

Economic and Financial Outlook

ttb analytics

Jun 2022



Executive Summary



Global Economy

- May PMIs data showed deteriorating situation in the manufacturing sector in European countries, while China improved. Lower number of Covid-19 cases in China led to government decisions to relax distancing measures, reviving outlook in service sector which is still in the contraction zone.
- U.S. inflation remained high, pressuring FED hike plan. the CPI index in May displayed further increase in price level. May CPI reached 8.6%, the highest level in 41 years. Inflation remained high due to high energy and grocery prices in the United States.
- European Union inflation continued to grow significantly 8.1% in May due to food and energy price. EU faces highest inflation in decades, ECB displayed interests to tighten in the second half of the year. ECB stated its intent to raise interest rate for the first time in the decade in July to combat high inflation.
- China's retail and factory activity rebounded as the government relaxed COVID-19 lockdowns measures in May Retail sales in may, despite still remained in a contraction zone at -6.7%, improved from April which shrank 11.1%. Industrial production improved to expand slightly at 0.2%

Domestic Economy

- As of Apr2022, Thai economy has been in a recovery phase but global slowdown and rising living cost dented outlook.
- Services and agricultural products expanded, while Manufacturing dropped. Main drags could be found in Metal products, Computer and Electronics, Furniture, representing supply chain disruption.
- External sectors grew in line with continuous export recovery and a strong rebound in foreign tourists, which mainly came from 3EU (France, Germany, UK), Malaysia, Singapore and Japan.
- Private consumption improved after Omicron cases dropped and tourism steadily resumed. Employment and farm incomes steadily improved with fragility.
- Investment marginally rose in line with domestic machinery sales. Business sentiment improved but only product cost still posed a drag. Construction material sales stabilized. Real estate continuously improved in some segments.
- Government has less room of stimulus package left for providing further support for Thai economy.
- Inflation in Apr22 grew by 4.5% due to rising energy prices.

Financial Market

- USDTHB remained in high level in June around 34.80
 35.20 level. Dollar strengthened further from market expectations on faster rate hike from FED to combat
 US inflation. Current Account returned to negative as trade balance collapsed from slowdown in exports.
- Thai baht depreciated around 5.2% in 2022 in line with other Asian currencies. Japanese Yen led the depreciation of Asian currencies, dropping more than 14% since last year
- DXY continued its long bullish run from last month, extending its run to 105 before dropping down from risk-off sentiments on future recession
- The Federal reserve hiked the policy rate by 75 bps in June, making the largest hike since 1994. Market widely expects 75 bps hike in the next Federal Reserve meeting in July to tame down inflation.
- Market expect MPC to hike rate in the third quarter as Thai inflation rose to 7.1% in May and there are growing pressures from fund outflows and policy rate differences with other countries. Short term bond yield spiked due to market expectations on future rate hike while long term yield fluctuated from recession concerns



Manufacturing tumbled in May as supply chain issues rose. China's service sector improved

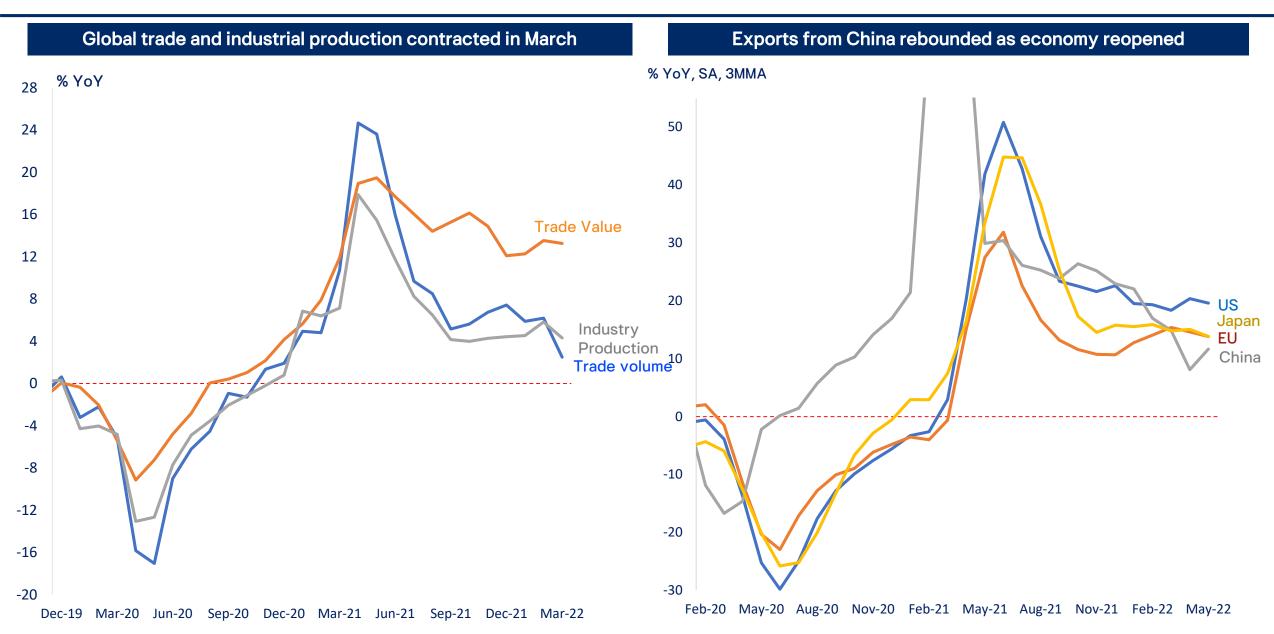


Manufacturing PMI										Se	rvice PN	Л					
	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22									
Australia	58.2	59.2	57.7	55.1	57.0	57.7	58.8	55.7		Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
China	50.6	49.9	50.9	49.1	50.4	48.1	46.0	48.1	Australia	51.8	55.7	55.1	46.6	57.4	55.6	56.1	53.2
India	55.9	57.6	55.5	54.0	54.9	54.0	54.7	54.6	China	53.8	52.1	53.1	51.4	50.2	42.0	36.2	41.4
Indonesia	57.2	53.9	53.5	53.7	51.2	51.3	51.9	50.8	Japan	50.7	53.0	52.1	47.6	44.2	49.4	50.7	52.6
Japan	53.2	54.5	54.3	55.4	52.7	54.1	53.5	53.3	·								
South Korea	50.2	50.9	51.9	52.8	53.8	51.2	52.1	51.8	India	58.4	58.1	55.5	51.5	51.8	53.6	57.9	58.9
Thailand	50.9	50.6	49.5	51.7	52.5	51.8	51.9	51.9	United States	58.7	58.0	57.6	51.2	56.5	58.0	55.6	53.4
Canada	57.7	57.2	56.5	56.2	56.6	58.9	56.2	56.8	Germany	52.4	52.7	48.7	52.2	55.8	56.1	57.6	55.0
United States	58.4	58.3	57.7	55.5	57.3	58.8	59.2	57.0	France	56.6	57.4	57.0	53.1	55.5	57.4	58.9	58.3
Germany	57.8	57.4	57.4	59.8	58.4	56.9	54.6	54.8	Italy	52.4	55.9	53.0	48.5	52.8	52.1	55.7	53.7
France	53.6	55.9	55.6	55.5	57.2	54.7	55.7	54.6	United Kingdom	59.1	58.5	53.6	54.1	60.5	62.6	58.9	53.4
Italy	61.1	62.8	62.0	58.3	58.3	55.8	54.5	51.9	Spain	56.6	59.8	55.8	46.6	56.6	53.4	57.1	56.5
United Kingdom	57.8	58.1	57.9	57.3	58.0	55.2	55.8	54.6	-	00.0	33.3	33.0	10.0		30.1	3.1.	30.3
Spain	57.4	57.1	56.2	56.2	56.9	54.2	53.3	53.8									

- PMIs which are early indicators for economic activities suggested that most countries have positive outlooks toward manufacturing and service sector in the expansion zone (above 50).
- May PMIs data showed deteriorating situation in the manufacturing sector in European countries as the impact from the Russia conflict prolonged, causing rising energy prices and supply chain issues. Lower number of Covid-19 cases in China led to government decisions to relax distancing measures, reviving outlook in service sector which is still in the contraction zone.

