

NATIONAL DIRECTORATE FOR ECONOMIC POLICY

QUARTERLY INFLATION REVIEW

SEPTEMBER-DECEMBER 2018

n.27

EXECUTIVE SUMMARY

In December 2018, year-on-year (YoY) inflation in Timor-Leste was 2.1%, meaning that Timor-Leste has experienced positive inflation for 2 years following the deflationary period in 2016. This rate is below the 4%-6% target range set out in the Government's Strategic Development Plan. Quarter-on-quarter (QoQ) inflation in December was 0.3%, a 0.3pp increase on the September 2018 QoQ rate.

Timor-Leste still enjoys a low level of inflation. Due to the significant weight of food and non-alcoholic beverages in the CPI basket and the high proportion of food imported into Timor-Leste every year, international food prices remain one of the key drivers of the overall CPI rate, and the MoF continues to monitor price levels. The Food and Agricultural Organization's (FAO) food price index decreased -4.4% year on year in December. This moderates earlier upward swings in food prices. Domestic food prices rose in December, though these remained muted at +1.5% and it is expected that the current world food markets will continue to provide a moderating impact on prices in the near future. A one-off 16.6% increase in education costs has affected annual inflation in Timor-Leste throughout 2018.

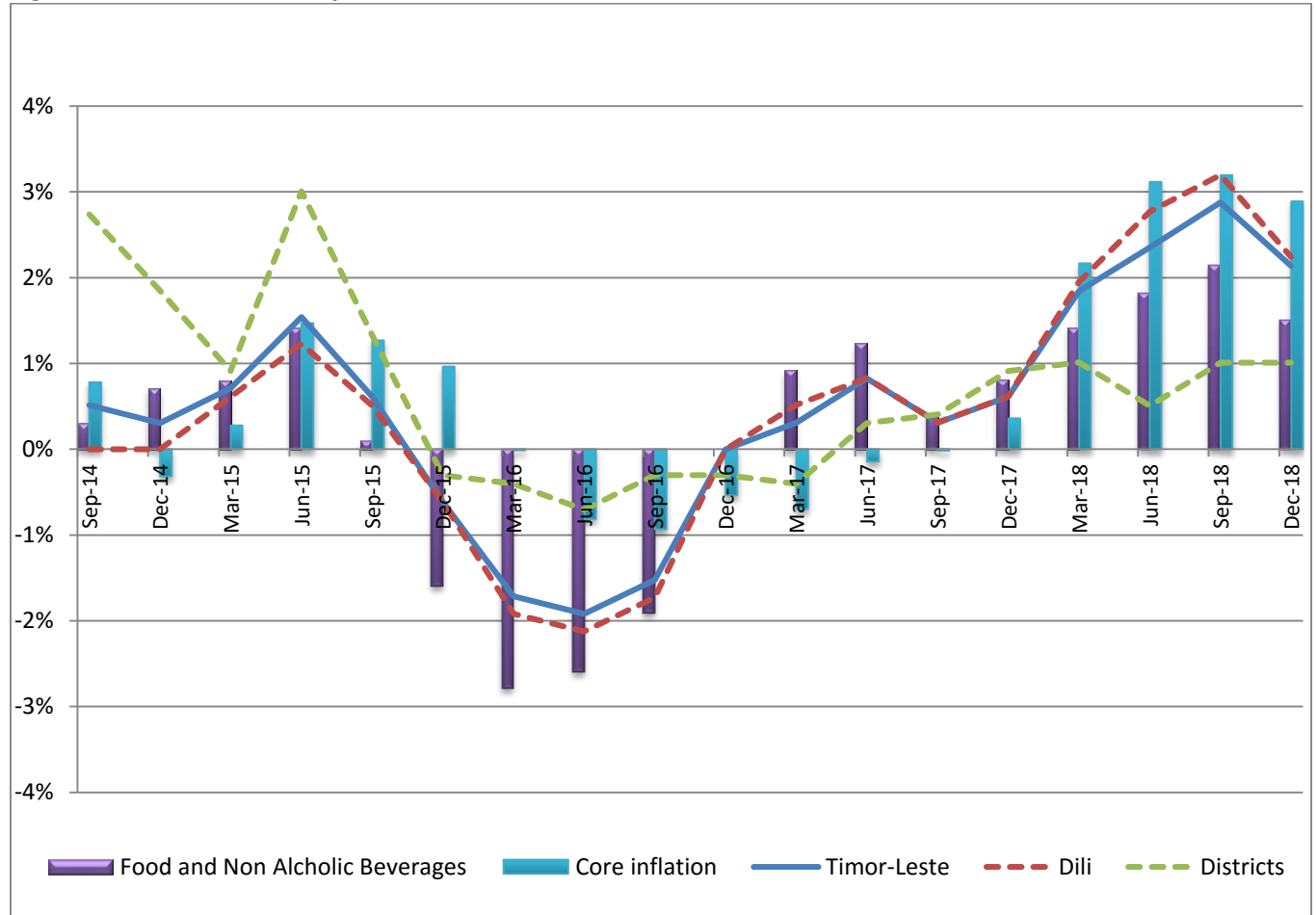
TRENDS IN INFLATION

In December 2018 YoY inflation in Timor-Leste was 2.1%; this means that a basket of goods and services that cost \$100.00 in September 2017 will now cost \$102.10 in December 2018 – on averages, prices are slightly up compared to one year ago. YoY inflation is higher than the rate seen in December last year of 0.6%. QoQ inflation in December 2018 was 0.3%.

Over the last few years, inflation in Timor-Leste has fluctuated widely (see Figure One). 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. By November 2015, Timor-Leste experienced deflation due to falling international oil and food prices. This episode of deflation ended with zero inflation in December 2016 and Timor is now experiencing positive but low inflation.

YoY core inflation¹, which excludes the prices of particularly volatile items, food and non-alcoholic beverages, increased in December 2018, at 2.9% on the year. Core-inflation is up from September 2018 (when it was 3.2%) with education (+16.6%), Alcohol and Tobacco (+11.1%), and Transport (+3.9%) increasing

