Tue, Jul 5, 2022

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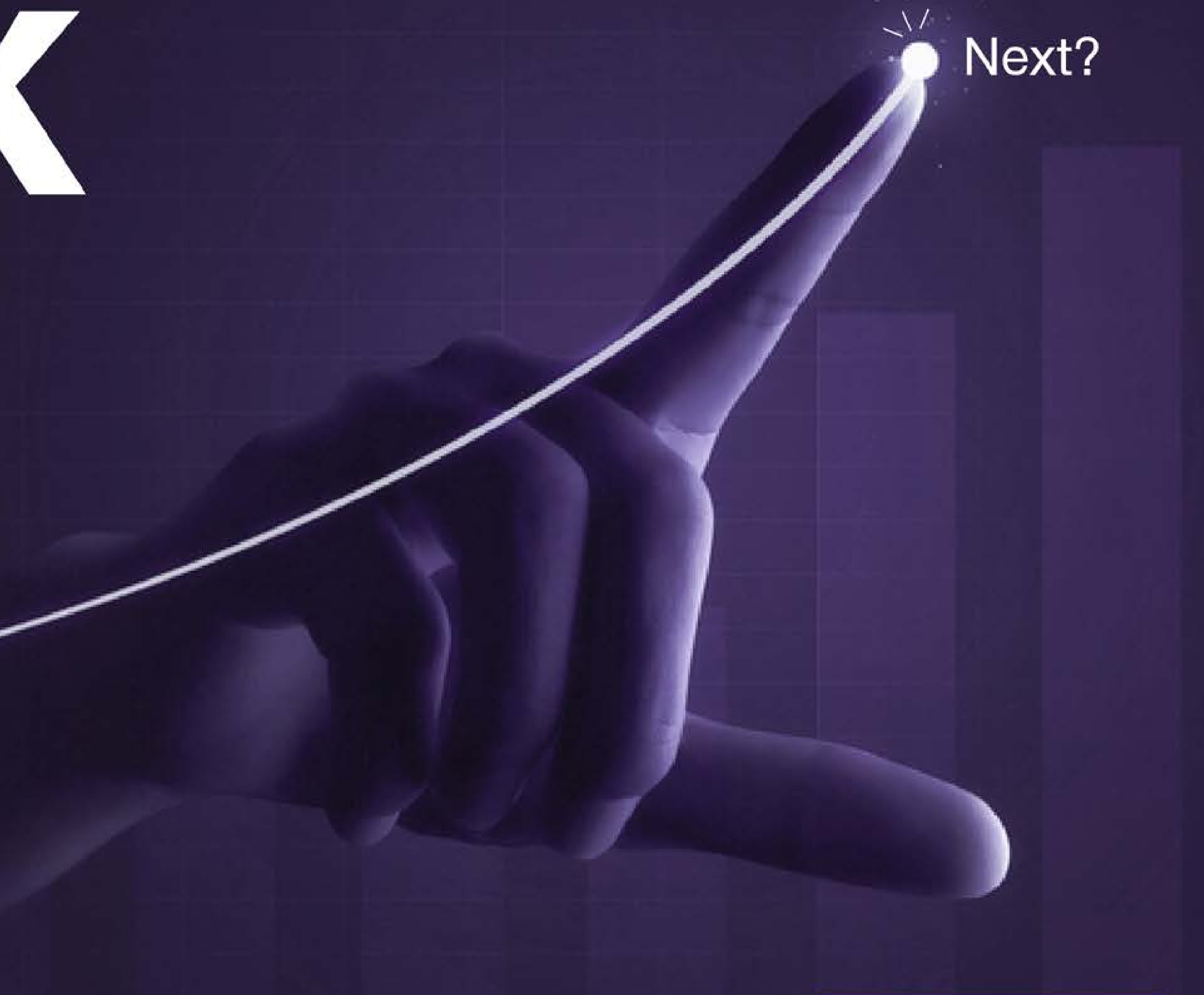
SCB Securities Company Limited

Q2/2022

Outlook

Economic Outlook for 2022

as of Q2/2022



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Thai Economic Outlook For Q2/2022

Thailand's road to economic recovery is in turbulent times amidst global economic instability and geopolitical uncertainties.

The Russia-Ukraine war and China's zero-Covid policy have disrupted global supply chains and resulted in a commodity crisis— as evident in soaring food and fuel prices. Against this backdrop, inflation has been accelerating, and the global economy is poised for a slowdown. **The Federal Reserve (Fed) and major central banks opted for monetary tightening in hopes of quelling inflation surges.** EIC expects the Fed to hike its policy rate at every meeting through the remainder of 2022 (seven rounds in total), possibly with a 50-bps hike in each of the next three meetings—in Jun, Jul, and Sep—following the quantitative tightening set off in June. This tightening global financial condition would fuel capital flow volatility and take a heavy toll on currency values, financing costs, and household wealth—particularly in developing economies, where external exposures remain fairly high. That is to say, **the global economy will soon enter a post-pandemic era of instability, where many countries will face higher risks of economic recession.**

The tourism and service sectors will replace export-oriented manufacturing as Thailand's economic driver.

