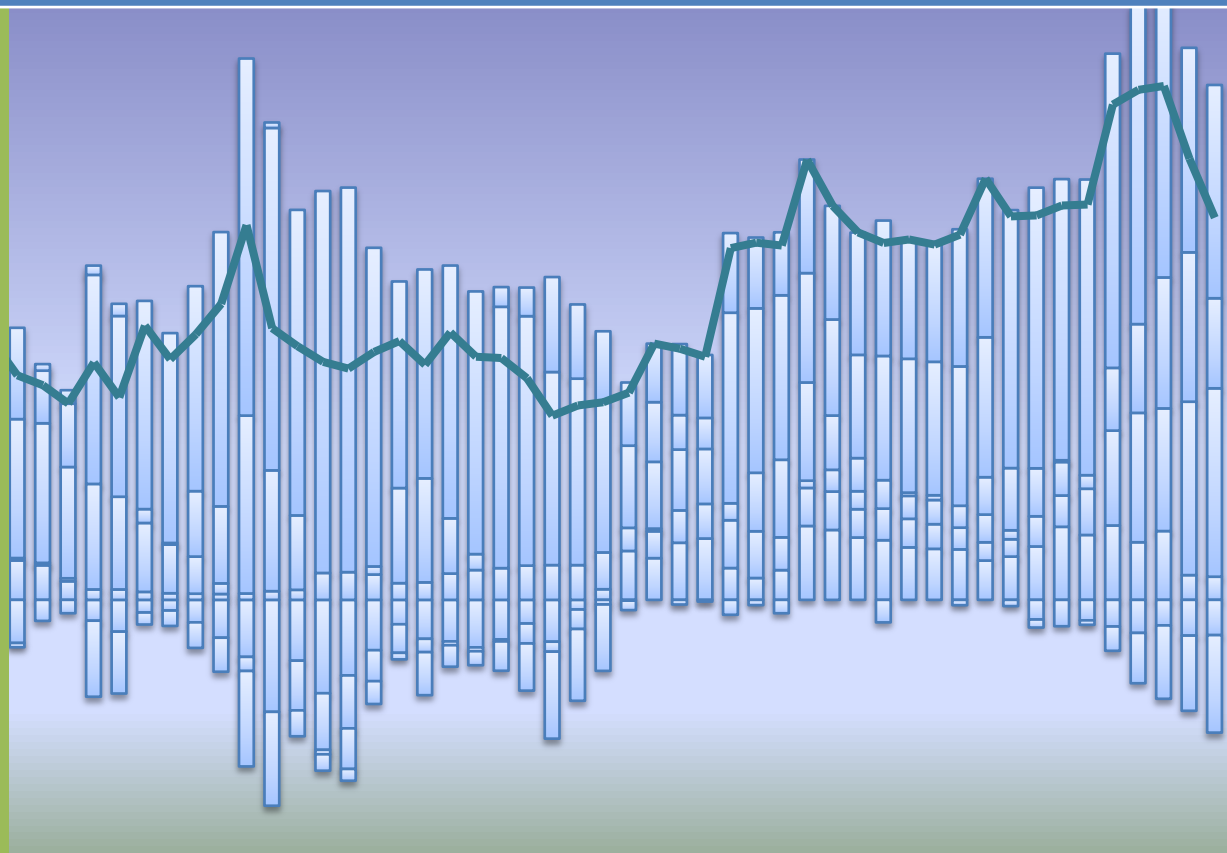# Inflation Dynamics in Bangladesh
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Inflation Dynamics in Bangladesh

April–June 2024 (Q4:FY24)

Chief Editor

Dr. Sayera Younus, Executive Director (Research)[1]

Co-Editors

Nurun Nahar Sultana, Director (Research)

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Analysts and Contributors

Tarek Aziz, Joint Director (Research)

Alok Roy, Joint Director (Research)

Nabila Fahria, Joint Director (Research)

Rupok Chad Das, Deputy Director (Research)

Md.Yousuf, Deputy Director (Research)

Md. Masudur Rahman, Deputy Director (Research)

Mohammod Ullah, Assistant Director (Research)

Rozina Akter, Assistant Director (Research)

Shakil Ahmed, Assistant Director (Research)

Farah Nasreen, Assistant Director (Research)

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1 Introduction

Bangladesh Bank's foremost priority is maintaining low and stable inflation to ensure sustained economic growth and financial stability of the Bangladesh economy. Understanding the underlying causes of fluctuations in consumer prices and wage levels is essential for the development of effective monetary policy. The Bangladesh Bureau of Statistics (BBS) provides several indices that reflect the price dynamics within the economy. This report delves into the key drivers of inflation and wage trends in Bangladesh, offering insights into the factors shaping the country's economic landscape.

