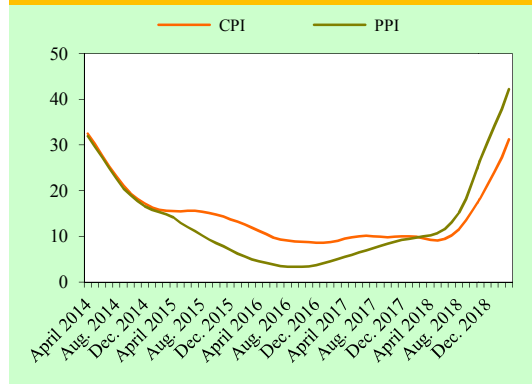


In 2018/19, average Consumer Price Index (CPI) of goods and services in urban areas and Producer Price Index (PPI) registered respectively 31.2 and 42.2 percent growth. A comparison of these figures with the respective figures in 2017/18 (9.6 and 10.0 percent) indicates a noticeable rise in the growth rates of CPI and PPI by 21.6 and 32.2 percentage points, respectively.

In May 2018, after the US unilateral withdrawal from the JCPOA and the subsequent reimposition of economic sanctions against Iran's key economic sectors (including oil and gas sector, automotive industry, banking system, and maritime transport), which ultimately resulted in an increase in the exchange rate and raised the costs of international trade, the inflation rate of CPI of goods and services faced an upsurge. This was after having experienced a long period of downtrend. Thus, the CPI inflation followed an increasing trend in 2018/19 and

after two consecutive years of registering a single-digit rate, hit the two-digit rate of 31.2 percent in March 2019. The PPI inflation indicated an increasing trend in 2018/19, affected by the rise in the exchange rate and that in the costs of the imports of intermediate goods. The PPI topped 42.2 percent in March 2019, up from 10.0 percent in March 2018.

**Figure 17.1. Annual inflation of CPI and PPI (2016/17=100)**



**Table 17.1. Annual Average Percentage Change in Price Indices and GDP Deflator**

|   | 2017/18 | 2018/19 |
|---|---------|---------|
| Consumer Price Index (CPI) of goods and services in urban areas (2016/17=100) | 9.6     | 31.2    |
| Producer Price Index (PPI) (2016/17=100)                                      | 10.0    | 42.2    |
| Export Price Index (2016/17=100)  | 18.3    | 137.9   |
| GDP deflator (2011/12=100)  | 12.2    | 32.9    |
| Non-oil GDP deflator (2011/12=100)  | 9.7     | 28.8    |

## Consumer Price Index (CPI)

### *CPI in Urban Areas by Major Components*

A review of the major components of the CPI in 2018/19 indicates that "tobacco" had the highest growth rate by 99.1 percent. The lowest growth rate by 13.3 percent was related to "housing, water, electricity, gas, and other fuels". The major group of "food and beverages", with a relative weight of 25.5 percent in the general CPI, had the lion's share of 40.0 percent in growth of the general CPI in 2018/19.

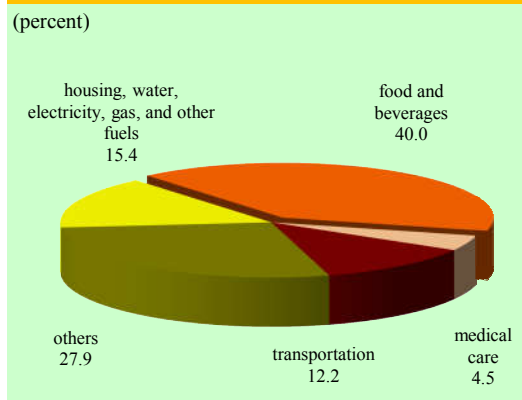
After the major group of "food and beverages", growth in the price index of "housing, water, electricity, gas, and other fuels" had the most direct effect on raising the general index. This group, with a relative weight of 37.1 percent in general CPI, grew by 13.3 percent and contributed by 15.4 percent to growth in general CPI. Therefore, the two major groups of "food and beverages" and "housing, water, electricity, gas, and other fuels", with a total relative weight of 62.6 percent, accounted for 55.4 percent of the inflation in 2018/19.

Among the other major components of the CPI, the price index of "transportation", with 44.4 percent growth compared with the year before, had 12.2 percent share in raising the general index. The price index of "furnishings, household equipment, and routine household maintenance" group, with 58.3 percent growth compared with 2017/18, accounted for 7.8 percent of the rise in the general CPI.