Despite previous robust growth, Thai exports will likely lose pace alongside a slowdown in demand from trade partners. In particular, the Chinese market still faces risks from stringent lockdown rules. Looking ahead, the tourism and service sectors should regain momentum as people resume their outdoor activities, given higher vaccination rates, lockdown easing, and Thailand's reopening to foreign tourists. Pent-up demand, especially from high-income households, will support a domestic rebound.

EIC revised Thailand's economic growth forecast upward to 2.9% (from 2.7%), with an upbeat outlook after Thailand's reopening, but high inflation is among critical risks that could weigh down domestic spending.

The country reopening to foreign visitors and easing border restrictions in Thailand and around the world will buttress a rebound in the tourism and service sector, Thailand's primary employment source. EIC anticipates **7.4 million incoming tourists this year** (from the previous estimate of 5.7 million). Furthermore, the agricultural sector would gain a boost from buoyant crop yields and rising food prices alongside other commodities, thus providing thrust to household spending. On the other hand, Thai exports might offer a contrasting outlook. Figures should improve in terms of value in baht but see a slowdown in terms of trade volume. We anticipate **average annual headline inflation at 5.9%—the 24-year high—in 2022.** As the government starts to pull back living cost subsidies, there will be pressures on domestic purchasing power and consumption, particularly those of the urban middle class, whereas businesses might delay some annual investment projects due to higher costs.

EIC expects the MPC to make one rate hike in Q3/22, while loan demand tends to accelerate further.

Based on our assessment, inflation spikes and an upbeat economic outlook after Thailand's reopening would prompt the MPC to make one rate hike in Q3/22 to 0.75% in order to tackle the risks of price instability and curb inflation expectations ahead. Still, the MPC would gradually wind down its ultra-easy monetary policy to buttress fragile economic recovery, given the long-lasting economic scars from high unemployment, stagnant income rebound, and ballooning household debt burdens.

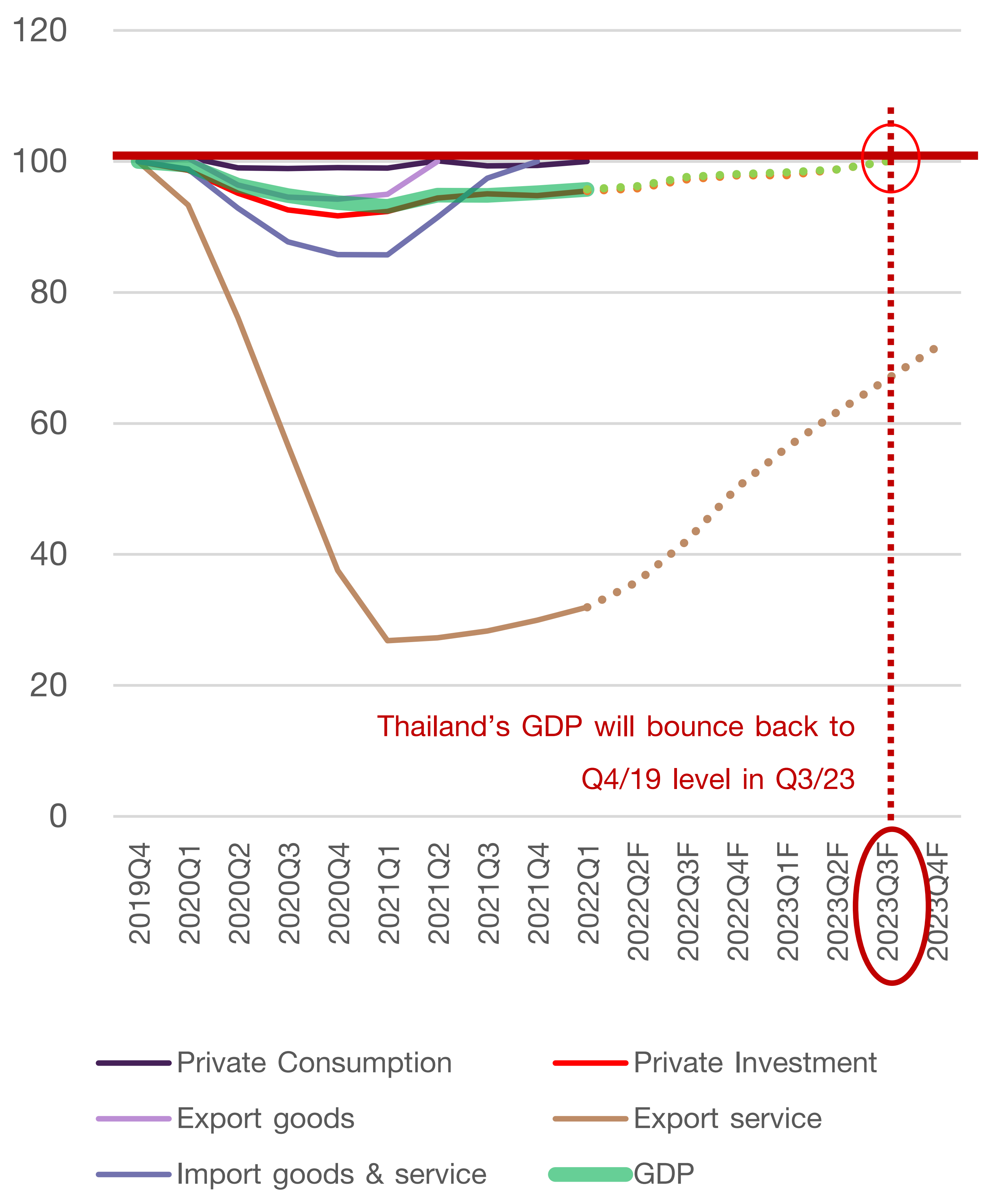
EIC revised Thailand's GDP growth forecast upward to 2.9%, ushered in by a buoyant rebound in the service, tourism, and agricultural sectors. But exports will likely lose pace alongside the global economy.

