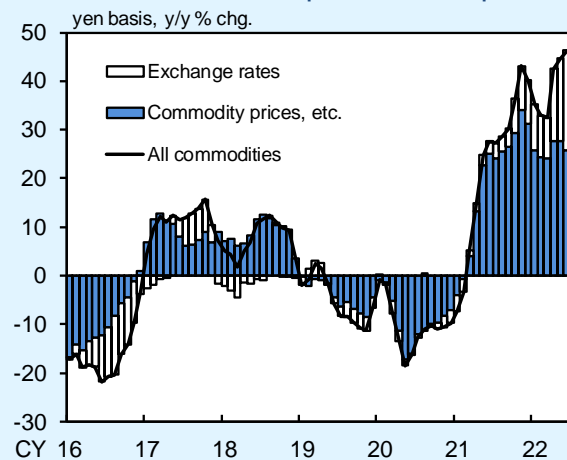


### (Box 3) Pass-Through of the Upward Pressure of Costs to the CPI

Import prices have risen, reflecting an increase in commodity prices and the yen's depreciation since early 2022 (Chart B3-1). This box summarizes the issues regarding the degree to which the upward pressure of costs due to such import price rises will spill over (be passed on) to the CPI for all items less fresh food and energy.

Intermediate input costs for the production of various consumer goods and services have continued to increase, with import prices rising, and moves to pass on such cost increases to selling prices have put upward pressure on the CPI (Chart B3-2).<sup>18</sup> The pass-through of rises in commodity and other prices from the upstream to downstream of the production process is examined using the Bank's Final Demand-Intermediate Demand price indexes (FD-ID price indexes), which have been released starting from June 2022 as satellite series for the corporate goods price index (CGPI) and the services producer price index (SPPI) (Chart B3-3). Developments in the FD-ID price indexes show that, at the ID stage, price rises have been most significant at stage 1, which is the most upstream stage in the production process. They also suggest that price fluctuations become smaller from the midstream to downstream, partly because the share of raw material inputs for each item becomes lower and some cost increases are

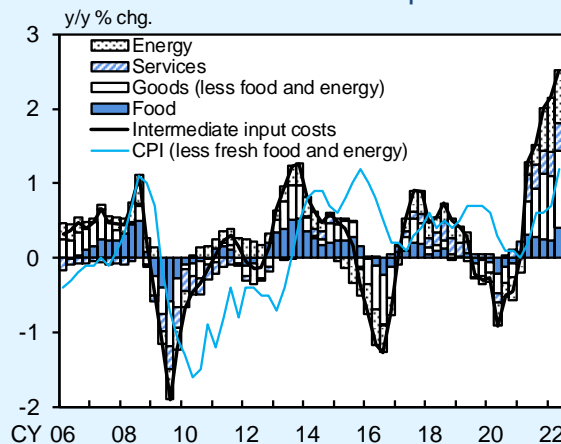
**Chart B3-1: Developments in Import Prices**



Source: Bank of Japan.

Note: The contribution of commodity prices, etc. is calculated using changes in import price index on a contract currency basis. The contribution of exchange rates is calculated using the difference between import price index on a yen basis and that on a contract currency basis.

**Chart B3-2: Intermediate Input Costs**



Sources: Ministry of Internal Affairs and Communications; Bank of Japan.

Note: The CPI figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hikes, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses. Intermediate input costs are calculated by multiplying the intermediate input ratio of each sector in the 2015 *Input-Output Tables for Japan* by price data from the corporate goods price index (CGPI) or the services producer price index (SPPI) and then taking the weighted average using consumption expenditure shares as weights. Figures for 2022/Q2 are April-May averages.

<sup>18</sup> To measure the intermediate input costs for the production of consumer goods and services, excluding fresh food and energy, the intermediate input cost index is estimated here based on the transaction structure in the input-output tables. For details, see Box 3 in the April 2022 Outlook Report.

