

Economic and Financial Outlook

tbb analytics

Feb 2023

Global Economy

- **Global economy is expected to bottom out in 2023** after inflation fight and Russia-Ukraine war. In the end of 2022, Global trade declined according to weak global demands. Accordingly, Industrial productions were continuously in negative territory in several nations.
- **Global recession concerns have been recently abated with the improvement in production activities**, as shown by the easing of downturn in global manufacturing PMI in January 2023. Likewise, the contractions in New orders and New export orders were eased.
- **The softened condition of global demands have been accompanied by an improvement in labor markets** in several nations, except UK. Moreover, China's reopening would pave the way for rapid rebound in global tourism, especially Asia tourism.
- **Global price pressure was in a moderate decline in January 2023.** The underlying reasons were due to a slower easing in global supply chain situation and an increase in non-energy components. However, the prices of crude oils started to rise, contrasting with the falls in natural gas' prices.

Domestic Economy

- **In Dec22, Thai economy continued to recover**, private consumption indicators slightly improved in line with increases in foreign tourist figures. Several fundamental factors including employment, incomes, and consumer confidence continued to improve.
- **Private investment indicators declined** in this month, mainly from the machinery and equipment category corresponding with overall industrial production.
- **The value of merchandise exports contracted sharply.** This was due to the further decrease of major product sectors such as rubber, cassava, auto and parts, and HDD etc. By key partners, most of export figures also declined.
- **Foreign tourists increased consecutively** to reach a new peak over 2 million persons. The major groups still came from East Asia. Moreover, Russia and Europe tourists had continuously rebounded.
- **Headline inflation in Jan23 decelerated further** due to drops in food and energy prices while core inflation slightly declined but remaining mark over 3% level.

Financial Market

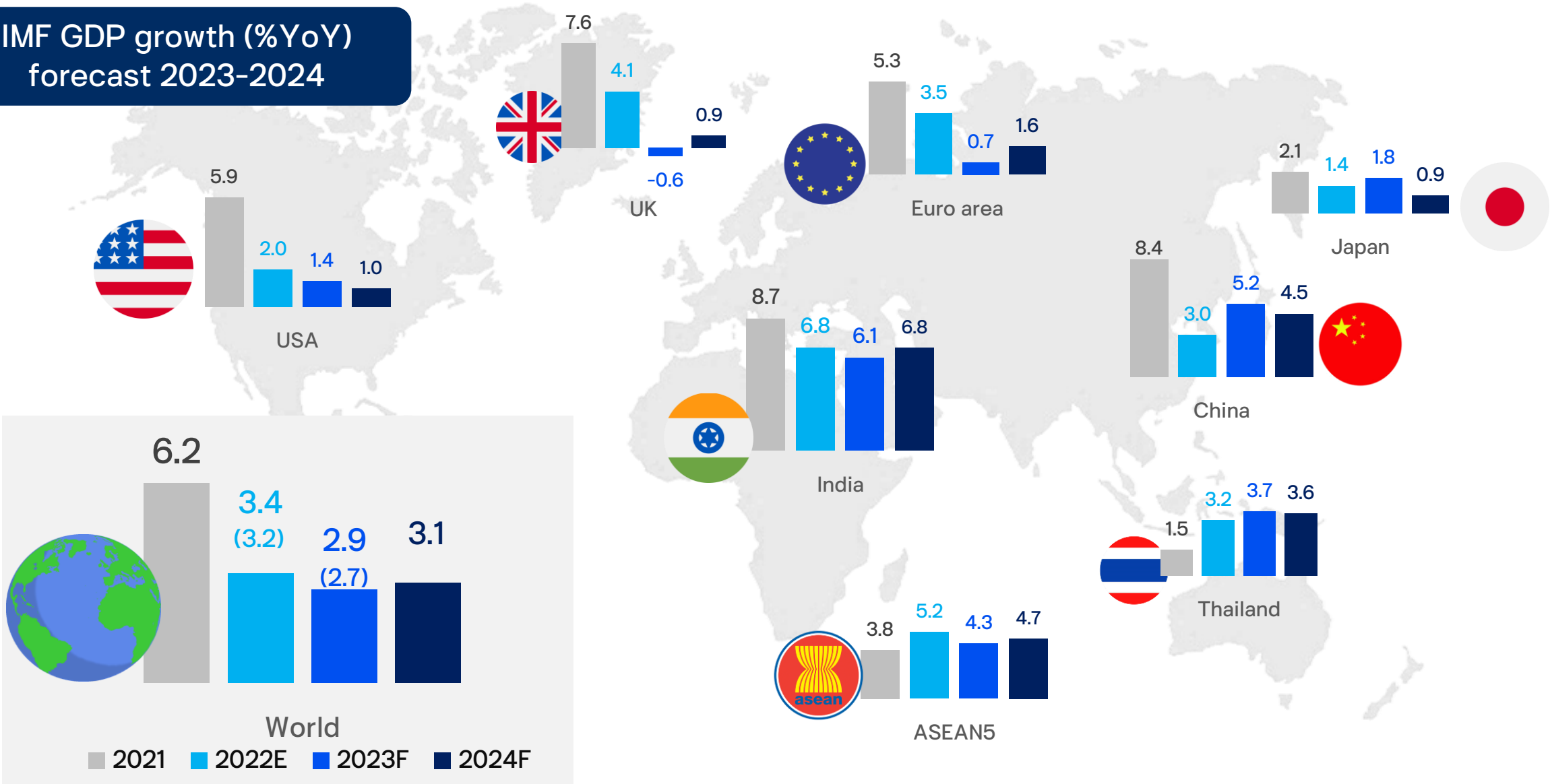
- **Major central banks around the world hike policy rate to curb rising inflation but with slower pace.** The Federal Reserve delivered only 25-bps hike on 31 January – 1 February 2023 meeting.
- **Investors went into long term bond tenor, for both US and Thai bond, due to recession concerns.** Moreover, 10y-2y yield spread for US government bond dropped below zero, signaling higher possibility of coming US economy recession. Meanwhile, 10y-2y yield spread for Thai government bond was still in positive territory.
- **USDTHB largely appreciated in January, ending 32.77 level.** It could be around 34.00-34.50 in February. US Dollar would appreciate in short-term as better-than-expected US jobs report raised the likelihood of the Federal Reserve keeping on with its inflation-fighting interest rate hikes for longer.

PART 1

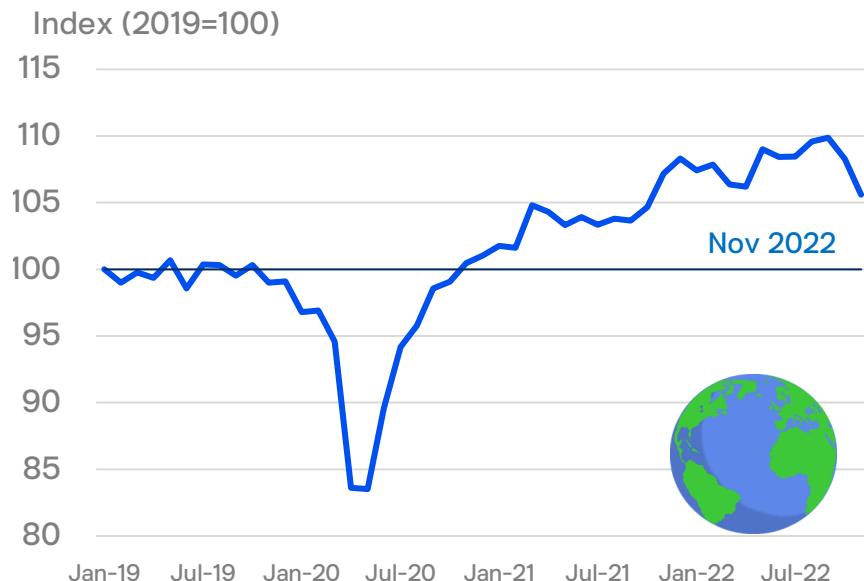
Global Economy



IMF GDP growth (%YoY)
forecast 2023-2024

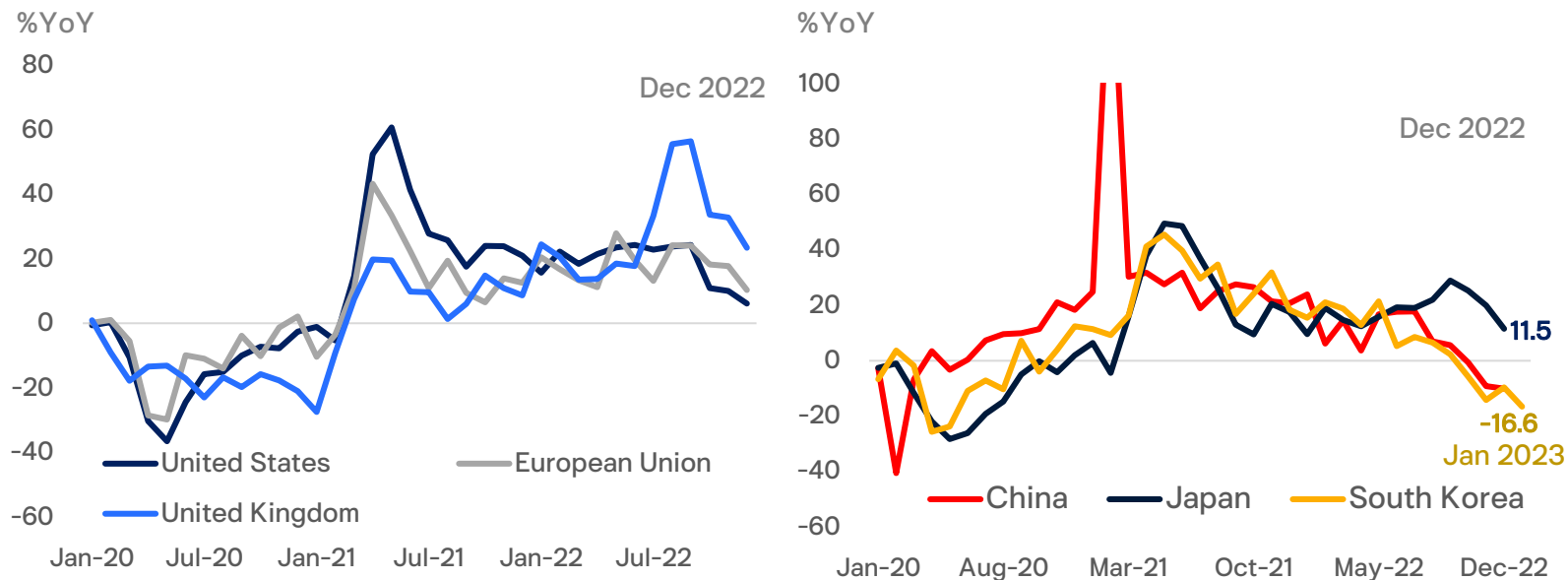


Global Merchandise Trade Volume Index (sa)

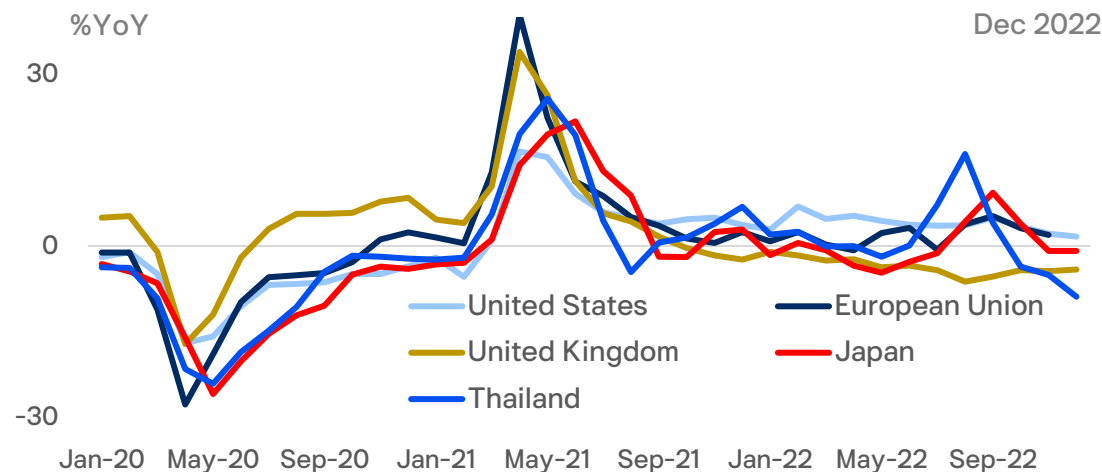


- **Global trade decline significantly in the end of 2022.** This was according to weak global demands. The exports of China and South Korea dropped in December 2022 and that of South Korea has declined steadily till the begin of 2023
- In December 2022, Industrial productions have been continuously in negative territory in several nations. The productions in US and UK have been also softening steadily.

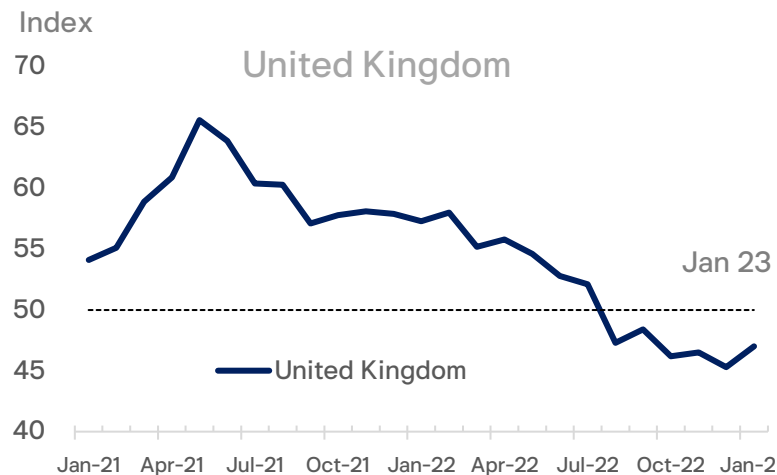
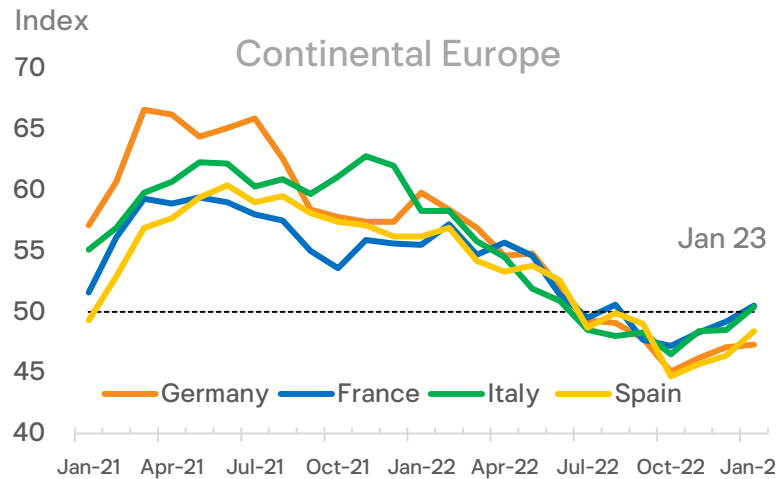
Export Growth by Region