Global economic growth forecasts by EIC

Economic Forecasts (base case)	Unit	2021	2022F As of Mar 2022	2022F As of Jun 2022	
GDP	%YOY	1.5	2.7	2.9	▲
Household Consumption	%YOY	0.3	2.9	3.0	▲
Government Consumption	%YOY	3.2	-1.5	-2.5	▼
Private Investment	%YOY	3.3	3.5	3.2	▼
Public Investment	%YOY	3.8	3.0	2.7	▼
Goods Export Value (USD BOP basis)	%YOY	18.8	6.1	5.8	▼
Goods Import Value (USD BOP basis)	%YOY	23.4	13.2	10.8	▼
Export of Services	%YOY	-23.1	65.8	67.9	▲
Foreign Tourist Arrivals	Million person	0.4	5.7	7.4	▲
Headline Inflation	%YOY	1.2	4.9	5.9	▬
Crude Oil Prices (Brent)	USD/Brl.	70.4	110	110	▲
Policy Rate (Year-end)	%	0.50	0.50	0.75	

Thailand's economic recovery amidst the COVID-19 crisis

Unit: Rolling sum 4Q Index (2019Q4 = 100: Pre-COVID-19)



EIC expects that Thai GDP will bounce back to its pre-pandemic level in Q3/23, backed by:

- **Recovery in the tourism and service sectors,** which will become a major driver of the Thai economy throughout the remainder of 2022.
- **The agricultural sector** will likely see robust growth, both in terms of crop yields and prices.
- **Private consumption remains upbeat, thanks to lockdown easing and support from pent-up demand** —particularly among high-income cohorts, as evident in Q1 GDP readings.

Pressures hindering an economic recovery include:

- **Escalating inflation,** driven by commodity price surges from global supply chain disruption, would undermine household purchasing power and fuel business costs.
- **China's economy might witness a pronounced slowdown** due to its zero-Covid strategy, economic restructuring, and real estate crisis amidst a high debt burden. This will impair Thai exports to the Chinese market and imports of parts and equipment from China.
- **The ongoing war** would deflate the European economic rebound—another drag on Thai exports.
- **Global financial tightening** will heighten borrowing costs worldwide.
- **Deeper scarring effects on the domestic economy** might deter financial system stability.

Source: EIC analysis based on data from the Office of the National Economic and Social Development Council and CEIC

Key Themes for the Thai Economy in 2022

- **EIC revised Thailand's economic growth forecast upward to 2.9% in 2022,** from the previous 2.7%. The upward revision was attributed to an upbeat rebound in the tourism industry, service sector, and domestic demand.
- **Robust export growth will likely lose momentum** in tandem with a slowdown in demand from trade partners, especially a Chinese market that still faces risks from stringent lockdown rules.
- **EIC anticipates average annual headline inflation at 5.9% in 2022,** the highest in 24 years, as the Thai government gradually withdraws subsidies for living costs, thus pressuring domestic consumption and private investment.
- **Nonetheless, Thailand's reopening and easing border restrictions worldwide** will help resume the tourism and service sectors, which have been the primary source of Thai employment. EIC expects that Thailand will welcome around 7.4 million foreign visitors this year (up from the previous estimate of 5.7 million). Furthermore, rising global food prices alongside commodity costs will provide thrust to the agricultural sector and thus bolster household spending.
- **Meanwhile, there remain downside risks that warrant monitoring:** (1) Volatile energy and commodity prices that could stay elevated for longer than expected as the Russia-Ukraine war drags on; (2) Supply chain disruptions in the manufacturing and logistics sectors due to China's zero-Covid policy; (3) Tight monetary policies among the major central banks; (4) Rising costs of living would aggravate the prevalent economic scars, thus broadly damaging household debt serviceability; and (5) Government assistance would soon peter out, both in terms of economic stimulus and living cost subsidies—particularly energy.

Thai Economic Outlook for 2022

EIC revised Thailand's economic growth forecast upward to 2.9% in 2022, from the previous 2.7%, backed by a rebound in the tourism industry, service sector, and domestic demand.