A review of CPI changes in 2018-2019 in each month compared with the previous month (monthly inflation) points to the fluctuating trend of this index. The highest rise by 6.1 percent was related to September and the lowest growth rate by 0.8 percent was related to April 2018. The average

monthly inflation of the CPI stood at 3.7 percent in 2018.

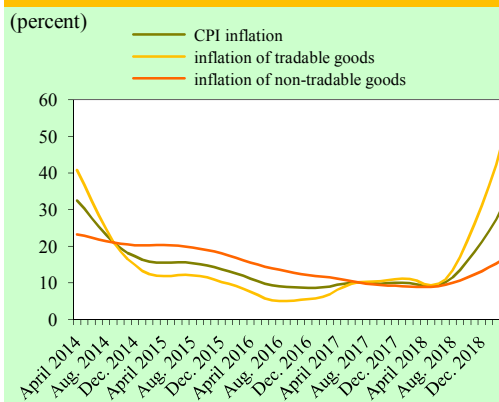
**Figure 17.2. Share of major groups in CPI inflation in 2018/19**



Reviewing the developments in the CPI by "tradable" and "non-tradable" special groups indicates that in 2012 and the period of April-September 2013, a surge in the exchange rate, resulting from the expansionary monetary and fiscal policies of previous years and the imposition of severe economic sanctions, raised the inflation rate of tradable goods sharply. This variable hit the highest level of 57.9 percent in September 2013. Contrarily, the inflation of non-tradable goods, due to being slightly affected by the exchange rate developments (most items in this group are services-related), increased only slightly. With the commencement of the 11<sup>th</sup> government in 2013 which led to the strengthening of the monetary discipline, the foreign exchange market was stabilized again, which in turn led to the downward trend of the inflation of tradable goods. With the continuation of this condition in the following years, the inflation of tradable goods remained at levels lower than the inflation of non-tradable goods as of October 2014.

Concomitant with the reimposition of sanctions, the increasing trend of the exchange rate which had begun as of October 2017, continued until March 2019 and brought about a surge in the prices of imported goods and an increase in the volume of the exports of goods to the neighboring countries. This ultimately heightened the inflation rate of tradable goods to 49.5 percent. However, the special group of non-tradable goods, which includes mostly services and is only slightly affected by foreign exchange rate fluctuations, registered the inflation rate of 16.5 percent.

**Figure 17.3. CPI inflation by tradable and non-tradable goods (2016/17=100)**



**Table 17.2. Consumer Price Index (CPI) in Urban Areas**

(2016/17=100)

