

Box 1**Exploring the recent changes in Taiwan's inflation structure through price adjustment intervals**

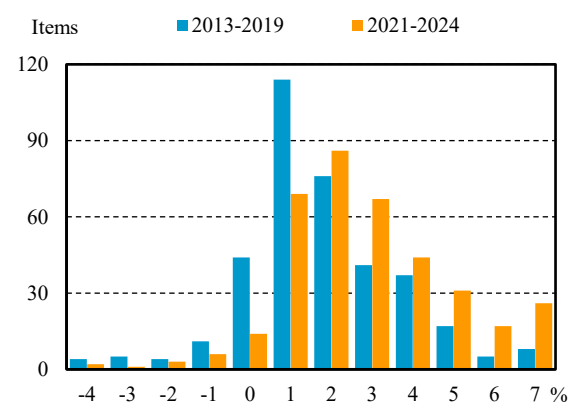
During the post-pandemic period from 2021 to 2022, as global vaccine coverage gradually increased and economic activity progressively resumed, the world began to emerge from the shadow of the pandemic, and demand started to recover. However, supply chain bottlenecks stemming from the pandemic, which had not yet been fully alleviated, together with geopolitical tensions such as the Russia-Ukraine war, disrupted the global supply-demand balance, thereby driving up international prices of major commodities, including energy and food. Taking the United States and the euro area as examples, these factors, coupled with tight labor markets in the post-pandemic era, forced firms to implement frequent and sizable price modifications to maintain profit margins. The shift in price adjustment intervals, in addition to exerting upward pressure on inflation across economies, has affected price rigidity and shaped inflation expectations. As a result, these structural changes in pricing behavior have become a focus for central banks in major economies such as the US and the euro area. In light of these developments, this box attempts to construct an index measuring the price adjustment intervals of various items in Taiwan's CPI. This index assesses changes in Taiwan's inflation structure before and after the pandemic (i.e., from 2016 to 2019 and from 2021 to 2024), as a general reference.

1. Impact and empirical findings on post-pandemic inflation and price adjustment interval changes

1.1 Recent changes in Taiwan's inflation structure

Observing historical price changes in Taiwan, inflation generally followed a low and stable trend before 2020, with the annual CPI inflation rate typically fluctuating around 1%. Between 2013 and 2019, of the 368 items surveyed in Taiwan's CPI, 114 items had an average annual growth rate of 0% to 1%, accounting for about one-third of the total items and indicating relatively mild price changes. Nonetheless, since 2021, owing to

Chart B1.1 Year-on-year growth rate distribution of Taiwan's 368 CPI pricing items



Source: DGBAS.

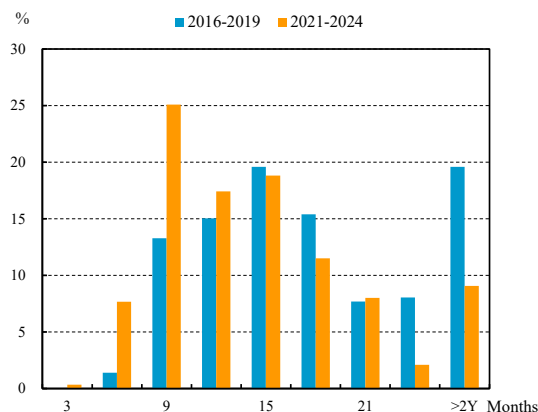
global supply chain bottlenecks, geopolitical tensions like the Russia-Ukraine war, and climate change, the imported prices of raw materials such as crude oil and food have surged. This cost pressure originating from the supply side has gradually been transmitted to various components of the domestic CPI, driving a notable upward trend in the prices of many domestic commodities. Among the abovementioned 368 pricing items in Taiwan's CPI basket, 185 items had an average annual growth rate higher than 2% from 2021 to 2024, making up 50.3% of

the total items, far more than the 108 items (29.3%; see Chart B1.1) from 2013 to 2019. It signals that inflationary pressures have extended to a broader range of daily consumer items since 2021, suggesting a possible structural shift in overall inflation and implying that price adjustment intervals across various product items in Taiwan have changed. Furthermore, Price et al. (2023)¹ also found a considerable uptick in the frequency of price changes in certain US manufacturing and service industries commencing in 2021, indicating that after inflation started climbing, US firms began to adjust prices more frequently and adopted a strategy of “gradual, modest price modifications,” allowing consumers to progressively adapt to the rising price environment rather than a large change all at once.

1.2 Recent changes in the price adjustment intervals of core prices

According to the weighting statistics of the 2021-based CPI pricing items published by the DGBAS, core inflation components (excluding energy, fruit, and vegetables) accounted for 287 of the 368 pricing items in Taiwan's CPI basket, representing more than 90% of the total CPI weight. In other words, the overall CPI changes are strongly affected by the pricing dynamics of its internal components. To analyze differences in price adjustment intervals, a further comparison of the two periods before and after the pandemic, namely from 2016 to 2019 and from 2021 to 2024, was conducted using a total of 48 months of data for each period, under the 2% price increase threshold. The results showed that the adjustment interval for core CPI items shortened from 17.4 months before the pandemic to 12.5 months after the pandemic, suggesting that the overall price adjustment frequencies

Chart B1.2 Changes in price adjustment intervals of core CPI items over the past 36 months (2% price increase threshold)



Source: Yu (2024).

had increased significantly. Moreover, the distribution of core CPI price adjustment intervals also exhibited a marked shift to the left as shown in the chart (Chart B1.2):

- (1) Core items with adjustment intervals shorter than half a year (less than six months) accounted for only 1.4% of all core items before the pandemic (2016-2019), but rose to 8% after the pandemic (2021-2024), indicating that short-term price changes had increased significantly.
- (2) Core items with adjustment intervals longer than two years (24 months or more) accounted for 19.58% of all core items before the pandemic, but decreased to 9.1% after the pandemic, reflecting a reduction in long-term price rigidity.

These estimates reveal that the price adjustment intervals of many core consumer items in Taiwan, previously characterized by price rigidity, have shortened since 2021. This suggests that the changes in international raw material prices, geopolitical risks, and climate change are gradually reshaping Taiwan's current inflation structure. The shifting price adjustment intervals across various product categories not only challenge consumers' previous perceptions of those intervals but also lead to more pronounced public sensitivity to inflation.²

2. Conclusion

Stabilizing price fluctuations and maintaining consumer purchasing power are crucial for stabilizing society and remain key policy concerns for the government. Central banks worldwide, in accordance with their legal mandates, primarily focus on maintaining price stability as their top monetary policy objective. They employ tools such as guiding market interest rates and controlling the money supply to mitigate the adverse economic effects of inflation volatility. In recent years, Taiwan's core CPI price adjustment intervals have significantly shortened, reflecting that unexpected factors, including international raw material price fluctuations, geopolitical risks, and climate change, may be reshaping Taiwan's current inflation structure. This poses new challenges for the Bank's formulation and implementation of monetary policy. The Bank will continue to closely monitor changes in price adjustment frequencies across various items and adjust monetary policy in a timely manner to achieve price stability, maintain financial stability, and fulfill its legal duties to support economic development in line with the aforementioned objectives.

Notes: 1. Price, A. David, Tim Sablik, and Matew Wells (2023), "How the Pandemic Era Changed Price-Setting," *Econ Focus*, Federal Reserve Bank of Richmond, Fourth Quarter.

2. Yu, Hsin-Jung (2024), "Exploring the Recent Changes in Inflation Structure through Price Adjustment Intervals: A Case Study of Taiwan," *CBC Internal Report*.