3 Labour Market and Inflation

- Total employment growth picked up further in Q2 2022, mainly driven by stronger non-resident employment gains. The near-complete removal of border restrictions in April allowed firms to ramp up hiring of non-resident workers, especially in the construction sector. Meanwhile, resident employment expanded at a similar rate as in Q1. Overall, the labour market remained tight in Q2, and the resident unemployment rate dipped to 2.8% in June. Resident wage growth stayed strong at 6.8% y-o-y, but the momentum of wage increase slowed compared to the previous quarter.

- For the rest of 2022 and into 2023, continued robust inflows of non-resident workers should steadily alleviate excessive labour market tightness. Overall labour demand is expected to stay supported. The ongoing recovery in tourism and business-related travel, along with resilient domestic consumption, should support employment growth in the domestic-oriented and travel-related sectors. While weakening global demand conditions could lead to some pullback in hiring, the aggregate employment impact should be contained, with the adjustment largely taken up through a fall in job vacancies and a moderation of wage pressures.

- Core inflation accelerated to 5.1% y-o-y in Q3, from 3.8% in the previous quarter, as price pressures picked up across all broad categories of the core CPI basket. Accumulating upstream costs passed through to discretionary goods & services inflation amid firm demand conditions, while earlier spikes in global commodity prices led to higher electricity & gas and non-cooked food inflation.

- In the remaining months of 2022, energy-related inflation should moderate as global crude oil prices have eased from the peak seen earlier this year. However, as demand conditions remain conducive, discretionary goods and services inflation should rise further, reflecting the continued response to increased costs. On a y-o-y basis, core inflation will stay elevated and average slightly above 5% for the rest of the year. For 2022 as a whole, core and headline inflation are projected to come in around 4% and around 6%, respectively.

- In 2023, imported inflation is expected to remain significant across a range of intermediate and final goods. Commodity prices have come off their peaks but will remain elevated, while higher costs in Singapore's major trading partners—including from tight labour markets—will continue to flow through global value chains. Domestically, the labour market is likely to stay tight. Unit labour cost, especially for services, will rise further in 2023, albeit at a slower pace than this year. Firms are projected to continue raising prices to rebuild profit margins eroded by increases in import, labour and other business costs, keeping underlying inflation above-trend in the year ahead.

- Core inflation will step up temporarily amid the one-off increase in prices to a higher level following the GST hike in January 2023. It is forecast to remain high in H1 next year before slowing more discernibly in H2, as cost pressures ease and demand conditions moderate. For the full year, MAS Core Inflation should come in at 3.5–4.5% and CPI-All Items inflation at 5.5–6.5%. Excluding the effects of the GST increase, core inflation should ease to an average of 2.5–3.5% in 2023, and headline inflation to 4.5–5.5%. Nevertheless, there remain upside risks to these forecasts.

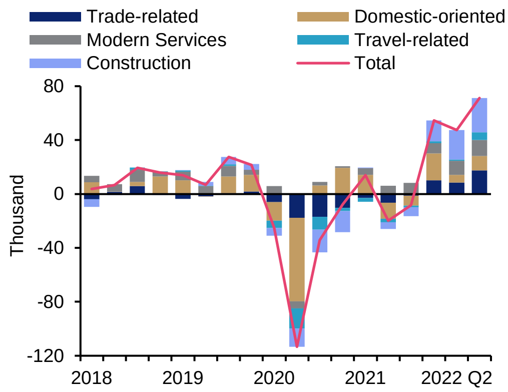
3.1 Labour Market[1]

Total employment growth rose in Q2 2022, primarily reflecting the catch-up of non-resident employment

Total employment[2] expanded at a faster pace of 71,100 q-o-q in Q2 **(Chart 3.1)**, as non-resident employment growth accelerated to 64,000 from 41,400 in the preceding quarter. The step-up in non-resident headcount growth reflected the near-complete removal of border restrictions as well as strong labour demand amid manpower shortages. Meanwhile, resident employment also rose firmly by 7,100 in Q2, compared to 6,000 in Q1.

Chart 3.1 All broad sectors saw a step-up in employment growth in Q2

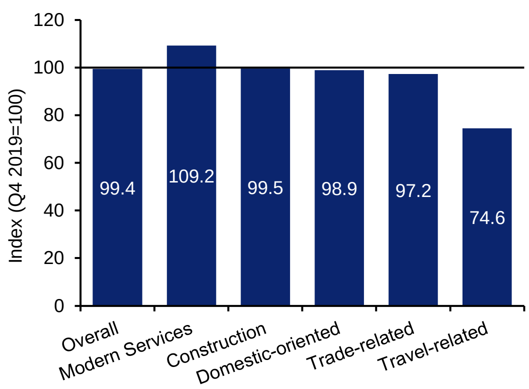
Employment change (q-o-q) by broad sectors



Source: MOM and EPG, MAS estimates

Chart 3.2 Headcount in the travel-related sector was still significantly below pre-COVID level

Employment levels in Q2 2022 relative to pre-COVID by broad sectors



Source: MOM and EPG, MAS estimates

[1] The commentary in this section is mostly based on available labour market data up to Q2 2022.

[2] Includes foreign work pass holders and migrant domestic workers.

The construction sector continued to be a significant driver of overall employment growth, accounting for around a third of net jobs created in Q2 2022. Modern services[3] and the trade-related sectors also saw their headcounts increase steadily. The catch-up in employment was notable in the domestic-oriented sector where net hiring almost doubled, while the travel-related sector registered close to a seven-fold surge relative to the previous quarter, reflecting the strong rebound in tourism.

The pace of overall resident employment expansion was likely constrained from the supply side in Q2. In particular, seasonally adjusted unemployment rates for younger (below 30) as well as lower-educated (below secondary education) residents had declined more significantly below pre-COVID (Q4 2019) levels, compared to other groups. Low unemployment among these groups likely reflected the greater representation of young and lower-educated resident workers in jobs that experienced resurgences in labour demand as COVID-19 restrictions were relaxed, such as in the domestic-oriented sector.