Key forecasts

( ) Previous forecast — No change ▲ Revised upward from previous forecast ▼ Revised downward from previous

GDP

(%YOY)

2021	2022F
1.5	2.9 ▲ (2.7)

Throughout the rest of 2022, the Thai economy will gain a meaningful thrust from the tourism and service sectors, which will revive alongside the country's reopening and lockdown easing. Expansion in the agricultural sector, both crop yields and prices, would significantly support economic growth this year. Still, there remain headwinds from inflation spikes—driven by the war in Ukraine, China's zero-Covid policy and economic slowdown, and tightening global financial condition—which could hinder household purchasing power and exacerbate already-high business costs. Meanwhile, Thai export growth tends to lose its streak in line with the global economy

Policy Rate (year-end)

(%)

2021	2022F
0.5 — (0.5)	0.75 ▲ (0.5)

We expect the Bank of Thailand to raise the policy rate by 0.25% in Q3/22 as inflation looks to pick up pace, and the Thai economic outlook is on an upbeat. Still, the MPC would slowly wind down its ultra-easy monetary policy to buttress a fragile economic recovery amidst scarring effects from high unemployment and swelling debt burden.

Exchange Rate (year-end)

(THB/USD)

2021F	2022F
33.2	33.5-34.5 ▲ (32-33)

In the short term, we expect a volatile Thai baht on the weaker side due to monetary policy tightening among major central banks. And yet the baht will likely bounce back slightly in H2/22 in line with Thailand's economic rebound, BOT rate hikes, and improving current account balance—buoyed by higher tourist arrivals in the latter half of 2022.

Source: EIC analysis based on data from the Office of the National Economic and Social Development Council, Office of Agricultural Economics, Fiscal Policy Office, Bank of Thailand, Ministry of Commerce, Tourism Authority of Thailand, CEIC, and Bloomberg

Thai Economic Outlook for 2022

Positive Factors

(Compared to previous forecast)

- **The tourism and service sectors will become key economic drivers** throughout the remainder of 2022, following Thailand's reopening and lockdown easing.
- **A rebound in farm income—both in terms of crop yields and prices—would provide thrust to private consumption.**
- **Domestic spending recovery should continue with a resumption of economic activities,** led by pent-up demand from high-income households.

Negative Factors

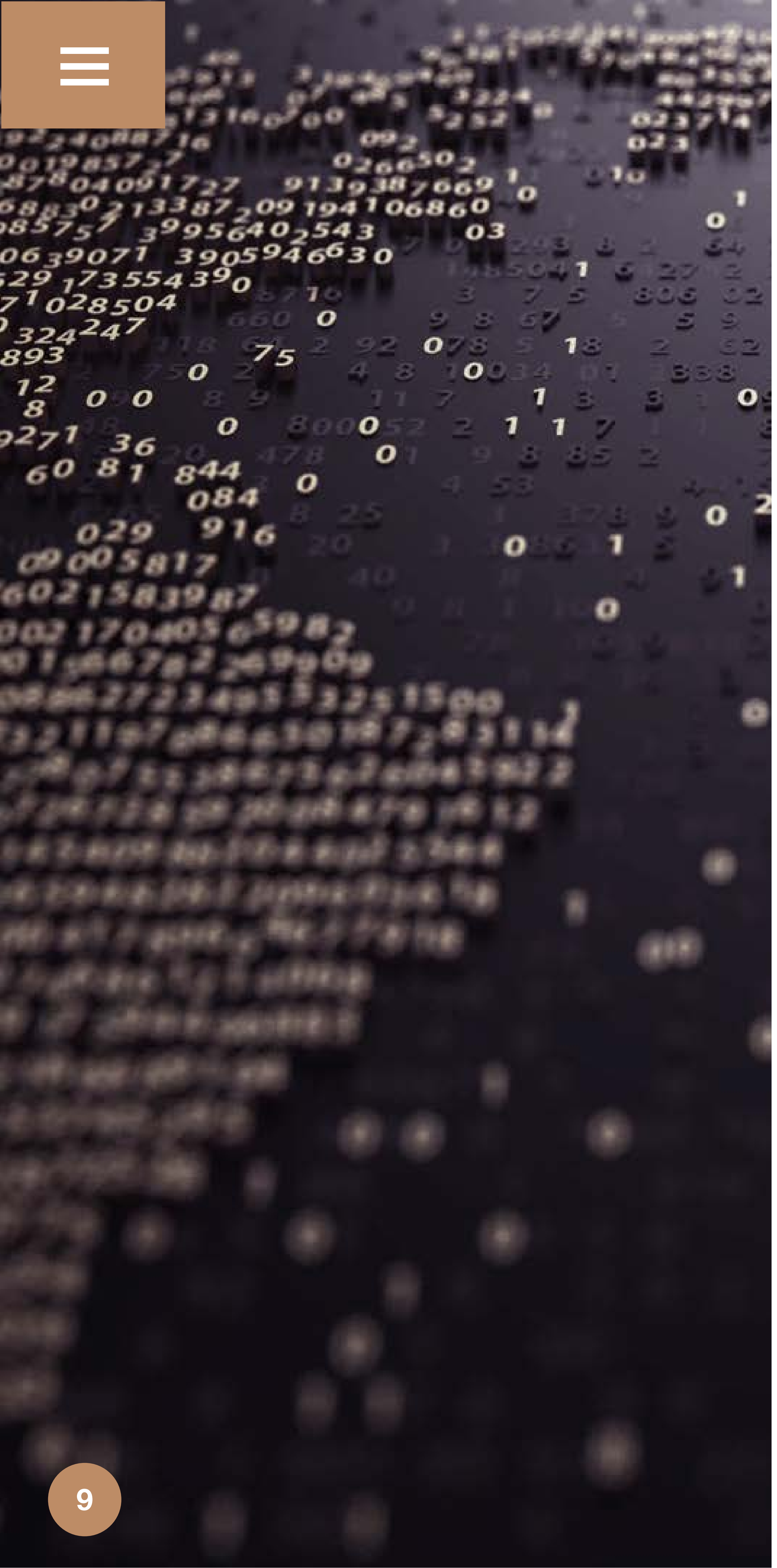
(Compared to previous forecast)