|  | Relative weight<br>in base year<br>(percent) | Percentage<br>change |              | Direct effect <sup>1</sup> on<br>growth of CPI in<br>2018/19<br>(percent) |             |              |
|--|--|----------------------|--------------|---|-------------|--------------|
|  |  | 2017/18              | 2018/19      | 2017/18   | 2018/19     |              |
| <b>Special groups</b>  |  |                      |              |   |             |              |
| Goods  | 48.5   | 110.2                | 161.1        | 10.2  | 46.3        | 72.6         |
| Services   | 51.5   | 109.2                | 127.5        | 9.2   | 16.8        | 27.4         |
| <b>General index</b>   | <b>100.0</b>                                 | <b>109.6</b>         | <b>143.8</b> | <b>9.6</b>  | <b>31.2</b> | <b>100.0</b> |
| <b>Major groups and selected subgroups</b>                                 |  |                      |              |   |             |              |
| <b>Food and beverages</b>  | <b>25.5</b>                                  | <b>113.9</b>         | <b>166.5</b> | <b>13.9</b>   | <b>46.2</b> | <b>40.0</b>  |
| Meat   | 5.3  | 116.5                | 172.2        | 16.5  | 47.9        | 8.9          |
| Fish and seafood   | 0.6  | 108.0                | 182.3        | 8.0   | 68.7        | 1.3          |
| Bread and cereals  | 4.4  | 113.4                | 140.6        | 13.4  | 24.0        | 3.7          |
| Fats and oils  | 0.8  | 112.1                | 146.7        | 12.1  | 31.0        | 0.9          |
| Fruits and nuts  | 5.5  | 110.7                | 194.3        | 10.7  | 75.5        | 14.4         |
| Vegetables, pulses, and vegetable products                                 | 3.5  | 121.3                | 171.5        | 21.3  | 41.4        | 4.7          |
| Dairy products and birds' eggs   | 3.0  | 112.2                | 151.0        | 12.2  | 34.6        | 3.3          |
| <b>Tobacco</b>   | <b>0.4</b>                                   | <b>103.1</b>         | <b>205.2</b> | <b>3.1</b>  | <b>99.1</b> | <b>1.2</b>   |
| <b>Housing, water, electricity, gas, and other fuels</b>                   | <b>37.1</b>                                  | <b>108.1</b>         | <b>122.5</b> | <b>8.1</b>  | <b>13.3</b> | <b>15.4</b>  |
| Rental value of non-owner occupied housing                                 | 7.7  | 108.3                | 122.8        | 8.3   | 13.4        | 3.2          |
| Imputed rental value of owner-occupied housing                             | 25.4   | 108.4                | 123.1        | 8.4   | 13.6        | 10.8         |
| Maintenance and repair services  | 1.7  | 107.8                | 131.7        | 7.8   | 22.2        | 1.2          |
| Water  | 0.5  | 100.0                | 106.3        | 0.0   | 6.3         | 0.1          |
| Electricity, gas, and other fuels  | 1.8  | 103.4                | 106.9        | 3.4   | 3.4         | 0.2          |
| <b>Clothing and footwear</b>   | <b>4.6</b>                                   | <b>105.4</b>         | <b>142.8</b> | <b>5.4</b>  | <b>35.5</b> | <b>4.9</b>   |
| <b>Furnishings, household equipment, and routine household maintenance</b> | <b>4.3</b>                                   | <b>108.1</b>         | <b>171.2</b> | <b>8.1</b>  | <b>58.3</b> | <b>7.8</b>   |
| <b>Transportation</b>  | <b>8.9</b>                                   | <b>106.5</b>         | <b>153.8</b> | <b>6.5</b>  | <b>44.4</b> | <b>12.2</b>  |
| <b>Communication</b>   | <b>2.3</b>                                   | <b>105.9</b>         | <b>139.7</b> | <b>5.9</b>  | <b>31.9</b> | <b>2.2</b>   |
| <b>Medical care</b>  | <b>7.8</b>                                   | <b>110.1</b>         | <b>128.8</b> | <b>10.1</b>   | <b>17.0</b> | <b>4.5</b>   |
| <b>Recreation and culture</b>  | <b>2.1</b>                                   | <b>110.2</b>         | <b>180.8</b> | <b>10.2</b>   | <b>64.0</b> | <b>4.3</b>   |
| <b>Education</b>   | <b>2.0</b>                                   | <b>111.3</b>         | <b>130.1</b> | <b>11.3</b>   | <b>16.8</b> | <b>1.1</b>   |
| <b>Restaurants and hotels</b>  | <b>1.8</b>                                   | <b>111.3</b>         | <b>141.4</b> | <b>11.3</b>   | <b>27.0</b> | <b>1.6</b>   |
| <b>Miscellaneous goods and services</b>                                    | <b>3.2</b>                                   | <b>110.2</b>         | <b>162.9</b> | <b>10.2</b>   | <b>47.9</b> | <b>4.8</b>   |

<sup>1</sup>For the calculation of this variable, rounded figures of relative weight and price index have been used.

## Chapter 17 PRICE TRENDS

A review of the CPI developments in urban areas by provinces reveals that Kohgiluyeh va Boyer-Ahmad, South Khorasan, and Golestan Provinces, with respectively 42.2, 39.6 and 39.2 percent growth in the CPI compared with the year before, had the highest inflation rates. Qazvin, Ilam, and Hamedan Provinces, with respectively 38.1, 37.9 and 37.5 percent, were next. It is to be noted that Alborz and Hormozgan Provinces accounted for the lowest rates of inflation by 27.0 and 27.5 percent, respectively. Inflation rate was 28.6 percent in Tehran Province in 2018/19.

### *CPI in Rural Areas<sup>1</sup>*

CPI for rural areas rose by 28.1 percent in 2018/19. Inflation in rural areas was the result of growth in the price index of "goods" with 33.8 percent and that of "services" with 15.3 percent compared with 2017/18.

### **Producer Price Index (PPI)**

In 2018/19, the Producer Price Index (PPI) increased by 42.2 percent compared with 2017/18. The growth rate of this index

was about 5.0 percent in 2016/17 and 10.0 percent in 2017/18. Among the major components of the PPI, "manufacturing" and "agriculture, forestry, and fishing" groups made the greatest contribution to raising the PPI general index by 60.4 and 17.7 percent, respectively. The price index of manufacturing group showed 53.7 percent growth in 2018/19. "Manufacturing", with a relative weight of 47.1 percent in the general PPI, had a share of 60.4 percent in growth of the general PPI in 2018/19.