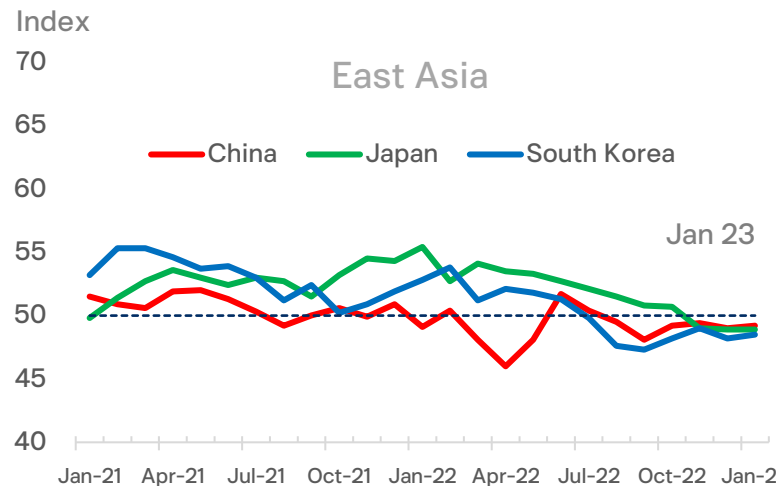
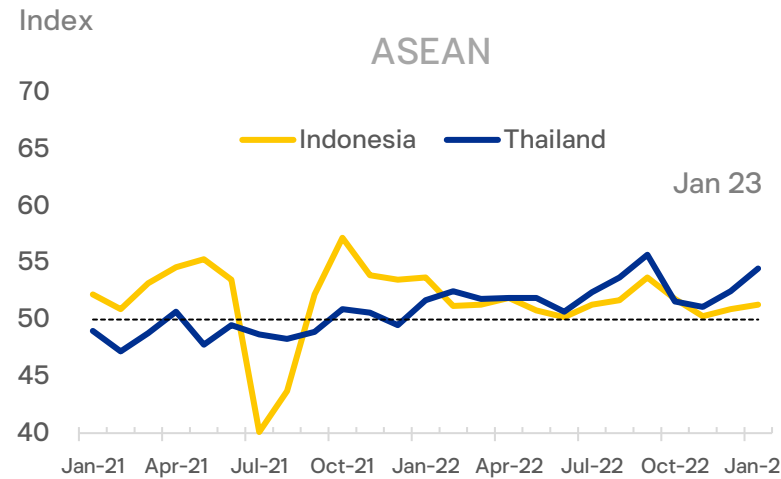
Industrial Production



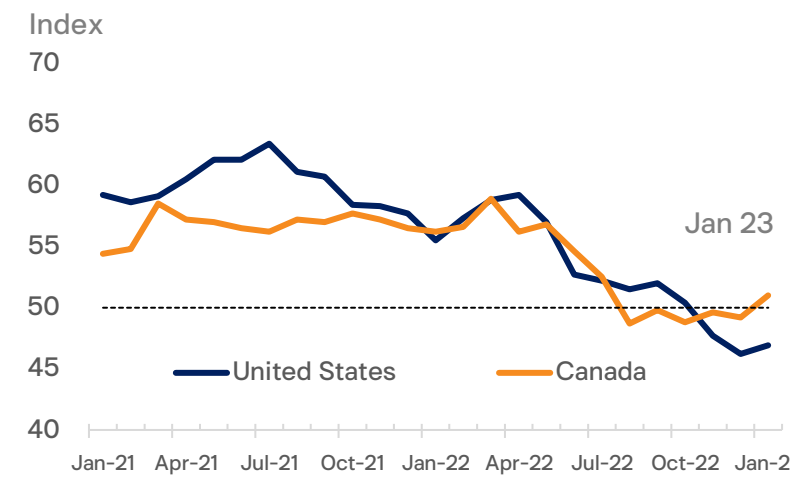
Manufacturing PMI - Europe



Manufacturing PMI - Asia



Manufacturing PMI - North America

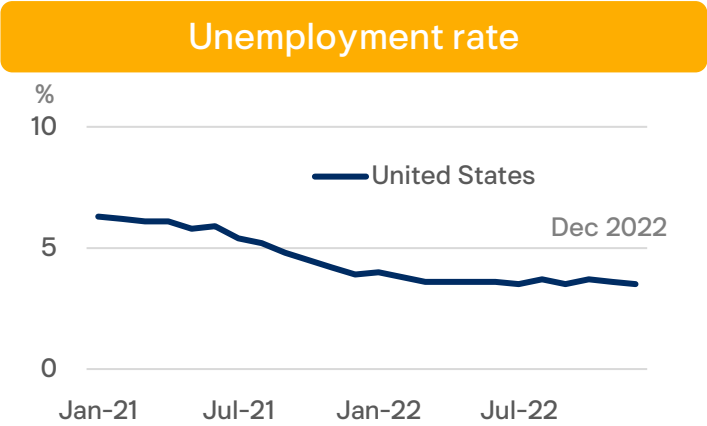
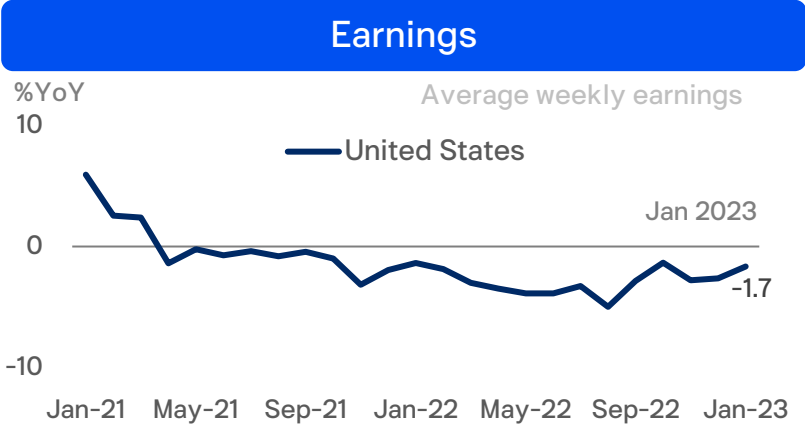
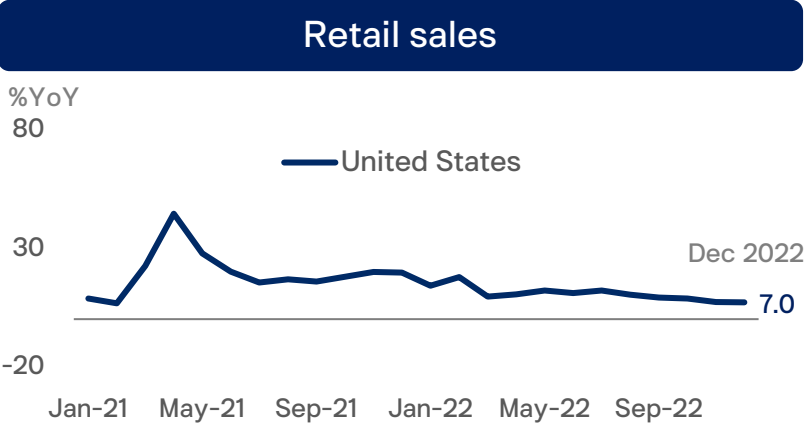


- **Global manufacturing PMI in January 2023 show the easing of downturn**, with the data of 9 from 31 nations showed the output expansion (India, Indonesia, Philippines, Thailand, Russia, Myanmar, Italy, Netherlands and Canada) and the rest also expressed the moderation in production activities decline.
- By sector, while the downturn remained for intermediate and investment goods, the production of consumer goods improved. Moreover, the contraction in *New orders* and *New export orders* turn eased.

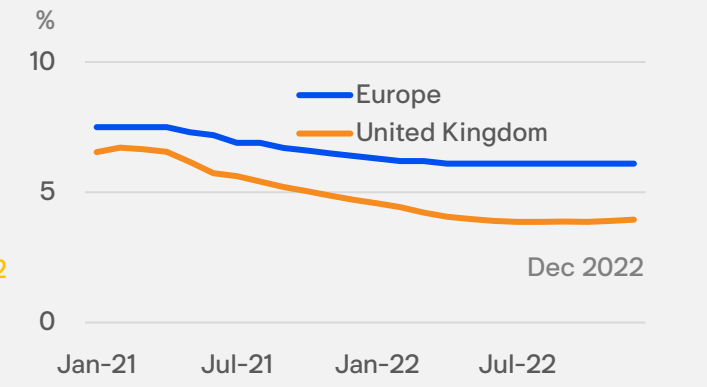
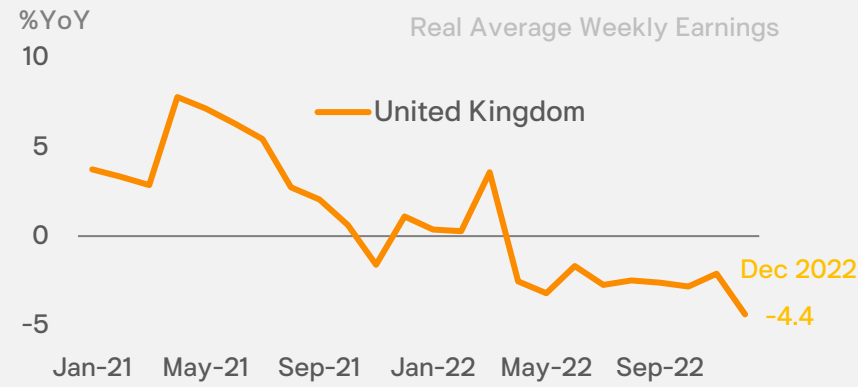
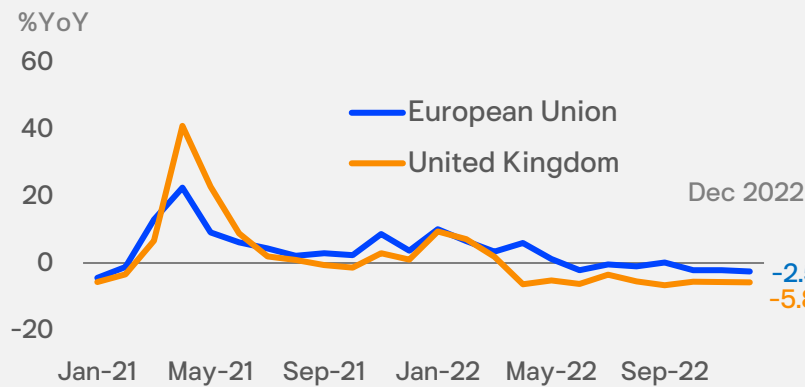
Global demands softened with improvement in labor market conditions, except UK



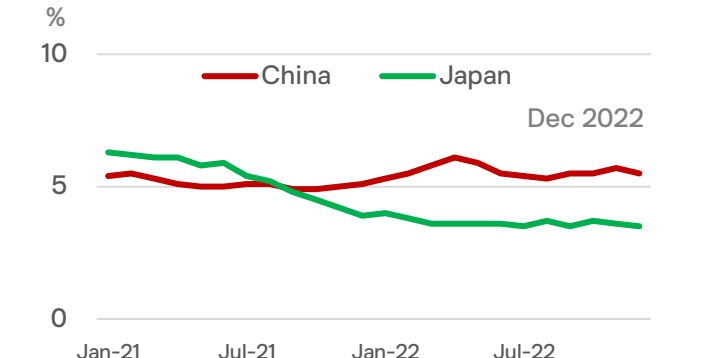
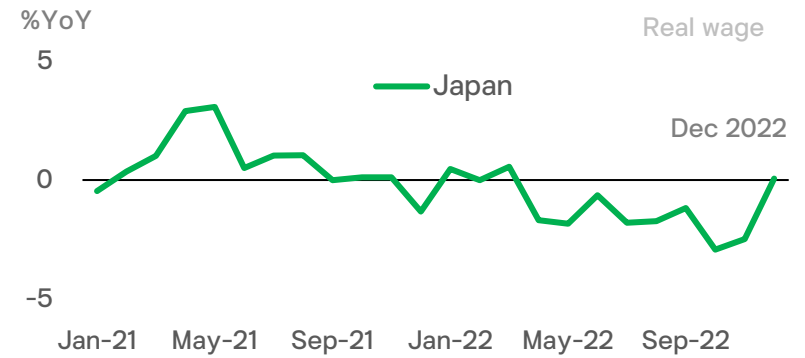
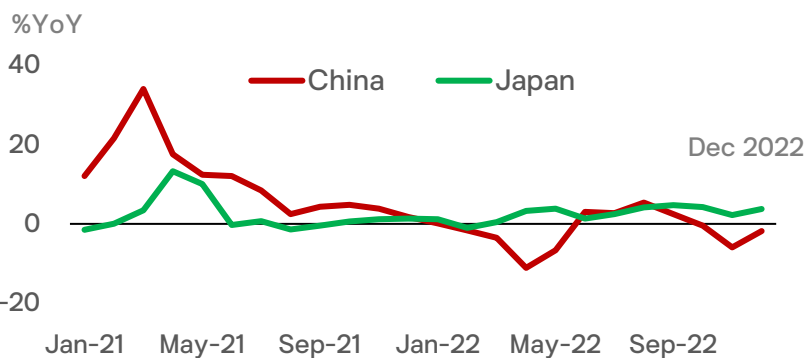
US



EU & UK



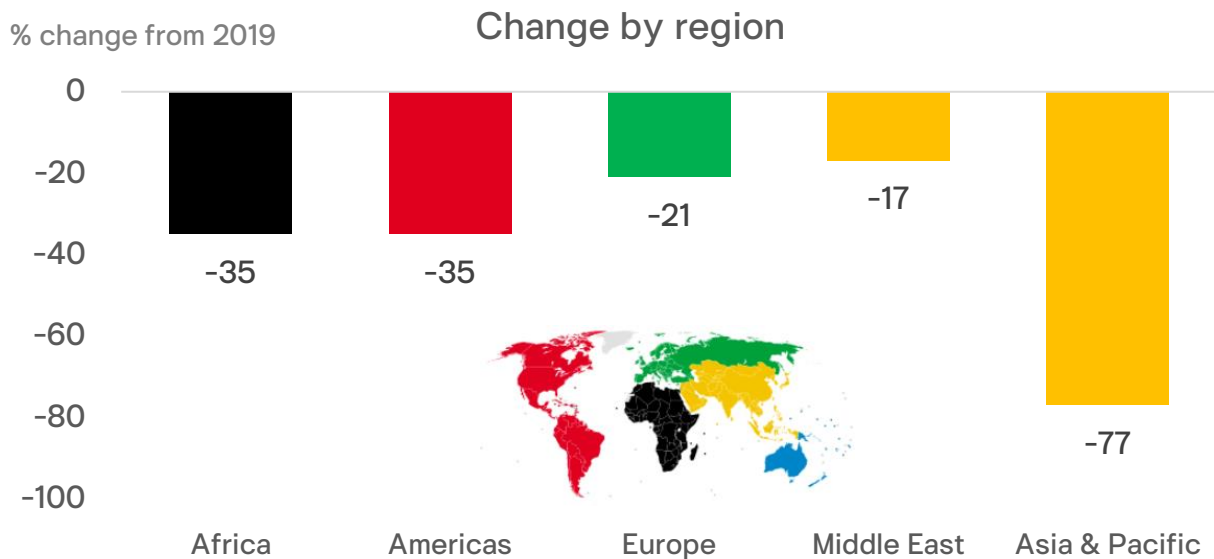
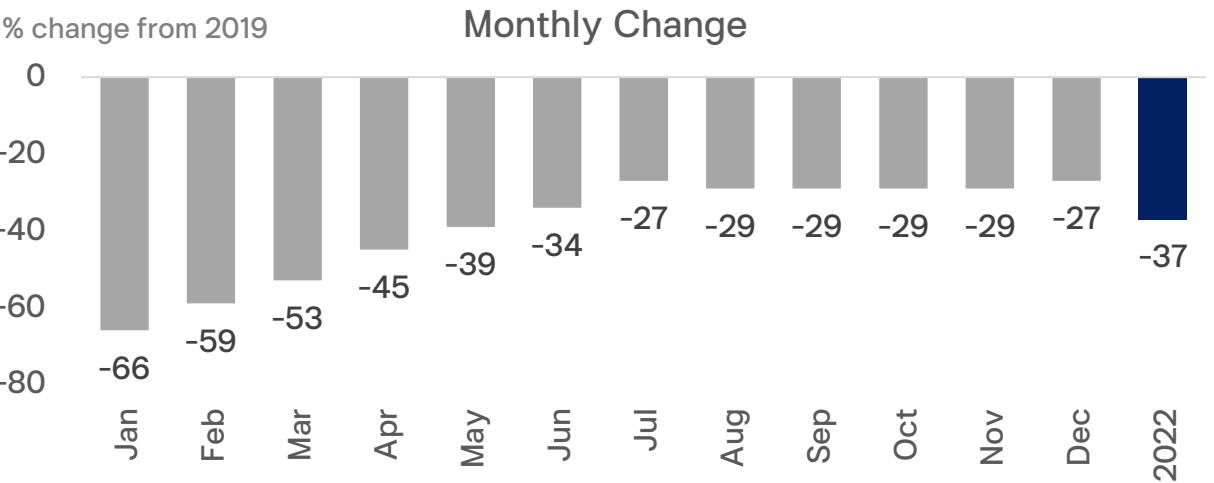
China & Japan