Global trade volume and production dropped in March, Chinese exports rebounded

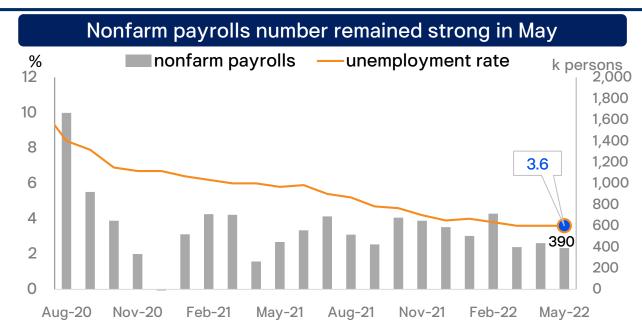


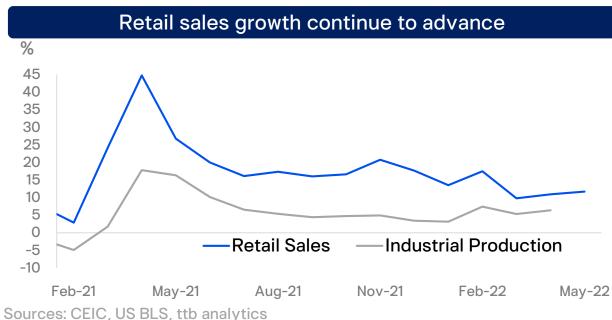


Source: CEIC and ttb analytics

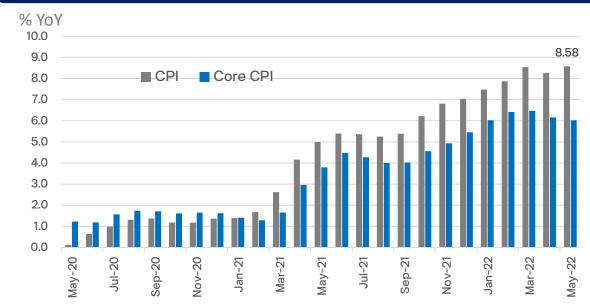
U.S. inflation remained high, labor market and retail sales data support aggressive rate hike







Inflation climbed due to rising prices of various goods

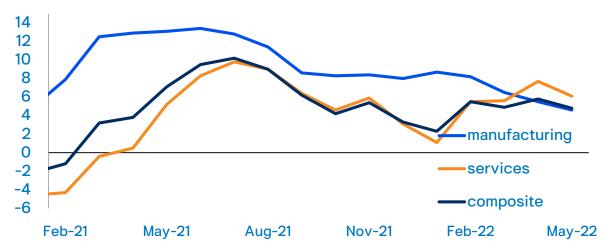


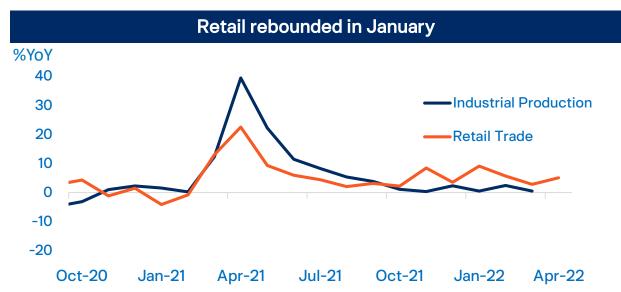
- In May, nonfarm payroll increased by 390,000 new jobs, exceeding market expectation. The numbers clearly showed strong improvement in U.S. labor market that would allow FED to aggressively hike in June. The unemployment rate remained at 3.6%
- Retail sales growth advanced in May, surprisingly, due to the rebound in automobile sales. Rising prices also partially affected the growth in retail sales. Excluding food and energy, core retail sales in April advanced as well.
- In April, price level started to taper. However, the CPI index in May displayed further increase in price level. May CPI reached 8.6%, the highest level in 41 years. Inflation remained high due to high energy and grocery prices in the United States. PCE rose 6.3% yoy in April, dropping from 6.6%, while core PCE rose 4.9% from 5.2% in March.

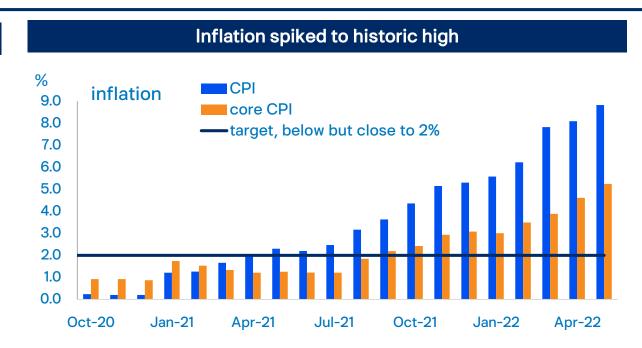
EU Manufacturing outlook deteriorated, energy price pushed Eurozone inflation



Service outlook returned as Omicron cases dropped %MoM, deviations from 50, + expansion - contraction 14 12



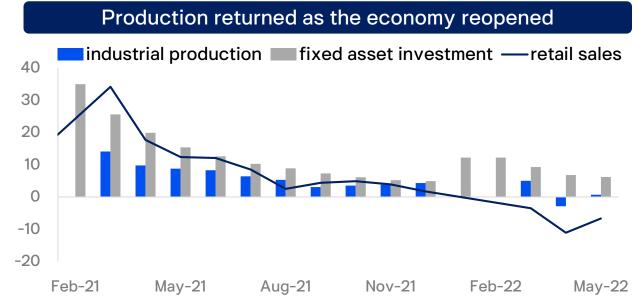


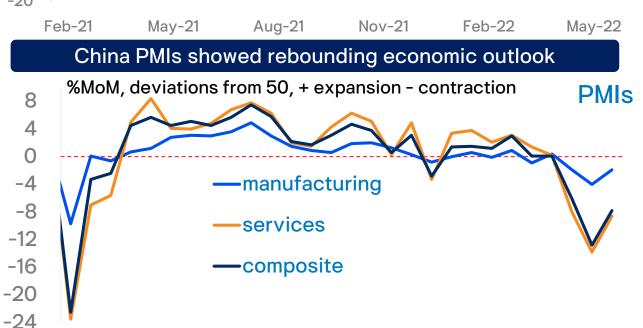


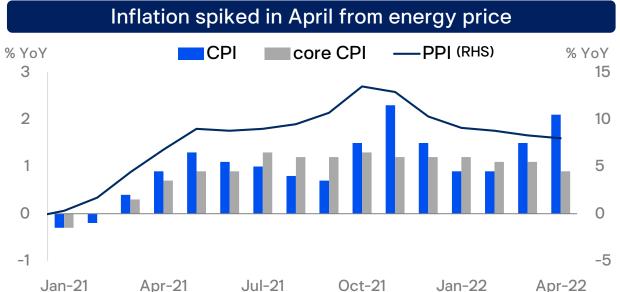
- In May, manufacturing sector faced higher pressure from supply chain disruption and higher energy cost. Service outlook decreased due to high prices of goods.
- European Union inflation continued to grow significantly 8.8% in May due to food and energy price. Core inflation increased from last month to 5.2%. EU faces highest inflation in decades, ECB stated its intent to raise interest rate for the first time in the decade in July to combat high inflation.
- Retail trade recovered slightly in April, despite rising prices pressured purchasing powers. Retail trade rebounded 5.1% in April while industrial production remained flat at 0.6%.