As at end Q2 2022, total employment had effectively recovered to its pre-COVID level (99.4%) **(Chart 3.2)**. Only employment in the travel-related sector was still significantly lower than its pre-pandemic level.

The overall labour market remains tight, supporting firm wage growth, even as supply constraints likely eased in Q2 2022

Primary indicators show that the labour market as a whole remained tight in Q2 **(Charts 3.3 and 3.4)**. Job vacancies dipped slightly but stayed significantly higher than the historical average. The seasonally adjusted resident unemployment rate edged down further to 2.8% in June, from 3.0% in March. The relatively large decline in resident unemployment caused the ratio of job vacancies to unemployed persons to shift up further to 2.53 in June, from 2.42 in March. At the same time, retrenchments fell to a new low and the number of workers placed on short work-week or temporary layoff dipped. Nevertheless, indicators of labour turnover did not point to a further significant tightening in the labour market. The recruitment rate edged up marginally while the resignation rate held steady.

Even as still-elevated job vacancy rates signalled that broad-based manpower shortages remained, the robust inflow of non-resident workers in Q2 likely helped to alleviate some of the supply constraints that had been contributing to labour market tightness. For example, with the removal of almost all COVID-19 restrictions on the entry of workers from major source countries, the job vacancy rate in the construction sector fell to 4.2% in June, from 4.5% in March, although this was still elevated relative to the pre-COVID (2019) average of 0.8%.

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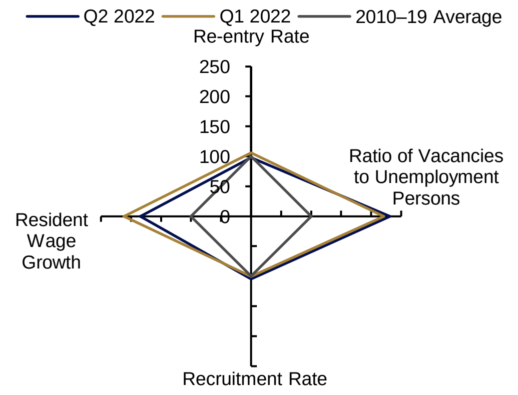
[3] *Modern services* comprise information & communications, financial & insurance services and professional services. The *domestic-oriented* sector encompasses land transport, retail trade, F&B services, real estate, administrative & support services, public administration & education, health & social services, other community, social & personal services, domestic work and utilities & others. The *travel-related* sector is made up of air transport, accommodation, as well as AER. The *trade-related* sector consists of manufacturing, wholesale trade, water transport and other transport industries.

Chart 3.3 Amid strong labour demand, …

Labour demand indicators



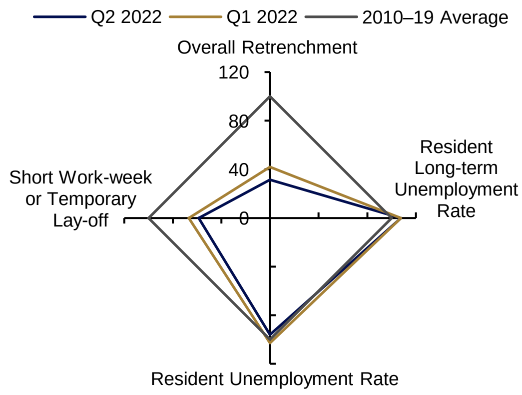
Source: MOM and EPG, MAS estimates

Note: A larger quadrilateral indicates tighter labour market conditions.

All variables are indexed such that the 2010–19 historical average for each indicator takes a value of 100.

Chart 3.4 … the labour market remained tight in Q2

Labour market spare capacity indicators



Source: MOM and EPG, MAS estimates

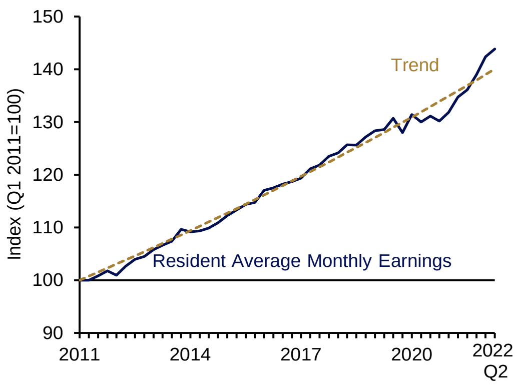
Note: A smaller quadrilateral indicates tighter labour market conditions.

All variables are indexed such that the 2010–19 historical average for each indicator takes a value of 100.

Accordingly, while there was some moderation in sequential wage growth momentum, the pace of increase remained notably strong. Nominal resident wage growth slowed to 1.5% on a q-o-q SA basis in Q2, from 1.7% in Q1, and from the peak of 2.3% in Q4 2021. However, the pace of wage increases in Q2 this year was still almost double its historical norm. Similarly, on a y-o-y basis, nominal resident wage growth stayed elevated at 6.8% in Q2, even as it eased from 7.8% in Q1, pushing wages 2.7% above the level implied by its pre-COVID trend **(Chart 3.5)**.

Chart 3.5 Resident wages in Q2 2022 were firmly above pre-COVID trend

Average monthly earnings

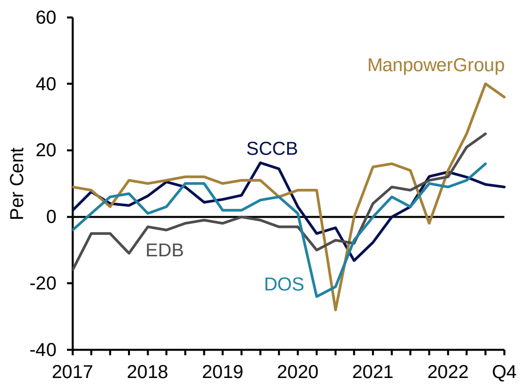


Source: EPG, MAS estimates using data from CPFB and Haver Analytics

Note: The trend line is plotted using the average q-o-q SA wage growth from Q1 2011 – Q4 2019.