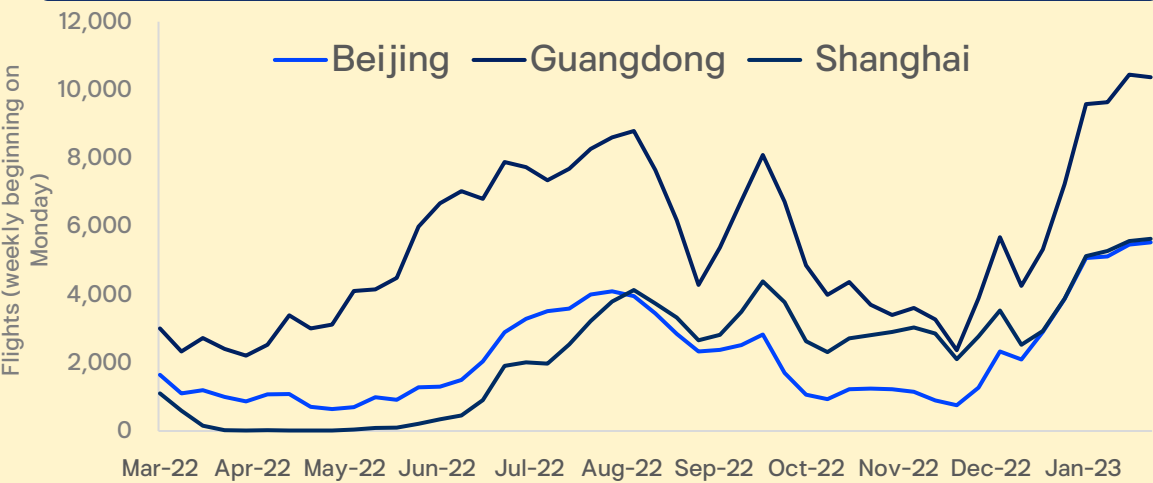
China's reopening pave the way for rapid rebound in global tourism, especially Asia



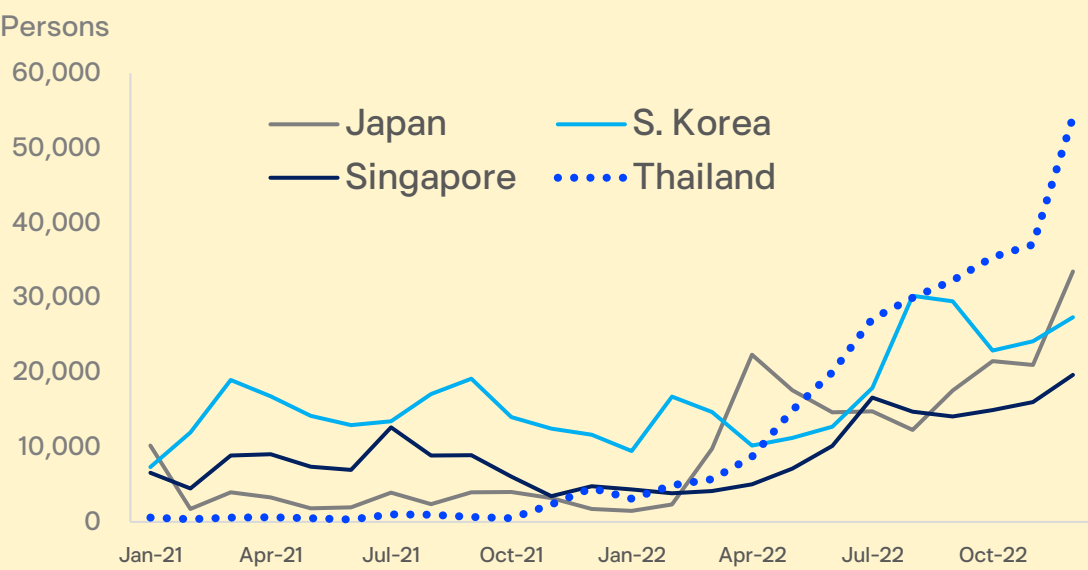
World international tourist arrivals 2022



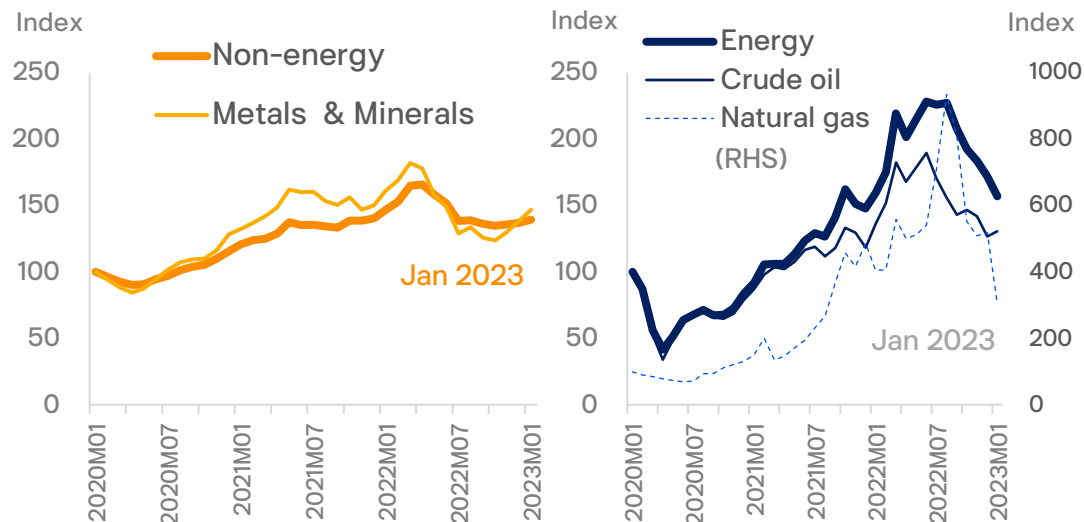
Weekly total operated flight from mainland



Chinese visitor arrivals in selected countries



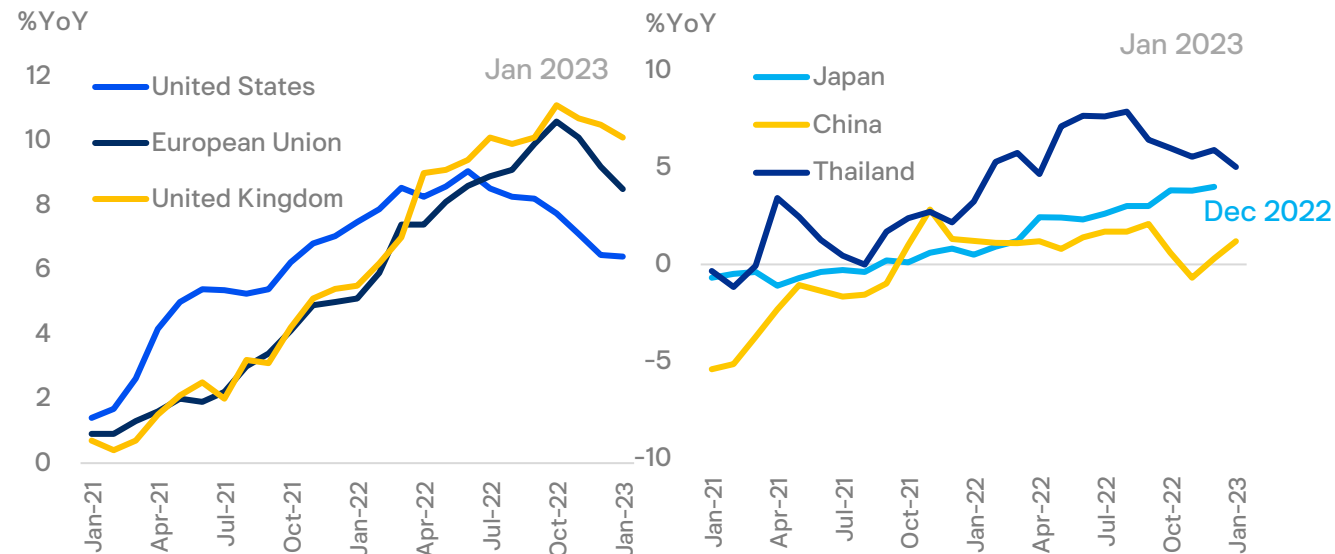
World Commodity Price Index



Global Supply Chain Pressure Index



Global Inflation



- **Global price pressure has been in a moderate decline.** The underlying reasons were due to a slower easing in global supply chain situation and an increase in non-energy components, according to the accelerating prices of metal and minerals. In addition, the prices of crude oils started to rise in January 2023, contrasting with the falls in natural gas' prices.
- **By nations, inflation continuously softened in most of key nations.** However, price pressure drop in the US started to move sideways, while inflation in Japan and China continuously accelerated.

PART 2

Thai Economy

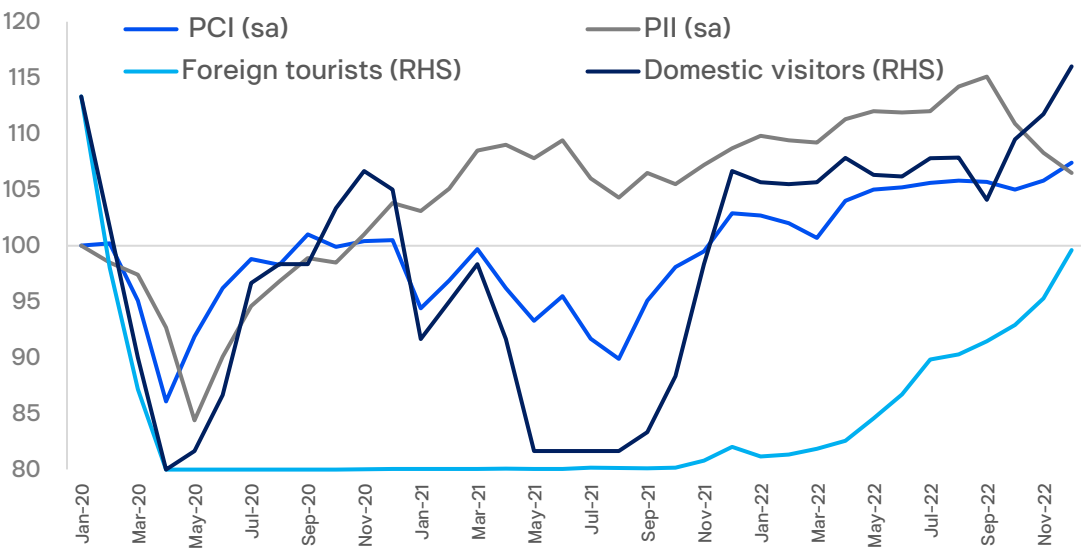


Thai economic recovery maintained on track amid the global economic slowdown



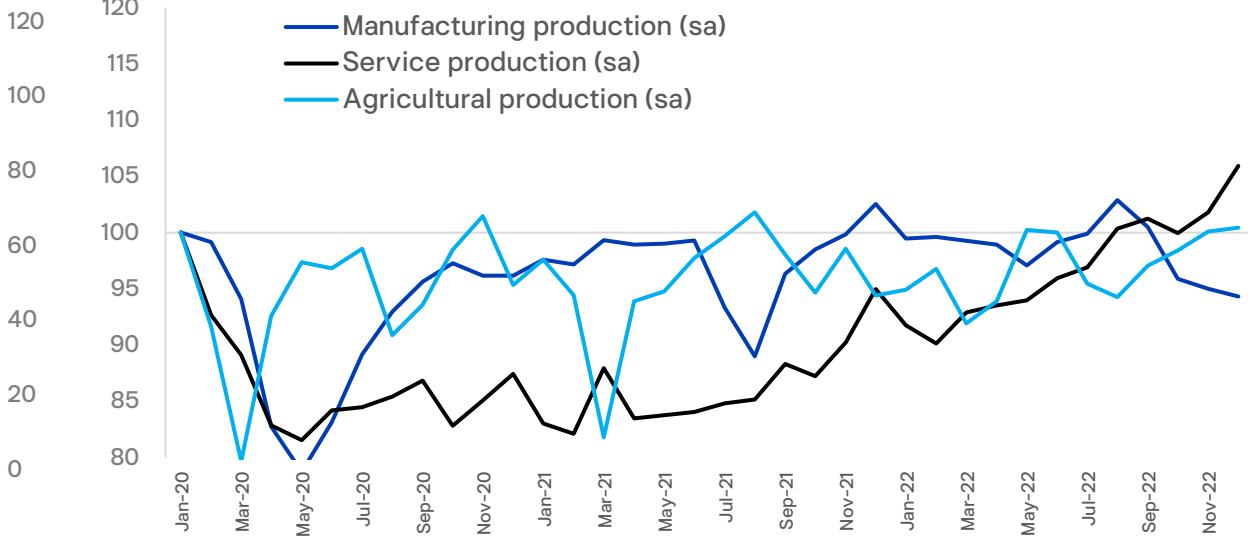
Demand-side indicators

Index (Jan20=100)



Supply-side indicators

Index (Jan20=100)



Coincident Economic Index (sa)

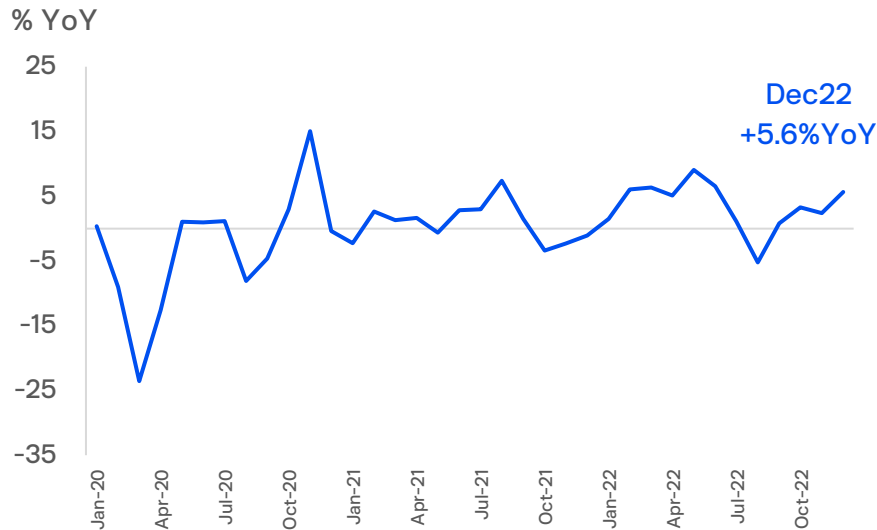
| | | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|------------|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Production | Coincident Economic Index (sa) | 99.0 | 99.9 | 100.5 | 100.8 | 100.7 | 100.9 | 100.9 | 100.5 | 100.3 | 100.6 | 100.5 | 101.1 | 96.7 | 96.0 | 95.0 | 95.2 |
| | Import Volume index (exclude Gold) | 102.1 | 104.3 | 99.8 | 115.9 | 104.9 | 107.9 | 112.5 | 109.6 | 109.2 | 109.4 | 110.5 | 110.0 | 112.7 | 105.3 | 95.8 | 98.8 |
| | Manufacturing Production Index | 96.3 | 98.5 | 99.8 | 102.5 | 99.5 | 99.6 | 99.3 | 98.9 | 97.1 | 99.1 | 99.9 | 102.9 | 100.5 | 95.9 | 95.0 | 94.3 |
| | Gross Value Added Tax at 2000 price (Million baht) | 52,842 | 55,047 | 61,594 | 57,139 | 56,930 | 58,144 | 58,511 | 57,467 | 56,777 | 58,146 | 55,517 | 57,152 | 58,682 | 59,022 | 55,602 | 55,700 |
| C | Sales Benzene, Gasohol & Diesel Index | 79.9 | 86.6 | 91.8 | 102.8 | 98.4 | 95.7 | 89.2 | 96.9 | 97.8 | 92.8 | 94.7 | 93.7 | 96.6 | 94.6 | 94.8 | 98.8 |
| | VAT Hotel & Restaurant Index | 29.2 | 36.9 | 45.1 | 48.1 | 38.2 | 48.8 | 48.7 | 53.7 | 56.0 | 58.3 | 62.2 | 60.3 | 68.0 | 71.0 | 75.5 | 76.3 |
| I | Imports of Capital Goods at 2010 price (Million USD) | 3,863.7 | 3,812.8 | 3,807.0 | 3,878.4 | 3,926.9 | 3,851.8 | 3,853.0 | 3,767.0 | 3,943.3 | 4,181.3 | 3,973.6 | 4,251.2 | 4,065.8 | 3,917.5 | 3,671.3 | 3,893.6 |
| | Domestic Machinery Sales at 2010 price (Million THB) | 88,249 | 88,945 | 90,303 | 90,123 | 91,033 | 92,003 | 87,812 | 92,390 | 91,711 | 85,131 | 92,271 | 90,998 | 96,296 | 92,351 | 89,681 | 88,063 |

Source: Bank of Thailand and ttb analytics.