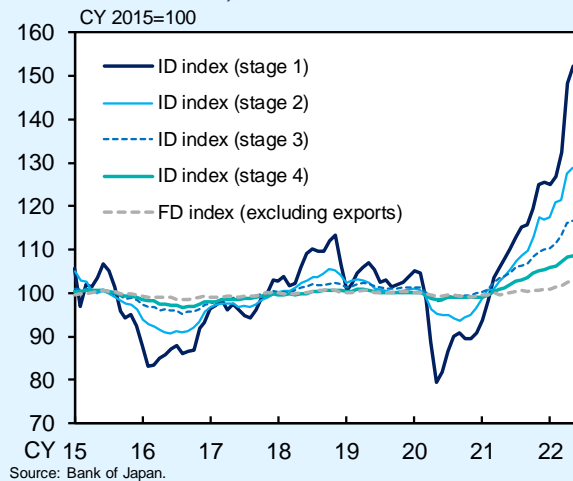
absorbed during the production process. That said, in the current phase, the indexes for stages 2 to 4 of the ID -- which are the midstream stages -- have risen significantly compared with the past. Under these circumstances, the index for the FD stage, which includes the consumption stage, has also risen.

Looking at the CPI (all items less fresh food and energy) by item to examine the pass-through of cost increases, although price rises had been seen for food products in particular until the early spring of 2022, prices such as of durable goods, for which the share of imported goods is high, have also risen recently. For services, the rates of change in prices have been increasing for dining-out and housework-related services (e.g., services related to housing repairs and maintenance), which have a high share of material costs in their overall costs (Chart B3-4).

There are two reasons behind the pass-through of such recent upward pressure of costs to the CPI.

First, the recent upward pressure of costs has been greater than in the past, and Japan's economy is on its way to recovery from a significant downturn caused by COVID-19. In this regard, studies abroad show that, when cost increases are significant, firms are more likely to pass on such increases to selling prices, while they also indicate that the cost pass-through rate

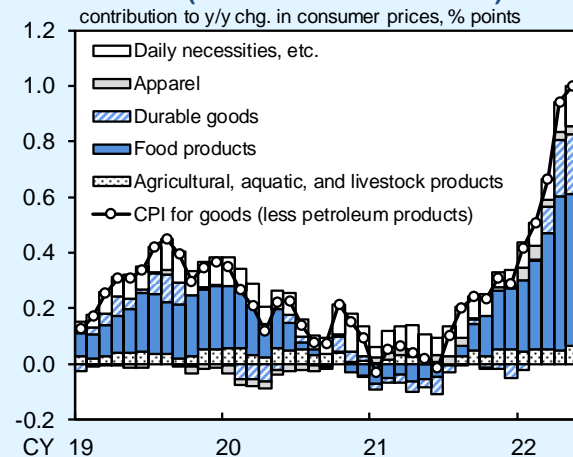
**Chart B3-3: FD-ID Price Indexes (All Commodities)**



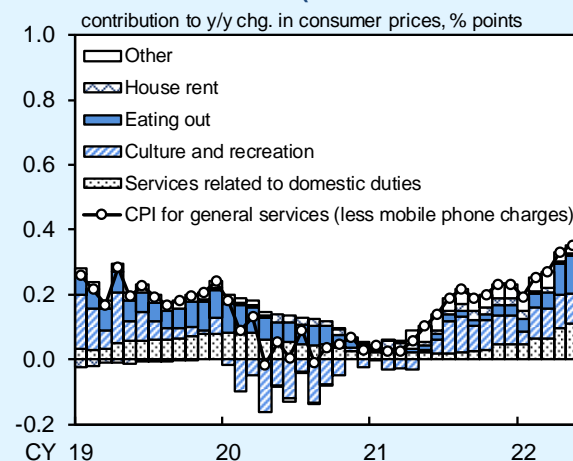
Source: Bank of Japan.

**Chart B3-4: Consumer Prices for Goods and Services**

**1. Goods (Less Petroleum Products)**



**2. General Services (Less Mobile Phone Charges)**



Source: Ministry of Internal Affairs and Communications.