The Consumer Price Index (CPI) based year-on-year (y-o-y) headline inflation remained elevated at approximately 9.8% during H2:FY24.[2] It was mainly driven by high and volatile food, fuel, and fertilizer prices, and the depreciation of Bangladesh taka against the USD (Asian Development Bank, 2024). Inflation reached 9.8% in June 2024 from 9.7% in June 2023 (Figure 1a). Though nonfood inflation moderated to 9.1% in June 2024 from 9.6% in June 2023 as monetary policy was tightened, food inflation accelerated to 10.4% from 9.7%, keeping headline inflation elevated.[3] International Monetary Fund (2024) in its latest World Economic Outlook (July 2024) reports slowing momentum on *global*

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[2]January–June, 2024.

[3]At present, based on the Classification of Individual Consumption by Purpose (COICOP) of the United Nations Department of Economic and Social Affairs, BBS produces the Consumer Prices Index (CPI) of Bangladesh's economy, considering 2021-22 as base and weights are derived from the Household Income and Expenditure Survey (HIES) 2016-17 of BBS. Likewise, the Wage Rate Index (WRI) is prepared by BBS with the same base period as CPI and associated weights are obtained from the BBS Labour Force Survey (LFS) 2016–17.

disinflation due to higher-than-average services price inflation, tempered to some extent by stronger disinflation in the prices of the goods.

FIGURE 1: CPI Inflation
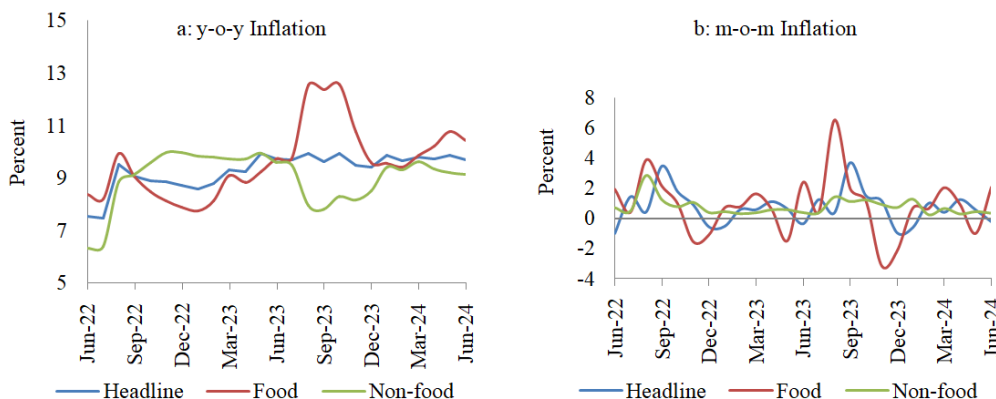
Source: Bangladesh Bureau of Statistics (BBS)

Month-on-month (m-o-m) headline inflation slightly declined during Q4:FY24. However, m-o-m food inflation increased sharply in June 2024 (Figure 1b), while m-o-m nonfood inflation remained broadly stable.

2   Decomposition of Headline Inflation

Almost half of the headline inflation stemmed from food items during Q4:FY24. Conversely, the average contribution of energy inflation declined. The contribution of food prices to headline inflation stood at 48% in June 2024, while the contributions of core[4] and energy items were 40% and 12%, respectively (Figure 2).

2.1   Decomposition of Food Inflation

Protein-based food items[5] contributed almost half of the food inflation in June 2024. The contribution of protein prices accentuated from the beginning of 2023, while spices and culinary essentials started contributing prominently from August 2023 (Figure 3). In June 2024, the contribution of spices & culinary essentials to food inflation was around 41%.

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[4]Core inflation is measured by excluding all food and energy items.

[5]Protein-based food items include milk, cheese, fish (fresh and dry), egg, meat (beef, mutton, duck, hen), peas, lentils etc.