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

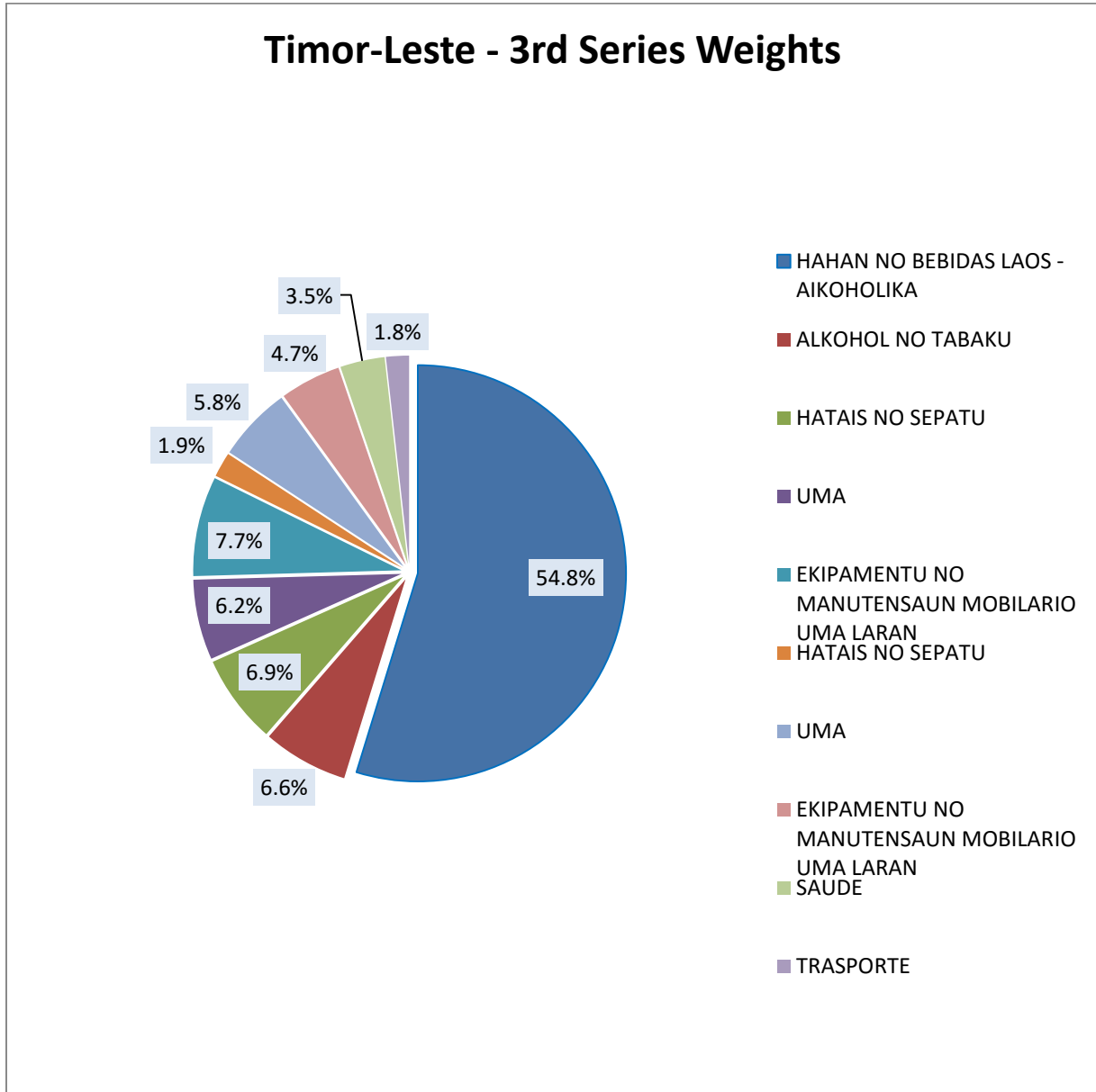


The CPI inflation series has been re-weighted as of September 2018, entering its third series. Figure Two shows the two weighted baskets. Notably, food and non-alcoholic beverages have fallen from approximately 64% to 56% of Timor-Leste’s CPI basket². Food and non-alcoholic beverages still make up the most important