

# METHODOLOGICAL NOTE ON CORE INFLATION<sup>1</sup>

## 1. Introduction

Price stability is often considered as one of the most important objectives that a central bank is mandated to achieve. The **Bank of Mauritius Act 2004** also recognises the maintenance of price stability as its primary objective alongside the promotion of orderly and balanced economic development. Typically, the price stability objective is guided by developments in the Consumer Price Index (CPI).

## 2. What is Headline Inflation?

In Mauritius, the CPI is measured by computing the average change over time in the cost of a fixed market basket of consumer goods and services. Inflation is then calculated by comparing the average level of prices during a twelve-month period with the average level during the preceding twelve-month period. CPI inflation is also known as headline inflation and is published by the Central Statistics Office (CSO).

## 3. What is Core Inflation?

It is a common feature in many countries to distinguish between inflation as measured by the CPI and another concept of inflation, referred to as core or underlying inflation. Core inflation is the trend component of headline inflation and reflects the persistent sources of inflationary pressures, besides containing the most relevant information from a central bank's perspective.

While it is generally accepted that monetary policy affects inflation only over time, it is also known that a central bank cannot fully offset any short-term fluctuations in the rate of inflation. The CPI usually reflects the impact of some factors that are beyond the control of the central bank like adjustments in the prices of administered goods and services, changes in taxes and excise duties, adverse weather conditions and oil shocks. While these types of shocks have a potential impact on the CPI, any change in the stance of monetary policy has little or no effect on the resulting inflation. It is therefore vital for the central bank to discern between the various types of shocks that affect the rate of inflation. For instance, it is important to know whether a particular shock is a temporary supply shock or a one-off event that will have a transitory effect on the rate of inflation or whether it is a demand shock with persistent effects.

Core inflation complements headline inflation by providing information about the long-term direction of consumer price movements and serving as an indicator of future inflation. Core inflation is generally associated with expectations and demand pressure components of measured inflation and excludes items subject to supply shocks and short-term volatile components. An appropriately defined measure of core inflation can then help to identify the underlying trend in prices, which in turn, provides a better gauge of the overall state of the economy.

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<sup>1</sup> *The Bank of Mauritius has published a Primer on Core Inflation in its Occasional Paper Series 2006, Number 1 on its website.*

#### **4. How is Core Inflation measured?**

Core inflation measures have been derived across the world using three broad approaches: (i) the structural approach, (ii) the exclusion-based approach and (iii) the statistical approach.

The Bank of Mauritius has calculated three measures of core inflation by using the exclusion and statistical approaches. The exclusion-based approach excludes certain items from headline inflation in order to remove the influence of unrepresentative items while the statistical approach examines the distribution of price movements at a highly disaggregated level and excludes those movements that are too extreme.

To calculate the indices for the exclusion method, detailed disaggregated CPI data for two different consumption baskets with base years 1996-97=100 and 2001-02=100 were used. The two CPI series were first rendered comparable and items in the two baskets were classified into one series along the lines of the dis-aggregation relating to the latest consumption basket, but with base year starting 1996-97=100. That is, items in the two consumer baskets were reclassified according to Divisions they form part in the 2001-02 basket and their indices were spliced so as to bring them to a common base year starting 1996-97=100.

The first exclusion method, CORE1, strips the two divisions of the consumer basket: “Food and Non-Alcoholic Beverages” (Division 01) and “Alcoholic Beverages and Tobacco” (Division 02) from the computed series while the second exclusion method, CORE2, apart from excluding Divisions 01 and 02, also removes energy and administered prices as these prices are subject to different kinds of regulation and government tax policies. The list of goods and services in the current CPI basket that are subject to price control include cement, water charges, waste water tax, workmen’s wages and electricity, gas and other fuels from Division 04; domestic and household services from Division 05; gasoline, diesel oil, road tax and bus fare from Division 07; postal services and telephone and telegraph services from Division 08; MBC TV licence from Division 09 and driving test fee and passport fee from Division 12 of the CPI basket.

The third measure of core inflation, TRIM10, is calculated using the trimmed mean approach, which truncates 5 per cent of each tail of the distribution of price changes, that is, it excludes 5 per cent of the most positive and 5 per cent of the most negative price changes. Core inflation is then computed by taking the weighted average of price changes for the rest of the components.

#### **5. Desirable Properties of Core Inflation**

Core inflation is intended to be used as a complementary indicator of the general movement in prices of goods and services. The Bank of Mauritius monitors core inflation rates as part of broad inflationary indicators in the economy. A good measure of core inflation should track trend inflation over a long time period, that is, the average rate of core inflation should match the average rate of overall inflation. Moreover, a good measure of core inflation should be able to forecast the future movement of headline inflation. A good measure of core inflation should be transparent in calculation, verifiable, easy to communicate and widely recognised.