FIGURE 2: Decomposition of Headline Inflation
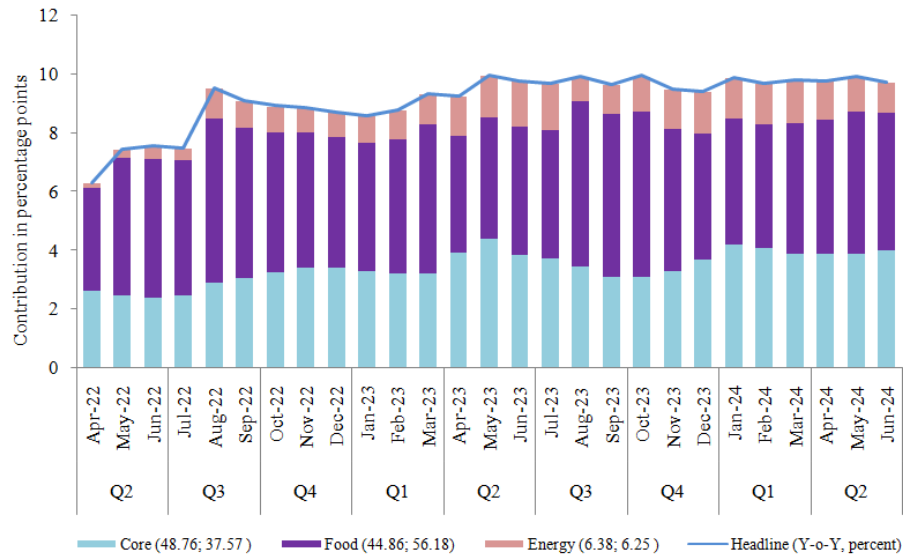
Notes & sources: Numbers in parenthesis represent weights in current and previous baskets, respectively; current weights started from April 2023. BBS and EMFW estimates.

FIGURE 3: Decomposition of Food Inflation
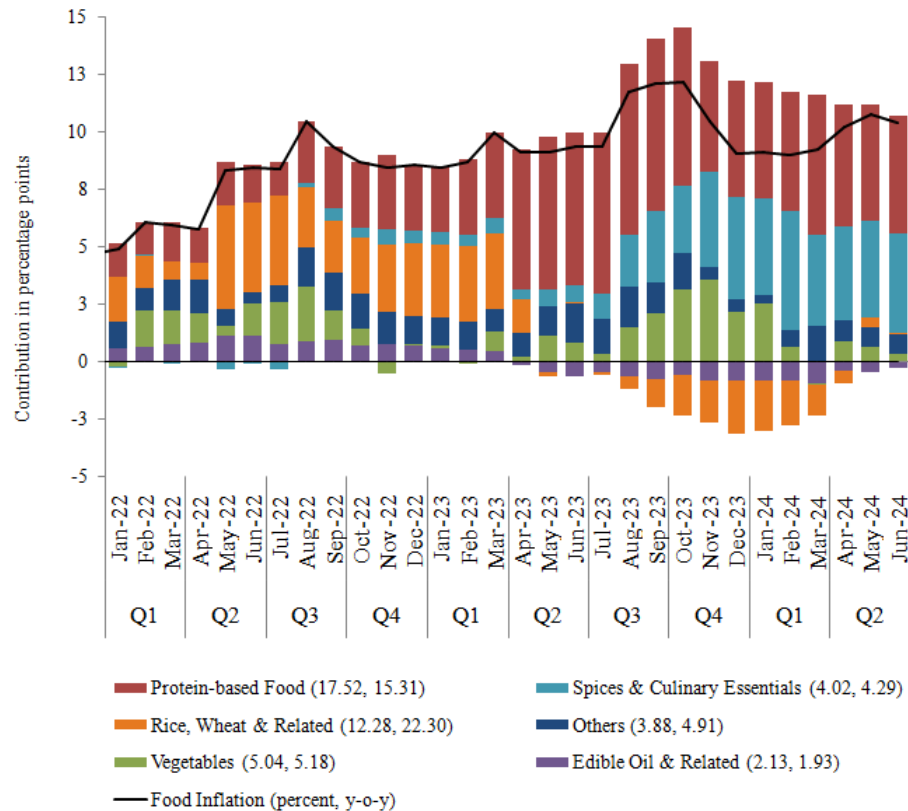
Notes & sources: Figures in parenthesis represent weights in current and previous baskets, respectively. Current weights and base 2021-22=100 was started from April 2023, prior to that previous base 2005-06=100 has been rebased to 2021-22=100 based on previous weight. BBS and EMFW estimates.

2.2 Decomposition of Nonfood Inflation

**Nonfood inflation declined at approximately 9.2% in Q4:FY24 from 9.5% in Q3:FY24.** This decline was primarily driven by a reduction in the impact of energy prices, which became a significant contributor to nonfood inflation from mid 2022 (Figure 4). Additionally, there was a downward inflationary pressure from sectors such as restaurants, hotels, and recreation, along with a decrease in rental costs. Despite this overall easing, health and personal care expenses continued to exert significant inflationary pressures, averaging around 18%. On the other hand sectors like clothing and footwear, vehicle purchase and maintenance, and furniture and appliances remained relatively stable.