Chart 3.6 Most firms plan to increase their workforce in H2 this year

Net employment outlook



Source: DOS, EDB, SCCB and ManpowerGroup

Note: The net employment outlook refers to the percentage of surveyed employers expecting to increase headcount less the percentage of employers expecting to reduce employment during the period.

Overall labour demand should soften somewhat but remain broadly supported next year

Notwithstanding the weakening external outlook, hiring should remain firm in most sectors for the rest of 2022. Employment surveys suggest that most companies intend to further expand their headcount in Q3 and Q4 2022. In the latest Q4 hiring outlook surveys by the Singapore Commercial Credit Bureau (SCCB) and ManpowerGroup, the net employment outlook remained firmly positive even as it moderated slightly from previous readings **(Chart 3.6)**. In particular, demand for workers in the domestic-oriented and travel-related sectors should stay supported in the near term. The recent easing of border restrictions by several East Asian economies (e.g., Hong Kong, Japan, Taiwan), the ongoing growth recovery in the ASEAN region as well as strong domestic household balance sheets should ensure that activity in these sectors stays relatively resilient. Indeed, the aviation industry is pressing ahead with recruitment drives for the remainder of this year to fill manpower gaps as demand for business and leisure travel recovers.[4]

Moderating global growth and tightening financial conditions will have some impact on labour demand, primarily in the external-oriented manufacturing and modern services sectors.[5] Notably, the slowdown in global manufacturing demand could act as a drag on the domestic sector's workforce expansion, given the spillovers through worldwide supply chains, particularly in electronics production. Labour demand in external-oriented modern services could also ease. After trending up for five consecutive quarters, job vacancy rates in the information & communications and financial & insurance services sectors fell in June 2022, although they remained high compared to pre-pandemic levels.

Nevertheless, amid significant wage flexibility as well as underlying shortages for skilled workers, labour market adjustments in the external-oriented sectors should largely take place via a downshift in job vacancies and wage growth, rather than by means of large-scale job losses. Any persistent drag from a manufacturing employment slowdown on the overall labour market is likely to be modest as the sector's share of resident employment is relatively small (10% as of end-2021), while structural demand for skilled workers in the modern services sectors remains high. Overall, given the starting point of a very tight labour market, there could be some scope for labour demand to weaken and job vacancies to fall without a significant rise in resident unemployment.

Robust inflows of non-resident workers should continue into 2023, further easing labour supply constraints

Meanwhile, with low resident unemployment and the non-resident employment level still below the pre-COVID level, firms are likely to continue hiring non-residents to fill manpower gaps, supporting robust inflows of non-resident workers in the near term. In particular, the number of work permit holders (WPHs) in the Construction, Marine Shipyard and Process (CMP) sectors should recover more quickly relative to overall non-resident employment, reflecting elastic labour supply of these workers. In comparison, the growth of employment pass (EP) and S-pass (SP) holders is expected to continue at a slower, albeit steady, momentum. In general, the strong S$ could push more non-resident workers to seek the

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4 "Aviation industry to hire 4,000 more workers by end-2022, taking total to 90% of pre-COVID workforce: Iswaran", *Channel NewsAsia*, 3 October 2022.

5 For instance, Shopee had undertaken two rounds of layoffs in June and September this year to cut costs. Top management staff will also be forgoing salaries to tighten expenses. Source: "More layoffs at Shopee, three months after previous round of job cuts", *Channel NewsAsia*, 19 September 2022.

higher (home currency-equivalent) wages in Singapore. Singapore's high level of openness should also continue to attract international EP applicants, even amid the intense global competition for talent.

For 2023, the non-resident workforce is anticipated to expand at a slower pace as vacancies are filled and foreign worker policies begin exerting a stronger drag on non-resident employment growth. Dependency ratio ceilings (DRC) will become increasingly binding for firms that employ SP holders and WPHs.[6] At the same time, the tightening of EP and SP policies from September 2023 will raise the quality bar for hiring non-resident workers under these passes and further dampen hiring.[7]

Excess labour market tightness should be further alleviated in H1 2023

Moderating labour demand, in combination with robust non-resident worker inflows in the coming quarters, should further alleviate labour market tightness by H1 2023. Indeed, part of the current tightness in the labour market can be explained by a decline in matching efficiency. This reflects the significant frictions in the reallocation of available resident labour resources to sectors with high vacancies, such as the construction and manufacturing sectors, where significant shortfalls of non-resident workers remain. Lower matching efficiency leads to a rightward shift of the Beveridge Curve, which represents the negative empirical relationship between vacancies and unemployment. In other words, there are more job vacancies for any given level of unemployment, leading to a rise in the vacancy-unemployment ratio. Adapting the method of Ahn and Crane (2020)[8] to decompose recent shifts in the Beveridge Curve for Singapore into cyclical, job separation, reallocation and non-resident worker shortage components, the current shortfall of non-resident workers is estimated to account for the bulk of the decline in matching efficiency in the Singapore labour market from Q4 2021 to Q2 2022.[9] However, as the non-resident workforce returns to pre-COVID levels, matching efficiency should improve. Further, the government has also recently enacted policies that reduce frictions in the hiring of non-resident workers, which should facilitate higher matching efficiency in the labour market.[10]

Accordingly, wage growth is expected to moderate in 2023 but remain slightly above pre-COVID rates, reflecting persistence in wage momentum

While labour supply constraints are projected to ease in H2 2022, they should continue contributing to above-average wage growth, as the effects of a tight labour market on nominal resident wage growth take about three quarters to be fully transmitted.[11] At the same time, several other factors will add short-term boosts to wage growth. First, there is still some room

6 Sub-DRC for the CMP and manufacturing sectors will also be reduced to 15% from 1 January 2023, from 18% currently.

7 The tightened policies include higher Tier 1 foreign worker levies for SP applicants as well as higher minimum qualifying salary requirements for SP and EP renewal applications from 1 September 2023.