- **Global economic slowdown, particularly in Europe and China,** and supply-side pressures might result in weaker export growth.
- **Elevating inflation—driven by fuel and commodity costs,** the government supports withdrawal, and higher price increases passed on to consumers—will hamper domestic consumption.
- **The faster pace of monetary policy tightening from the Fed and major central banks could fuel a fluctuation of capital flows, thus weighing on currency values, financial costs,** investment returns, and household wealth.

Risk Factors

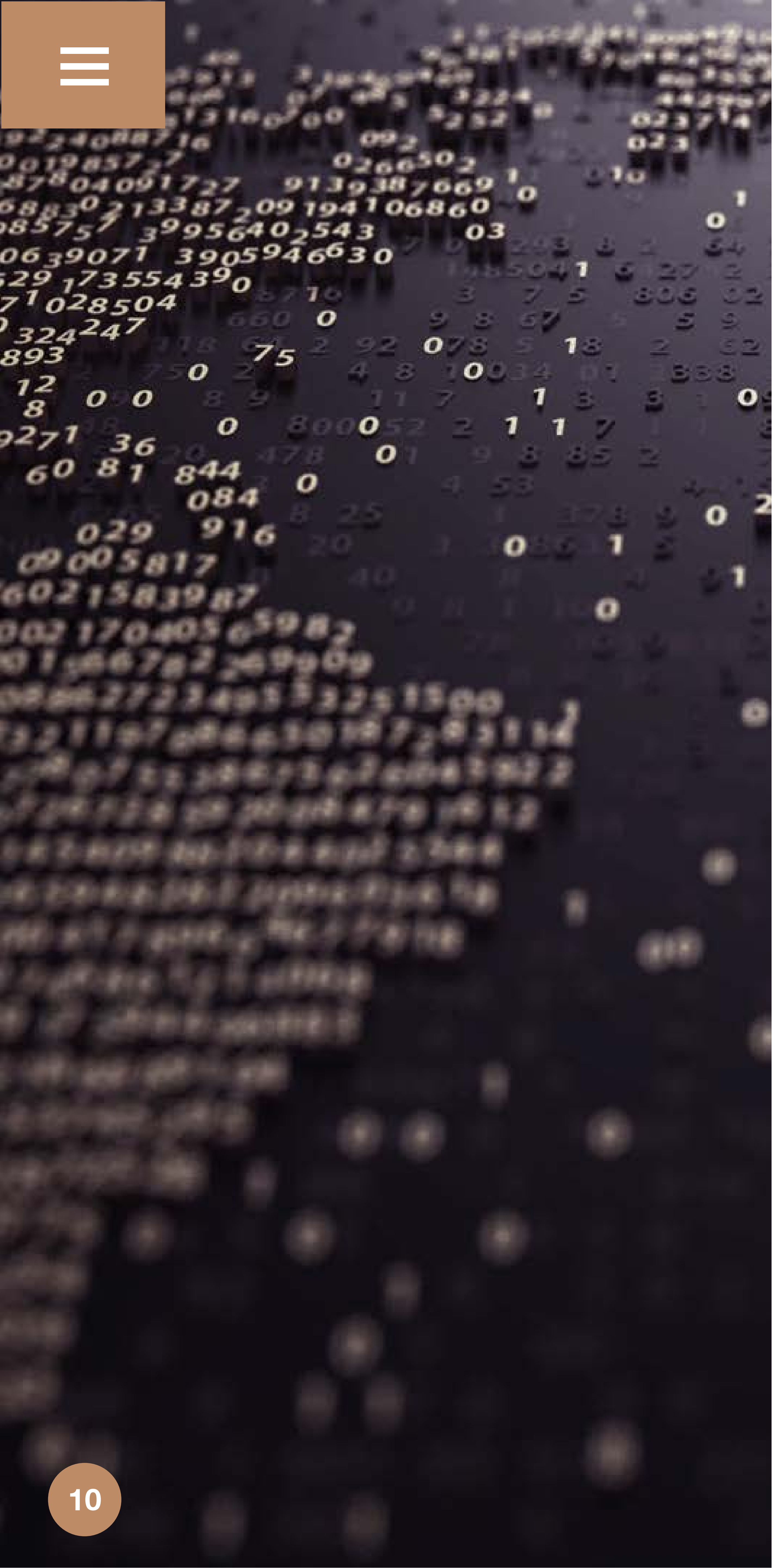
- **Oil and commodity prices might stay elevated and volatile for longer than anticipated due to the ongoing Russia-Ukraine war,** which would keep inflation at a historic high and fuel inflation expectations.
- **Further stringent lockdowns under China's zero-Covid policy and Western sanctions targeting the Russian economy** could exacerbate supply chain disruptions in the manufacturing and logistics sectors.
- **Supply chain decoupling (/fragmentation) impelled by geopolitical factors** will undermine productivity and aggravate the rising costs of global trade and investment.
- **Soaring costs of living due to the Russia-Ukraine war will deepen COVID-19 economic scars,** thus broadly damaging household debt serviceability.
- **Government relief packages would soon peter off,** both in terms of economic stimulus and subsidies to help with the rising living costs—particularly for energy prices.