China's economy rebounded in May from Reopening, retail sales still contracted





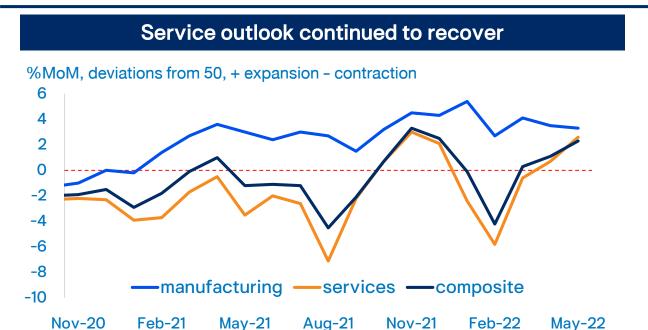


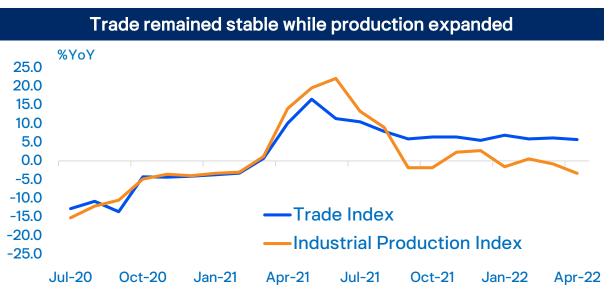


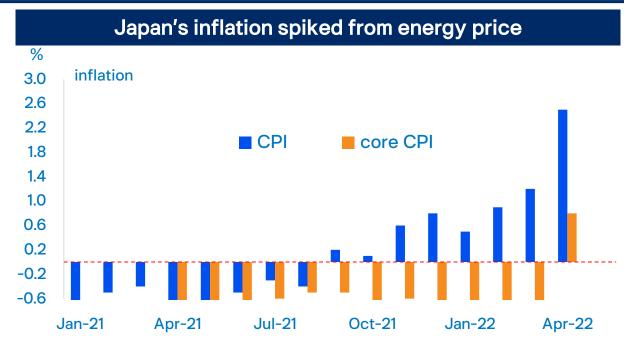
- China's retail and factory activity rebounded as the government relaxed COVID-19 lockdowns measures in May. However, since the government still strict to Zero-Covid policy, Chinese economy remains at risk to future lockdowns. May's PMI in both manufacturing and service sectors are still in the contraction zone but showed solid improvements.
- Overall economic activities returned as the economy reopened. Retail sales in may, despite still remained in a contraction zone at -6.7%, improved from April which shrank 11.1%. Industrial production improved to expand slightly at 0.2% while fixed asset investment dropped but remained positive at 6.2%
- Chinese officials stressed the importance of balancing Covid-19 controls and economic growths. The government plans to roll out economic stimulus plan in the second half of the year.

Japan's inflation spiked from imported energy prices, industrial production contracted the







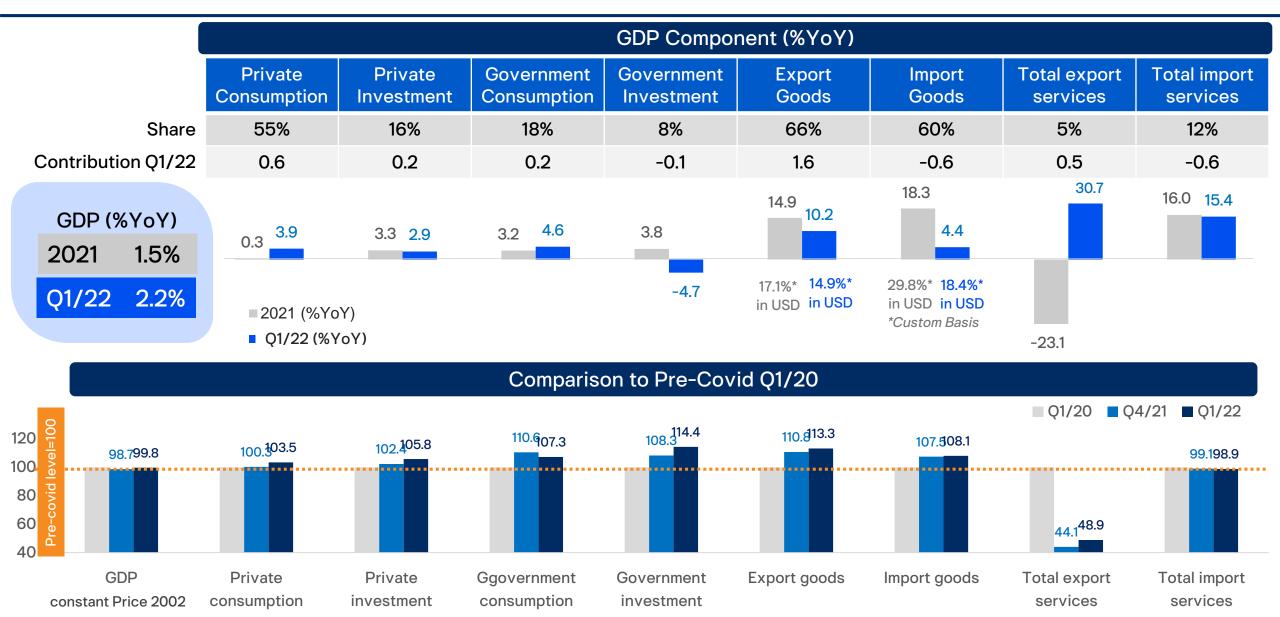


- Service outlooks rebounded further in May due to easing government measure. Impacts from supply chain disruption and higher material prices started to show in the manufacturing sector. The composite PMI continued to advance.
- The Bank of Japan continued its monetary policy ultra-loose, despite historically weak Japanese yen, Bond outflows continued. Inflation spiked in April, reaching above 2%, due to high energy price. Inflation expanded highest in seven years while core CPI also expanded 0.8%, highest since 2019.
- Trade stabled from last month. Trade index rose 5.7%. However, industrial production continued to contract by 3.4%



GDP Q1/2022: Thai economy slowly recovered from last year



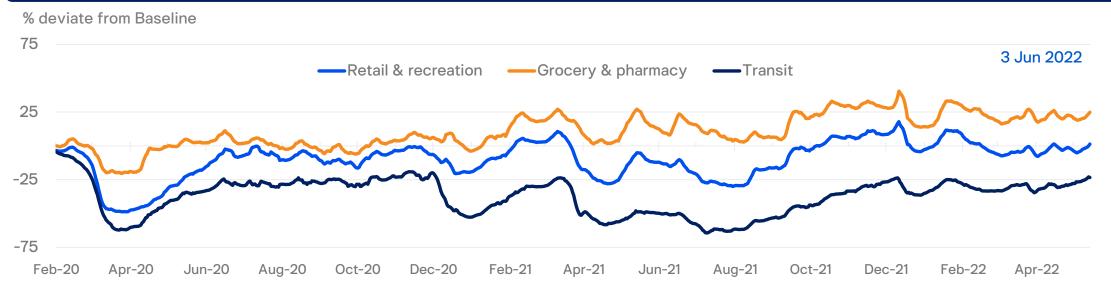


Source: NESDC and ttb analytics

Apr22: Thai economy's been in a recovery phase but world economy and living costs dented outlook