8 Ahn H. J., and Crane L. D. (2020), "Dynamic Beveridge Curve Accounting", *FEDS Working Paper No. 2020-027*, May 18.

9 From Q4 2021 to Q2 2022, lower efficiency in the matching process between unemployed resident workers and job vacancies contributed to an estimated 57% increase in the number of job vacancies relative to the pre-COVID (2019) average. The shortfall in foreign employment from trend during this period accounted for two-thirds of the matching efficiency decline, while labour market reallocation due to COVID-induced structural change accounted for the remaining third.

10 These policies include the reduction of fair consideration framework (FCF) job advertisement duration from 28 days to 14 days.

11 This estimate is based on EPG's augmented Wage Phillips Curve framework, that uses the output gap as the slack variable. Please refer to Box B of the October 2019 MAS Macroeconomic Review for details of a similar model.

for catch-up of wage levels to pre-COVID trends in industries heavily impacted by COVID-19, such as the travel-related sector. Second, low-wage worker policies, including the local qualifying salary and progressive wage model expansions that came into effect in September 2022, are estimated to provide a direct boost of about 0.2% point to average resident wage growth for this year. The relatively mild impact on overall resident wage growth reflects the fact that only a small proportion of the resident workforce is directly affected by the new policies, and that underlying wage growth in the affected segments has been firm over 2021–22. Third, amid the rising cost of living and expectations that wage and price levels have permanently stepped up, workers are likely to seek (and get) above-average wage increments. While the risk of a self-reinforcing wage-price spiral is assessed to be low, primarily as the effect of price pressures on wage increases is empirically weak[12], nominal resident wage growth could remain somewhat elevated above pre-COVID averages if inflation expectations remain persistently high. With inflation anticipated to be strong this year, growth in average resident real wages is projected to be positive, but modest.

In 2023, nominal wage growth for resident workers is expected to moderate from this year as labour market tightness is further alleviated. Even so, some persistence in wage growth momentum and elevated inflation expectations should keep resident wage growth above pre-COVID rates. The announced salary increases to retain workers in the civil service, healthcare and education sectors will also add to aggregate wage growth next year.

3.2 Consumer Price Developments

The pickup in price pressures was broad-based in Q3

MAS Core Inflation stepped up to 5.1% y-o-y in Q3, from 3.8% in Q2, with price increases firming across all broad categories **(Chart 3.7)**. Earlier global oil and food commodity price shocks continued to drive a further pickup in energy-related and non-cooked food inflation. At the same time, discretionary goods & services inflation increased markedly, accounting for half of the rise in core inflation. Food services inflation rose amid strong underlying cost pressures, while travel-related services inflation picked up sharply as pent-up travel demand met binding near-term capacity constraints. Meanwhile, private transport and accommodation costs also increased more rapidly, leading to CPI-All Items inflation coming in much higher at 7.3% in Q3, compared to 5.9% in the quarter before. **(Chart 3.8)**.

The momentum of underlying price pressures has been strong, with the 3-month moving average (3MMA) of the seasonally adjusted annualised m-o-m % change (m-o-m SAAR) in core CPI staying elevated at 5.8% in September. Nevertheless, this was an easing from its peak of 7.6% in May **(Chart 3.9)**. Price pressures were broad-based in Q3 with the net proportion of core CPI items experiencing sequential price increases rising to 25%, from 22% in Q2 **(Chart 3.10)**. The 25% trimmed mean inflation measure[13] picked up to 3.8% y-o-y in Q3, from 3.0% in the previous quarter.

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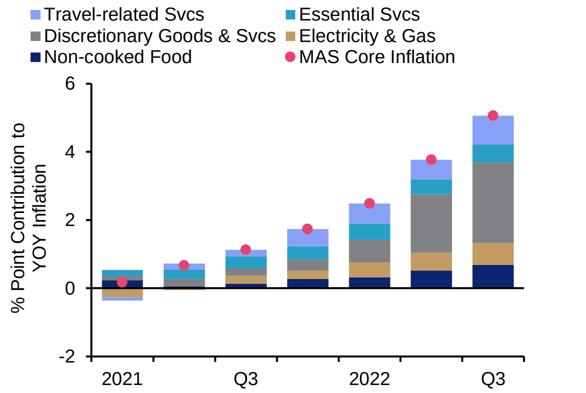
12 Estimates from EPG's Wage Phillips Curve suggest that a 1% point rise in expectations of inflation one quarter ahead is associated with about a 0.2% point increase in average resident wage growth in the current quarter.

13 The 25% trimmed mean inflation measure is computed by excluding 25% (by weight) of the CPI basket from each end of the distribution of price changes (i.e., the CPI components with the largest and smallest m-o-m price changes are removed from the calculation of inflation).

Chart 3.7 Discretionary goods & services drove most of the rise in core inflation

Contribution to MAS Core Inflation

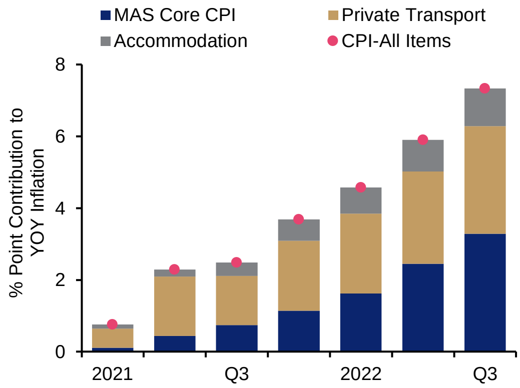


Source: DOS and EPG, MAS estimates

Note: Discretionary goods & services refer to retail & other goods and services such as food services. Essential services mainly refer to public transport, healthcare and education services.

