

2. Recent Inflation Experiences in Asia and the Pacific¹

Recent inflation experiences in Asia and the Pacific raise important questions: why was inflation lower on average than in other regions, and why has it varied so much within the region? The differences between regions do not appear to be because of the transmission of inflationary shocks, but instead the ways inflationary shocks manifested in each country. External shocks to food, fuel, and supply chains were important, but Asian economies generally felt these pressures less than elsewhere, partly because of the type of products and services dominant in their economies, and also because of direct policies to restrict price increases. Pandemic responses set off a complex mix of demand and supply shocks that varied over time. Lockdowns were generally longer lasting in Asia and Pacific countries, dampening demand and inflation. Policy support during the pandemic varied across the region. However, recent fiscal and monetary policies have helped manage and reduce inflation rates.

Inflation has surged in recent years across Asia and Pacific, but it has generally not been as strong as in some other regions. Inflation experiences across the region have varied considerably: inflation in some countries is still high, while others appear as if they will experience deflation soon. Two sets of questions follow:

- How and why have inflation dynamics been different for the Asia and Pacific region on average compared with economies elsewhere? And what explains the differences in inflation outcomes across the region?
- What are the implications for monetary policy? How should policy have reacted to the shocks that drove inflation? Was it effective?

The first section in what follows summarizes inflation experiences for the entire region and within the region. The second section considers potential explanations of inflation in relation to inflation pressures and their propagation, concentrating on external price pressures. The third section evaluates monetary policy, and the final section presents conclusions.

2.1. Inflation Facts

Understanding inflation in the region begins with three facts (Figure 2.1):

- The Asia and Pacific region overall saw a noticeable increase in inflation, but inflation on average has been lower through this period than in other regions.
- Country experiences vary considerably—some countries have experienced historically high inflation, and others have experienced markedly low inflation.
- Transportation, food, and fuel costs also increased substantially, though the increase in food costs was less than in other regions, and fuel costs increased by a smaller amount in Asian emerging markets.

The inflation patterns suggest the following groupings:

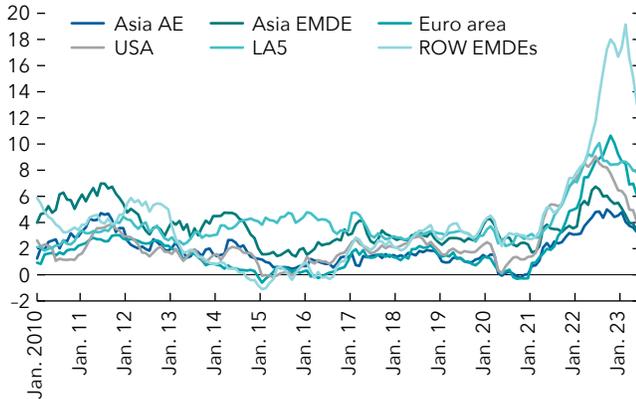
- In the advanced economies of Australia, Korea, New Zealand, and Singapore, inflation patterns are similar to those in the United States and the euro area (though varying in amplitude): headline consumer price index (CPI) inflation dipped early in the pandemic, then increased steadily; producer price index and imported inflation led CPI inflation, but there is little sign that wage-price spirals drove the inflation cycle.

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Figure 2.1. Inflation Patterns

The increase in inflation in Asia and Pacific coincided with the striking increase in inflation across the world but was less pronounced.