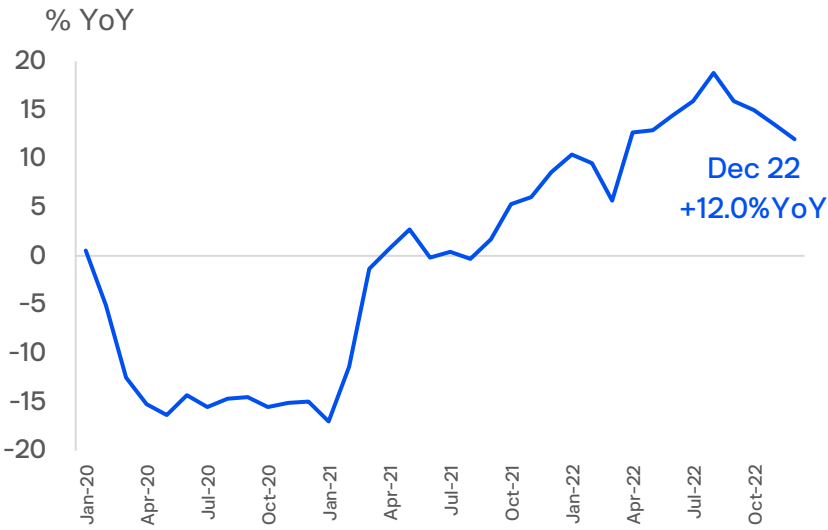
Services activities regarding to tourism activities continued to expand, while commerce and logistics activities contracted



Agriculture Production Index



Services Production Index



- As of Dec22, Agricultural Production Index was expanded at 5.6%YoY, due to the increase production of fruit and sugarcane following the proper climate. In Service Production Index (SPI) also showed a good sign of recovery, up by 12.0%yoy in line with the business service related to tourism, however, service production regarding to manufacturing activities dropped consecutively.

Service Production Index (Base Jan 2020=100)

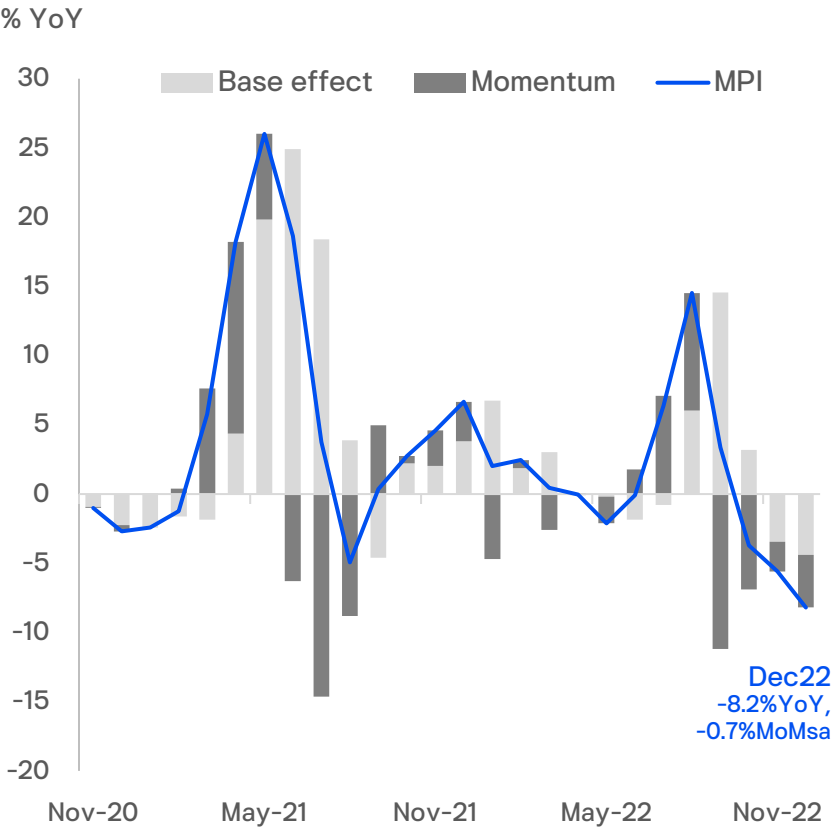
| | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 95.4 | 97.7 | 99.5 | 100.6 | 102.0 | 103.3 | 105.3 | 104.0 | 103.0 | 103.6 | 104.2 | 107.4 | 108.2 | 107.0 | 108.8 | 109.3 |
| Transportation and storage | 62.4 | 63.4 | 65.3 | 70.3 | 67.9 | 66.9 | 72.2 | 70.4 | 74.5 | 77.9 | 81.4 | 84.6 | 81.9 | 82.3 | 82.7 | 86.8 |
| Accommodation and food service activities | 3.8 | 8.0 | 20.2 | 30.4 | 27.9 | 28.0 | 29.1 | 32.7 | 35.4 | 39.5 | 47.4 | 48.3 | 50.9 | 55.2 | 62.3 | 75.2 |
| Information and communication | 116.3 | 98.8 | 108.7 | 121.4 | 112.8 | 99.8 | 116.9 | 103.0 | 115.2 | 117.3 | 109.7 | 124.8 | 125.6 | 121.2 | 139.5 | 134.4 |
| Financial and insurance activities | 114.9 | 111.5 | 113.1 | 115.5 | 102.2 | 101.5 | 102.2 | 118.8 | 120.3 | 111.3 | 108.3 | 108.9 | 109.5 | 106.9 | 108.9 | 111.0 |
| Real estate activities | 121.3 | 121.1 | 128.1 | 133.9 | 123.3 | 122.3 | 128.7 | 120.6 | 122.0 | 123.8 | 124.2 | 118.5 | 132.5 | 125.0 | 130.4 | 133.4 |
| Professional, scientific and technical activities | 105.4 | 111.4 | 113.0 | 125.1 | 120.1 | 107.4 | 126.1 | 120.1 | 118.4 | 129.2 | 143.6 | 112.5 | 135.6 | 135.4 | 130.6 | 156.2 |
| Administrative and support service activities | 80.4 | 73.6 | 81.1 | 85.1 | 82.0 | 76.7 | 89.3 | 79.2 | 77.3 | 85.7 | 90.6 | 79.8 | 98.8 | 87.1 | 101.3 | 104.2 |
| Public administration and defence; compulsory social security | 113.5 | 105.8 | 101.0 | 106.5 | 102.1 | 97.6 | 92.1 | 116.1 | 105.1 | 104.4 | 108.3 | 110.8 | 113.7 | 102.6 | 101.2 | 101.2 |
| Service Production Index | 89.2 | 88.1 | 91.1 | 95.9 | 92.3 | 90.5 | 93.5 | 97.0 | 96.3 | 97.1 | 99.3 | 99.9 | 103.4 | 100.4 | 103.6 | 106.9 |

Source: Bank of Thailand and ttb analytics.

MPI dropped further for third consecutive month



Manufacturing Production Index (MPI)



MPI by sector (Base Jan 2020=100)

| Contribution | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Food products (16.2%) | | | | | | | | | | | | | | | | | | | | |
| Beverages (3.8%) | | | | | | | | | | | | | | | | | | | | |
| Tobacco products (0.5%) | | | | | | | | | | | | | | | | | | | | |
| Textiles (1.6%) | | | | | | | | | | | | | | | | | | | | |
| Wearing apparel (1.9%) | | | | | | | | | | | | | | | | | | | | |
| Leather products (0.9%) | | | | | | | | | | | | | | | | | | | | |
| Paper products (2.9%) | | | | | | | | | | | | | | | | | | | | |
| Coke and refined petroleum products (9.6%) | | | | | | | | | | | | | | | | | | | | |
| Chemicals (8%) | | | | | | | | | | | | | | | | | | | | |
| Pharmaceutical products (1.2%) | | | | | | | | | | | | | | | | | | | | |
| Rubber and plastics products (8.9%) | | | | | | | | | | | | | | | | | | | | |
| Other non-metallic mineral products (5.5%) | | | | | | | | | | | | | | | | | | | | |
| Basic metals (3.6%) | | | | | | | | | | | | | | | | | | | | |
| Fabricated metal products (1.9%) | | | | | | | | | | | | | | | | | | | | |
| Computer and electronic products (8.9%) | | | | | | | | | | | | | | | | | | | | |
| Electrical equipment (3%) | | | | | | | | | | | | | | | | | | | | |
| Machinery and equipment (2.7%) | | | | | | | | | | | | | | | | | | | | |
| Motor vehicles (13.9%) | | | | | | | | | | | | | | | | | | | | |
| Other transport equipment (1.1%) | | | | | | | | | | | | | | | | | | | | |
| Furniture (1.5%) | | | | | | | | | | | | | | | | | | | | |
| Others (2.4%) | | | | | | | | | | | | | | | | | | | | |
| MPI (%YoY) | 26.0 | 18.6 | 3.7 | -4.9 | 0.4 | 2.7 | 4.6 | 6.7 | 2.0 | 2.5 | 0.4 | 0.0 | -2.0 | -0.2 | 6.4 | 14.9 | 3.3 | -4.0 | -5.1 | -8.2 |

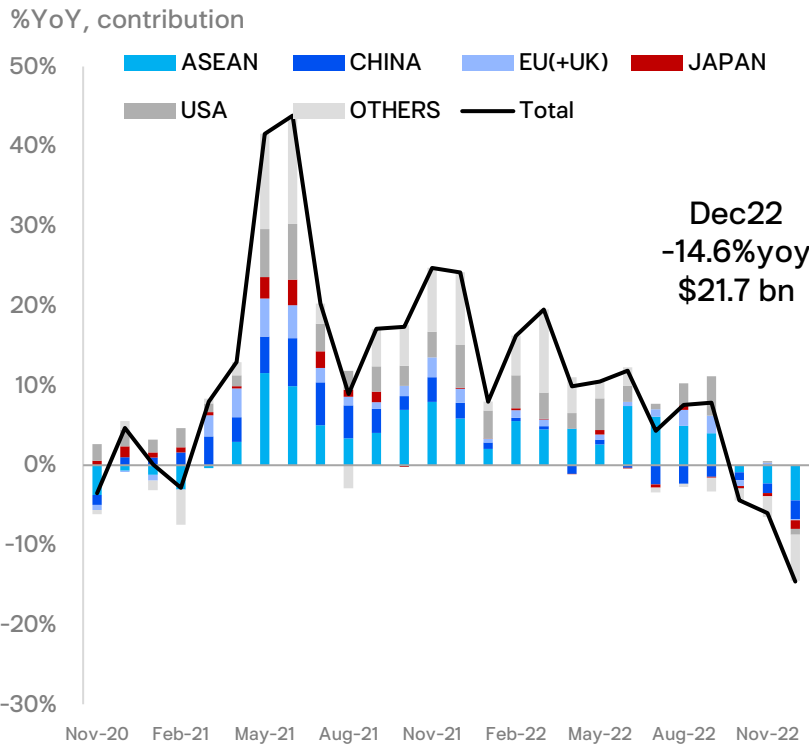
- As of Dec22, Manufacturing Production Index (MPI) was contracted at 8.2%YoY further drop from the previous month at contracted 5.1%YoY. The worsen momentum were mainly from 1) the overproduction of motor vehicles earlier 2) decline global demand in HDD and electric appliance and 3) the lower production of food and drink. However, the factor of temporary shutdown of oil refineries for maintenance returned gradually to normal production level.

Export dipped for third month in December, with a full-year expansion of 5.5%

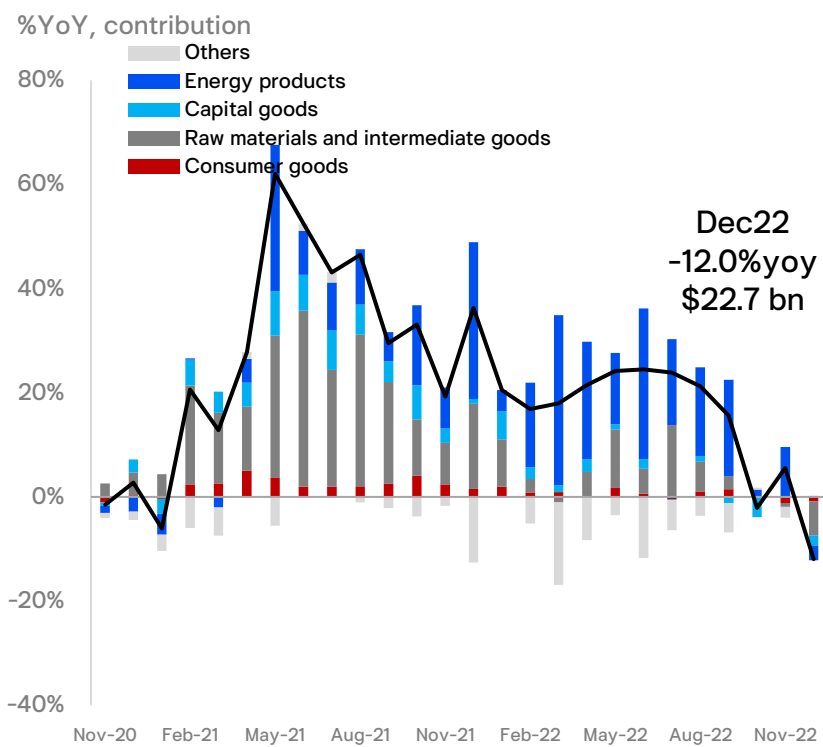


Exports value by product and destination*

| | 1Q21 | 2Q21 | 3Q21 | 4Q21 | 1Q22 | 2Q22 | 3Q22 | 4Q22 |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Auto and parts (11.5%) | 23.7% | 120.5% | 19.1% | 24.3% | -11.7% | -6.0% | 8.8% | -3.3% |
| Computer and parts (6.8%) | 8.4% | 30.4% | 17.7% | 16.9% | 8.6% | -6.7% | -0.9% | -23.6% |
| HDD (3.4%) | -9.4% | 43.5% | 31.9% | 27.6% | 22.4% | -11.4% | -12.0% | -33.5% |
| Rubber (4.9%) | 32.1% | 48.5% | 8.3% | -1.7% | -8.2% | -0.4% | -2.0% | -5.9% |
| Integrated circuit (3.5%) | 13.9% | 24.2% | 19.4% | 18.7% | 17.7% | 9.4% | 11.4% | 0.6% |
| Refinery oil (3.0%) | -5.5% | 93.8% | 103.4% | 104.7% | 21.8% | 63.7% | 10.4% | -25.7% |
| Electronic machinery (3.1%) | 6.8% | 52.6% | 29.4% | 17.1% | 17.6% | 14.0% | 4.5% | -5.8% |
| Plastic pallet (3.2%) | 31.8% | 49.9% | 50.8% | 33.1% | 19.4% | 4.7% | -13.9% | -26.7% |
| Chemical products (3.1%) | 16.5% | 66.5% | 51.4% | 54.9% | 24.6% | 3.6% | -8.0% | -25.1% |
| Jewelry (4.0%) | -66.8% | -41.9% | -55.3% | 37.1% | 205.1% | 20.4% | 37.5% | -7.3% |
| All products | 2.1% | 31.9% | 15.4% | 23.1% | 14.7% | 10.7% | 6.6% | -8.5% |