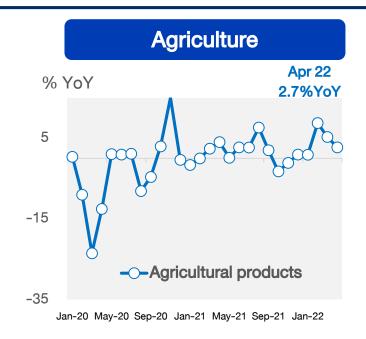
Coincident Economic Index (sa) Jan-21 Feb-21 Mar-21 Apr-21 May-21 Jun-21 Jul-21 Aug-21 Sep-21 Oct-21 Nov-21 Dec-21 Jan-22 Feb-22 Mar-22 Apr-22 Coincident Economic Index (sa) 99.8 100.1 99.2 99.9 99.8 99.0 98.1 99.0 99.9 100.5 100.7 100.7 100.9 100.7 98.1 100.9 Production Import Volume index (exclude Gold) 94.5 103.6 102.2 102.5 107.9 103.2 106.7 111.4 103.3 105.6 101.4 113.4 104.9 107.4 112.0 108.9 Manufacturing Production Index 97.6 97.2 99.5 98.8 99.0 99.0 93.2 88.9 96.2 98.5 99.7 102.8 99.5 99.6 99.4 99.4 Gross Value Added Tax at 2000 price (Million baht) 58.800 50.942 54.136 55.219 53.915 54.590 52.803 55.036 57.219 58.252 58.694 58.701 43.564 57.610 61.730 57.008 Sales Benzene. Gasohol & Diesel Index 99.8 107.2 88.3 81.8 87.5 74.9 70.4 80.0 86.6 91.8 102.7 98.3 95.7 81.8 89.0 96.0 VAT Hotel & Restaurant Index 27.0 36.4 38.3 20.2 18.9 28.2 21.5 21.1 29.1 36.8 45.1 48.1 48.8 38.3 48.7 51.0 Imports of Capital Goods at 2010 price (Million USD) 4,125.8 4,030.6 3,993.4 4,016.7 4,054.9 4,107.7 4,036.0 3,952.2 3,992.1 4,089.8 3,898.5 3,917.1 3,817.8 4,003.2 Domestic Machinery Sales at 2010 price (Million THB) 77,142 78,657 82,151 84,090 81,826 76,116 83,698 84,934 83,454 86,475 85,892 84,677 85,905 84.269

Google Mobility Report

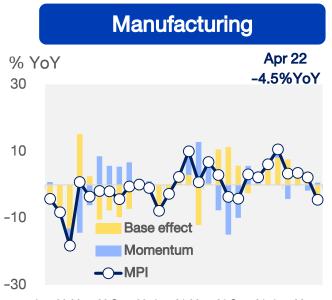


Manufacturing production declined, while Services activities rose in April 2022









Jan-20 May-20 Sep-20 Jan-21 May-21 Sep-21 Jan-22

Service Production Index

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22
Service Production Index	82.3	81.4	87.1	82.6	82.9	83.1	83.9	84.2	87.4	86.4	89.3	93.9	92.0	90.4	93.2	94.6
Wholesale and retail trade; repair of motor vehicles and m	90.7	90.8	92.5	92.8	94.5	95.6	94.8	93.6	95.4	97.7	99.5	100.6	101.9	103.3	105.3	105.6
Transportation and storage	62.6	64.0	70.4	63.2	64.2	64.4	61.8	60.2	62.4	63.4	65.3	70.3	67.9	66.9	72.2	71.3
Accommodation and food service activities	11.4	14.8	17.9	11.7	2.4	2.2	1.8	1.7	3.8	8.0	20.2	30.4	27.9	28.0	29.1	32.7
Information and communication	100.1	87.7	114.2	99.6	108.4	102.7	95.8	110.3	116.3	98.8	108.8	121.5	112.4	99.7	117.6	110.5
Financial and insurance activities	96.7	97.2	99.7	93.7	96.3	97.5	96.4	97.0	97.5	95.1	95.4	97.0	94.9	94.8	97.1	91.1
Real estate activities	105.0	101.2	102.0	93.5	97.4	99.3	116.7	116.4	121.3	121.1	128.1	133.9	124.5	124.9	124.8	118.8
Professional, scientific and technical activities	97.5	94.7	113.9	102.3	101.8	106.1	102.7	97.9	105.4	111.4	112.9	125.1	119.8	107.3	126.7	118.0
Administrative and support service activities	72.2	72.3	83.7	76.8	76.6	79.2	86.6	71.1	80.3	73.5	81.0	85.1	81.9	76.7	89.4	82.2
Public administration and defence; compulsory social secu	101.5	98.2	107.4	103.6	102.2	99.4	102.8	107.9	113.8	105.7	101.0	106.5	105.0	100.3	94.7	114.2

Regarding Industrial production, the drops were in Metals, Computer & Electronics and Furniture