FIGURE 4: Decomposition of Nonfood Inflation
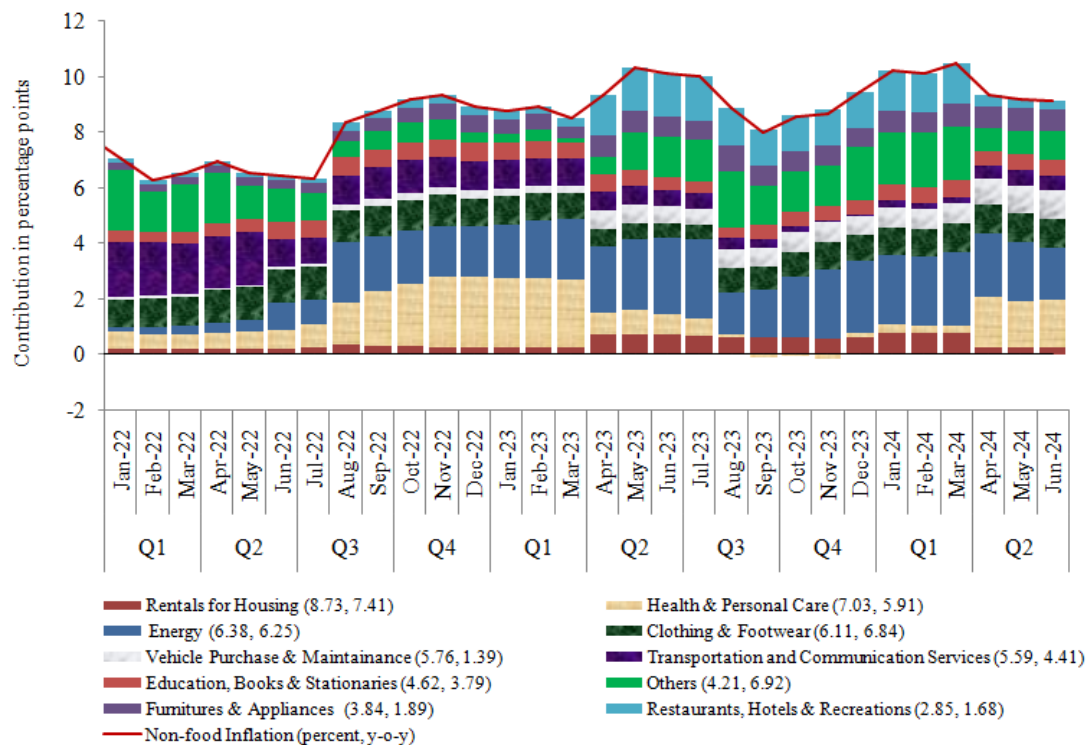
Notes & sources: Figures in parenthesis represent weights in current and previous baskets, respectively. BBS and EMFW estimates.

3 Product Wise Drivers of Headline Inflation

3.1 Goods (Perishable and Non-perishable) and Services

Compared to perishable goods [6], contribution of services and non-perishable goods to headline inflation increased during Q4:FY24. In June 2024, the contribution of services and non-perishable goods to headline inflation stood at 12% and 70% respectively, which was 10% and 61% in March 2024. Meanwhile, the contribution of perishable goods to headline inflation declined to 18% in June 2024 from 28% in March 2024 (Figure 5).

FIGURE 5: Contribution of Goods and Services
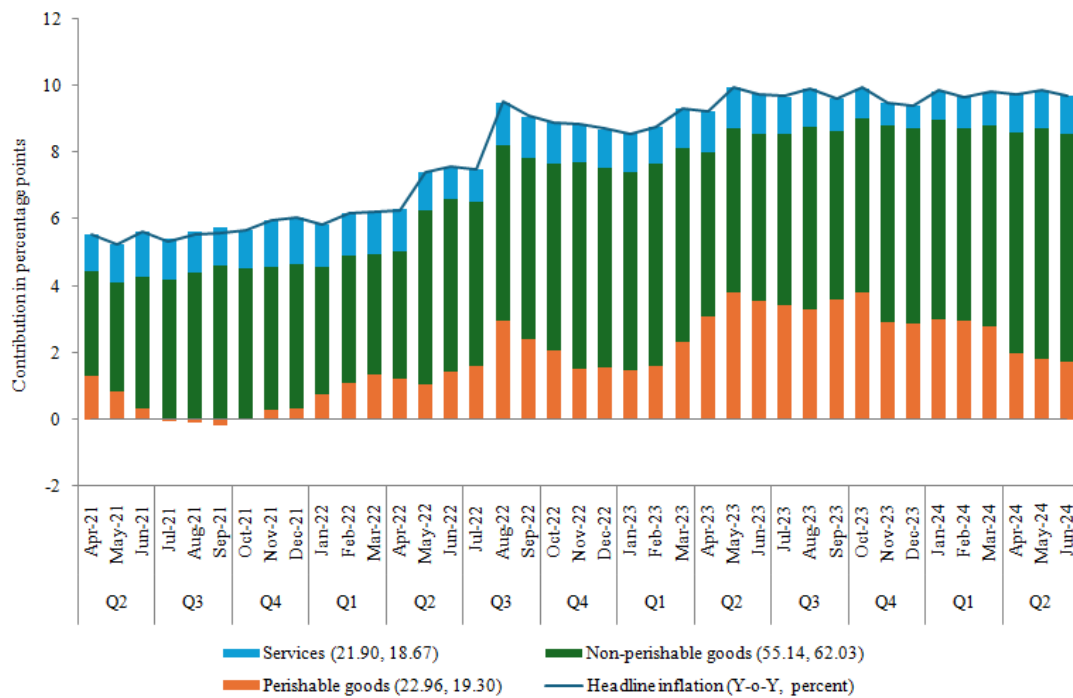
Notes & sources: Figures in parenthesis represent weights in current and previous baskets, respectively; current weights started from April 2023. BBS and EMFW estimates