1. Headline Inflation
(Percent)

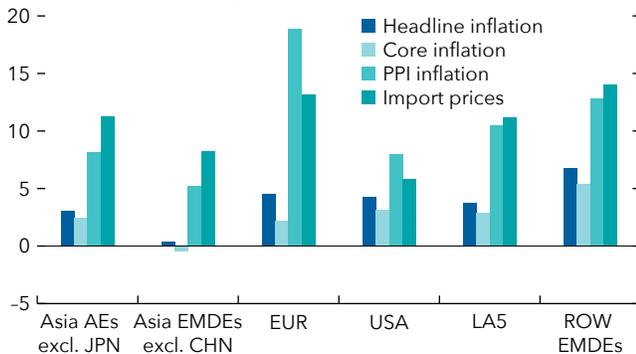


Sources: Haver Analytics; and IMF staff calculations.
Note: Asia AEs include AUS, HKG, JPN, KOR, MAC, NZL, SGP, and TWN. Asia EMDEs include BGD, BRN, BTN, CHN, FJI, IDN, IND, KHM, LAO, LKA, MAC, MDV, MMR, MNG, NPL, PHL, THA, and VNM. ROW EMDEs include HUN, POL, and ZAF. Country abbreviations are International Organization for Standardization (ISO) country codes. AE = advanced economy; EMDE = emerging market and developing economy; LA5 = Latin America 5 (Brazil, Chile, Colombia, Mexico, Peru); ROW = rest of the world.

Increases in PPI inflation and import inflation were notably smaller in Asian emerging markets than in other regions.

3. Inflation Measures

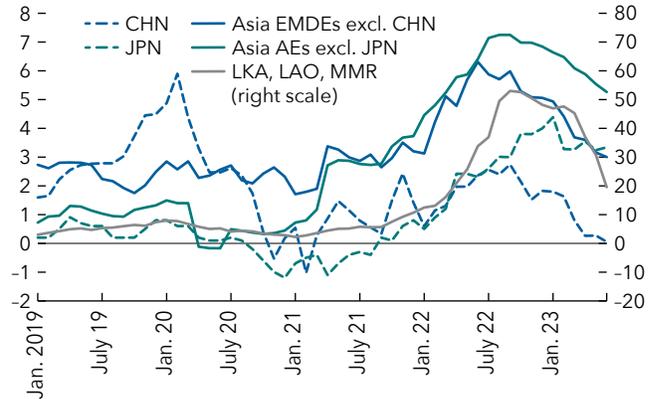
(Percentage points, differences in averages of before 2021 and of 2021–23)



Sources: Haver Analytics; and IMF staff calculations.
Note: Data start on 2010 (or when the first data are available). ROW EMDEs include HUN, POL, and ZAF. Country abbreviations are International Organization for Standardization (ISO) country codes. AE = advanced economy; EMDE = emerging market and developing economy; LA5 = Latin America 5 (Brazil, Chile, Colombia, Mexico, Peru); PPI = producer price index; ROW = rest of the world.

However, there was considerable variation in inflation within the region—very high in some cases, very low in others.

2. Headline Inflation
(Percent)

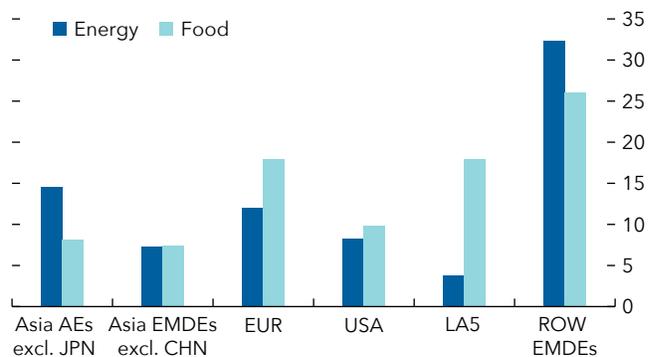


Sources: Haver Analytics; and IMF staff calculations.
Note: Asia AEs include AUS, KOR, NZL, SGP, and TWN. Asia EMDEs include BGD, BRN, BTN, FJI, IDN, IND, KHM, MAC, MDV, MNG, NPL, PHL, THA, and VNM. Country abbreviations are International Organization for Standardization (ISO) country codes. AE = advanced economy; EMDE = emerging market and developing economy.

Food inflation was relatively low in Asia and Pacific compared with the rest of the world; fuel price increases were higher than peers for advanced economies but lower than peers for emerging markets.