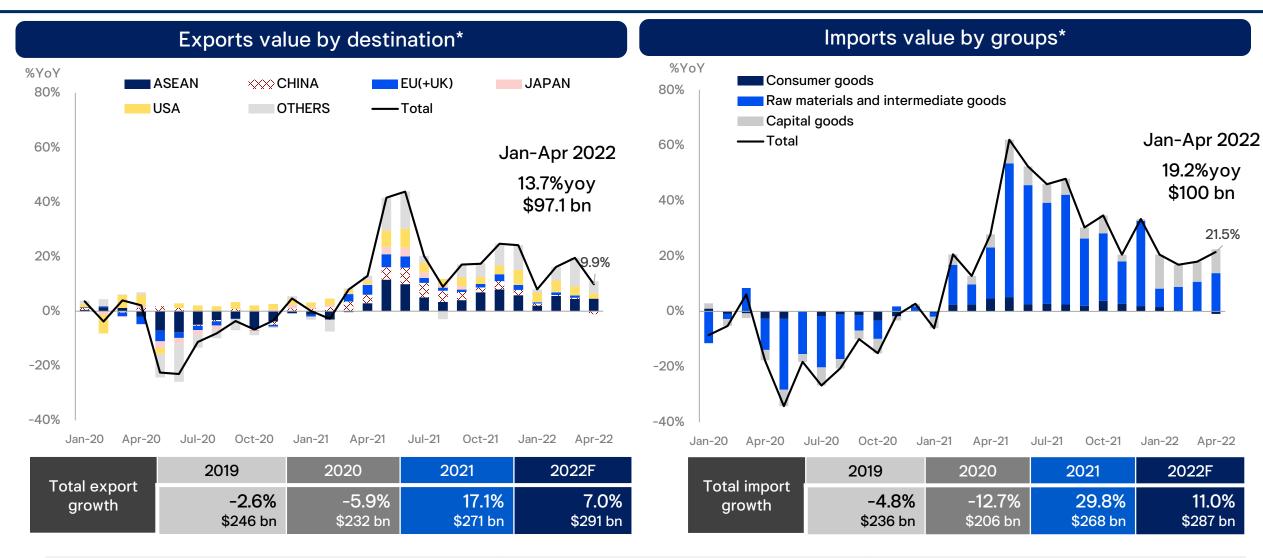
Manufacturing Production Index

Contribution	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22
Food products (16.2%)	0.0	-1.1	1.1	0.2	0.2	0.0	-1.6	-2.4	0.6	0.5	-0.4	-0.2	0.2	0.4	-0.4	-1.1
Beverages (3.8%)	0.1	0.2	-0.2	1.9	1.3	0.0	-0.8	-0.6	0.1	-0.4	0.3	0.3	-0.3	0.3	0.3	0.0
Tobacco products (0.5%)	0.0	-0.1	0.2	0.1	0.0	-0.1	-0.1	0.0	0.4	-0.3	-0.1	-0.2	-0.1	0.0	-0.2	-0.1
Textiles (1.6%)	-0.1	-0.3	-0.3	0.4	0.9	0.5	0.3	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Wearing apparel (1.9%)	-0.2	-0.8	-0.2	-0.1	-0.4	-0.1	0.0	-0.2	-0.1	0.3	0.3	0.1	-0.1	0.3	-0.2	-0.1
Leather products (0.9%)	0.0	-0.1	-0.2	0.3	1.4	1.3	0.6	0.2	0.4	0.6	0.2	0.4	0.0	0.1	0.2	0.1
Paper products (2.9%)	0.2	0.1	0.0	0.1	0.4	0.3	0.1	0.4	0.0	0.0	-0.1	-0.2	-0.2	-0.5	-0.1	-0.4
Coke and refined petroleum products (9.6%)	-1.0	-1.7	-1.1	0.7	0.3	-0.1	-0.5	-0.7	-0.3	0.5	1.1	0.6	0.9	1.5	1.6	1.2
Chemicals (8%)	-0.2	-0.2	0.0	0.6	0.9	1.2	1.9	-0.1	-0.7	0.0	-2.5	0.0	-0.5	-0.7	0.0	0.2
Pharmaceutical products (1.2%)	-0.2	-0.2	-0.2	-0.3	-0.1	-0.1	-0.2	-0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.3	0.3
Rubber and plastics products (8.9%)	-0.2	-0.2	0.5	0.5	2.6	2.4	0.9	0.0	0.4	0.4	-0.2	0.7	0.3	-0.2	-0.3	0.8
Other non-metallic mineral products (5.5%)	-0.1	-0.5	0.2	-0.1	0.6	0.5	-0.5	-0.5	-0.2	0.0	0.0	0.2	-0.1	0.0	-0.2	0.1
Basic metals (3.6%)	0.3	0.6	0.8	1.0	1.4	1.0	0.1	0.2	0.5	0.3	0.2	-0.4	-0.6	-0.3	-0.2	-0.2
Fabricated metal products (1.9%)	0.0	0.0	0.3	0.2	0.6	0.5	0.3	-0.2	-0.3	-0.1	-0.1	0.0	0.1	0.2	0.0	-0.2
Computer and electronic products (8.9%)	0.3	1.3	0.8	1.4	1.8	1.8	0.5	0.4	0.5	-0.2	0.4	0.6	0.2	-0.1	-0.2	-0.7
Electrical equipment (3%)	0.2	0.2	0.7	1.0	1.5	0.3	-0.3	-0.4	-0.3	-0.2	0.0	0.1	0.0	0.0	-0.1	-0.1
Machinery and equipment (2.7%)	-0.1	-0.1	0.1	1.4	2.4	0.4	0.1	-0.3	0.7	0.3	0.1	-0.1	-0.1	-0.1	-0.3	-0.2
Motor vehicles (13.9%)	-0.5	0.6	0.9	36.4	21.6	13.3	5.0	-1.0	-0.7	0.7	-0.2	1.0	0.4	0.0	0.4	1.7
Other transport equipment (1.1%)	0.0	0.0	0.5	1.2	1.6	1.4	-0.3	-0.5	-0.4	-0.3	-0.1	-0.1	-0.2	-0.3	-0.2	
Furniture (1.5%)	0.4	0.4	0.7	0.4	0.5	0.3	0.3	-0.1	0.3	0.5	0.3	0.5	0.1	0.2	-0.3	-0.3
Others (2.4%)	-0.1	0.0	0.2	0.7	1.6	2.2	0.4	-0.1	-0.1	0.1	0.3	0.7	0.1	0.2	0.0	0.5
MPI (%YoY)	-2.7	2.4	10.1	0.8	6.8	3.0	-3.6	-4.1	3.2	2.3	6.2	10.7	3.4	3.6	2.3	-4.5

Source: OIE ttb analytics

In 2022, Thai exports remain in a recovery path despite new Omicron Variant outbreak





 Jan-Apr 2022, Thai exports grew by 13.7 %yoy to \$97.1 billion, while imports rose by 19.2% to \$100 billion, resulting in a trade deficit of \$2.85 billion.

2022 Export Growth Projection



Export by Country (%yoy)

Country	Y2021	2022F
Total	17.1%	7.0%
USA	21.7%	9.6%
EU	21.4%	4.9%
ASEAN	14.8%	11.5%
Middle East	22.9%	9.7%
Japan	9.3%	4.2%
Australia	11.3%	0.0%
China	25.0%	4.2%

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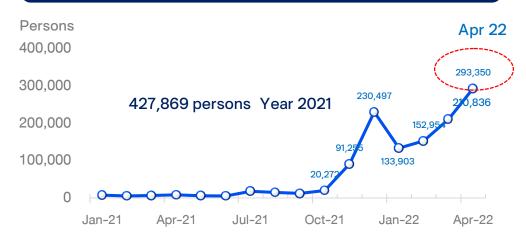
2022F H1	2022F H2
9%	5.4%
17%	3%
6%	4%
14%	9%
18%	1%
0%	8%
-4%	4%
-3%	11%

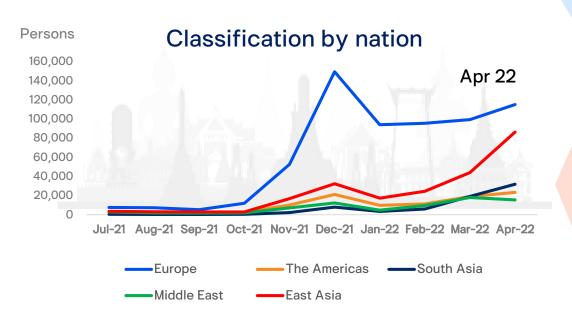
- Export Projection for full year 2022 is at 7.0% while the first half of the year growth is expected at 9% and second half is at 5.4%
- The YOY growth rate is expected to show less digits during the second half of the year due to a strong growth base last year.

Foreign tourists significantly improved, mainly from EU, Singapore, Malaysia and Japan

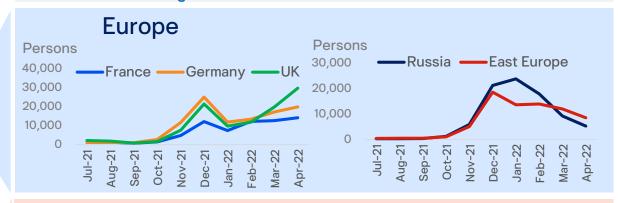


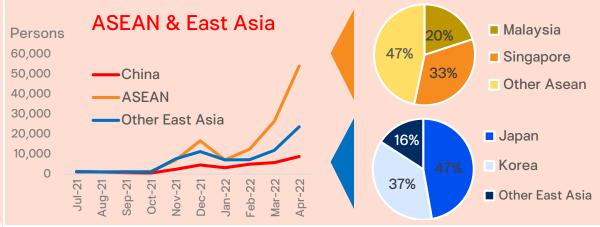
Total Foreign Tourist Inbounds





As of April22, foreign tourist significantly improved after Thai government eased border entry restriction. The major group came from Europe, of which France, Germany and UK accounted for 55% of total European figure. Russia and East Europe declined after war began. Singapore, Malaysia and Japan was the main Asia contributors. Indian tourists increased after signed mutual Air Travel Bubble agreement.