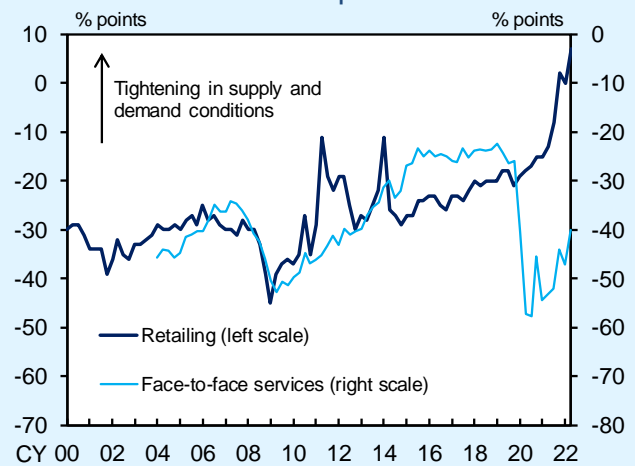
Notes: 1. Figures are the contribution to changes in the CPI (less fresh food and energy). Figures are staff estimates and exclude mobile phone charges and the effects of the consumption tax hike, policies concerning the provision of free education, and the "Go To Travel" campaign, which covers a portion of domestic travel expenses.

2. Figures for services related to domestic duties include services related to housing repairs and maintenance.

tends to rise when the economy is improving.<sup>19</sup>

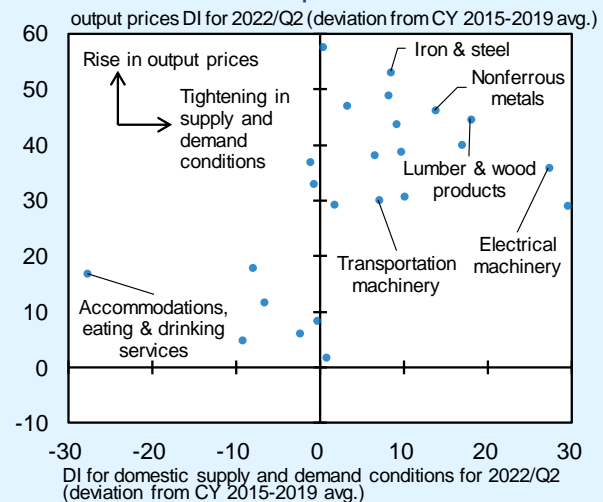
Second, supply and demand conditions for some goods have been extremely tight, partly due to a surge in global demand and the impact of supply-chain disruptions. Although the output gap, which is measured based on the labor and capital utilization rates, appears to have remained negative in Japan, supply and demand conditions for quite a few individual goods have been tight. Among the industries related to private consumption, supply and demand conditions for face-to-face services -- which have continued to be affected by COVID-19 -- have eased, whereas such conditions for retail goods have tightened clearly, partly due to the impact of supply-side constraints (Chart B3-5). Looking at other industries, many of those in manufacturing have pointed out that supply and demand conditions have been tighter than the average pre-pandemic levels, and it seems that these industries have tended to raise selling prices (Chart B3-6). Given these points, it is possible that the cost pass-through rate will rise for items with significantly tightened supply and demand conditions.

**Chart B3-5: Domestic Supply and Demand Conditions in Consumption-Related Sectors**



Source: Bank of Japan.  
 Note: Figures are based on the *Tankan* and are for all enterprises. Figures for face-to-face services are the weighted averages of the DIs for services for individuals and for accommodations, eating & drinking services.

**Chart B3-6: Domestic Supply and Demand Conditions and Output Prices**



Source: Bank of Japan.  
 Note: Figures are based on the *Tankan* and are for all enterprises.

<sup>19</sup> For details, see, for example, Colavecchio, R. and Rubene, I., "Non-linear Exchange Rate Pass-Through to Euro Area Inflation: A Local Projection Approach," *ECB Working Paper Series*, no. 2362 (January 2020); and Ben Cheikh, N. et al., "Nonlinear Exchange Rate Pass-Through: Does Business Cycle Matter?" *Journal of Economic Integration* 33, no. 2 (June 2018): 1234-61.