4. Energy and Food Inflation

(Percentage points, January 2023)



Sources: Haver Analytics; and IMF staff calculations.
Note: Data start on 2010 (or when the first data are available). Asia AEs includes AUS, KOR, NZL, and SGP. Asia EMDEs includes IDN, IND, MYS, PHL, THA, and VNM. ROW EMDEs include HUN, POL, and ZAF. Country abbreviations are International Organization for Standardization (ISO) country codes. AE = advanced economy; EMDE = emerging market and developing economy; LA5 = Latin America 5 (Brazil, Chile, Colombia, Mexico, Peru); ROW = rest of the world.

- In several low-income and emerging markets in the region (such as Bangladesh, Bhutan, Cambodia, Fiji, Indonesia, Malaysia, Nepal, Philippines, and Thailand), similar patterns are seen, though inflation increases are less striking compared with those in previous cycles. In India, Maldives, and Vietnam, headline inflation has been only slightly higher than before the pandemic period, without clear troughs or peaks.
- In Japan, the inflation cycle has been later than the other advanced economies. Inflation has been above the 2 percent target since the middle of 2022, with core inflation currently above headline measures (mainly due to large energy subsidies), following currency depreciation and wage growth.
- In China, Hong Kong Special Administrative Region, and Macao Special Administrative Region, inflation rates have been lower during the pandemic than before it ([Online Box 2.1](#)).
- By contrast, inflation rates have been much higher than the rest of the region in countries experiencing heightened economic stress (such as Lao P.D.R., Myanmar, and Sri Lanka), mostly associated with substantial exchange rate depreciations.

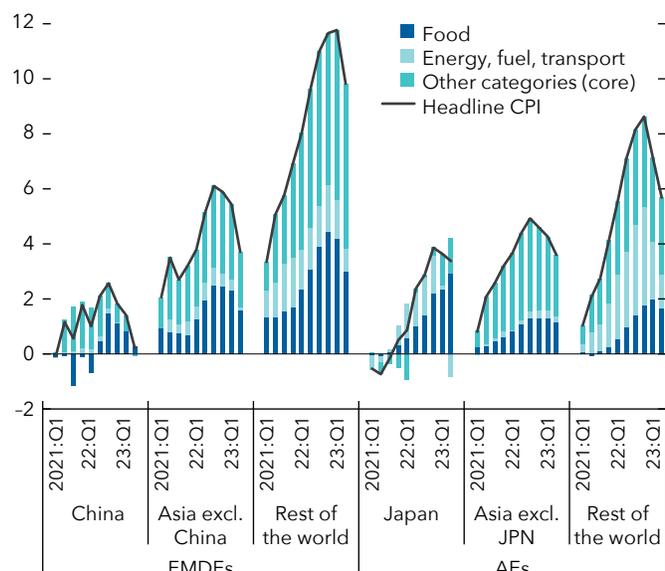
2.2. Inflation Pressures and Their Propagation

Understanding these inflation outcomes starts with looking at external price pressures, such as from global food and fuel price changes and from exchange rate fluctuations. However, understanding the pandemic's impact is crucial because it set off a complex series of demand and supply shocks across sectors.

External Shocks and CPI Inflation

From the second half of 2020, shipping costs soared by more than 400 percent from prepandemic levels. Later, global food and fuel costs increased sharply, by about 17 percent and 58 percent, respectively, from the start of 2021 to the end of 2022. The direct impact on headline CPI inflation was significant (Figure 2.2), as would have been expected based on structural analysis of exchange rate pass-through and the impact of changes in food, fuel, and transportation costs.² On average, increases in the prices of food, fuel, and transportation account for nearly 2 percentage points out of 4½ percent inflation for the region in 2022, for example. The largest contribution was from food, which has a high weight—considerably higher for emerging markets and higher in Asia and Pacific advanced economies than other advanced peers—whereas fuel and transportation carry a lower weight.

