

## **Why does the Government provide three types of percent changes of price indices?**

For facilitating use of price statistics, DGBAS provides not only the figures of price indices, but also three types of percent changes of price indices: "Percent changes compared with previous month (MOM)", "Percent changes compared with the same month of previous year (YOY)", and "Percent changes of average index so far this year compared with the same period of the previous year".

### **1.Percent changes compared with previous month (MOM)**

MOM in price indices reflect short-term price fluctuations and are closer to the experience of the public. In particular, based on the observation of changes in consecutive months, it can clearly reveal recent price trends. Take CPI's fuels and lubricants for example. The prices of fuels and lubricants had fallen steadily since February 2020, but turned to keep rising in May 2020 over 4 months. It reported that the percent changes compared with previous month of the fuels and lubricants increased between 0.9%-15.6% during that period, which obviously suggested that major crude oil prices would rebound from the lows. However, considering that large fluctuations may occur in the "compared with previous month" figure due to seasonal factors, such as in the case of fruits and vegetables, as a consequence, it may be better to use seasonally adjusted data when observing long-term price trends.

### **2.Percent changes compared with the same month of previous year (YOY)**

Also known as the annual rate of change, YOY signifies change over a one-year (12 months) period. If seasonal variations occur during the same months every year, this figure can completely eliminate the influence of seasonal factors. For instance, higher summer electricity rates have been applied from June to September of a year, while other months have adopted lower rates. If the electricity rates are not adjusted, the "Percent changes compared with previous month" figures for June and October may still express large fluctuations that actually reflect the change between summer and non-summer rates. However, "Percent changes compared with the same month of previous year" figure will remain steady because of adopting the same electricity price rate.

### **3.Percent changes of average index so far this year compared with the same period of the previous year**

Due to the unpredictable natural disasters and shifts in the timing of certain major Chinese holidays based on the lunar calendar, "Percent changes compared with the same month of previous year" may sometimes be inconsistent. Take the annual change rate of CPI in January 2022 for example: Comparing with the same month of 2021, the rate increased 2.8%, which can be regard as the result of increasing

demands for the foodstuffs in Chinese Lunar New Year and the higher costs of holiday services. Yet, the different timing of Chinese Lunar New Year in 2021, which fell in February, could also be the main reason. In this case, the "Percent changes of average index so far this year compared with the same period of the previous year" (i.e., combining the data of January and February of 2022) yielded to 2.6% and comparatively is a truthful representation of prices trends at the time.