The price index of "agriculture, forestry, and fishing" group, with a relative weight of 18.6 percent in the general PPI and a growth rate of 39.6 percent, made a contribution of 17.7 percent to the rise of the general index in 2018/19. Reviewing the PPI changes in 2018-2019 in each month compared with the previous month (monthly inflation) showed that the highest rate of inflation by 11.5 percent was related to October and the lowest by -4.5 percent, to December 2018. The average monthly inflation of the PPI reached 4.2 percent in 2018/19, which was higher than the average rate of the year before (1.0 percent).

**Table 17.3. Producer Price Index (PPI)**

(2016/17=100)

|   | Relative weight<br>in base year<br>(percent) | 2017/18      |              | 2018/19              |                      | Direct effect <sup>1</sup> on the<br>growth of PPI<br>in 2018/19<br>(percent) |
|---|--|--------------|--------------|----------------------|----------------------|---|
|   |  | 2017/18      | 2018/19      | Percentage<br>change | Percentage<br>change |   |
| <b>General index</b>  | <b>100.0</b>                                 | <b>110.0</b> | <b>156.4</b> | <b>10.0</b>          | <b>42.2</b>          | <b>100.0</b>  |
| <b>Major groups</b>   |  |              |              |                      |                      |   |
| Agriculture, forestry, and fishing                          | 18.6   | 111.0        | 155.0        | 11.0                 | 39.6                 | 17.7  |
| Manufacturing   | 47.1   | 110.7        | 170.2        | 10.7                 | 53.7                 | 60.4  |
| Transport and storage                                       | 16.9   | 106.5        | 149.2        | 6.5                  | 40.1                 | 15.6  |
| Communication   | 1.5  | 103.0        | 106.6        | 3.0                  | 3.5                  | 0.1   |
| Hotels and restaurants                                      | 0.8  | 111.3        | 141.4        | 11.3                 | 27.0                 | 0.5   |
| Education   | 2.5  | 111.6        | 130.3        | 11.6                 | 16.8                 | 1.0   |
| Health and social work                                      | 11.6   | 110.7        | 127.8        | 10.7                 | 15.4                 | 4.3   |
| Other community, social, and personal<br>service activities | 0.9  | 112.3        | 134.6        | 12.3                 | 19.9                 | 0.4   |
| <b>Special groups</b>                                       |  |              |              |                      |                      |   |
| Services  | 34.3   | 108.4        | 138.1        | 8.4                  | 27.4                 | 21.9  |

<sup>1</sup> For the calculation of this variable, rounded figures of relative weight and price index have been used.

<sup>1</sup> Source: "Consumer Price Index of Goods and Services in Rural Areas" published by the SCI (base year 2016/17).

## Export Price Index (EPI)

Export Price Index is used in Iran as an indicator of the changes in the general price level of non-oil exportables. For the compilation of this index, the price of exportable goods in foreign currency is converted into the local currency so that the price index could reflect the change in the price of exportables in the international market as well as the developments of the exchange rate. The Export Price Index increased by 137.9 percent in 2018/19 at base year 2016/17. This index declined by about 2.6 percent in 2016/17 while it increased by 18.3 percent in 2017/18. "Mineral products" and "products of the chemical or allied industries" (considering their high relative weight) had a major impact on the rise of the export price index by 39.1 and 15.5 percent, respectively.

## Price Trends and Return on Assets

A comparison of the total return on assets with the inflation rate in 2018/19 reveals that the growth rates of TEPIX, full Bahar Azadi gold coin price (new design), the nominal value of the US dollar and euro in the unofficial market, and the price of residential units in Tehran per square meter by respectively 85.5, 168.0, 166.6, 161.2, and 67 percent were higher than the 31.2 percent inflation rate of 2018/19. The rental value of non-owner occupied housing experienced a growth rate of 13.4 percent. A review of the average rates of return on all assets during 2016-2019 indicates that the full Bahar Azadi gold coin price (new design) and the nominal value of the euro in the unofficial market registered the highest average rates of return of 39.6 and 25.9 percent, respectively, on an annual average basis.

**Table 17.4. Export Price Index (EPI)**

(2016/17=100)