Source: EIC analysis based on data from the Office of the National Economic and Social Development Council, Office of Agricultural Economics, Fiscal Policy Office, Bank of Thailand, Ministry of Commerce, Tourism Authority of Thailand, CEIC, and Bloomberg



Key Themes for the Global Economy in 2022

- **The global economy in 2022 will likely lose pace from last year, with looming risks from the ongoing Russia-Ukraine war, a sharper and faster pace of monetary policy tightening among major central banks, and China's zero-Covid policy.** Three acute risks include: **(1) The Russia-Ukraine war has exacerbated the prevalent supply chain bottlenecks,** resulting in longer shipping times, and also kept commodity prices at historic highs, particularly energy and food prices; **(2) The sharper and faster pace of monetary policy tightening among major central banks to quell inflation surges** will, in turn, retard global economic growth. The latest indicators reflected a tighter global financial condition as central banks worldwide—both in advanced and developing economies—grew more hawkish and called for rate hikes; and **(3) China's zero-Covid strategy will prompt an economic slowdown given weaker domestic demand, and also exacerbate global supply chain disruptions,** since China is one of the world's largest manufacturers and a global logistics hub. Against this backdrop, **EIC thus downgraded our global economic growth forecast to 3.2% in 2022,** from 5.8% in 2021, following a synchronized slowdown in major economies—namely the US, Europe, and China.
- **A sharper and faster pace of monetary policy tightening among major central banks was attributed to global inflation, which continues to hover high for longer than anticipated.** In our view, the US Federal Reserve (Fed) will raise its policy rate at every meeting through the rest of 2022 (seven hikes in total): three 50-bps hikes in Jun, Jul, Sep, and 25-bps hikes in the remaining months. Hence, the Fed's fund rate should reach 3% at year-end 2022. The European Central Bank (ECB) will likely make four rate hikes this year: a 25-bps raise in Jul, possible 50-bps hikes in Sep and Oct if inflation expectations remain high, and another 25-bps hike in Dec. We thus expect the European economy to end its long era of negative interest rates within 2022. **EIC sees global inflation winding down from 2023 onwards** as monetary policies tighten worldwide, energy prices cool off on the back of improving supply chain bottlenecks, the tight labor market starts to loosen up, and low-base effects gradually peter out.



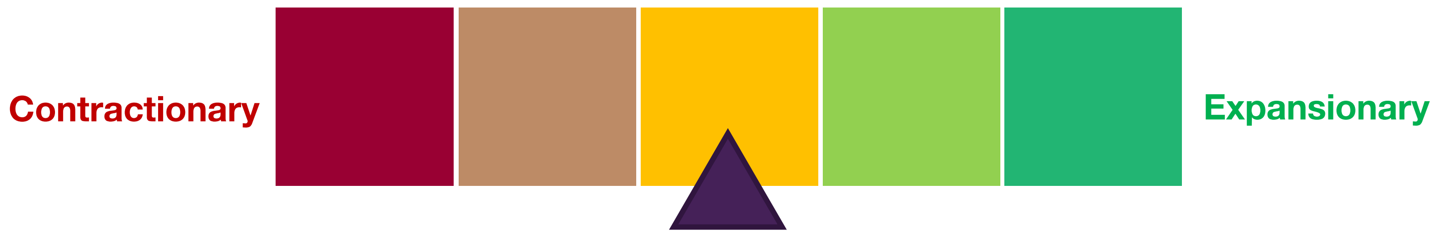
Key Themes for the Global Economy in 2022

- **In our view, the hawkish stance of major central banks will affect global financial markets via three channels: 1) Financing costs will increase** alongside interest rates and government bond yields, thus weighing down demand and economic activities; **2) Compared to 2021, capital flows will become more volatile, with possible further outflows from developing markets** to the US or developed economies. Hence, the US dollar should strengthen against most currencies in developing nations this year; and **3) The returns of risky assets will likely stumble worldwide** due to a liquidity decline in the global financial system, affecting the wealth of both the private and household sectors.

