divided into 10 specific groups representing specific sets of commodities such as food and non-alcoholic beverages, housing and transport. In addition, separate consumer price indices are compiled for both Dili and the districts.

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## ANNEX 2: NOTES

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This bulletin is produced by the National Directorate for Economic Policy, Ministry of Finance, on a quarterly basis, in both English and Tetum. Please refer any queries to the below contacts:

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<sup>14</sup> In this publication

<sup>15</sup> The contributions of each grouping will sum to give the overall rate of inflation

<sup>16</sup> The core inflation index in Timor-Leste excludes all food and non-alcoholic beverage items

<sup>17</sup> See for latest CPI data from the General Directorate of Statistics (<http://www.statistics.gov.tl/category/survey-indicators/consumer-price-index/?lang=en>)