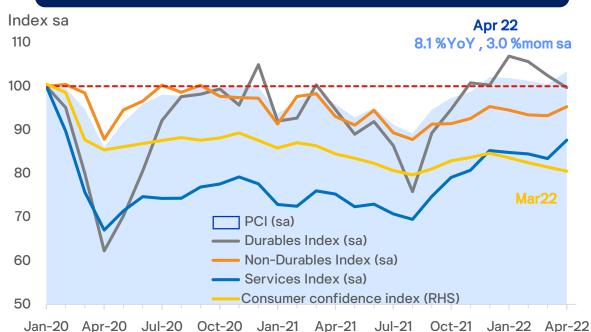




Private consumption improved after Omicron cases dropped and tourism steadily resumed

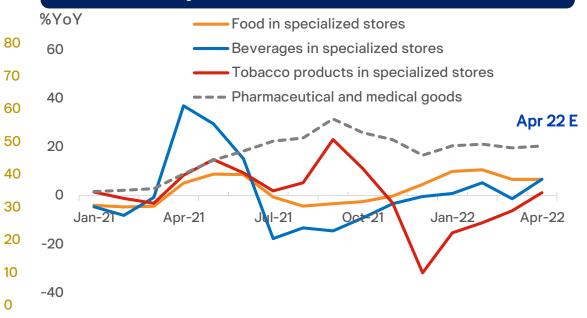






- Private consumption in April 22 strongly increased, partly contributed by a rise in services and non-durable goods after domestic new Omicron-infected cases started to decline and a recovery in tourism sector. Likewise, an increase in non-durable could be explained by a rise in retail sales of food and beverage categories.
- Employment improved and farm incomes recovered;
 however, confidence declined amid rising living cost.

Retail Payment across different channel



Employment M33

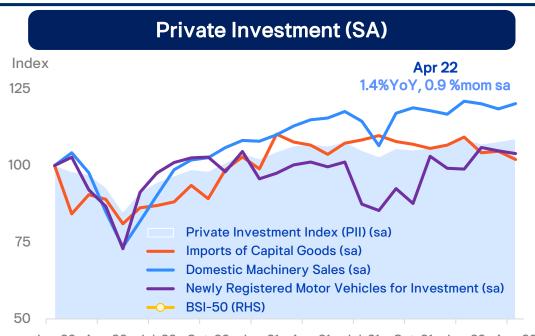
Thousand persons 11,800 11,600 11,400 Apr 22 11,200 11,000 10,800 Employed under article 33 (sa) 10,600 Jan-20 Jul-20 Jan-21 Jul-21 Jan-22

Farm Incomes



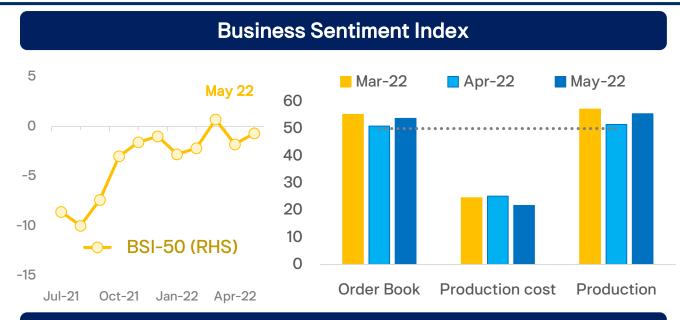
Private investment marginally rose in line with domestic machinery sales



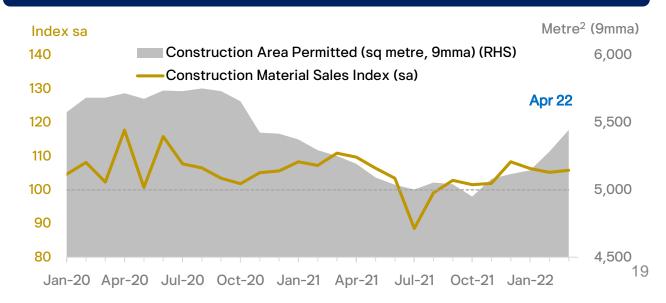




- Private investment marginally rose in line with domestic machinery sales. Meanwhile vehicles for investment and imports of capital goods declined. Busines sentiment in May relatively stable due to improvement in order book and production activities. Only production cost dragged business sentiment.
- Construction material sales stabilized from last period but permitted construction areas rose considerably. Real estates sector has been in recovery cycle, especially those low-rises in suburban are and condominium in BKK.

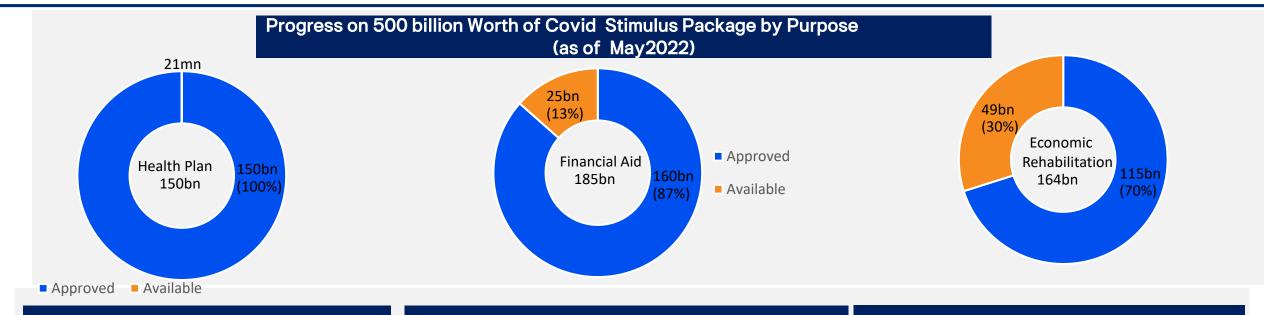


Construction sector (SA)

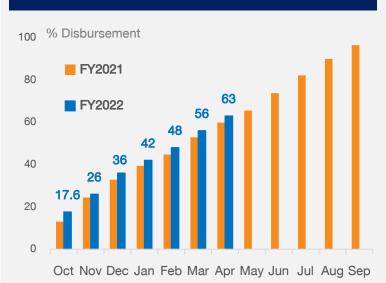


THB74bn is the leftover liquidity from THB500bn emergency loan decree to support economy in 2022

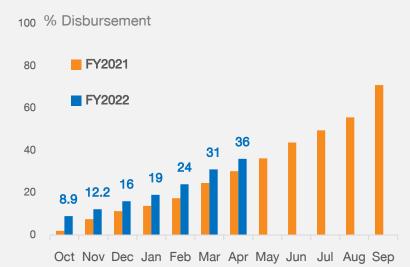




Current Expenditures(FY22): 1,564bn



Public Investment Expenditures(FY22): 220bn



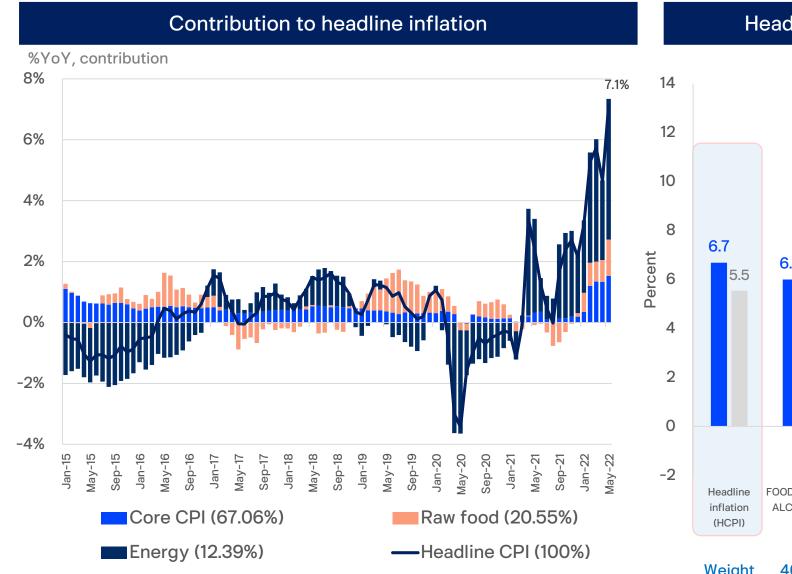
State Owned Enterprise Investment: 100bn