Global Economic Outlook for 2022

Global economic growth will likely soften in 2022, following a synchronized slowdown in the US, Europe, and China, while inflation continues to hover high.

Economic Growth



- The global economy is poised for a slowdown due to growing risks from: (1) The ongoing Russia-Ukraine war; (2) Faster and sharper monetary tightening among major central banks to tackle inflation surges; and (3) China's economic slowdown.
- Higher risks thus heighten concerns over economic recession worldwide. Nonetheless, global recession is unlikely to occur in 2022, given a solid private sector balance sheet and robust rebound in the labor market.

Inflation Rate

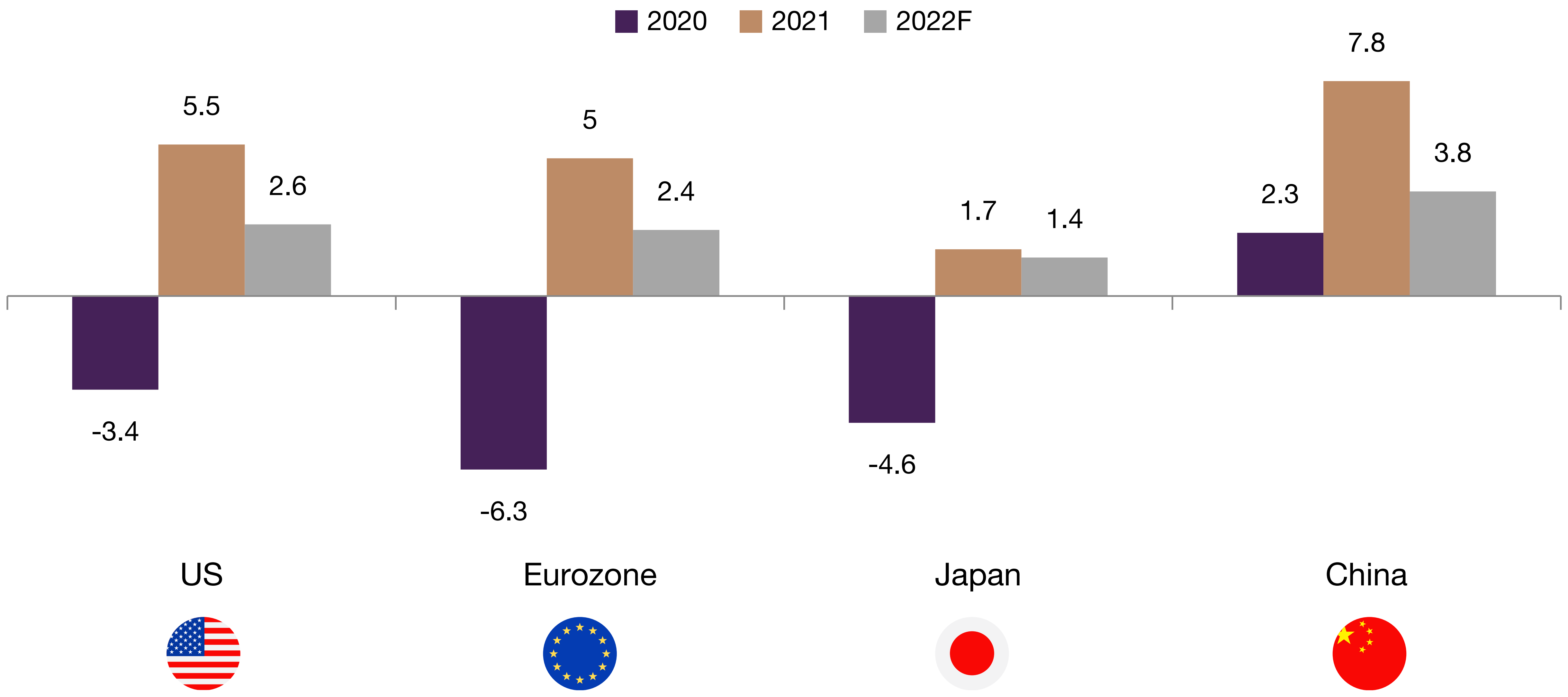
- The Russia-Ukraine war and China's zero-Covid policy will aggravate supply chain bottlenecks and fuel inflation.
- The tight labor market has prompted wage increases and thus intensified the risk of a wage-price spiral. Still, such an occurrence is less likely since a modest rebound in the labor supply would help offset wage rises.
- In the short term, global inflation this year will outstrip forecasts but tend to lose pace in 2023, as energy price starts to cool off, supply chain bottlenecks improve, global demand regains momentum, and low-base effects peter out.

Monetary Policy Direction

- Fed – will likely make seven rate hikes this year, with three possible 50-bps hikes in a row at Jun, Jul, and Sep meetings followed by 25-bps hikes through the remainder of 2022. Thus, the year-end Fed fund rate should increase to 3%.
- ECB – to conclude the QE by the end of Q2 and make its first rate hike at 25 bps in Jul. We expect the ECB to raise its policy rate by 50 bps at Sep and Oct meetings, with another 25-bps hike in Dec. Hence, the EU will exit the era of negative interest rates within this year.
- PBoC – likely to continue its accommodative stance to buttress China's economic recovery on the back of bleak domestic demand, a real estate downturn, and an exports slowdown as soaring inflation deters trade demand worldwide.