Figure 2.2. Contributions to Headline Inflation
(Percent)

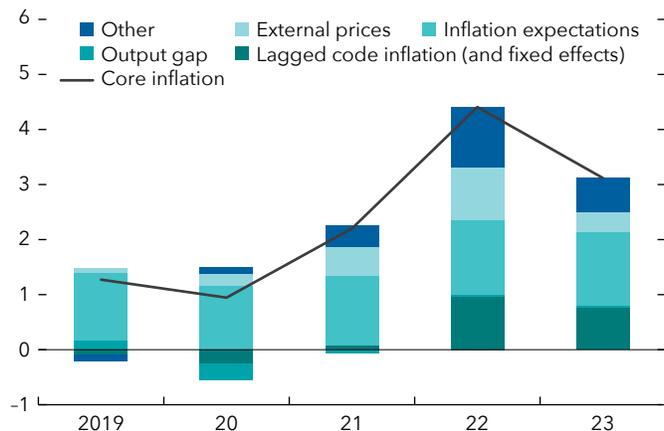


Sources: Haver Analytics; and IMF staff calculations.

Note: Core refers to CPI basket excluding food and energy, fuel, and transport. The exact categories used in the decomposition of these categories varies across countries. Asia AEs includes AUS, HKG, KOR, MAC, NZL, SGP, and TWN. Asia EMDEs includes IDN, IND, MYS, PHL, and THA. Rest of the world AEs includes BEL, CAN, CHE, DEU, FRA, GBR, ITA, NLD, SWE, and USA. Rest of the world EMDEs include BRA, CHL, COL, HUN, MEX, and ZAF. Country abbreviations are International Organization for Standardization (ISO) country codes. AE = advanced economy; CPI = consumer price index; EMDE = emerging market and developing economy.

² Carrière-Swallow and others (2022) estimate the effects of changes in global shipping, food, and fuel costs on import prices. Import prices respond quickly and strongly, followed by changes in producer prices; the responses of core inflation peak at about 8 to 12 months. The size of responses depends on the importance of the costs in the domestic economy and were found to be somewhat higher than the global average for Asian economies and especially high for Pacific islands. Carrière-Swallow and others (2023) show that exchange rate pass-through in Asian economies is within the range of pass-through estimates for other countries. It is strong and quick to import prices and is especially high during periods of high inflation and elevated uncertainty (for example, the pandemic period).

Figure 2.3. Drivers of Core CPI Inflation in Asia
(Percent)



Source: IMF staff calculations.

Note: Asia includes AUS, IDN, KOR, NZL, MYS, PHL, SGP, THA, and TWN. Country abbreviations are International Organization for Standardization (ISO) country codes. CPI = consumer price index.

inflation expectations—in Asia and Pacific economies is quite similar to that in advanced and emerging market peers ([Online Box 2.2](#)). The fitted model attributes significant effects from external price pressures to core inflation in recent years (Figure 2.3). However, much remains unexplained or attributed to lags, motivating additional analysis.³

The Pandemic and Its Repercussions

The external price pressures described can be characterized as typical “cost-push” shocks, but the pandemic created a mixture of demand and supply shocks both over time and across sectors.⁴ To understand the pandemic’s repercussions, producer price index inflation data was modeled (Chau and others 2023), which shows how lockdowns generated both supply and demand shocks.⁵ It also shows how those shocks contributed to inflation, along with policy stimulus (monetary and fiscal) and external shocks (transportation, fuel, and exchange rates).

- *Lockdowns and supply and demand shocks.* Differences in the recovery of demand because of differences in lockdowns and reopening play a substantial role in explaining differences in inflation. Across Asia and the rest of the world, negative demand effects from lockdowns in 2020 outweighed upward price pressures from production inefficiencies, pulling inflation down. Later, demand recovered, boosting inflation. But lockdowns were maintained for longer in Asia, contributing to later and weaker recoveries on average (Figure 2.4).⁶
- *Policy support.* Policymakers in the region acted quickly to support their economies through a range of monetary and fiscal support measures to households and firms. Although policy support persisted into 2021 in other regions, it was withdrawn relatively quickly in Asia and Pacific countries. Within the region, policy support was generally stronger in advanced than emerging markets ([Online Box 2.3](#)).