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[6]Perishable goods are those that begin to spoil without refrigeration or freezing within seven days.

3.2   Import-concentrated Items

Contribution of import-concentrated items[7] to inflation started to increase in August 2022, mainly due to the rise in international prices. In June 2024, the contribution of import-concentrated items to inflation increased to 39% from 28% in March 2024 (Figure 6).

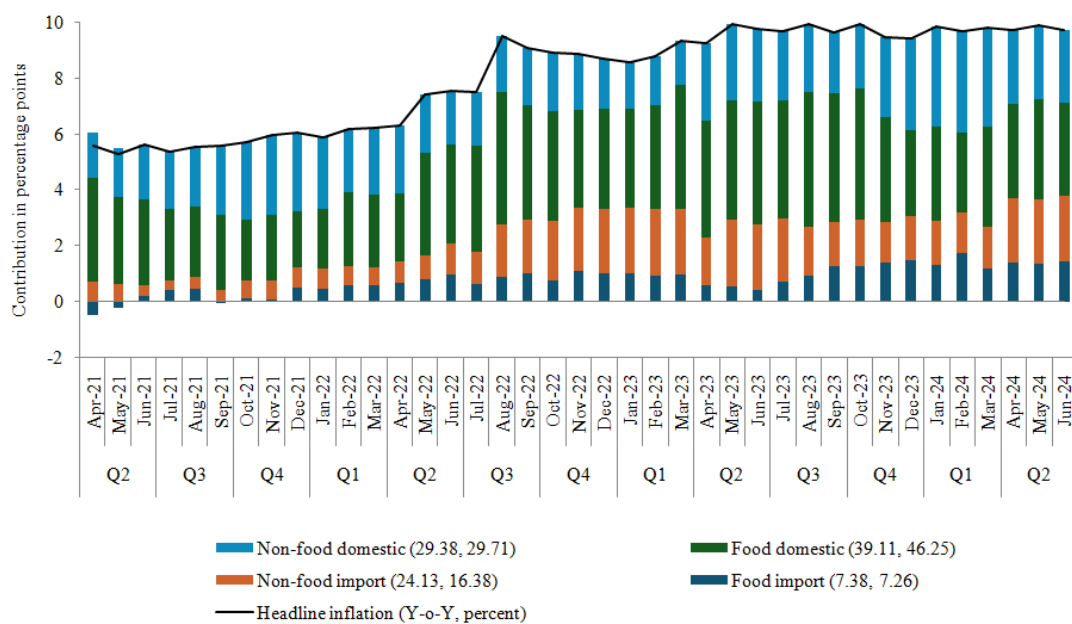FIGURE 6: Contribution of Import-Concentrated Items

Notes & sources: Figures in parenthesis represent weights in the current and previous baskets, respectively; current weights started from April 2023. BBS and EMFW estimates.

4   Retail and Wholesale Prices of Selected Commodities

Margins[8] for some selected commodities are reported in Figure 7 along with their retail and wholesale prices. Margins for potato and onion decreased in April 2024 from the previous month but subsequently increased throughout Q4:FY24. Conversely, margins for rice (medium) and meat-sonali increased

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[7]Items which are fully or partially imported are classified as import-concentrated items.

[8]Margins are defined as the difference between retail and wholesale prices.

from the previous quarter, Q3:FY24, before declining by the end of the quarter. Particularly in June 2024, there was a notable decline in the margin for meat-sonali. Moreover, the margin for eggs (farm) exhibited an initial increase, followed by a decrease, and then another increase during the observed timeframe, while soybean oil maintained a stable margin. Notably, the margin for green chilli witnessed a substantial increase, reaching its peak in June 2024.

FIGURE 7: Retail and Wholesale Prices of Selected Commodities

Notes & sources: Margin= Retail Price–Wholesale Price. Figures in parentheses denote the corresponding weight in the current basket. Department of Agricultural Marketing (DAM).