|   | Relative weight<br>in base year<br>(percent) | 2017/18      | 2018/19      | Percentage<br>change |              | Direct effect <sup>1</sup> on the<br>growth of EPI<br>in 2018/19<br>(percent) |
|---|--|--------------|--------------|----------------------|--------------|---|
|   |  |              |              | 2017/18              | 2018/19      |   |
| <b>General index</b>                                  | <b>100.0</b>                                 | <b>118.3</b> | <b>281.4</b> | <b>18.3</b>          | <b>137.9</b> | <b>100.0</b>  |
| <b>Major groups</b>                                   |  |              |              |                      |              |   |
| Animal products                                       | 3.5  | 115.4        | 263.2        | 15.4                 | 128.1        | 3.2   |
| Vegetable products                                    | 8.0  | 109.6        | 283.7        | 9.6                  | 158.9        | 8.5   |
| Animal or vegetable fats and oils                     | 0.2  | 102.1        | 244.3        | 2.1                  | 139.3        | 0.2   |
| Prepared foodstuffs, beverages, and tobacco           | 3.5  | 109.4        | 236.4        | 9.4                  | 116.1        | 2.7   |
| Mineral products                                      | 40.4   | 122.0        | 279.8        | 22.0                 | 129.4        | 39.1  |
| Products of the chemical or allied industries         | 14.5   | 113.2        | 287.8        | 13.3                 | 154.1        | 15.5  |
| Plastic & articles thereof, rubber & articles thereof | 12.1   | 114.9        | 267.3        | 14.9                 | 132.6        | 11.3  |
| Raw hides and skins, leather and articles thereof     | 0.2  | 120.0        | 322.2        | 20.0                 | 168.4        | 0.3   |
| Wood and articles of wood                             | 0.1  | 94.5         | 196.8        | -5.5                 | 108.2        | 0.1   |
| Paper pulp, paper, or paperboard                      | 0.1  | 110.2        | 197.4        | 10.2                 | 79.1         | 0.1   |
| Textiles and articles thereof                         | 2.5  | 110.7        | 225.0        | 10.7                 | 103.3        | 1.7   |
| Footwear  | 0.2  | 94.0         | 166.6        | -6.1                 | 77.3         | 0.1   |
| Articles of stone                                     | 2.3  | 109.0        | 232.9        | 9.0                  | 113.6        | 1.7   |
| Base metals and articles of base metals               | 10.0   | 130.9        | 345.1        | 30.9                 | 163.6        | 13.2  |
| Mechanical appliances and electrical equipment        | 2.0  | 108.6        | 250.3        | 8.6                  | 130.5        | 1.7   |
| Vehicles and transport equipment                      | 0.4  | 114.2        | 295.0        | 14.2                 | 158.4        | 0.5   |
| <b>Special groups</b>                                 |  |              |              |                      |              |   |
| Petrochemical products                                | 38.5   | 120.9        | 294.0        | 20.9                 | 143.2        | 40.9  |

<sup>1</sup> For the calculation of this variable, rounded figures of relative weight and price index have been used.

**Table 17.5. Price Trends and Return on Assets** (percent)

|   | Growth during the year |            |             | Average rate of return <sup>1</sup> | Standard deviation | Sharpe Ratio <sup>2</sup> |
|---|------------------------|------------|-------------|-------------------------------------|--------------------|---------------------------|
|   | 2016/17                | 2017/18    | 2018/19     |                                     |                    |                           |
| Price of residential units in Tehran per square meter <sup>3</sup>                | 7.2                    | 17.0       | 67.0        | 20.2                                | 32.1               | 0.1                       |
| TEPIX   | -3.7                   | 24.7       | 85.5        | –                                   | 45.6               | –                         |
| Rental value of non-owner occupied housing  | 9.8                    | 8.3        | 13.4        | 10.3                                | 2.6                | -2.6                      |
| Nominal value of US dollar (unofficial market)                                    | 5.6                    | 11.0       | 166.6       | 21.8                                | 91.4               | 0.1                       |
| Nominal value of euro (unofficial market)   | 5.7                    | 19.0       | 161.2       | 25.9                                | 86.2               | 0.1                       |
| Full Bahar Azadi gold coin price (new design)                                     | 19.0                   | 19.4       | 168.0       | 39.6                                | 85.9               | 0.3                       |
| Provisional profit rate of participation papers issued by government <sup>4</sup> | 15.5                   | 17.5       | 18.0        | 17.0                                | 1.3                | 0.0                       |
| Provisional profit rate of one-year deposits (highest approved rate)              | 15.0                   | 15.0       | 15.0        | 15.0                                | 0.0                | –                         |
| <b>CPI of goods and services (inflation rate)</b>                                 | <b>9.0</b>             | <b>9.6</b> | <b>31.2</b> | <b>13.9</b>                         | <b>12.6</b>        | <b>-0.2</b>               |

<sup>1</sup> The average rate of return on assets is calculated using the geometric mean method over the 2016-2019 period.

<sup>2</sup> The Sharpe Ratio is calculated by dividing the difference between the average rate of return for an asset and the risk-free asset (participation papers) by the standard deviation of that risky asset.

<sup>3</sup> Source: SCL.

<sup>4</sup> Includes only those participation papers whose first date of issuance was in 2018/19.