³ See also Gopinath (2022), who argues that Phillips curves are unable to explain the surges in inflation elsewhere.

⁴ Guerrieri and others (2022) show how negative supply shocks in one sector can reduce demand in others, even to the point where aggregate demand is below potential output.

⁵ Supply shocks would cause prices to increase downstream from a given sector “A” more in sectors that have a higher share of sector A’s inputs in production. Demand shocks would cause prices to increase more in sectors that have large demand shares and/or input shares to the final good.

⁶ Lockdowns were also maintained for long periods in Australia and New Zealand, which still experienced relatively high inflation, but closed border policies allowed those economies to function without lockdowns in the early stages of the pandemic, supporting demand.

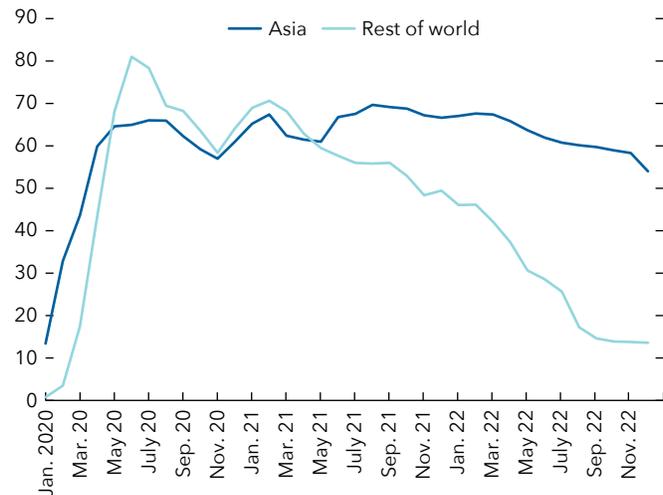
However, the contributions to headline CPI were lower than in peer countries. Two factors are important: first, unique factors such as a solid harvest in India, a hog population rebound from a recent swine flu epidemic in China, and relatively small increases in rice prices contained food prices. Second, several countries used direct measures (such as subsidies, excise tax cuts, and administered prices) to mitigate the impact on local costs.

However, this accounting does not give insight into the broader effects of external price pressures through the economy or the impact of economic slack. Following the October 2016 *World Economic Outlook* and Baba and others (2023), core CPI inflation was examined through the lens of a canonical open economy Phillips curve. The analysis indicates that the propagation of shocks—that is, how much inflation is affected by changes in output gaps, import prices, and

- *Supply chains, transportation costs, and commodity prices.* These contributed substantially to inflation in the region, more so in absolute terms than in the rest of the world on average. The model implies that fuel prices had a slightly larger impact on inflation dynamics for Asian countries than the rest of the world, associated with the larger size of manufacturing sectors in the region. However, weaker positive demand shocks offset these price pressures, because lockdowns were typically lifted later than in other regions.

As a result, producer price index inflation was lower in Asia and the Pacific than in the rest of the world, especially in Asian emerging market economies, which suffered more persistent effects on output than advanced economies, which tended to recover more strongly (Figure 2.5).

Figure 2.4. Evolution of Lockdown Stringency
(Index; GDP weighted, three-month moving average)



Source: Oxford COVID-19 Government Response Tracker.