5   Base and Momentum Effects, Diffusion Index and Kernel Density Estimates of Inflation

In 2023, large price momentum dominated over the base effect[9] which exhibited rising inflation rate in Bangladesh. During Q4:FY24, headline inflation declined due to reductions in both food and energy components, largely driven by favorable base effects over momentum effects. Meanwhile, positive momentum effects were more pronounced in case of core inflation. Looking ahead, both core and energy inflation are expected to have negative base effects throughout 2024.

Box 1: Base and Momentum Effect

If the price level is denoted as, the y-o-y inflation rates in two consecutive months π_t and π_{t-1} can be expressed as,

$$\pi_t = [(I_t - I_{t-12})/I_{t-12}] * 100 \tag{1}$$

$$\pi_{t-1} = [(I_{t-1} - I_{t-13})/I_{t-13}] * 100 \tag{2}$$

Now, the difference between π_t and π_{t-1} can be approximated as,

$$\pi_t \approx \pi_{t-1} + [(I_t - I_{t-1})/I_{t-1}] * 100 + [(I_{t-13} - I_{t-12})/I_{t-13}] * 100 \tag{3}$$

The $[(I_t - I_{t-1})/I_{t-1}] * 100$ part of eq (3) is the m-o-m inflation at the current period termed as the momentum effect, and $[(I_{t-13} - I_{t-12})/I_{t-13}] * 100$ is the m-o-m inflation 12 periods ahead termed as the base effect. Economic factors arising from the price movement of different commodities of the CPI basket can be ascribed as momentum. On the other hand, the statistical factors stem from the price swing twelve months earlier, which can be attributed to a base effect. The base impact on inflation can be positive or negative with different magnitudes. If the change between the price indices of the two consecutive months of the base period is negative, then-current inflation will be suppressed, offsetting the price momentum. The opposite will happen when the price change is positive, uplifting the present measured inflation.

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[9]See Box 1 and European Central Bank (2005) for details.

Diffusion indices[10] for headline and food picked up at the end of the Q4:FY24. The rise in diffusion indices indicates that more items from the overall CPI basket saw a price rise (Figure 9).

FIGURE 8: CPI Inflation–Momentum and Base Effects
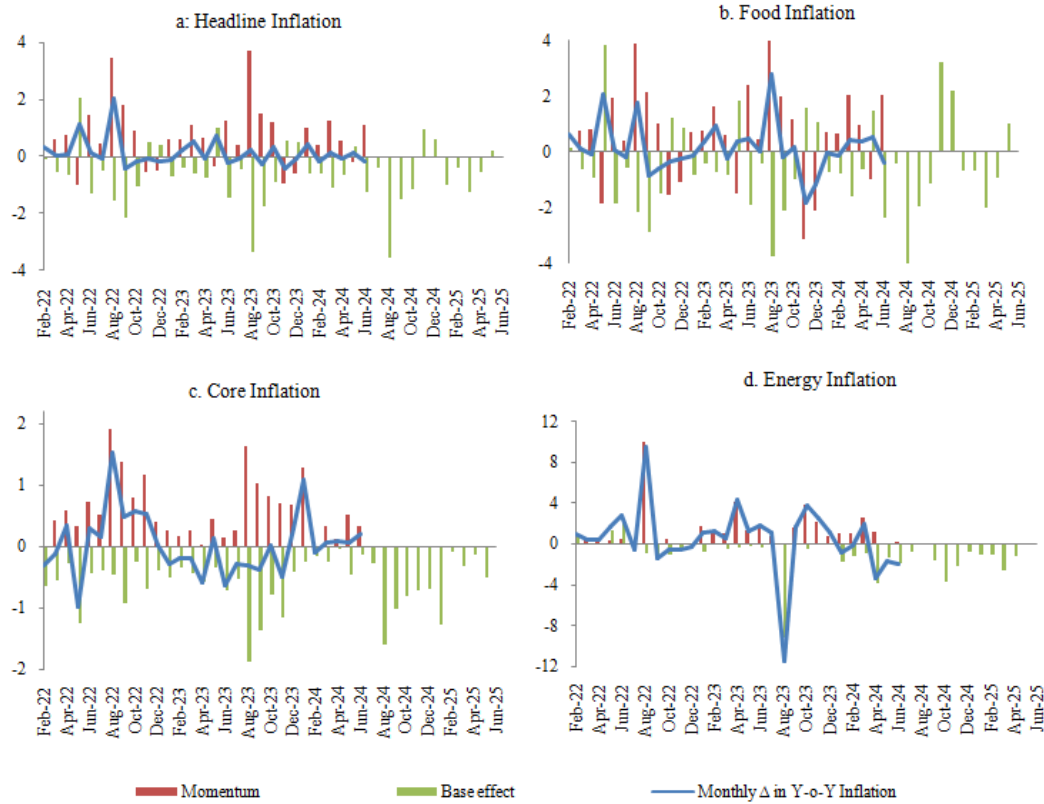
Sources: BBS and EMFW estimates

The Kernel Density Function (KDF[11]) indicated the mean value of headline inflation increased in the first half of 2024 but with less volatility compared to 2023 as shown by the shape of the distribution. Particularly, the standard deviation decreased by more than 50% in 2024 compared to 2023 (Figure 10).