Chart 3.8 Private transport and accommodation inflation picked up as well

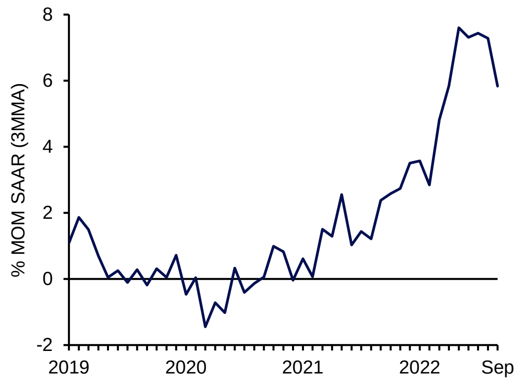
Contribution to CPI-All Items inflation



Source: DOS and EPG, MAS estimates

Chart 3.9 Sequential price increases stayed strong, albeit easing slightly from their peak

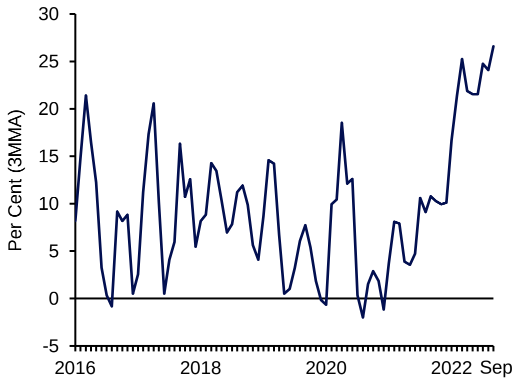
Seasonally adjusted annualised m-o-m % change in MAS Core CPI



Source: DOS and EPG, MAS estimates

Chart 3.10 Inflationary pressures remained broad-based

Net proportion of core CPI basket with m-o-m increases



Source: DOS and EPG, MAS estimates

Note: The series is calculated by taking the 3MMA of the total number of items in the core CPI basket with m-o-m price increases less the total number of items with price declines, as a proportion of total items in the core CPI basket.

The global oil and food price shocks seen earlier in the year continued to drive energy-related and non-cooked food inflation higher

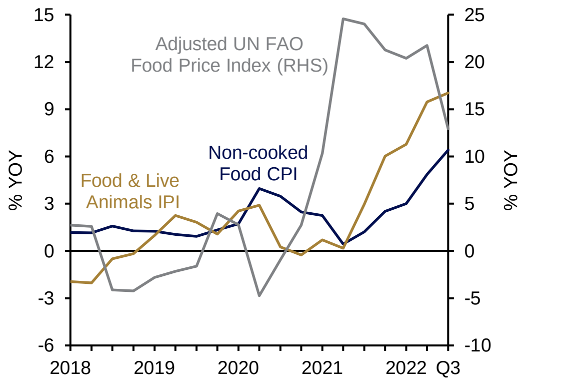
Electricity & gas and non-cooked food inflation picked up further in Q3 and contributed to slightly over a fifth of the increase in y-o-y core inflation. While global oil and food commodity prices have moderated from their peaks in recent months, they were still significantly higher compared to year ago levels. These higher upstream prices continued to work their way through international supply chains, keeping Singapore's imported inflation firm. (See Special Feature A for a study tracing the increases in costs through industry input-output linkages across borders.)

Electricity & gas inflation picked up to 23.9% y-o-y in Q3, from 19.9% a quarter ago, reflecting the increase in global oil prices in Q2. In view of elevated global energy prices, OEM retailers also revised up electricity rates offered to households. On average, the prices of standard electricity plans under OEM retailers rose more steeply on a y-o-y basis in Q3 compared to Q2.

Meanwhile, non-cooked food inflation rose to 6.4% y-o-y in Q3, from 4.9% in Q2, driven by larger increases in the prices of bread & cereal, meat, fruits and vegetables. These, in turn, reflected persistently strong imported food inflation **(Chart 3.11)**. In particular, the rate of increase in import prices of cereals & cereal preparations more than doubled in August, compared to Q2. High global cereal prices have also raised the cost of meat production worldwide, resulting in significant inflation for imported meat & meat preparations. In addition, domestic prices of fruits and vegetables picked up more strongly, in part due to other supply disruptions. In Malaysia, continuous heavy rainfall, as well as steep production costs related to fertilisers and labour, weighed on agricultural yield and drove up produce prices.[14] The cost of fruits from China has also risen as strict COVID-19 control measures led to delays and degradation in the quality of produce.[15]

Chart 3.11 Non-cooked food inflation picked up alongside stronger import price inflation

Global food commodity prices, CPI and IPI for non-cooked food

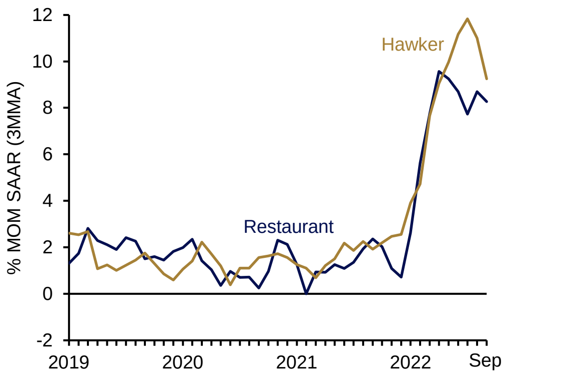


Source: DOS, UN Food and Agriculture Organisation (FAO) and EPG, MAS estimates

Note: The Q3 2022 figure for IPI refers to the average of the Jul–Aug data. The Adjusted UN FAO Food Price Index is computed based on the weights of the respective food components in Singapore's IPI basket.