part of the basket, as half 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 December 2018 was 1.5%, higher than the rate of 0.8% witnessed last December and continuing its stable positive trend during 2018.

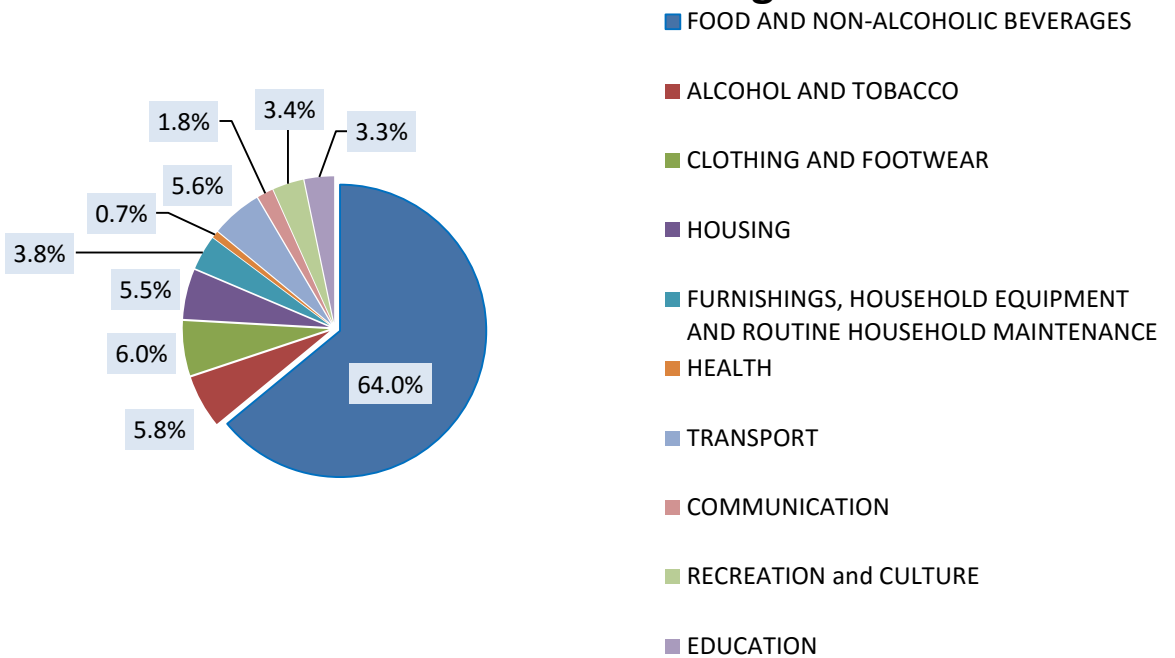
¹ Calculated by the National Directorate of Economic Policy

² Timor-Leste’s CPI basket is made up of the ten expenditure groupings seen in Figure Two.