Additional Factors: Consumption Shifts, Labor Markets, and Inflation Expectations

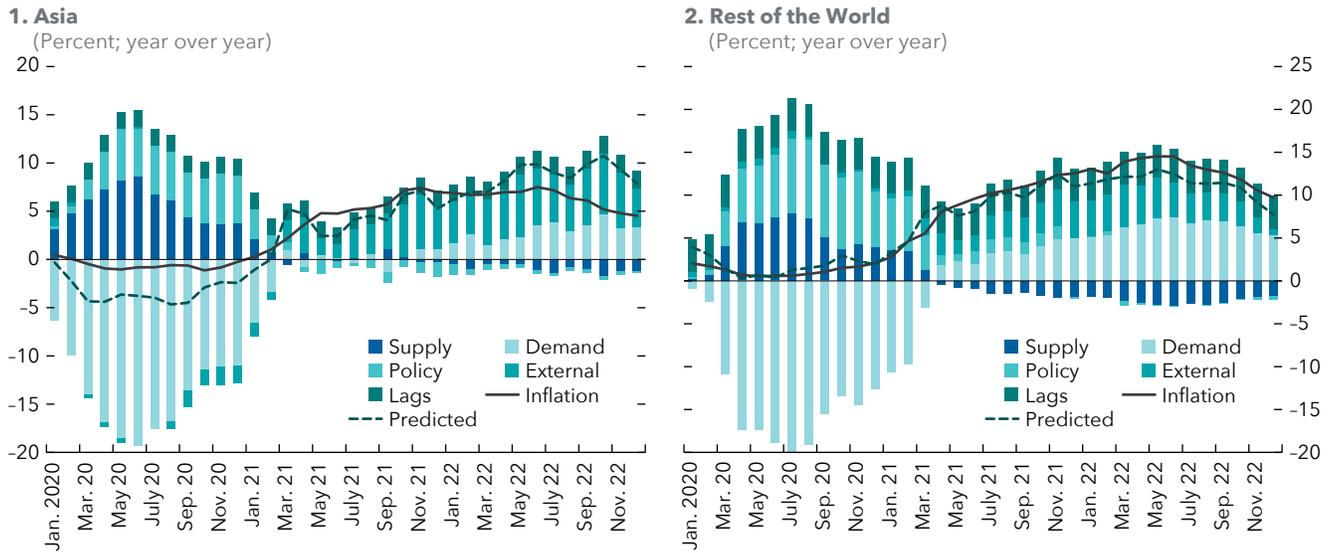
Several other factors have been suggested to explain inflation in other regions. This section briefly assesses the relevance of three of them to Asia and Pacific inflation:

- *Shifts in consumption patterns.* Bernanke and Blanchard (2023), Gopinath (2022), and Koch and Noureldin (2023) point to the strong shift in US consumer demand as stoking inflation pressures early in the pandemic. An examination of personal consumption expenditure data shows similar patterns in Asia and Pacific advanced economies, but not as strong. The hypothesis does not appear to carry over to Asia and Pacific emerging market economies, where demand for both goods and services fell.⁷
- *Labor markets.* Labor markets in the United States were very tight in 2021 as workers stopped participating (for example, Abraham and Rendell 2023), which generated fears of wage-led inflation. By contrast, employment and participation rates bounced back strongly in the region (except for East and Southeast Asia; ILO 2022), with firms adjusting the number of hours worked (ILO 2022). Malaysia, Thailand, and Singapore and, more recently, Australia (Causa and others 2022) and New Zealand suffered from a lack of migrant workers while borders were closed, but wage increases remained relatively weak.⁸
- *Inflation expectations.* Sharp increases in inflation pressures raised fears that inflation expectations could become unanchored. Data on firms' earnings reports (Albrizio, Dizioli, and Simon 2023) show a noticeable increase in concerns over future price pressures from the onset of the pandemic through the middle of 2022 (Figure 2.6), suggesting that had global commodity prices not fallen, the expectations mechanism might have proved stronger.

⁷ The ratio of goods to services personal expenditures in the United States was 10-15 percent higher than its prepandemic level from the second quarter of 2020 onward, but the ratio for Asia and Pacific increased by about 5 percent in 2020 and reverted afterward.

⁸ See also Bernanke and Blanchard (2023), who find that inflation in the United States was the result of shocks to prices (sharp increases in commodity prices, supply chain problems, and changes in the sectoral composition of demand) given wages.