Chart 3.12 The pace of price increases for food services remained well above historical norms

Seasonally adjusted annualised m-o-m % change in CPI for restaurant and hawker food



Source: DOS and EPG, MAS estimates

Higher upstream costs and still-firm domestic demand underpinned strong discretionary goods & services inflation

Food services inflation rose markedly by 1.9% points to 6.5% in Q3, contributing to around a third of the increase in core inflation in the quarter. Notably, the momentum of price

14 "With the heavy rain comes issues for Malaysia's farmers", *Asia News Network*, 5 September 2022.

15 "China Fresh Fruit Prices Up Nearly 20% as Producers Affected by Rising Costs", *Produce Report*, 31 July 2022.

increases was still well above historical norms, with the 3MMA m-o-m SAAR of restaurant food and hawker food inflation coming in at 8.3% and 9.3% in September, compared to their historical (2010–19) averages of 2.3% and 1.9% respectively **(Chart 3.12)**. The step-up in inflation likely reflected the pass-through of sharply higher costs in the sector—particularly from raw food ingredients, utilities and manpower—to prices amid favourable demand conditions.

Inflation of retail & other goods rose to 2.9% y-o-y in Q3, from 2.2% in the preceding quarter. The inflation rates of clothing & footwear and personal care products, in particular, more than doubled in Q3 from Q2, to 7.1% and 3.9% respectively. The higher inflation outturn was underpinned by firm demand amid the pickup in retail sales and return in tourism spending, as well as rising import costs for retail products such as personal care items. Nevertheless, prices of clothing & footwear and personal care goods in Q3 remained 4.4% and 0.4% below their respective pre-COVID (2019) levels.

Amid capacity constraints and rebounding demand for overseas travel, travel-related services inflation stepped up as well

The ongoing relaxation in border restrictions globally continued to boost demand for travel-related services, including from outbound residents. However, manpower shortages and restricted operating capacity in the aviation and tourism sectors, both domestically and abroad, resulted in stronger inflation in travel-related services of 9.2% y-o-y in Q3, up from 6.2% in Q2. Holiday expenses picked up by 7.4% compared to 4.1%, on account of steeper increases in hotel charges and package tour fees. Airfares also rose more rapidly, reaching levels 10.9% higher in September than that of pre-COVID.

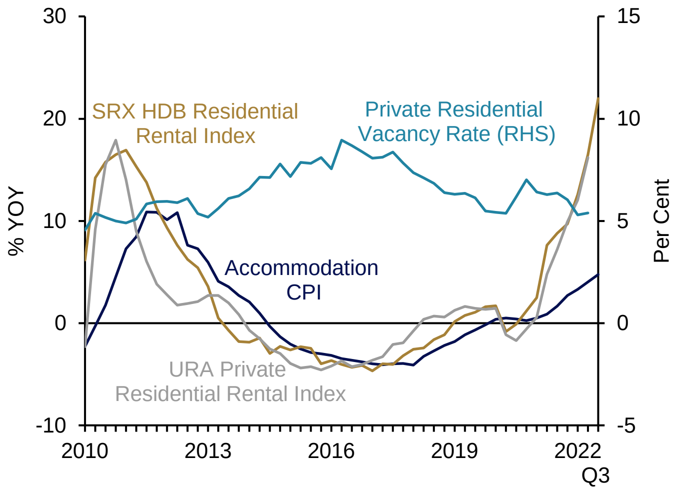
CPI-All Items inflation was boosted by both higher private transport and accommodation inflation

The cost of private transport excluding petrol rose by 24.3% y-o-y in Q3, accelerating from 17.5% in Q2. This reflected the strong pickup in Certificate of Entitlement (COE) premium for cars, with premium for Category B hitting record high, and that for Category A approaching historical peak as well. In contrast, as global oil prices declined from their Q2 levels, domestic petrol prices fell on a sequential basis in Q3, and the y-o-y increase halved to 15.7% in Q3 from 30.6% in Q2.

Accommodation inflation picked up to 4.8% y-o-y in Q3, from 4.0% in Q2, with rentals across all housing types recording larger sequential price increases **(Chart 3.13)**. The stronger inflation outturn reflected firm demand, including from the recovering inflows of non-resident workers, as well as tight supply. Notably, vacancy rates for private residential units fell to 5.4% in Q2, coming in below the historical (2010–19) average of 6.6%.

Chart 3.13 Housing rentals continued to pick up strongly

Measures of housing rentals



Source: DOS, SRX, URA and EPG, MAS estimates

Core inflation is expected to remain elevated for the rest of this year

In Q4, inflation due to externally driven components should edge down, as prices of energy-related items ease in line with the decline in global oil prices earlier in Q3. However, this will be offset by still-firm inflation in other components. For instance, y-o-y inflation in discretionary goods & services—specifically, food services and retail & other goods—may continue to strengthen amid the first year-end festive season after most COVID restrictions have been lifted. MAS Core Inflation is likely to average slightly above 5% for the rest of this year. For 2022 as a whole, core and headline inflation are projected to come in around 4% and around 6%, respectively.

Inflation should slow over the course of 2023 but stay elevated

In the year ahead, the confluence of easing supply constraints and weakening global demand should lead to lower commodity prices on average, compared to 2022. The direct effects of externally driven components such as energy-related and non-cooked food items on Singapore's CPI should decline **(Chart 3.14)**. However, still-elevated electricity and fuel costs as well as strong wage growth in many of Singapore's major trading partners will continue to filter through global supply chains. This will keep inflation of imported services and goods firm. On the domestic front, more businesses are likely to renew contracts, such as those for electricity and wages, at higher rates. As firms adjust prices to catch up with the steep increases in input costs that have accumulated along production chains, inflation is likely to persist at elevated rates in Singapore for some time.