Figure Two: Series weights in CPI Basket, 2nd and 3rd series,



Timor-Leste - 2nd Series Weights



Over the past 12 months there have been significant price changes in the following expenditure classes³:

- Education (16.6%)
- Alcohol and tobacco (11.0%)
- Transport (3.9%)

The re-weighting means breaking down the contribution does not indicate price movements clearly. For example, the reduction in the food and non-alcoholic beverage weight means its contribution is negative, even though its prices have increased. All contribution calculations until September 2019 will be affected by this. However, it can still be useful to see where changes in the index are coming from.

Bearing this is mind, the largest **upwards** contributions (see Figure Three) to the overall year-on-year inflation rate in December 2018 came from:

- Furnishings and Household Equipment (3.92 pp (percentage points))
- Communication (3.01 pp)
- Alcohol and Tobacco (1.82 pp)

The increase in both Furnishings and Household equipment and Communication is driven by the re-weighting – in fact, prices in the Furnishings class decreased year-on-year. Alcohol and tobacco was driven by a 17.1% increase in tobacco as well as an increase in its weight.

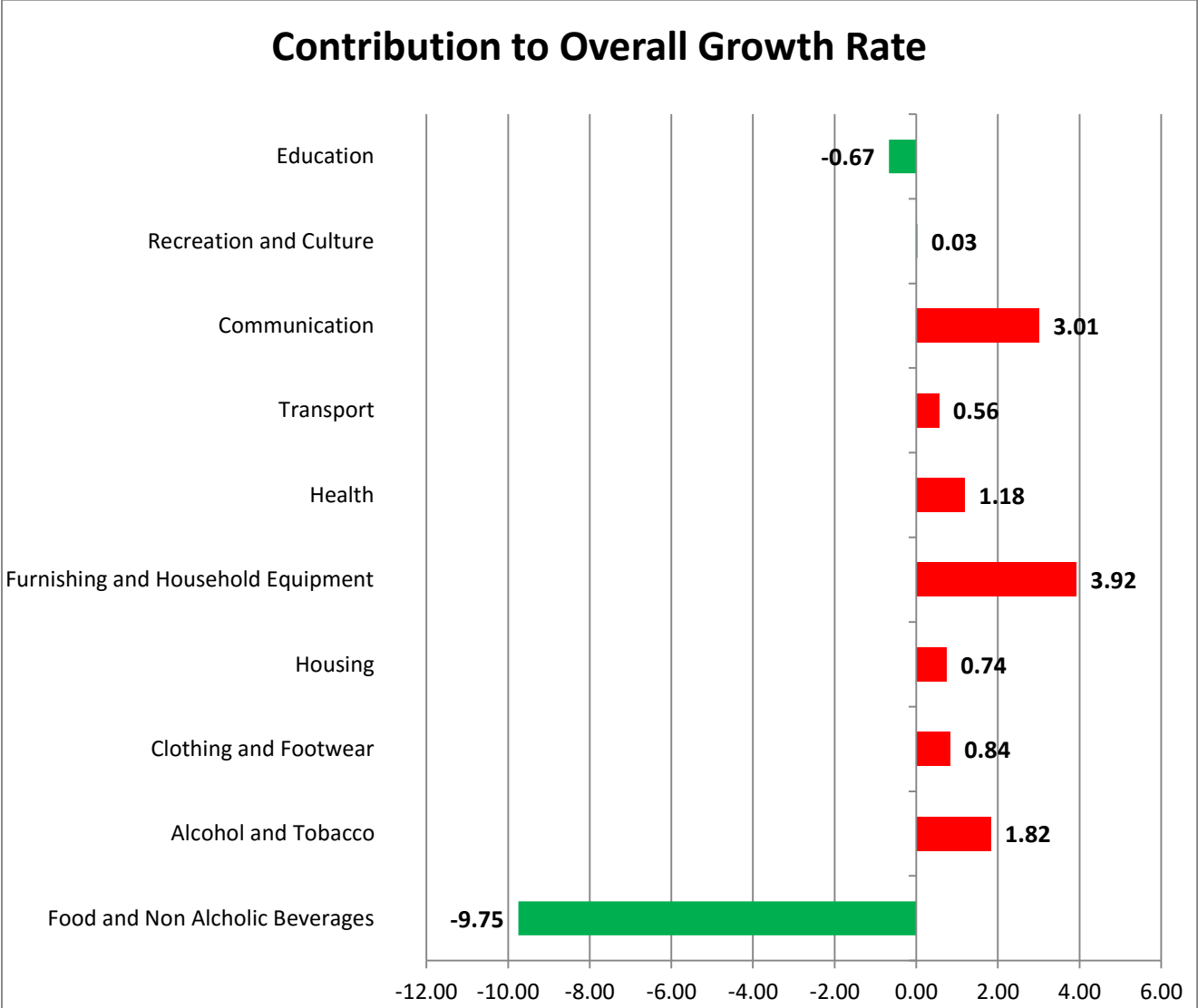
³ Expenditure classes are the sub-categories within an expenditure group in a CPI index