^{*} Accumulated disbursement /Full year Plan

Inflation forecast 2022 rises due to energy and raw food prices





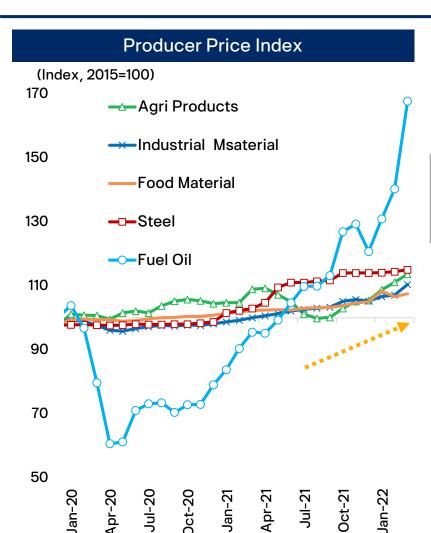
Headline inflation 2022 Forecast (JUNE 2022)



Source: MOC and ttb analytics 21

Industry Impact from High Raw Material Price





%Raw Material Price Change

Cost	Y2021	Y2022F
Fuel oil	39.8%	33.1%
Steel	11.3%	5.4%
Agri.Products	1.8%	8.1%
Industrial Material	4.9%	5.0%
Food Material	3.2%	5.0%

Projection

Calculated Cost impact

Χ

%usage of input

(Cost Structure from Input-Output Table 2015

Price Change

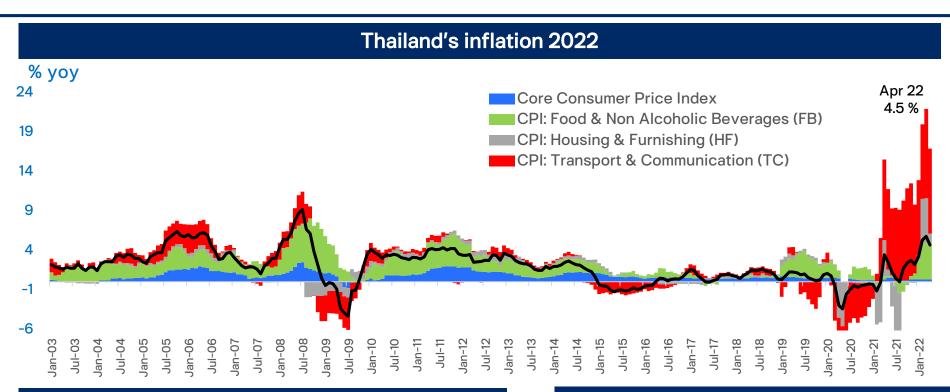
(from 2022 price change projection)

% Cost of Goods Sold Increase 2022F **Energy Producer Transportation & Logistics** 15.2% Aquatic Animal 13.2% Electricity & Water Suply 11.2% Mining 7.8% Chemical 7.6% Rice 7.3% Agro Products 6.8% Avg Food 6.4% %COGS **Animal Farming** 6.0% Steel & Metal Producer 5.7% Increase Construction Material 5.7% =5.7% **Hospitality Business** 5.4% Furniture and Household... 5.4% Beverage Producer 5.3% Contractor 5.3% Machinery Producer 5.1% Electronic/Computer & Parts 5.1% Containers , Packaging & Parts 5.0% **Consumer Goods** 5.0% Electronic/Electric Home... Rubber 4.9% Papers & Printing 4.8% **Fashion Products Producer** IT & Telecommunication 4.3% Real Estate 3.8% Healthcare 3.7% Consumer Goods Retailer 3.5% **Consumer Services** 3.4% **Business Services** 2.9%

Source: Ministry of Commerce, NESDC (I-O Table 2015) and ttb analytics

As of Apr22, Thai inflation grew by 4.5% due to rising energy prices.





(%YoY)	Apr-22
Headline inflation	4.5
Core (67.1%)	2.0
Raw Food (20.6%)	3.5
Energy (12.4%)	21.1