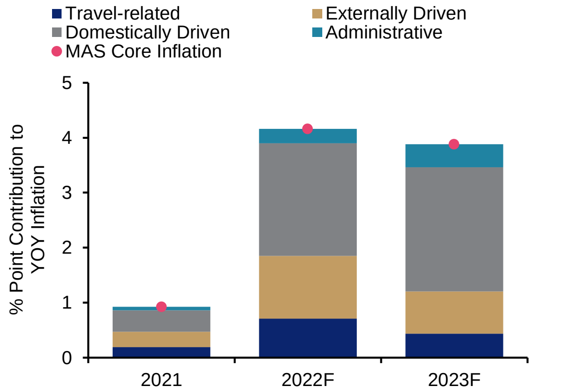
Consumer prices in 2023 will also be lifted by the GST hike from 7% to 8% effective from January. As a result, core inflation will step up further in Q1 2023. However, the impact of the increase in GST on inflation should be temporary. While the absolute level of prices will be raised permanently by the tax increase, it is not expected to have a persistent impact on the rate of price increases thereafter.

All in, MAS Core Inflation is projected to average 3.5–4.5% in 2023. Upside risks to the forecast are present, including from fresh shocks to global commodity markets and second-round effects on consumer prices arising from a prolonged period of high inflation **(Chart 3.15)**. Including the effects of the GST increase, core inflation is expected to remain high in H1 2023 before slowing more discernibly in the second half, as cost pressures gradually ease. Headline inflation will average 5.5–6.5% next year. Excluding the one-off effects of the GST increase, core inflation is expected to moderate to an average of 2.5–3.5% in 2023 and headline inflation to 4.5–5.5%. However, these remain above their respective historical (2010–19) averages of 1.5% and 1.7%.

The details of the main drivers of inflation in 2023 are elaborated below.

Chart 3.14 Externally driven and travel-related services inflation are forecast to ease in 2023

Contribution to MAS Core Inflation

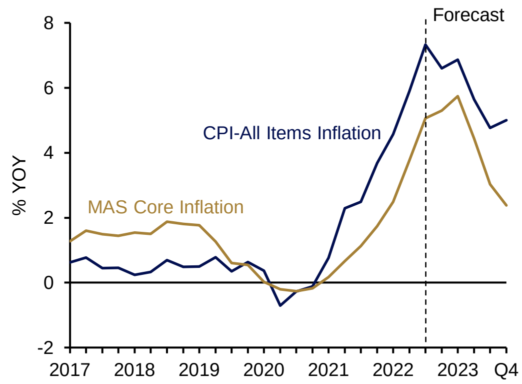


Source: DOS and EPG, MAS estimates

Note: Domestically driven CPI refers to discretionary goods & services including food services. Externally driven CPI mainly comprises of non-cooked food and electricity & gas. Administrative CPI includes CPI for healthcare, education and public transport services.

Chart 3.15 Core inflation is expected to stay above its historical average next year

MAS Core Inflation and CPI-All Items inflation forecasts



Source: DOS and EPG, MAS estimates

Global energy prices are expected to remain high in 2023

Brent crude oil prices fell to US$101 per barrel (/b) in Q3, from its peak of US$114/b in Q2, driven by both a contemporaneous moderation in the growth of global oil demand and expectations that global economic activity will slow further in the quarters to come. However, oil prices are unlikely to ease significantly hereon given the recent decision by OPEC+ to cut production.[16] Barring fresh shocks, Brent crude oil prices are forecast to average US$102/b this year and US$95/b in 2023. Under this baseline outlook, Singapore's electricity & gas inflation is projected to slow while petrol prices could fall on a y-o-y basis. Nevertheless, amid limited spare capacity in global oil markets and persistent geopolitical uncertainty, the risk to the oil price outlook remains tilted towards the upside.

Elevated global energy prices will also feed into domestic consumer price inflation indirectly, through sustained upward pressure on business costs as more firms renew their utilities contracts at markedly higher rates. Moreover, an analysis of global input-output tables shows that the global energy cost shock is indirectly transmitted to inflation in

[16] OPEC+ announced a reduction in its oil production target by 2 million barrels per day from November. These account for around 2% of global consumption. Source: "OPEC+ unleashes shockwaves with big cut to oil production", *Financial Times*, 6 October 2022.

Singapore predominantly via intermediary sectors located abroad. (See Special Feature A.) Thus, the step-up in energy prices will continue to pass through cross-border value chains and exert upward pressures on Singapore's imported goods and services inflation.

More erratic weather conditions as well as still-high costs of agricultural inputs should keep food commodity prices elevated

Global food commodity prices have stepped down in recent months and are expected to fall further next year as frictions in food production and trade ease somewhat. However, the pace of decline will likely be modest due to the following supply factors.

First, weather-induced supply disruptions could persist. International weather agencies have highlighted prospects of a rare third consecutive year of the La Niña phenomenon in 2023. Such weather episodes have already damaged crops in agricultural-producing regions including Europe, China and India.

Second, export curbs will weigh on the global supply of food. India, for instance, has imposed curbs on exports of broken rice. This is mainly used for animal feed and will likely have some downstream implications for the cost of meat production.

Third, high energy prices will keep agricultural and food production costs elevated given that energy is utilised throughout the food value chain, from fertiliser production to harvesting and refrigeration. Farmers have cut down on using fertiliser as its price has risen, while fruit and vegetable growers have reduced plantings for the next harvest due to the higher cost of operating greenhouses.[17] Agricultural yields are likely to fall in tandem.

With global food commodity prices expected to remain elevated, retailers are likely to pass on at least some of the higher costs to consumers, although softening demand may mitigate the extent to which this occurs. Non-cooked food prices are projected to rise further next year, albeit at a slower pace compared to this year. Alongside elevated costs of raw ingredients, utilities and manpower, food services are likely to face sustained upward pressures. Inflation in this component is therefore forecast to stay above its historical rate in 2023.