The **deflationary** contributions (see Figure Three) to the overall year-on-year inflation rate in December 2018 came from:

- Food and Non Alcoholic Beverages (-9.75 pp)
- Education (-0.67 pp)

Even though the contribution is negative, because the index weight for this category reduced, the food and non-alcoholic beverages index increased 1.5%. The annual price increase is driven by increases of 3.4% in rice and 9.8% in dairy. Education prices increased 16.6%, but again the weight has been reduced.

Figure Three: Contribution to Overall YoY Inflation Rates taking into account the CPI weights (December 2018)⁴



⁴ See concepts and terminology section for further explanation

CAUSES OF INFLATION⁵

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, 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 September 2017 to September 2018 period is analysed.

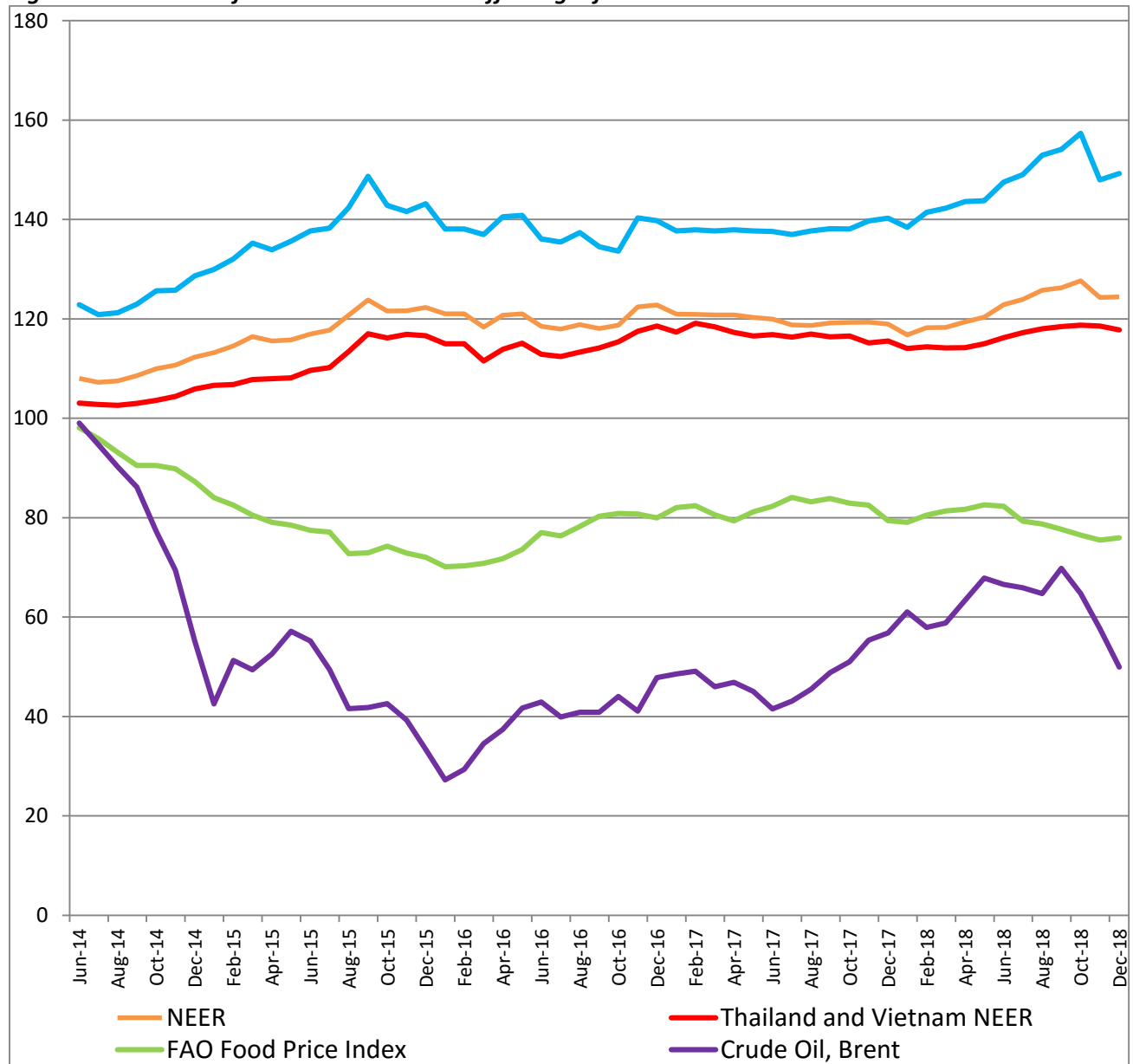
Between September 2017 and September 2018 Timor-Leste's nominal effective exchange rate (NEER) appreciated by 6.0%; this appears to have been driven by the appreciation of the US dollar against a range of currencies, including the Brazilian Real (28.1%), the China Renminbi (3.2%), the Indonesian Rupiah (11.5%), and the Australian Dollar (8.4%). Over this period the US dollar also appreciated by 1.8% against a weighted Thai baht and Vietnamese dong basket. This slight appreciation placed some downwards 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.