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[10]The CPI diffusion index, a measure of dispersion of price changes, categorises items in the CPI basket according to whether their prices have risen, remained stagnant or fallen over the previous month. See Reserve Bank of India (April 2024) for details.

[11]A KDF shows the distribution of data, indicating where the data is concentrated (steep parts) and how far it spreads out (tail length). Steeper parts indicate higher density and mean value, and longer tails show spread or variation of the data. Kernel density estimation is a useful statistical tool for creating a smooth curve given a set of data. See Bangladesh Bank (2024) and Reserve Bank of India (April 2024) for details.

FIGURE 9: Diffusion Indices
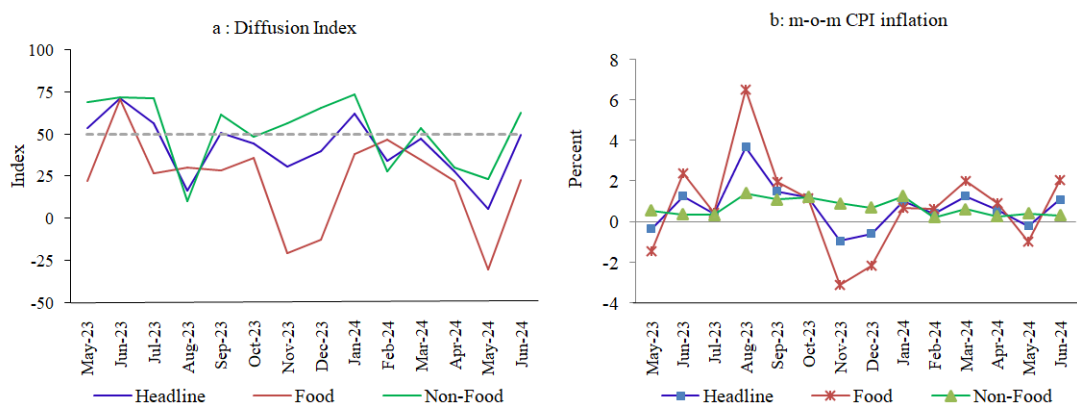
Notes & sources: A value above 50 of diffusion index indicates a broader expansion or generalization of price increases, whereas a reading below 50 indicates a broader drop in prices across items. BBS and EMFW estimates.

FIGURE 10: Kernel Density Estimates
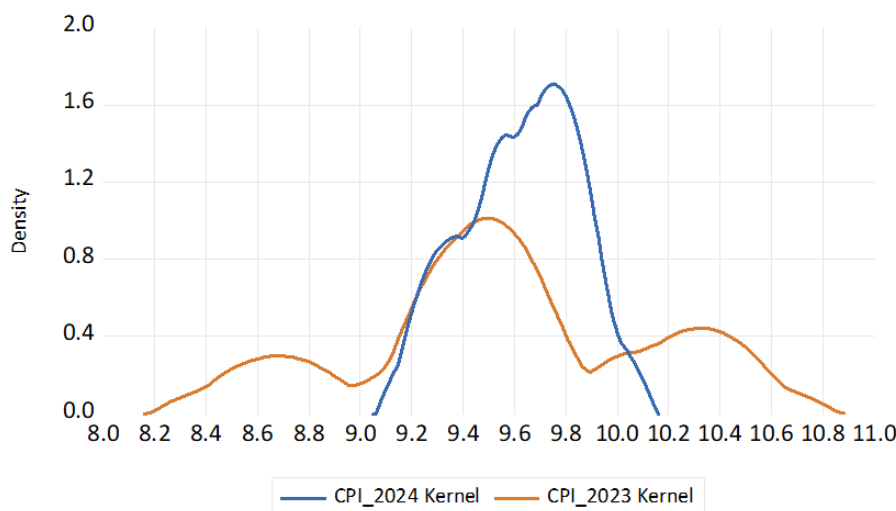
Sources: BBS and EMFW estimates.