Imports value by groups*

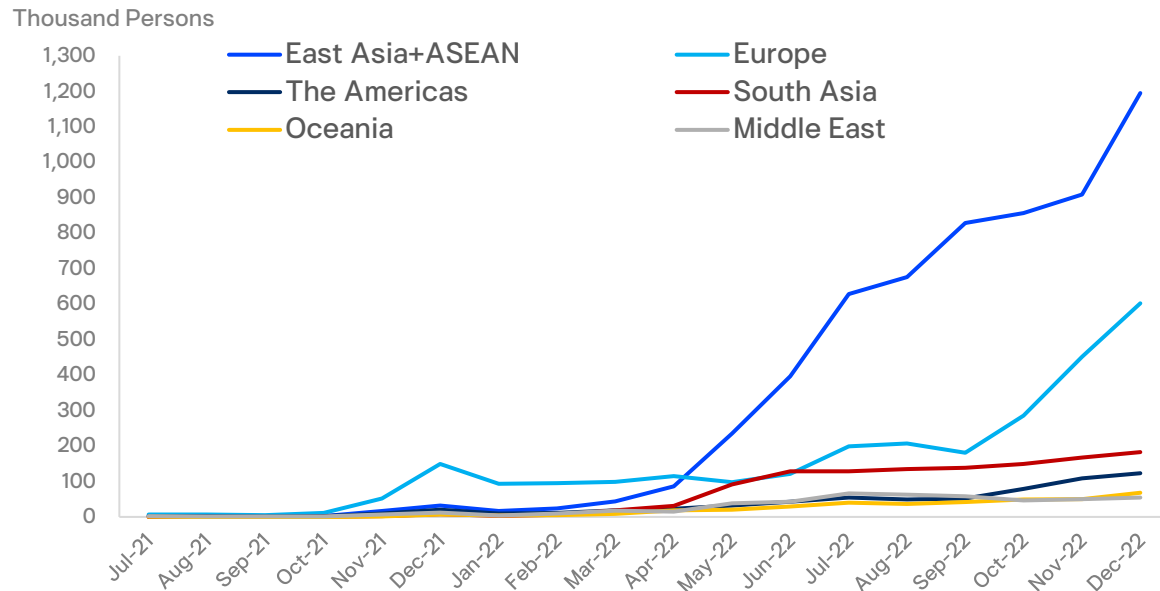
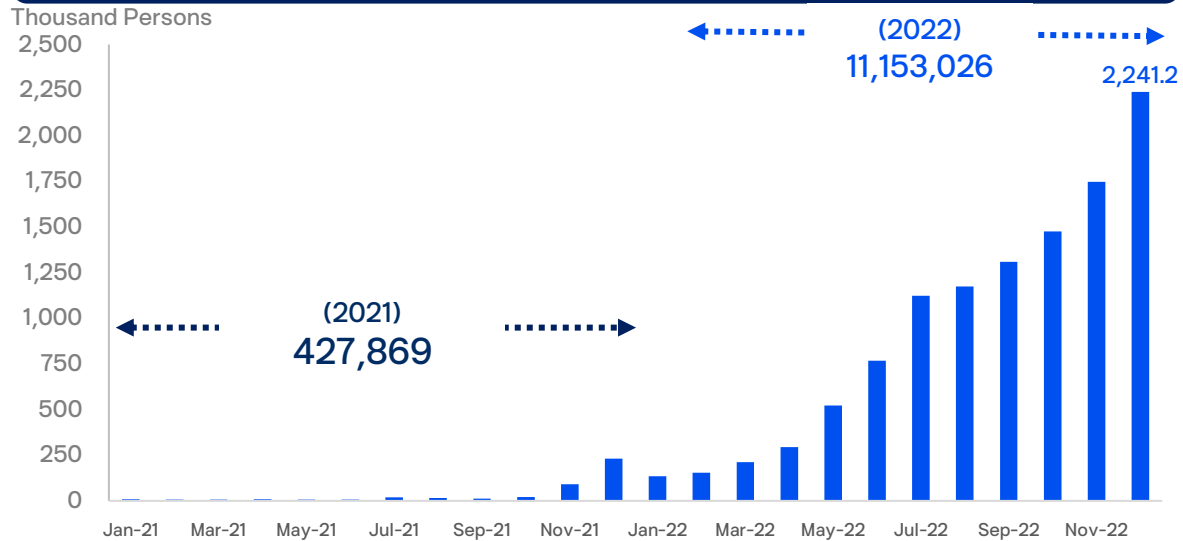


| %yoy,value | 2019 | 2020 | 2021 | 2022 | 2023F |
|--------------|-------------------|--------------------|-------------------|-------------------|-------------------|
| Total export | -2.6% \$246 bn | -5.9% \$232 bn | 17.1% \$272 bn | 5.5% \$287 bn | 0.5% \$288 bn |
| Total import | -4.8% \$236 bn | -12.7% \$206 bn | 29.8% \$267 bn | 13.6% \$303 bn | -2.0% \$297 bn |

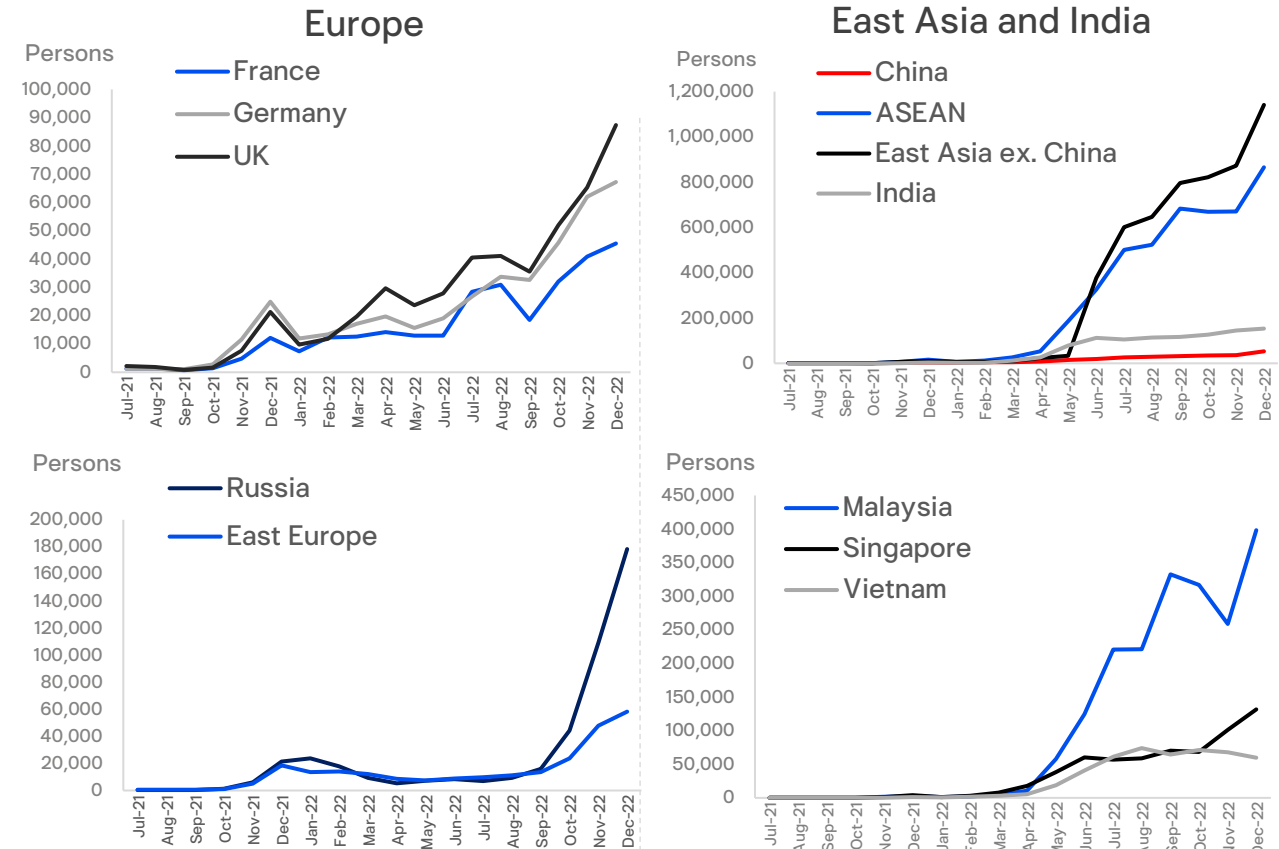
- Export value in Dec22 contracted sharply by -14.6%YoY, comparing to -6.0% in the month earlier. This was due to the further decrease of major product sectors except oil-related products such as rubber (-47.7%) cassava (-12.4%) ,auto and parts (-13.6%) and HDD (-34.1%) etc.
- In 2022, total exports expanded 5.5%YoY, lower than market and our expectation as high-base effect and explicitly global economic slowdown. Particularly, exports of major products fell across the board.

Foreign arrivals in 2022 reached 11.2 million or roughly one-third comparing to pre-covid

Total Foreign Tourist Inbounds

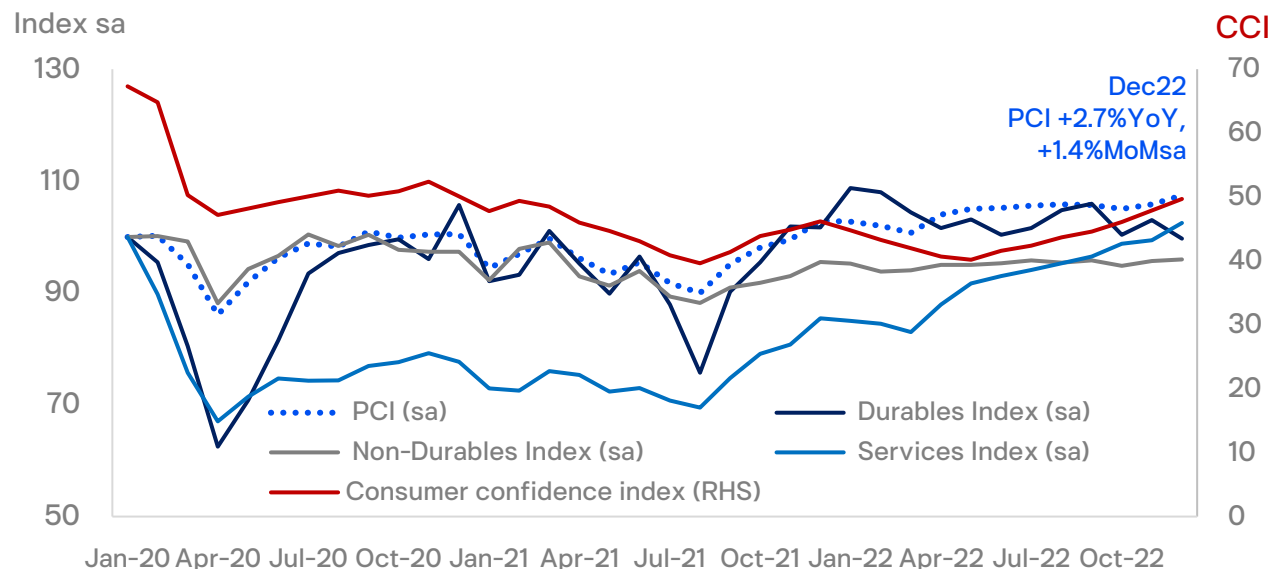


- As of Dec22, foreign tourist increased consecutively to reach 2 million. In 2022, the total foreign arrival accounted for 11.2 million or almost one-third comparing to pre-covid. The major groups came from East Asia, led by Malaysia. Russia and Europe tourists also showed significantly improved momentum during the mid-year. Particularly, India tourists came into Thailand throughout the year almost 1 million or more than half comparing to 2019 level.

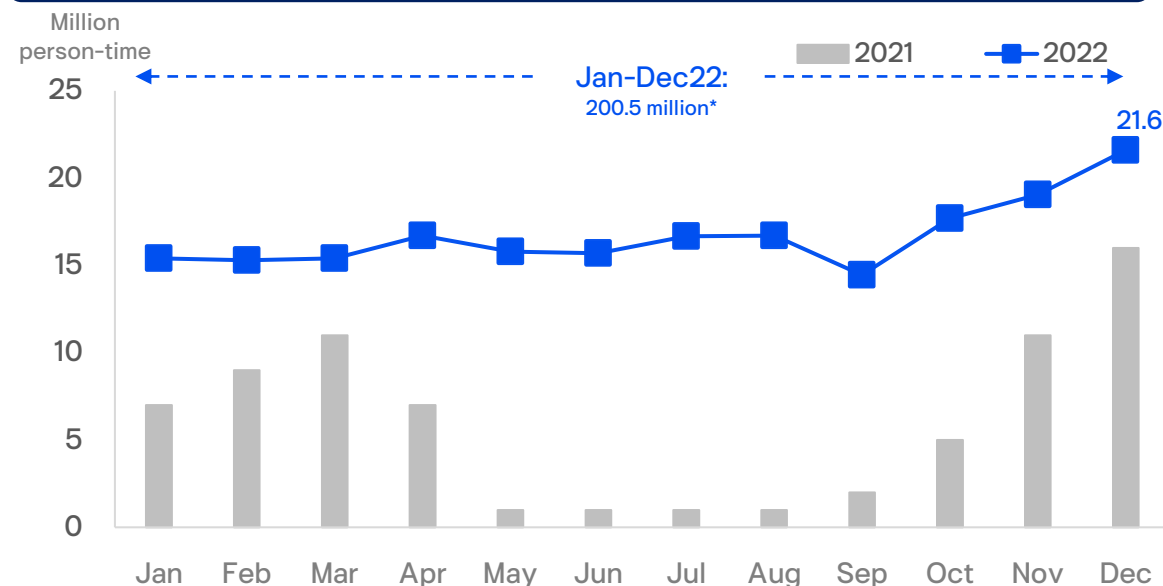


Private consumption increased remarkably thanks to high-season vibe

Private Consumption (SA)

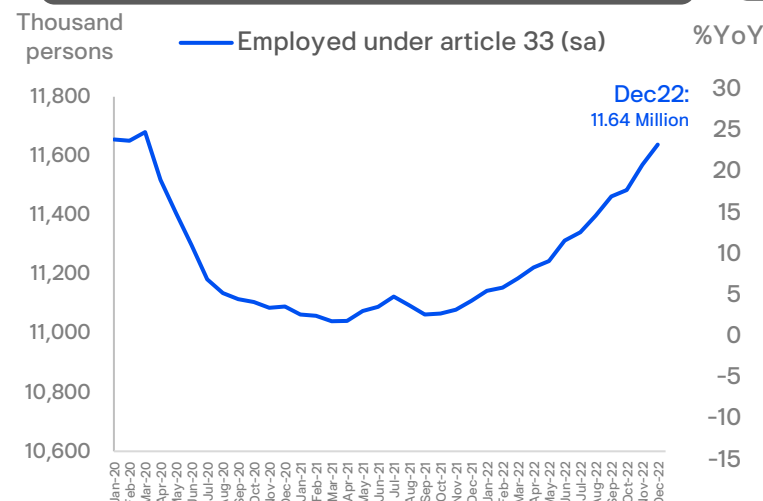


Thai domestic tourism visitors

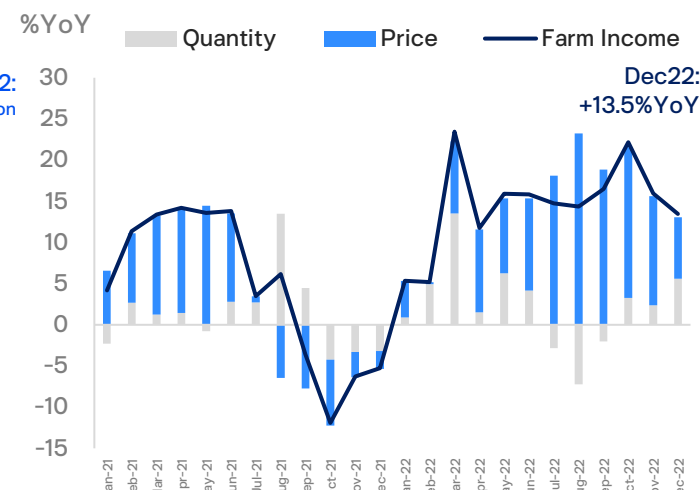


- Private consumption indicators in Dec22 increased remarkably from the previous month due to the increase in service sector.
- Several fundamental factors supporting household consumption gradually improved especially employment and consumer confidence.
- However, the elevated living costs still weighed down on consumption.