Between September 2017 and September 2018, crude oil (Brent)⁶ increased by 43%, reflecting the increase in oil prices witnessed since the 2016 low. International food prices have generally been declining recently, and the Food and Agricultural Organization's (FAO) food price index changed -7.4% for the month September 2017 to September 2018.

⁵ Within this section inflation refers to YoY inflation

⁶ World Bank Pink Sheet, updated April 2018

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



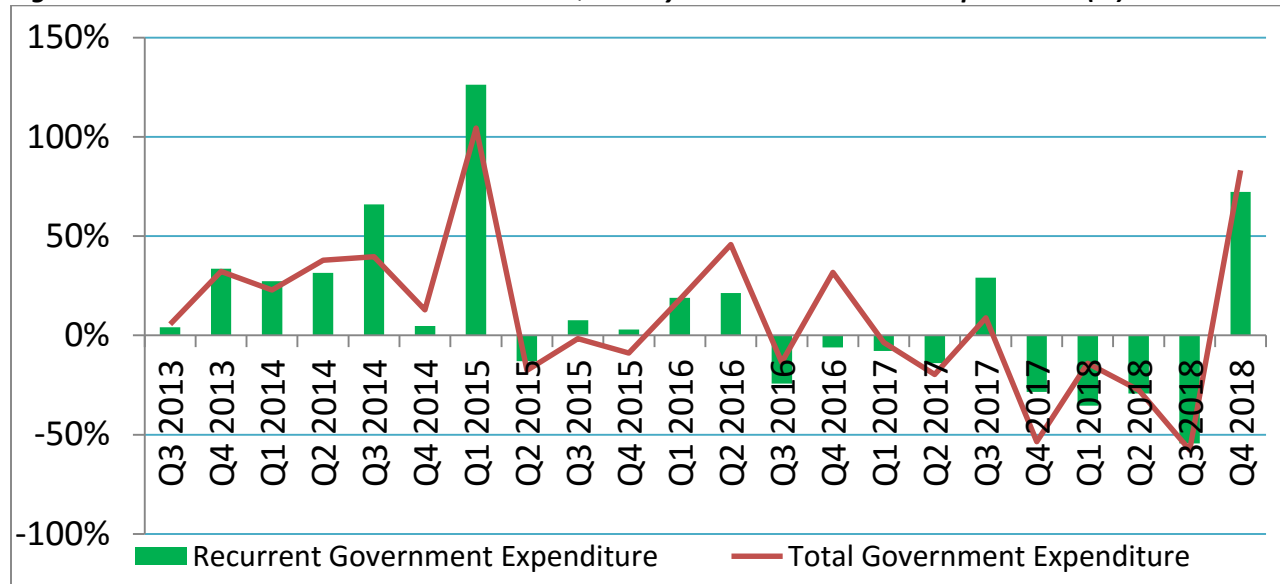
Domestic Factors

The increases in government spending during 2014 and 2015 were broadly sustained up to mid-2017, when year on year public spending fell (see figure six). This fall in government expenditure, particularly recurrent expenditures such as transfers and salaries & wages, can have a deflationary 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 international conditions, such as rising oil prices, as discussed above, may outweigh the domestic deflationary pressure coming from lower Government expenditure.
- Increases in government expenditure often result in an increase in imports which can mediate the inflationary impact. This may simply unwind with falls in expenditure.

- Other domestic factors such as changes to the supply side of the economy or non-Government aggregate demand may have different impacts on inflation to changes in expenditure.

Figure Five: Year-on-Year Nominal Growth in Quarterly Recurrent and Total Expenditure (%)⁷



