

Inflation Effects of Individual Factors Causing Commodity Price Changes on Inflation

Kim, Chanwoo*, Lee, Junghyuk**

Affected by concerns over the recent supply chain disruptions stemming from the war in Ukraine, the extent of commodity price hikes has widened. Existing studies show that commodity price rises could have different effects on inflation and inflation expectations, depending on whether the price increases are commonly seen in a broad range of items or are limited to certain items such as oil and grains. Accordingly, this paper breaks down changes in commodity prices by factor, analyzes different effects of changes caused by each factor on Korea's inflation and inflation expectations, and draws related implications.

Commodity price changes can be explained by three factors: a global factor that includes global conditions with respect to liquidity, the economy and supply chains; a block factor that includes a specific group of commodities including crude oil and grains; and an idiosyncratic factor with regard to individual products such as Dubai crude oil and US corn. Breaking down the factors causing changes in commodity prices into ① global, ② block, and ③ idiosyncratic factors shows that a considerable amount of such changes are triggered by the global factor, which affects commodity prices broadly. According to our analysis, the block factor played a major role before the 2000s, but the influence of the global factor has increased substantially since 2000 and has strengthened even

more in the wake of the Covid-19 pandemic. Moreover, it is estimated that the global factor was created mainly by the rise of liquidity worldwide, and was expanded by the effect of global supply bottlenecks after the pandemic.

Next, the analysis regarding the effects of commodity price changes of each factor on inflation shows that the rise in commodity prices fuelled by the global factor affected inflation and inflation expectations more considerably and over a longer run compared to the rise stemming from the block factor. This also demonstrates that the increase in commodity prices caused by the global factor fuels inflation expectations, thus creating additional inflationary pressure. Moreover, it is analyzed that the impact of the rise in commodity prices by the global factor on inflation and inflation expectations has recently been growing gradually.

Based on the above analysis, even if the war in Ukraine is resolved, there is a possibility that the upward trend of commodity prices in general could continue. In particular, we should take note that if the rising commodity prices are translated into inflation expectations, the recent high inflation could be sustained for a considerable period of time.

* Economist, Inflation Analysis Team, Research Department, Bank of Korea
(Tel: +82-2-759-4414, e-mail: ckim@bok.or.kr)

** Junior Economist, Inflation Analysis Team, Research Department, Bank of Korea
(Tel: +82-2-759-4397, e-mail: junghyuk.lee@bok.or.kr)

■ We thank Mr. Chun Kwang Myung, Head of the Inflation Research Division, Dr. Lim Hyun Joon, Head of the Inflation Analysis Team, and two other judges for all their advice.

- The contents of this paper represent the personal opinions of the authors and do not necessarily reflect the official views of the Bank of Korea. Any report/citation of this paper should specify the names of the authors.

I. Introduction

II. Factors behind Recent Changes in Commodity Prices

III. Breakdown of Factors behind Recent Changes in Commodity Prices

IV. Impacts of Changes in Commodity Prices on Inflation and Inflation Expectations

V. Assessment