6 Wage Dynamics

Since April 2022, inflation has consistently outpaced wage growth, leading to reduced purchasing power for consumers and a subsequent fall in real income (Figure 11.a). The momentum effect of Wage Rate Index (WRI) was offset by base effect causing slower wage growth since August 2023 (Figure 11.b). However, in June 2024, the momentum effect marginally outweighed the base effect, indicating a modest uptick in wage growth. The projected base

effects following August 2024 indicate substantial negative magnitudes, signifying adverse implications for wage growth, whereas April and May 2025 exhibit favorable base effects. Among the overall wage growth rates of seven divisions in Bangladesh (Figure 11.c), Rangpur stands out with the highest wage growth rate since October 2023.

FIGURE 11: Wage Dynamics
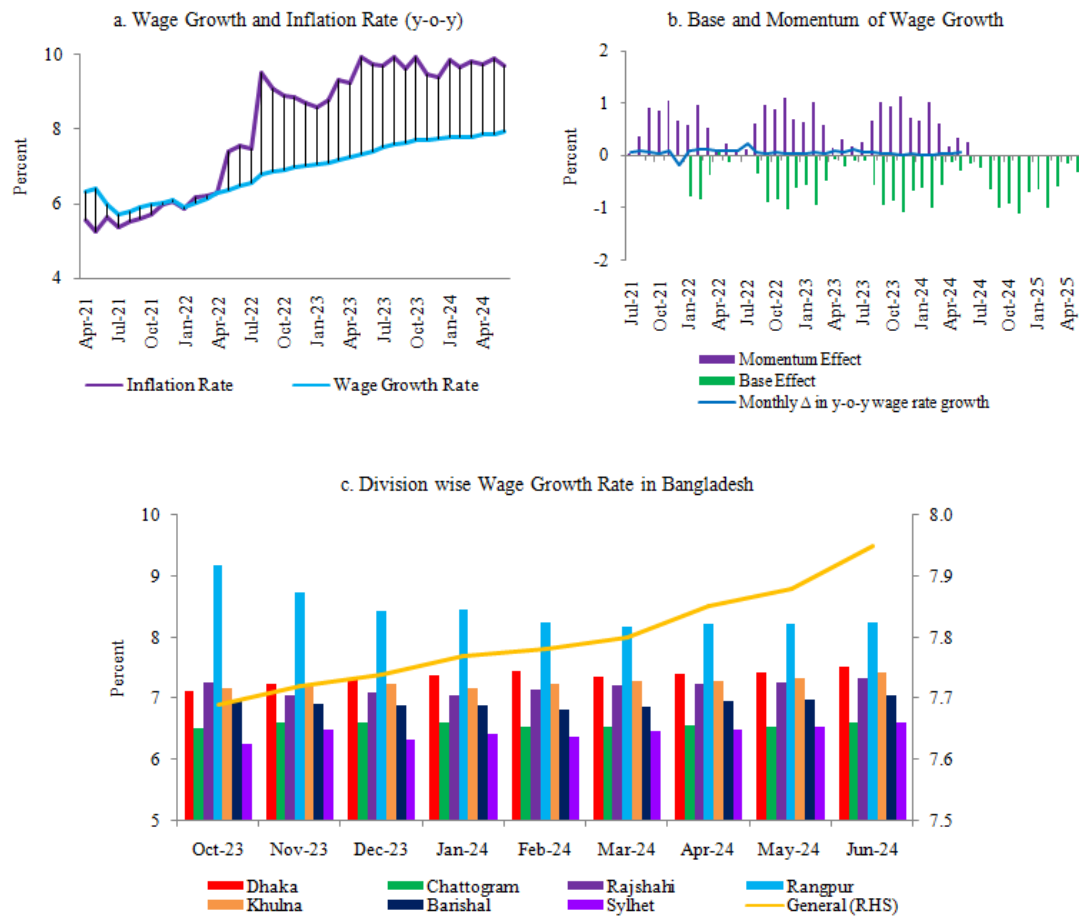
Sources: BBS and EMFW estimates

7   Conclusion

Bangladesh experienced persistent inflationary pressures during Q4: FY24, with headline inflation hovering around 10%. Though nonfood inflation moderated to 9.1% in June 2024 from 9.6% in June 2023 as monetary policy was tightened, food inflation accelerated to 10.4% from 9.7%, keeping headline inflation elevated. A shift was observed in the inflationary contribution of perishable items, which decreased from 28% in March 2024 to 18% in June 2024, providing

some relief. However, the impact of rising international prices stem from services disinflation and renewed trade or geopolitical tension continued to be felt through import-concentrated items, exerting upside risks to inflation. Additionally, wage trends during this period indicated a troubling decline in real income, as inflation consistently outpaced wage growth since April 2022. Nevertheless, a modest rise in wage growth in June 2024 offered a glimmer of hope for improved purchasing power, though regional disparities persisted.

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