Employment M33



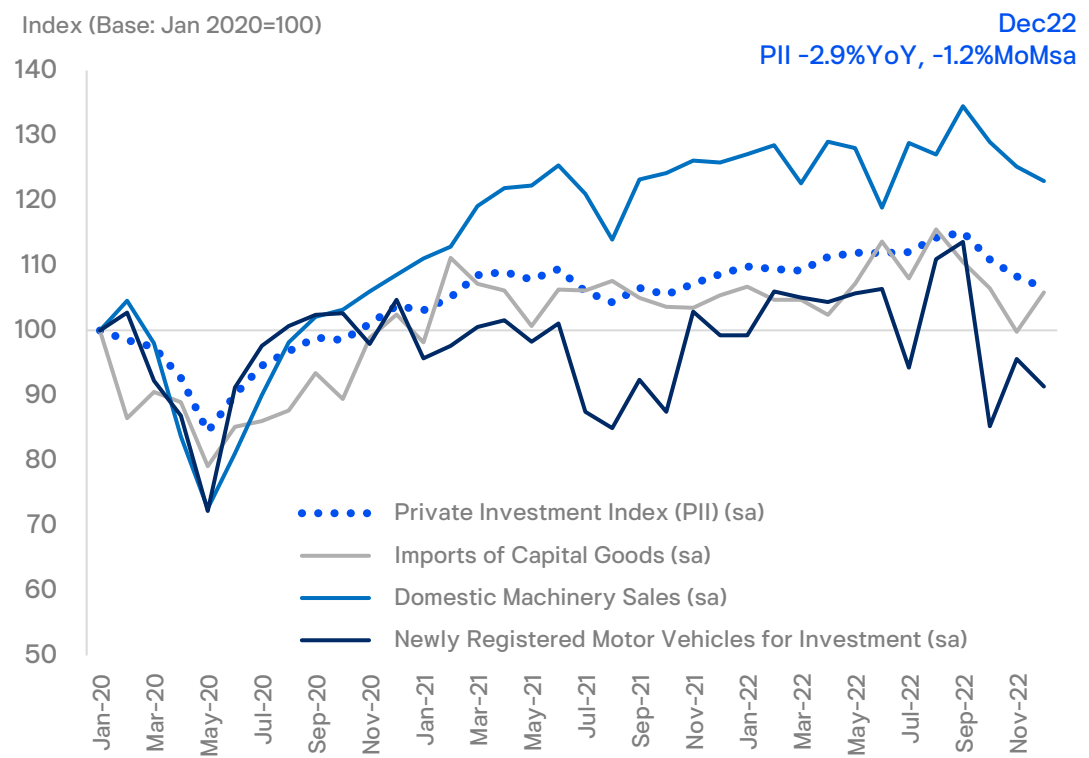
Farm Incomes



Private investment declined for third consecutive month in all categories

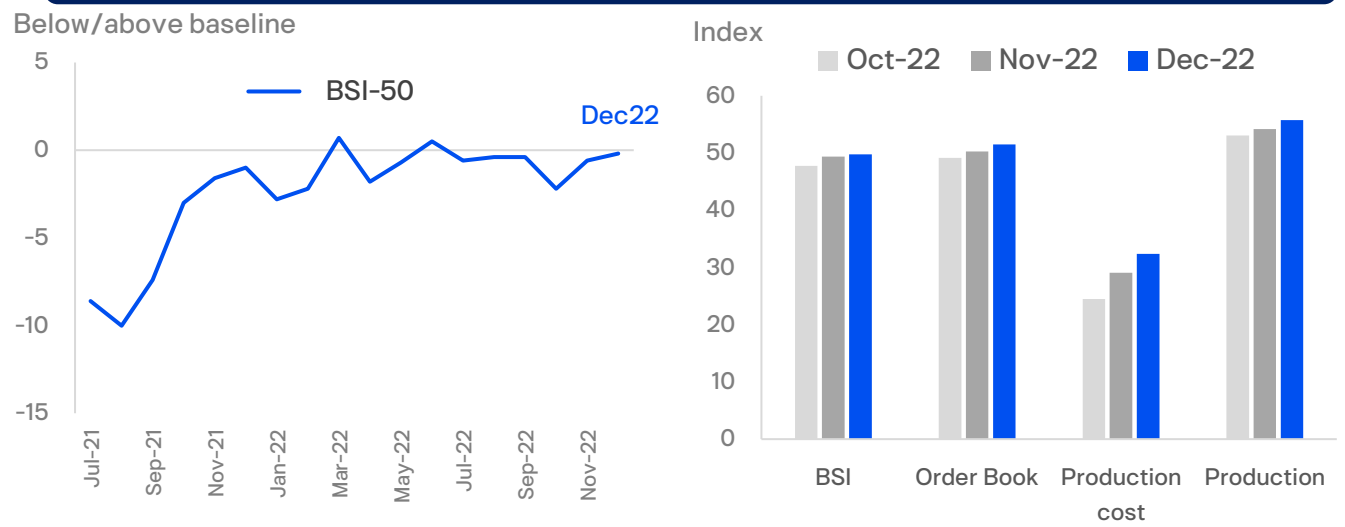


Private Investment Indicators (SA)

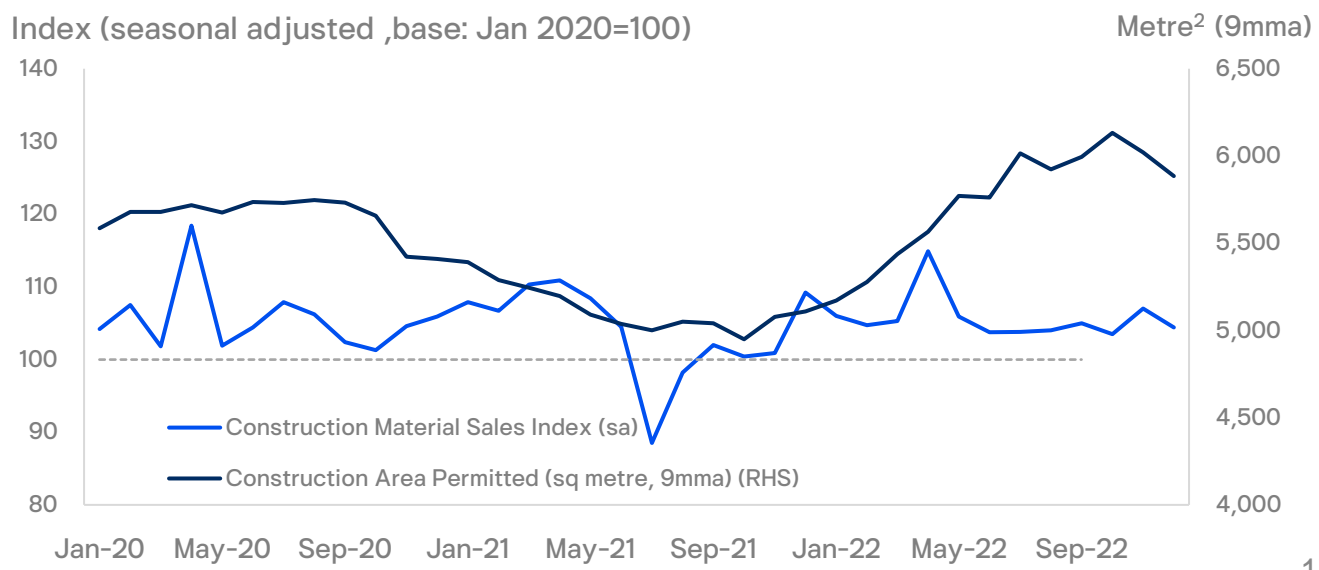


- Indicators on private investment in Dec22 declined for consecutive months which mainly due to lower investment in all categories, particularly in machinery and equipment, and newly registered motor vehicles for investment.
- Investment in construction gradually improved following construction material sales, however, the construction area permitted dropped slightly from dwell propose.

Business Sentiment Index



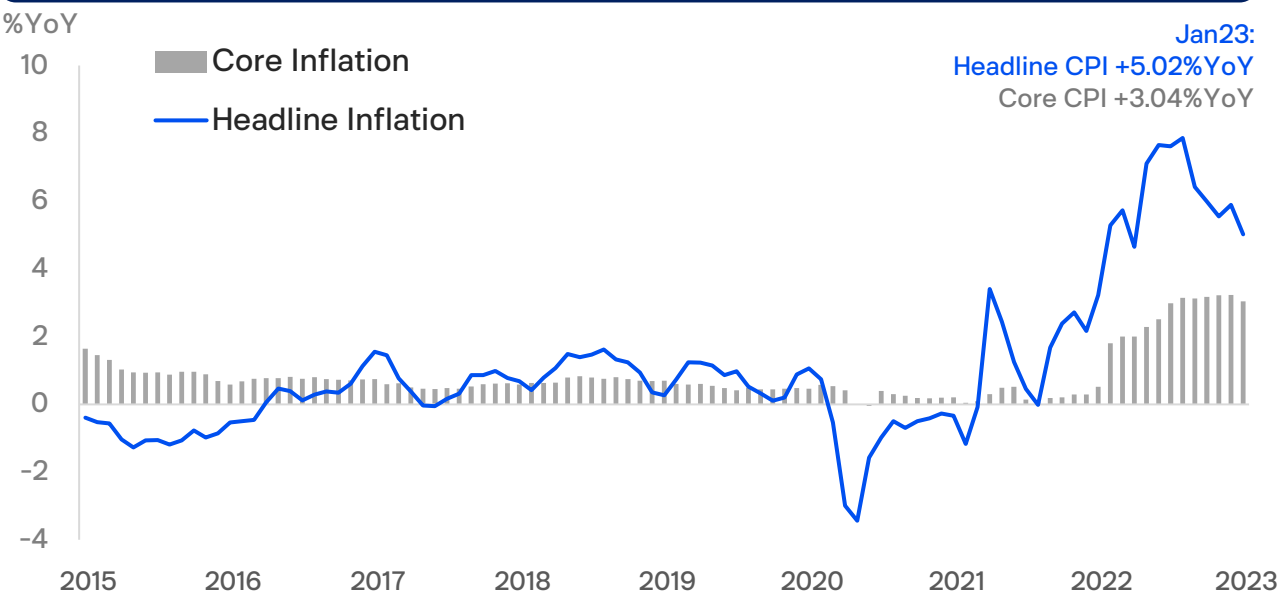
Construction sector (SA)



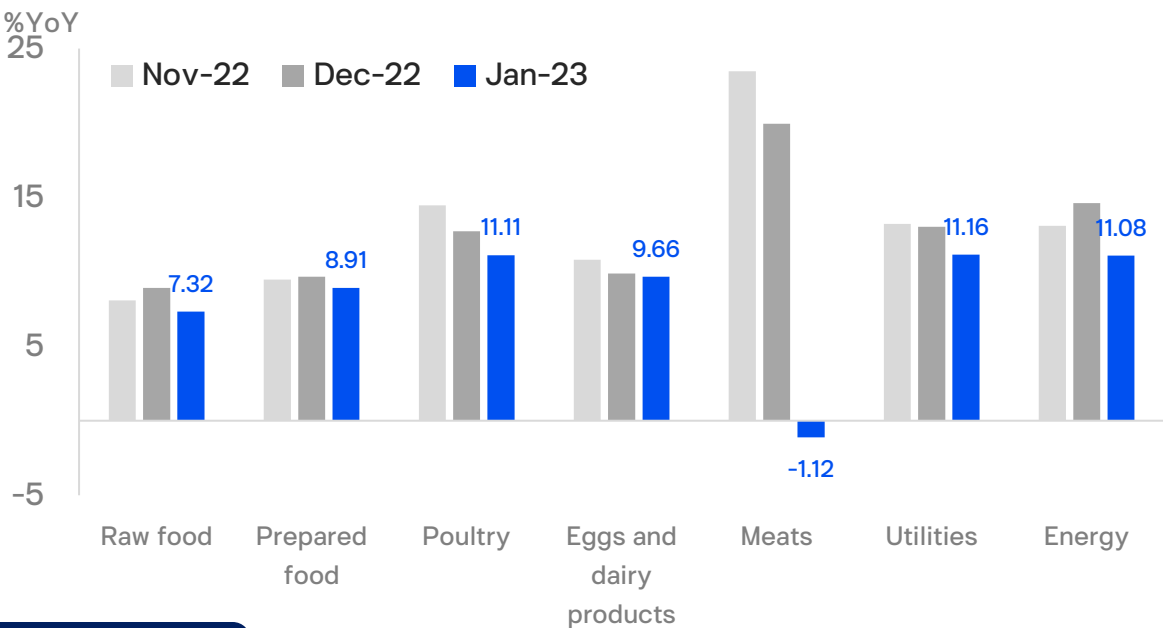
Headline inflation in January cooled due to the ease of energy and food prices