Labour cost pressures are expected to moderate

In 2023, wage pressures are projected to ease from this year, as softening labour demand and sustained inflows of non-resident workers help alleviate excessive labour market tightness. Nevertheless, the wage growth momentum seen in 2022 should persist to some extent in 2023, as it takes several quarters for the effects of labour market tightness to pass through to wages. Resident wage growth is forecast to remain above its historical average next year, leading to an above-trend pace of increase in unit labour cost for services firms in particular, even as it slows compared to 2022.

Accumulated costs will lead to upward adjustments in essential services prices

Although inflation rates of the more volatile items in the CPI are expected to ease somewhat in 2023, components with less frequent price changes are forecast to see a

17 "Farmers warn of winter food shortages in Europe", *Financial Times*, 8 September 2022.

step-up in inflation amid increases in costs. For instance, in view of higher fuel and wage costs in 2021, the Public Transport Council announced that bus and train fares would be revised up by 2.9% at the end of 2022. This is even as the extent of cost pass-through (and therefore, price increase) was attenuated by additional operating subsidies from the government.[18] Meanwhile, healthcare services will continue to see strong year-on-year price increases in H1 2023 due to the impact of the removal of Public Health Preparedness Clinics (PHPC) subsidies from July this year. Inflation in healthcare services would also be lifted by firm demand for previously deferred non-essential procedures as well as rising wages in the sector. On the education front, several major pre-school chains have announced fee hikes effective early next year[19], but the inflationary impact of these changes could be mitigated by lower fee caps at government funded pre-schools.[20]

Weaker real income growth and fading pent-up demand should temper discretionary and travel-related services inflation next year

Spending on discretionary services such as recreational & cultural and point-to-point transport services should stay firm for the rest of the year. However, some pullback in private consumption growth in 2023 is expected as pent-up demand fades and the excess savings buffer accumulated over the course of the pandemic is eroded. Lower real income growth as well as higher debt servicing costs could also crimp households' cashflows and dampen discretionary spending. Inflation for discretionary services (excluding food services) is thus expected to ease next year.

Strong demand and capacity constraints within the aviation and tourism sectors globally should keep airfares, package tours and hotel room rates high in the near term, particularly with the anticipated resumption of leisure travel to popular tourist destinations such as Taiwan and Japan.[21] Nevertheless, short-term supply constraints should gradually unwind while travel demand will likely moderate next year as elevated airfares and hotel room rates begin to bite amid the expected economic downturn. Travel-related services inflation is therefore projected to slow in 2023.

Private transport inflation is anticipated to moderate, but accommodation inflation is likely to pick up in 2023

Private transport inflation is expected to ease next year as car COE prices are forecast to rise at a more modest pace compared to 2022. Tighter financial conditions and growing economic uncertainty could weigh on demand for big ticket items including cars. However, the supply of COEs will remain at cyclical lows, as the recent decline in the population of vehicles aged 9 to 10 years old caps the number of car de-registrations. Reflecting these factors, car prices would still be elevated.

Accommodation inflation is projected to rise further in 2023. The renewal of existing leases at prevailing higher market rentals will drive further increases in the accommodation

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18 Based on the Public Transport Council's Fare Review Exercise 2022, the maximum allowable fare adjustment was 13.5% but the final fare increase granted was capped at 2.9%. The remaining 10.6% will be carried over to future fare reviews.

19 "Some major pre-school players to raise fees in 2023", *The Straits Times*, 3 October 2022.

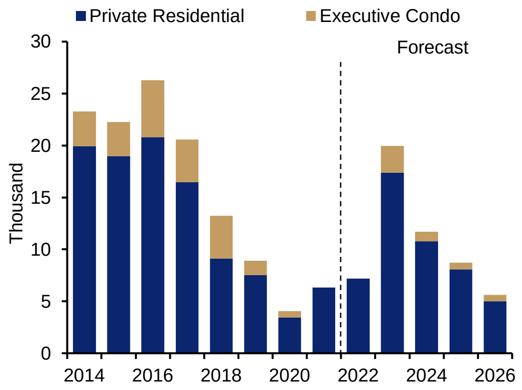
20 "S'pore looking at more measures to address income inequality: DPM Wong", *The Straits Times*, 10 October 2022.

21 As of September 2022, a portion of travel-related services remained imputed due to prevailing travel restrictions within parts of North Asia. However, imputations of CPI for travel to certain regions, such as Hong Kong, Taiwan and Japan, could cease in the months ahead with the lifting of travel restrictions.

CPI over the coming quarters. At the same time, the steady return of the foreign workforce will likely add to rental demand while the supply of new units available for leasing only increases modestly. While there will be a pickup in private residential units to be completed next year, the number of HDB units that will reach their minimum occupancy period (MOP) and become eligible for lease on the open market is estimated to fall **(Charts 3.16 and 3.17)**.

Chart 3.16 While more private residential units are expected to be completed next year…

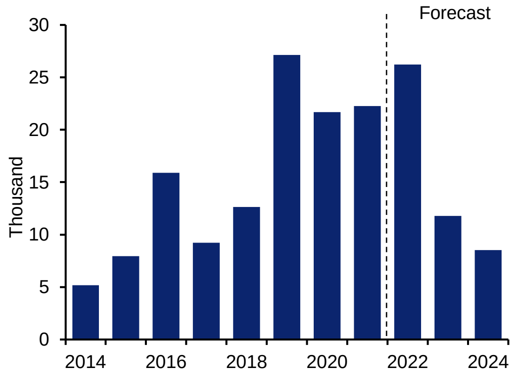
Pipeline of residential units by estimated year of completion



Source: URA

Chart 3.17 … the number of additional HDB units available for leasing is estimated to fall

Estimated number of new HDB units reaching MOP



Source: HDB and EPG, MAS estimates

Note: Data is estimated from the completion dates of HDB developments excluding 1- and 2-room HDB flats.