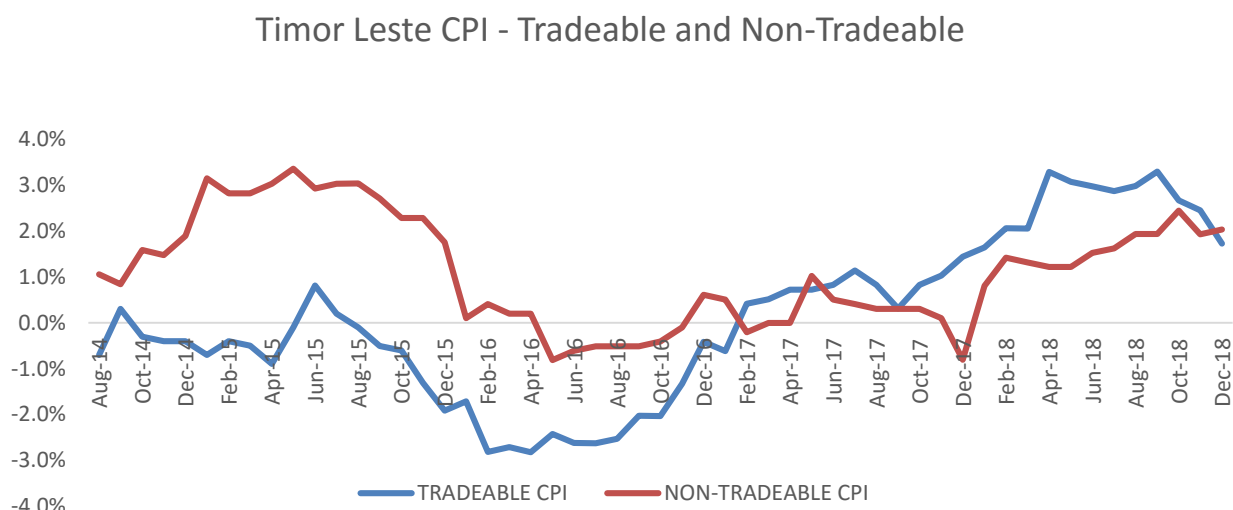
The growth in the money supply of an economy is also likely to have some influence on inflation. Taking the average change in money supply across the year to December 2018⁸, a 15.8% increase was witnessed. This may have impacted upon inflation.

Tradable and non-tradable

Tradable goods and services refer to those whose prices are largely determined on the world market, and all other goods and services are non-tradable. This enables splitting out the inflationary (or deflationary) pressures coming from international or domestic sources. Chart six below shows that the deflationary period during 2016 was driven by the falling price of tradable goods and services, at a time when non-tradable prices remained stable. During most of 2017 both types of prices have remained low and positive. There has been an upward trend since September 2017 in tradable prices, and since December for non-tradable prices (when there was a brief deflationary dip which has since subsided).

⁷ This measures the year-on-year growth in quarterly nominal expenditure, i.e. the growth rate in Q2 2018 measures the change between nominal expenditure in Q2 2017 and Q2 2018.
⁸ Taking the average change in money supply for the last 12 months compared to the previous 12 months.

Figure Six Timor-Leste CPI – Tradable and Non-Tradable:



CONSEQUENCES OF INFLATION

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 and the current low inflation level is consistent with the Government's poverty reduction strategy.