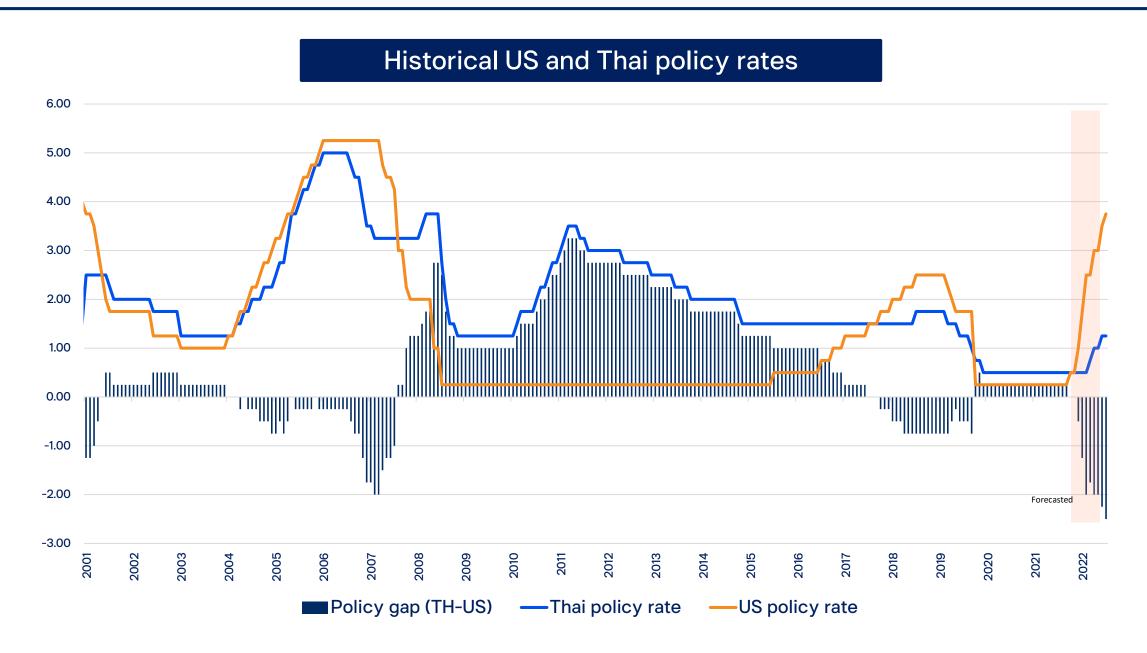


Source: MOC and ttb analytics



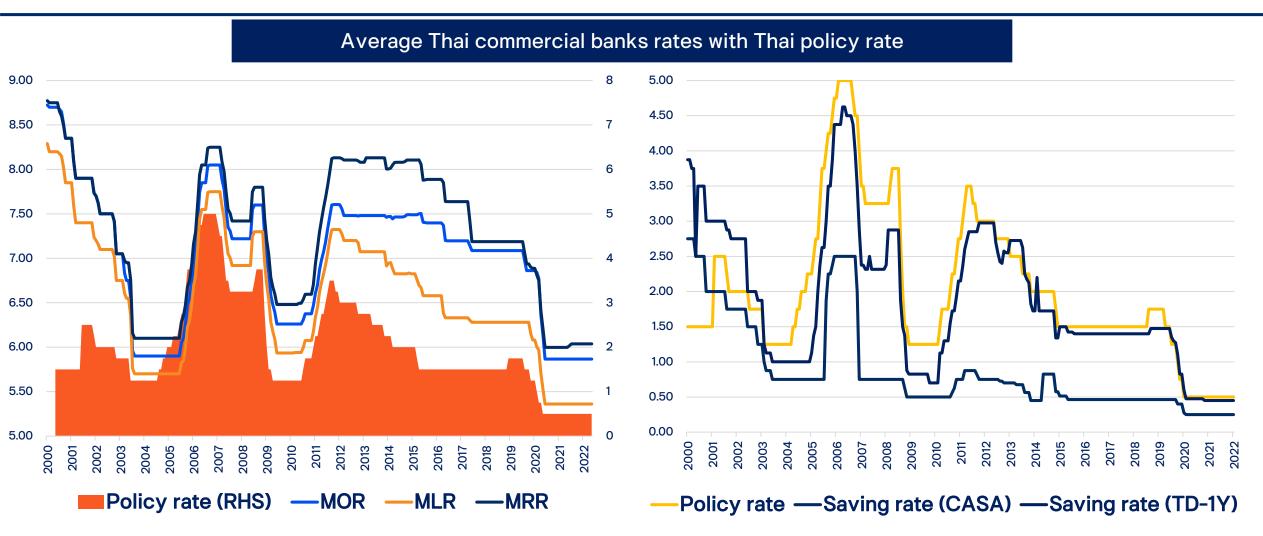
TTBA expects MPC to hike rate in 22Q3, policy gap will keep widening





Historical bank administered rates with Thai policy rate



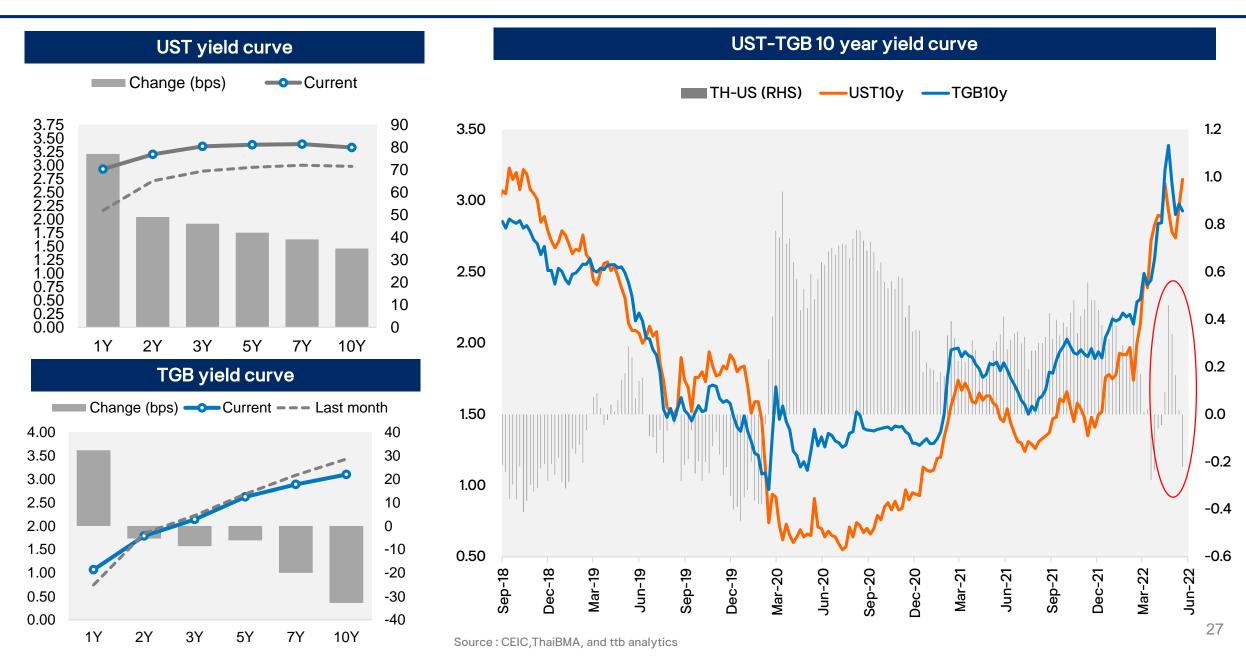


- In the past there were 2 rate hiking cycles 1st: 2004-2006 and 2nd: 2010-2011
- Overall, banking rates tend to move along Thai policy rate. Lending rates seemed to move faster in comparison to deposit rates

Source: BOT, CEIC and ttb analytics 26

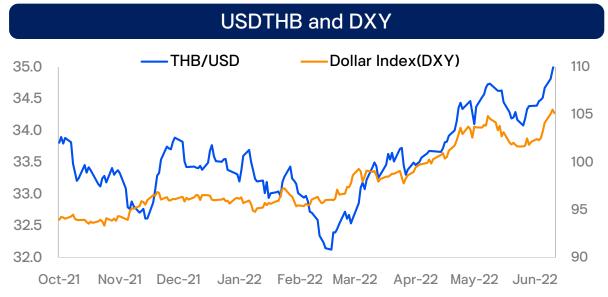
Spikes in short-term TH and US bond yield due to market expectations on future rate hikes



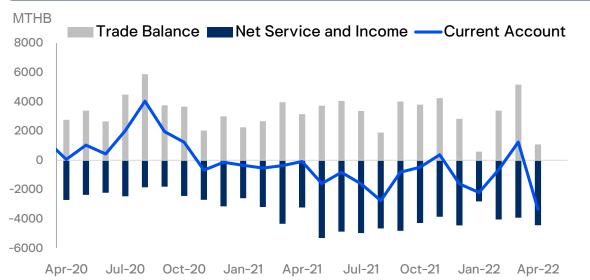


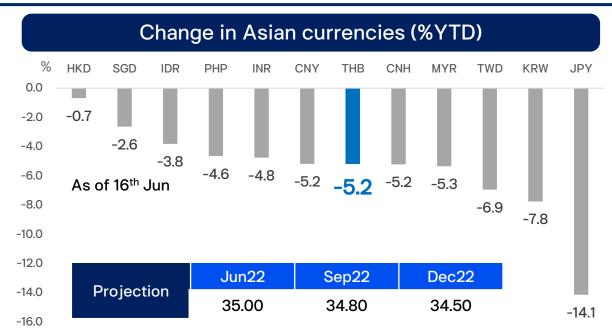
Dollar Strengthened to 20 years high, causing USDTHB to reach 6 years high











- USDTHB remained in high level in June around 34.80 35.20 level. Dollar strengthened further from market expectations on faster rate hike from FED to combat US inflation. Current Account returned to negative as trade balance collapsed from slowdown in exports.
- Thai baht depreciated around 5.2% in 2022 in line with other Asian currencies. Japanese Yen led the depreciation of Asian currencies, dropping more than 14% since last year
- DXY continued its long bullish run from last month, extending its run to 105 before dropping down from risk-off sentiments on future recession