Headline vs core inflation



Price change in top categories



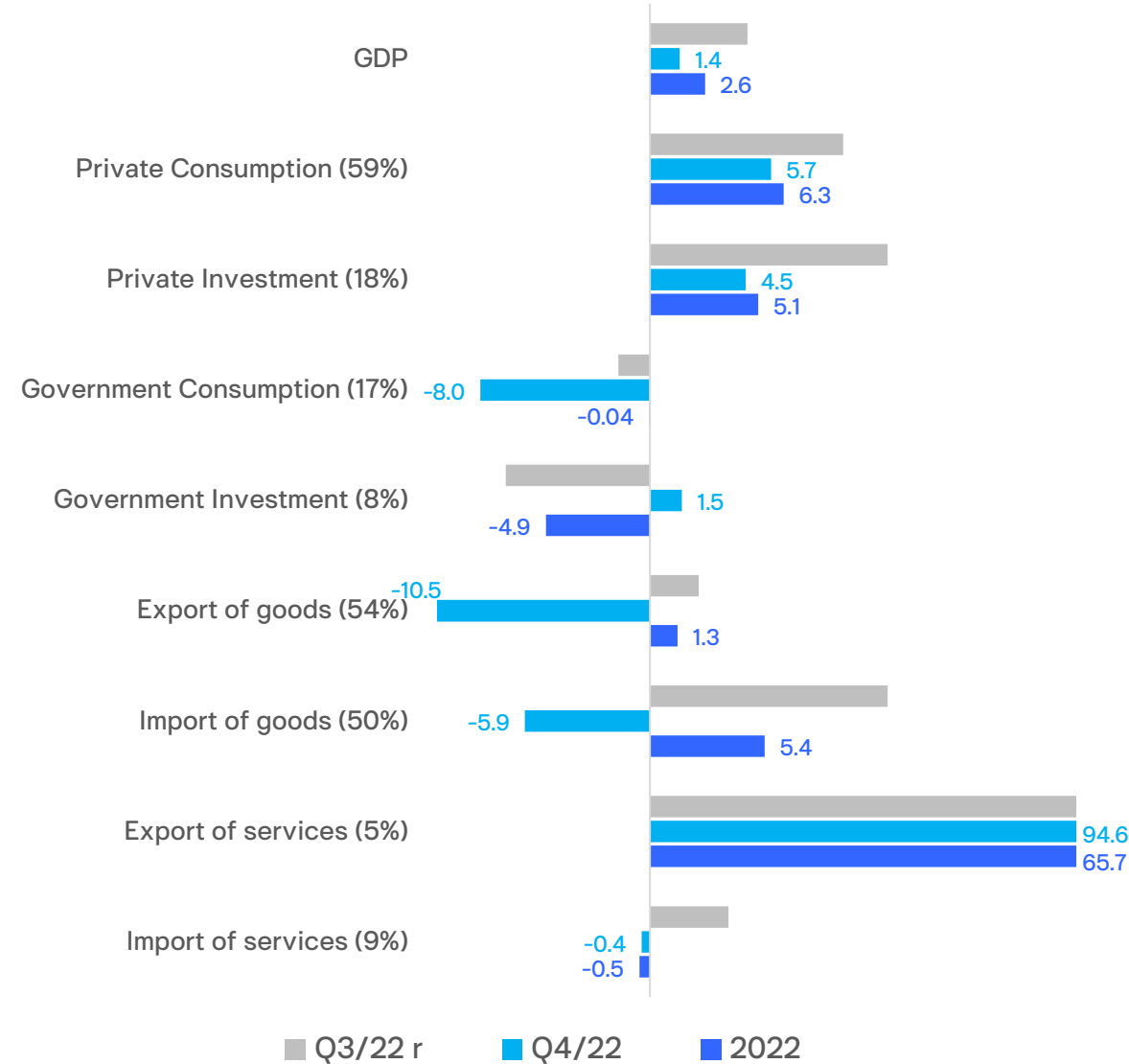
Historical Thai Inflation (%yoy)

| %YoY | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------|------|-------|-------|------|------|------|------|------|-------|-------|------|------|-------|-------|-------|------|------|
| HCPI | 2.17 | 5.19 | -0.83 | 3.3 | 3.81 | 3.01 | 2.19 | 1.9 | -0.9 | 0.19 | 0.67 | 1.07 | 0.71 | -0.84 | 1.24 | 6.08 | 5.02 |
| Food | 4.08 | 11.56 | 4.54 | 5.43 | 7.94 | 4.89 | 3.41 | 3.94 | 1.14 | 1.6 | 0.01 | 0.41 | 2.32 | 1.23 | -0.12 | 6.91 | 7.70 |
| Housing | 0.13 | -3.19 | -1.55 | 2.03 | 1.31 | 2.73 | 1.9 | 1.41 | 0.59 | -0.99 | 0.17 | 1.03 | 0.42 | -1.02 | -1.69 | 4.81 | 3.11 |
| Transport | 2.72 | 6.38 | -9.41 | 3.81 | 1.73 | 1.58 | 1.34 | 0.09 | -6.52 | -1.75 | 2.37 | 2.31 | -1.14 | -4.53 | 7.81 | 9.10 | 4.26 |
| Core CPI | 1.08 | 2.29 | 0.27 | 0.95 | 2.36 | 2.10 | 1.01 | 1.59 | 1.05 | 0.74 | 0.55 | 0.71 | 0.52 | 0.29 | 0.24 | 2.50 | 3.04 |

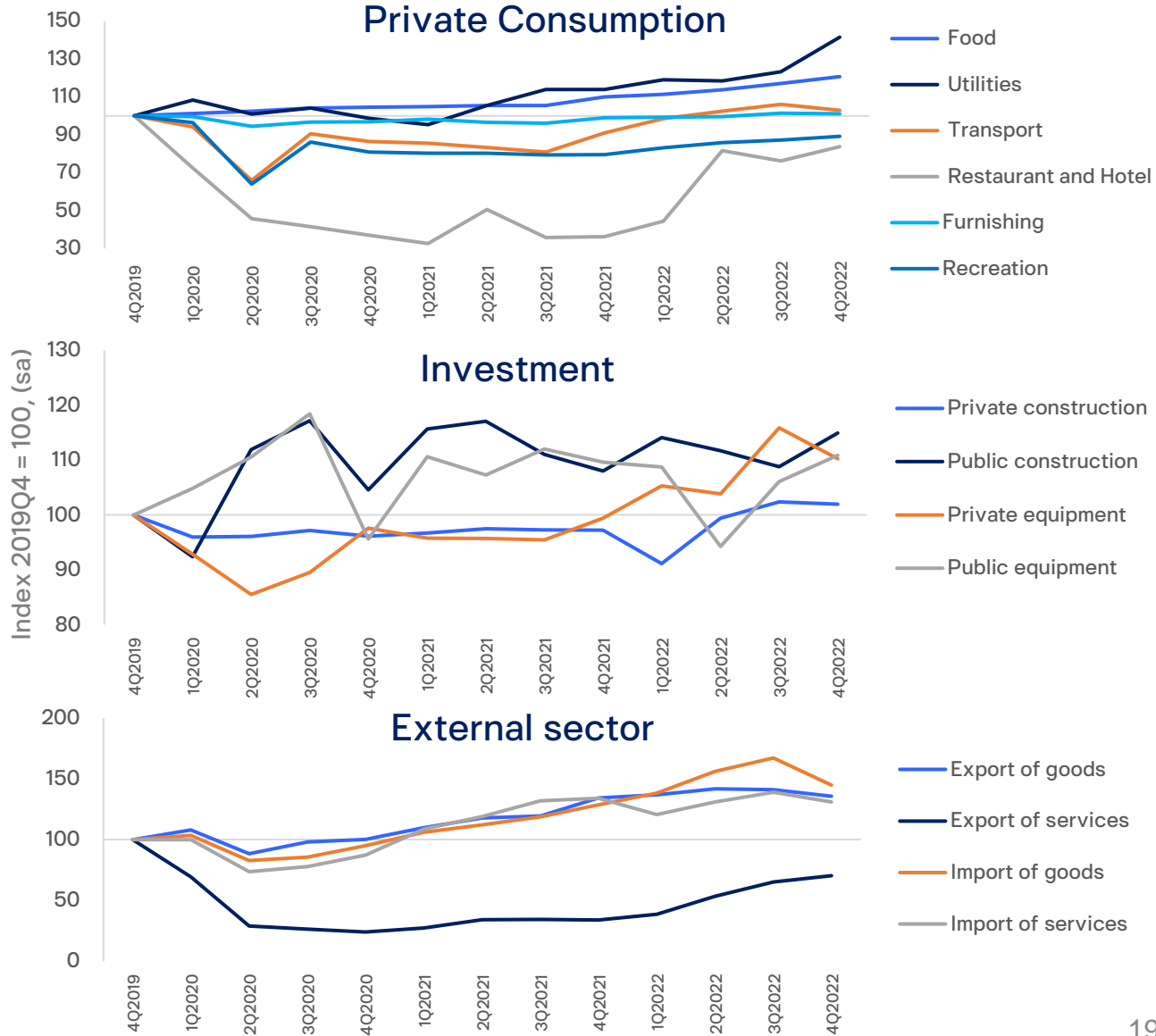
- The headline consumer price index (CPI) rose 5.02%YoY in Jan23, cooled to its lowest rate in nine months. This was due to the ease of energy and food prices in many categories. Besides, the core inflation was up 3.04%YoY.
- Still, the inflation rate remains above the central bank's target range of 1-3%, suggesting the central bank will raise its key interest rate further after hiking it at four consecutive meetings to try to bring prices back within target.

Thai GDP Q4/2022 expanded 1.4%, decelerating from previous quarter, which mainly due to the contraction of merchandise export, the full year of Thai economic growth of 2.6%

GDP growth composition (%yoy)



Growth path development from pre-covid level



PART 3

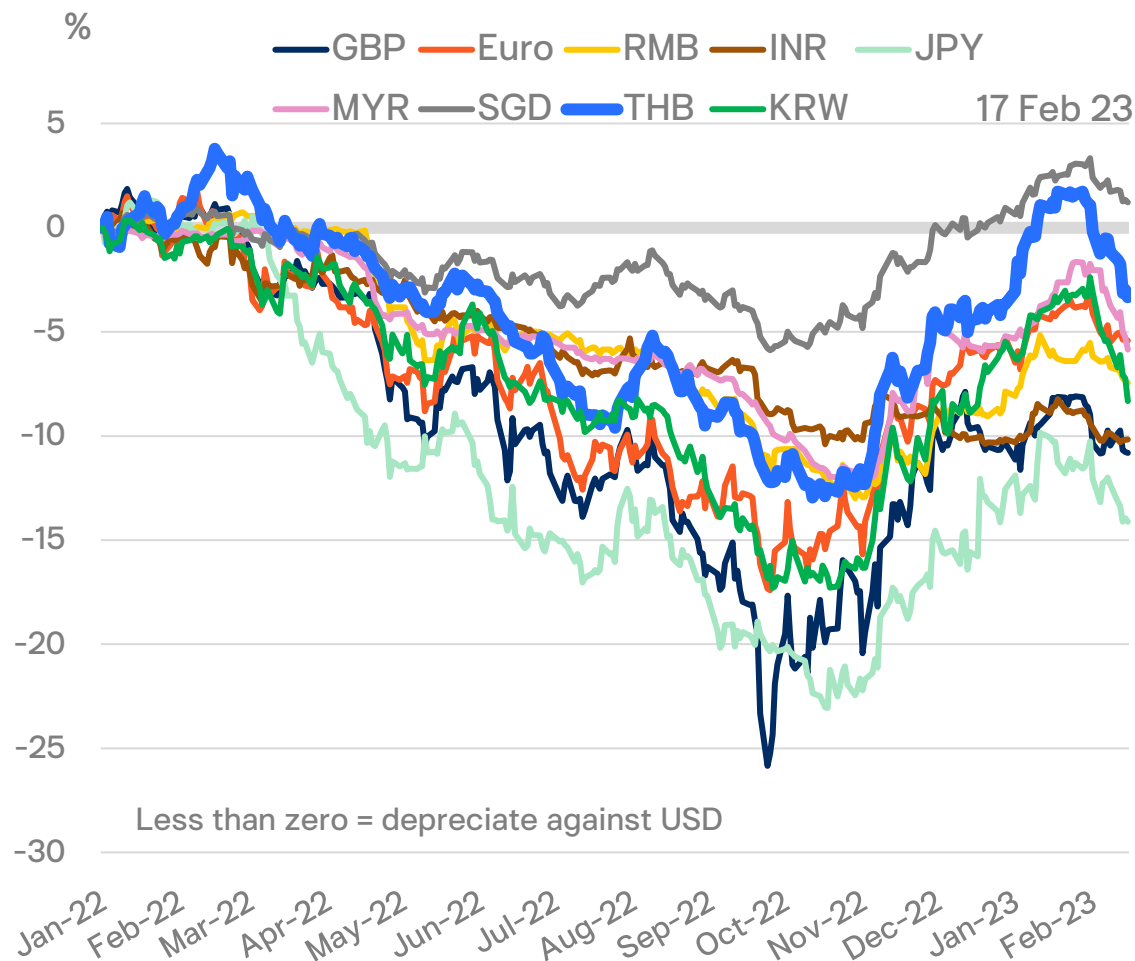
Financial Market



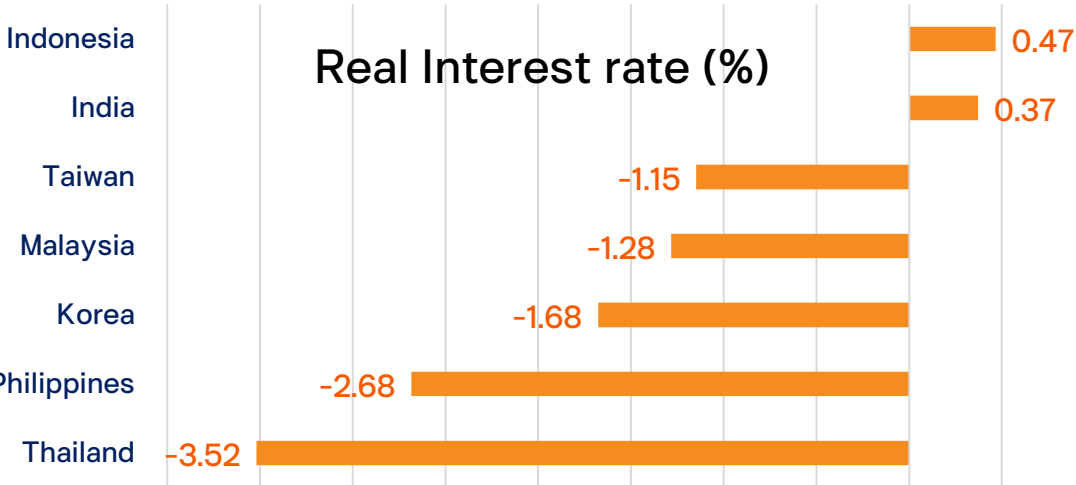
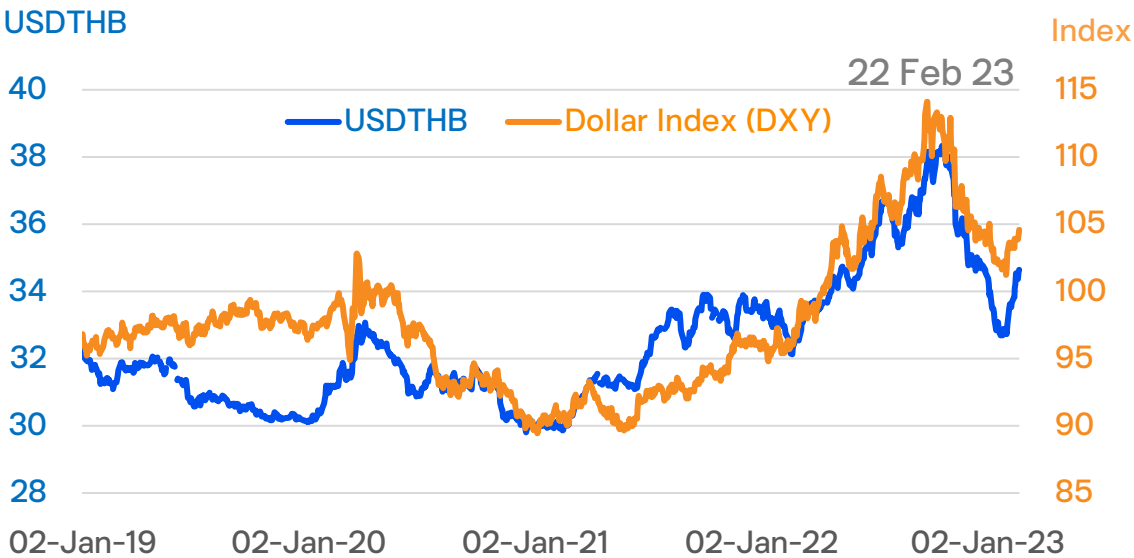
Recently US dollar has rebounded due to stronger-than-expected economic data