INFLATION OUTLOOK

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

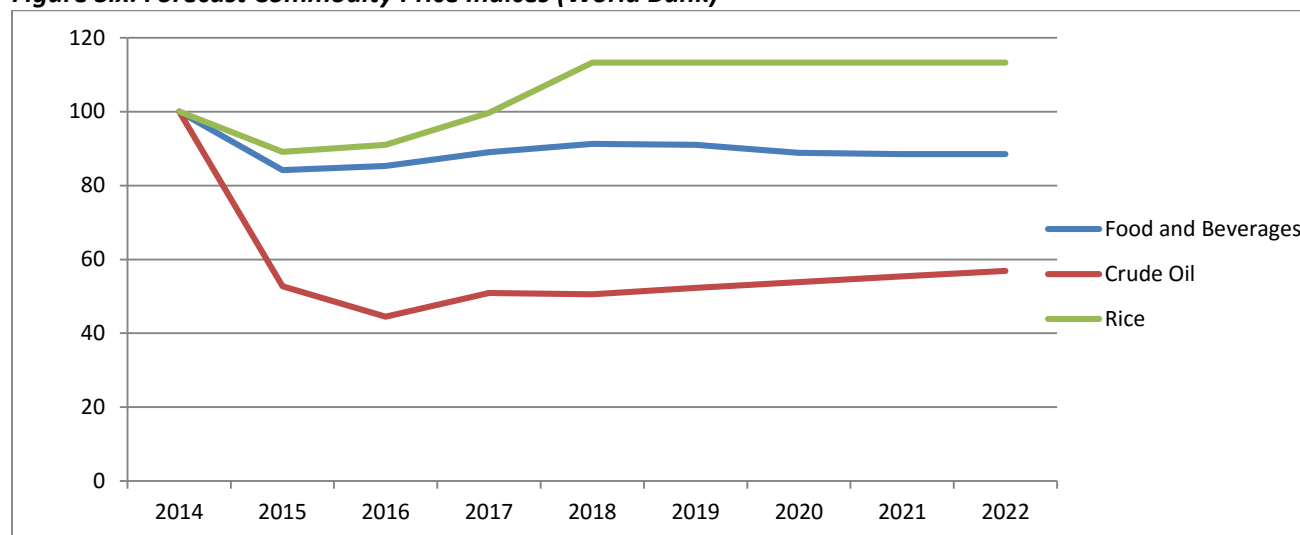
International commodity prices: between September 2018 and December 2018, international food prices decreased (-2.2%) and between September 2018 and December 2018 the price of crude oil decreased by -28%. As changes in commodity prices have a lagged effect on inflation in Timor-Leste, these price changes may impact inflation in Q4 2018. Given the weight of food and oil in TL's CPI basket, it is likely that these commodity price movements will have noticeable negative impacts on inflation. In the medium to long-term, the World Bank nominal commodity price forecasts show energy rising and food prices stable⁹; this is expected to place some upward pressure on inflation, in line with current trends.

⁹ Commodity Markets Outlook, World Bank (<http://www.worldbank.org/en/research/commodity-markets>)

International exchange rates: between September 2018 and December 2018 Timor-Leste’s NEER depreciated by-1.5%, and the Vietnamese dong and Thai baht weighted basket depreciated -0.6%. Overall this puts some upwards pressure on inflation by increasing the cost of imported goods and services.

Government expenditure: the decline in Government expenditure in 2018 will result in reduced inflationary pressure. However, in the last quarter there was a strong increase in spending. The extent to which this will result in higher inflation depends on whether this amount of spending continues into 2019, and on the impact of other factors and the economy’s absorptive capacity.

Figure Six: Forecast Commodity Price Indices (World Bank)



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)¹⁰ 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 December 2018 measures the percentage change in prices between December 2017 and December 2018.

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. Thus quarter-on-quarter inflation in September 2018 measures the percentage change in prices between September 2018 and December 2018.

¹⁰ 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.

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 December 2018 measures the percentage change in prices between November 2018 and December 2018.

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 series¹¹.

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 products¹² 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 (MPF)¹³. 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.

ANNEX 2: NOTES

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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¹¹ The contributions of each grouping will sum to give the overall rate of inflation

¹² The core inflation index in Timor-Leste excludes all food and non-alcoholic beverage items

¹³ See for latest CPI data from the General Directorate of Statistics (<http://www.statistics.gov.tl/category/survey-indicators/consumer-price-index/?lang=en>)