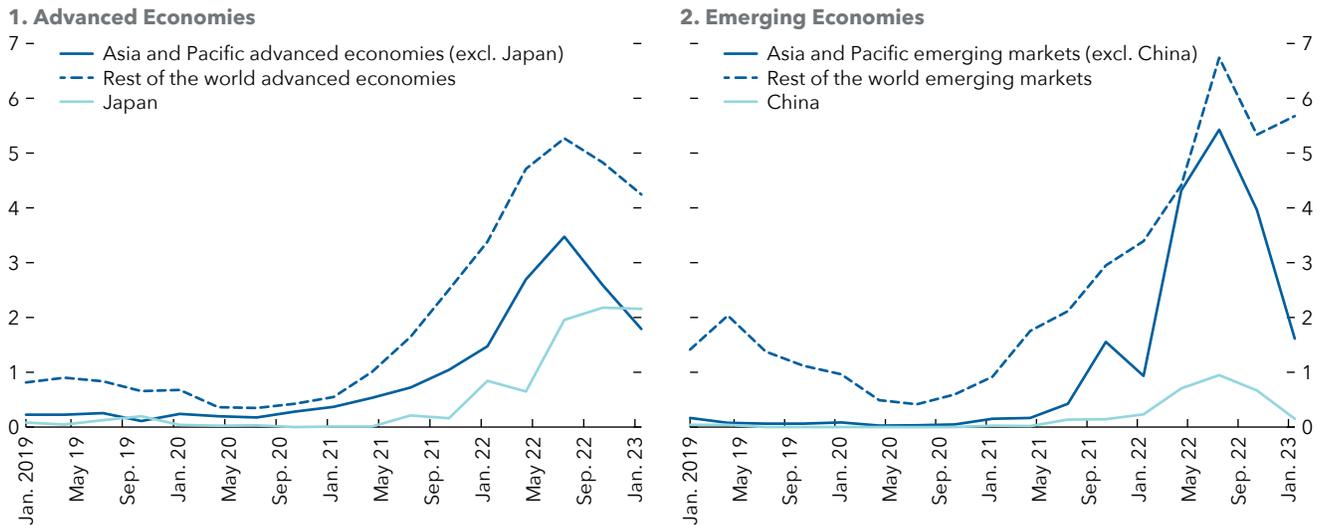
Figure 2.5. Drivers of Producer Price Index Inflation



Source: Chau and others (forthcoming).

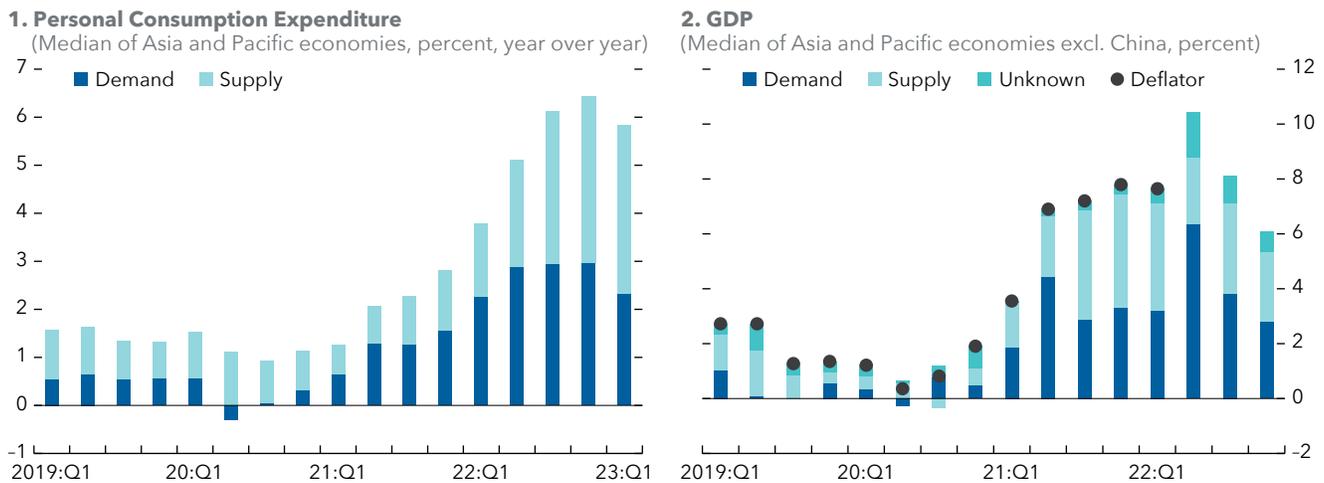
Note: “Policy” denotes combined stimulus from monetary and fiscal policies. “External” denotes the contribution of transportation, fuel, and exchange rate shocks. “Lags” includes fixed effects in addition to the contribution from lagged inflation.