Major Asian currencies against USD

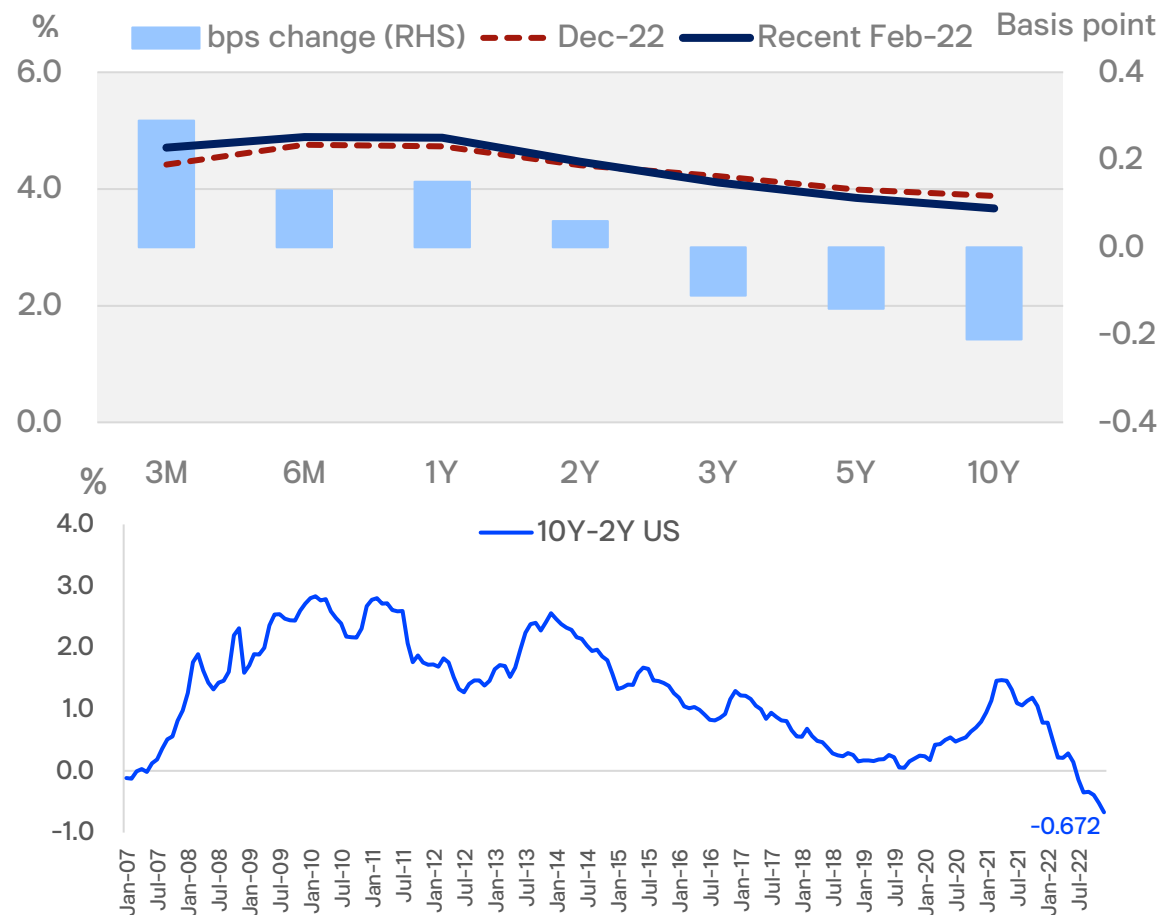


Dollar Index / USDTHB

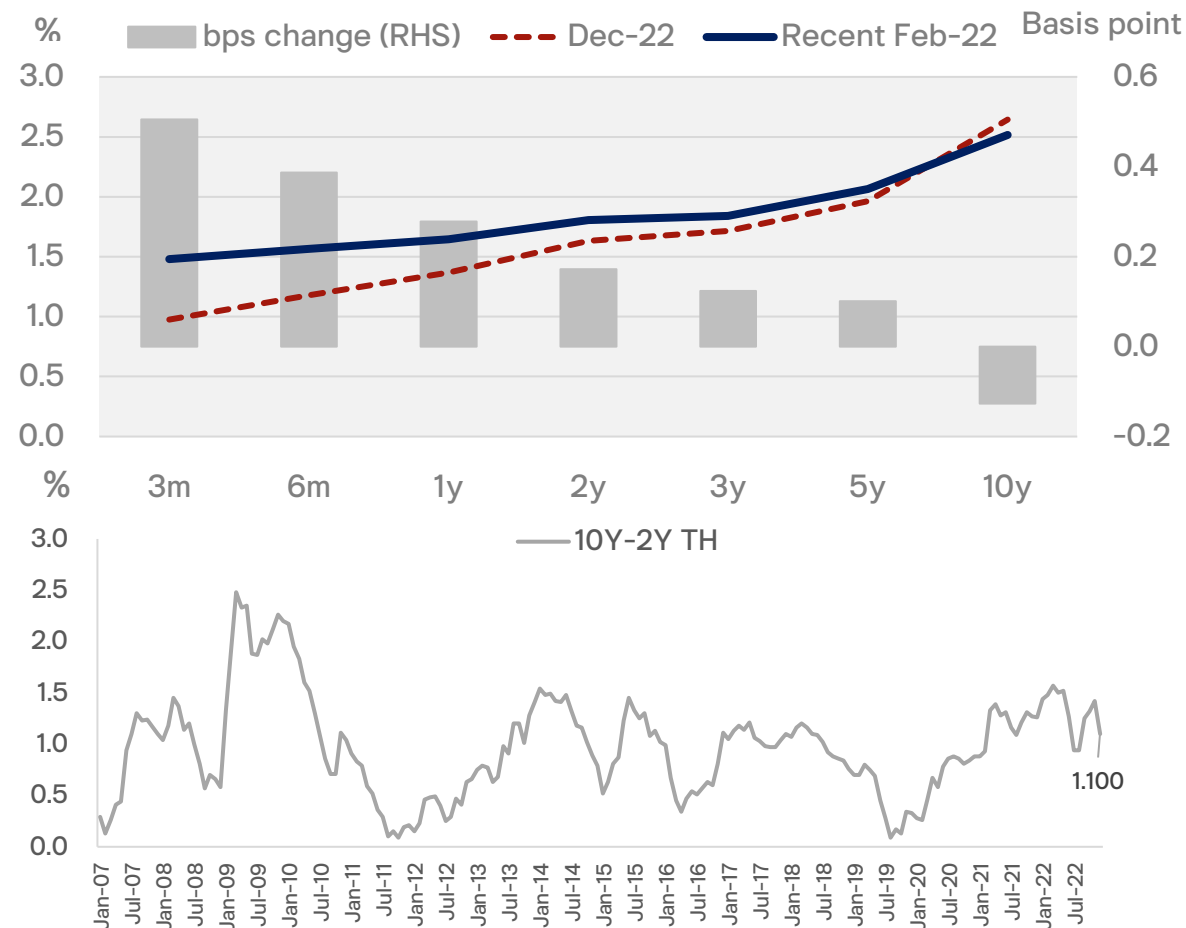


Investors enter long-term tenors due to global recession fear

US government yields

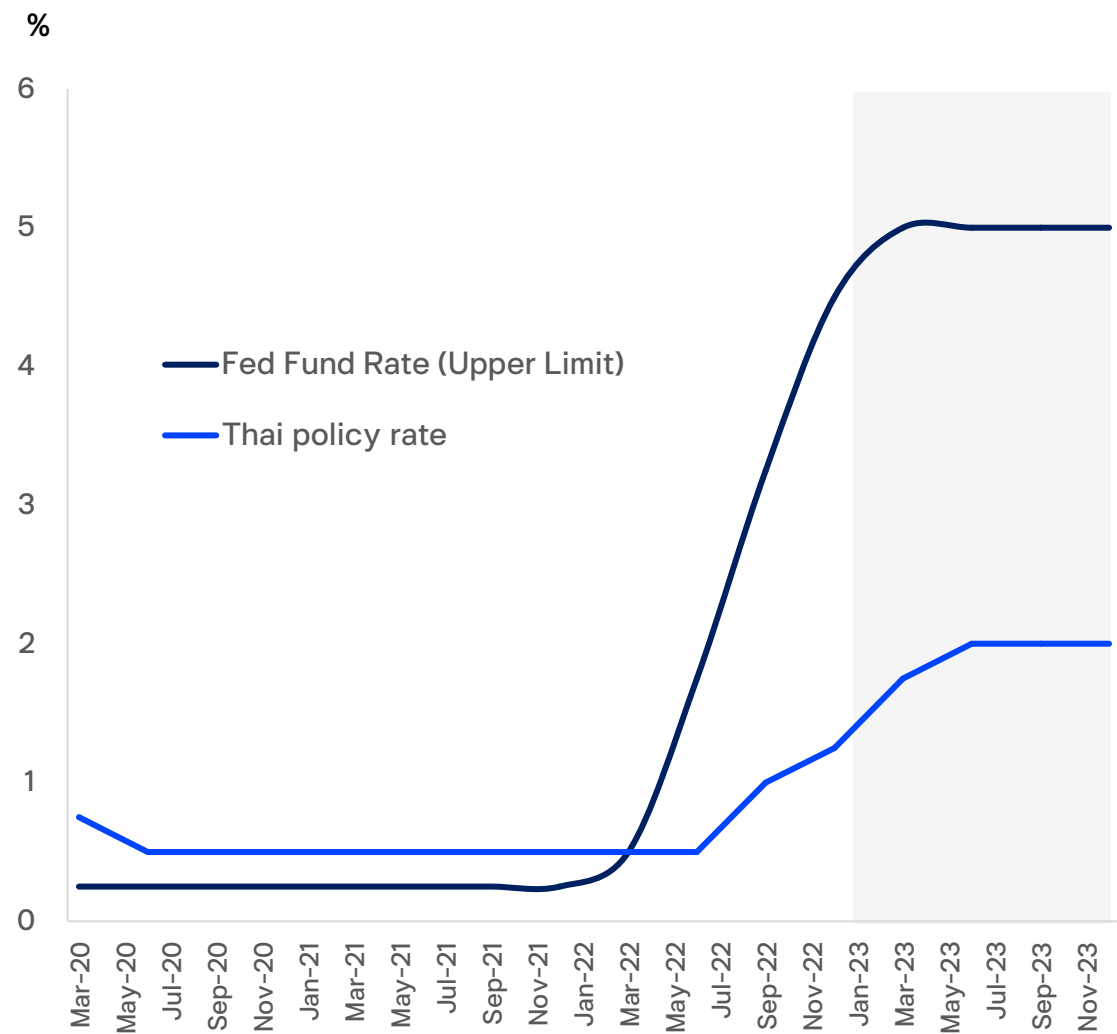


Thai government yield curve

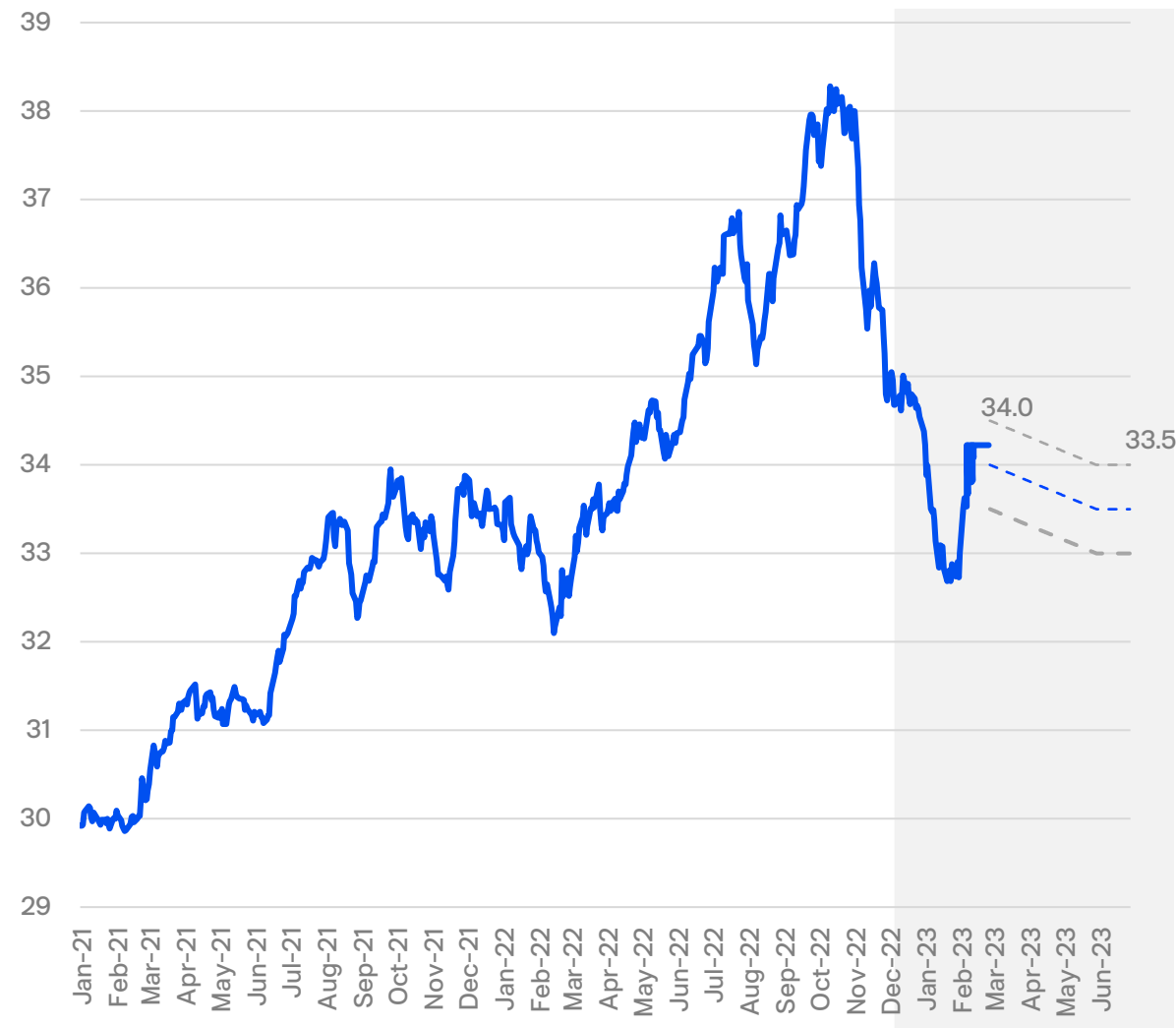


- For both US and TH government bond, Investors went into long term tenor due to recession concerns. Moreover, 10y/2y yield spread for US government bond dropped below zero, signaling approaching recession in US. Meantime, 10y/2y yield spread for Thai government bond increased above zero.

FED-BOT policy rate forecast



USDTHB Projection



Major currency moved by anticipation of monetary policy stance



USDTHB

- USDTHB ending 32.77 level in January and is hovered around 34.00 – 34.50 in February 2023.
- The dollar index edged up as economic data showed that U.S. business activity (PMI) unexpectedly rebounded in February to reach its highest level in eight months, adding to the data pointing that the retail sales remained robust, labor market maintained its tightness, while inflation stayed elevated.
- This raised the likelihood of the Federal Reserve to keep on its inflation-fighting interest hikes for longer after delivering 25-bps hike on 31 January to 1 February meeting.



EURTHB

- EURTHB ending 35.56 level in January and is hovered around 35.70 – 36.00 in February 2023.
- EUR slightly gained against the US dollar as the European Central Bank (ECB) delivered 50-bps hike in attempt to corral elevated inflation.
- ECB president Christine Lagarde commented that the central bank will "stay the course" on its current monetary policy tightening cycle, adding that price growth is still "way too high" albeit recent data suggest that inflation may have peaked.



JPYTHB

- USDTHB ending 0.252 level in January and is hovered around 0.254 – 0.257 in February 2023.
- The Japanese Yen was nursing steep losses against the US dollar amid uncertainty over the upcoming nomination of next Bank of Japan's Governor – Kazuo Ueda, who is expected to shed more light on ultra-loose monetary policy this year.
- On economic side, Japan's current account surplus fell sharply in December amid a widening trade deficit and a weak currency. This raised concerns over slowing growth of the Japanese economy, which is struggling with high inflation and waning overseas demand for exports.

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