Figure 2.6. Inflation Expectations
(ECFIE Index, simple average)



Sources: Albrizio, Dizioli, and Simon (2023); and IMF staff calculations.

Note: Earnings Call Firms Inflation Expectations (ECFIE) Index is a novel measure constructed by Albrizio, Dizioli, and Simon (2023) where they extract firm-level expectations using their earnings conference calls. Asia and Pacific advanced economies includes HKG, JPN, KOR, NZL, and SGP. Asia and Pacific emerging markets includes CHN, IND, MYS, and THA. Country abbreviations are International Organization for Standardization (ISO) country codes.

Figure 2.7. Supply and Demand Drivers of Deflator Inflation

2.3. The Role of Monetary Policy

Central banks across the Asia and Pacific region eased monetary policy soon after the onset of the pandemic, and later tightened as economies recovered and inflation pressures increased. Some (for example, Korea and New Zealand) started raising policy rates before the Federal Reserve initiated its tightening cycle. Most central banks followed and have maintained rates ([Online Box 2.3](#)).

How should policymakers have reacted? Conventional wisdom is that policymakers can afford to “look through” supply-driven inflation if inflation expectations remain well anchored (Brainard 2022). Cost-push shocks certainly played a major role in driving inflation. But lockdowns caused both supply and demand shocks—at first bringing inflation down, while later demand recovery and unwinding negative supply pressures raised inflation. This pattern is seen in both advanced economies and emerging markets in the region in the personal consumption expenditure deflators (Firat and Hao 2023), which are closely related to CPI data (Figure 2.7, panel 1). The findings are corroborated with analysis of more widely available GDP deflators (Redl 2023) (Figure 2.7, panel 2).

On this basis, central banks were correct to respond with easing and then tightening, which appears to have helped restrain inflation. Evidence on monetary transmission (Deb and others 2023) shows that the effects of policy rate changes on activity are not statistically different from those in peer countries, which implies that monetary tightening has contributed to moderating inflation, allowing for lags.

2.4. Conclusions

Inflation outcomes have been on average lower than in other regions, but the variation has been wide within the region. Inflation has also been higher in most of the region’s advanced economies than in emerging markets. Two sets of shocks are important. The effects of external cost-push shocks—especially from food prices—are undoubtedly important to both headline CPI inflation and core CPI. The impact of food price pressures was generally lower in Asian emerging markets than in other regions, despite relatively high weights on food in headline CPI, partly because of compositional effects and policy measures. Pandemic policies had complex effects. Lockdowns set off demand and supply shocks. They constrained production, while border closures

generated shortages in migrant labor in some countries. But overall, demand effects dominated: the lockdowns were generally longer lasting for Asia and the Pacific than elsewhere, dampening demand and inflation. Policy support was stronger for advanced economies in the region, supporting some increase in demand for goods that stretched capacity but not to the extent that was seen in the United States. Support was withdrawn relatively quickly in emerging markets, constraining a rebound in demand.

Understanding the differences in how these shocks propagated through economies also has implications for policy. Rather than treating the pressures as entirely driven by supply shocks, policymakers eased monetary conditions amid negative demand shocks and tightened as demand recovered, which was appropriate and helped contain inflation.

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