Global economic growth in 2022, 2021, and 2022

Unit: %YOY



Supporting Factors

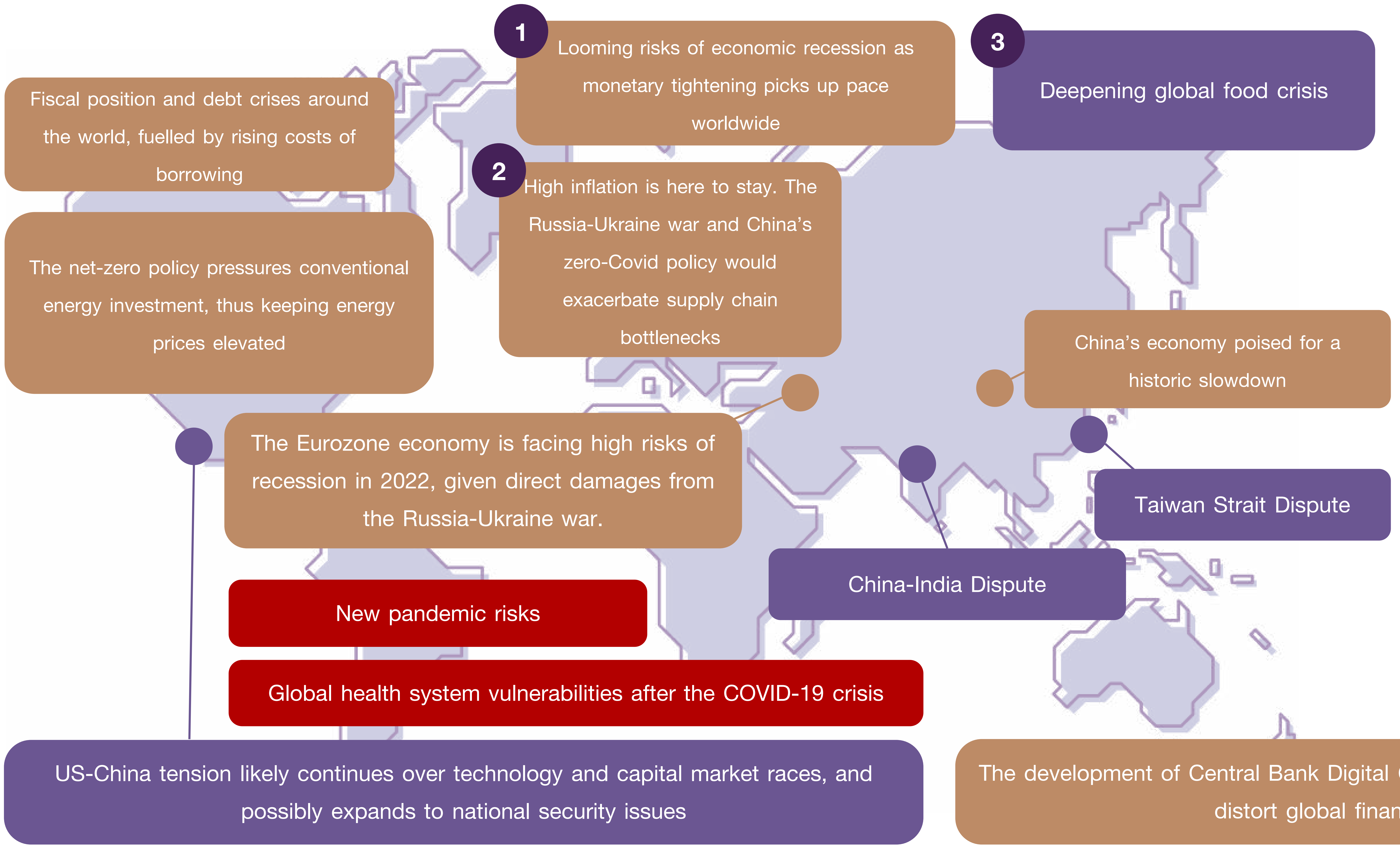
- Buoyant rebound in the labor market
- The solid financial position of the private sector helps provide thrust to domestic purchasing power amidst inflation spikes.
- Recovery in the service sector, manufacturing sector, and inventory as the pandemic outlook improves.

Risk Factors

- Monetary tightening might occur at a faster-than-expected pace
- Inflation stays elevated for longer than anticipated
- China's zero-Covid policy could deter a global rebound from supply chain bottlenecks
- Deeper global food crisis
- The risk of new pandemics

Source: EIC analysis

Global Economic Risk Map of 2022



2022 global economic risk categories

- Politics & Geopolitics
- Economy & Finance
- War & Military
- Societal

Note

1 2 3 are 3 major risks for the world's economy with high probability and high impact within 2022

Source: EIC analysis

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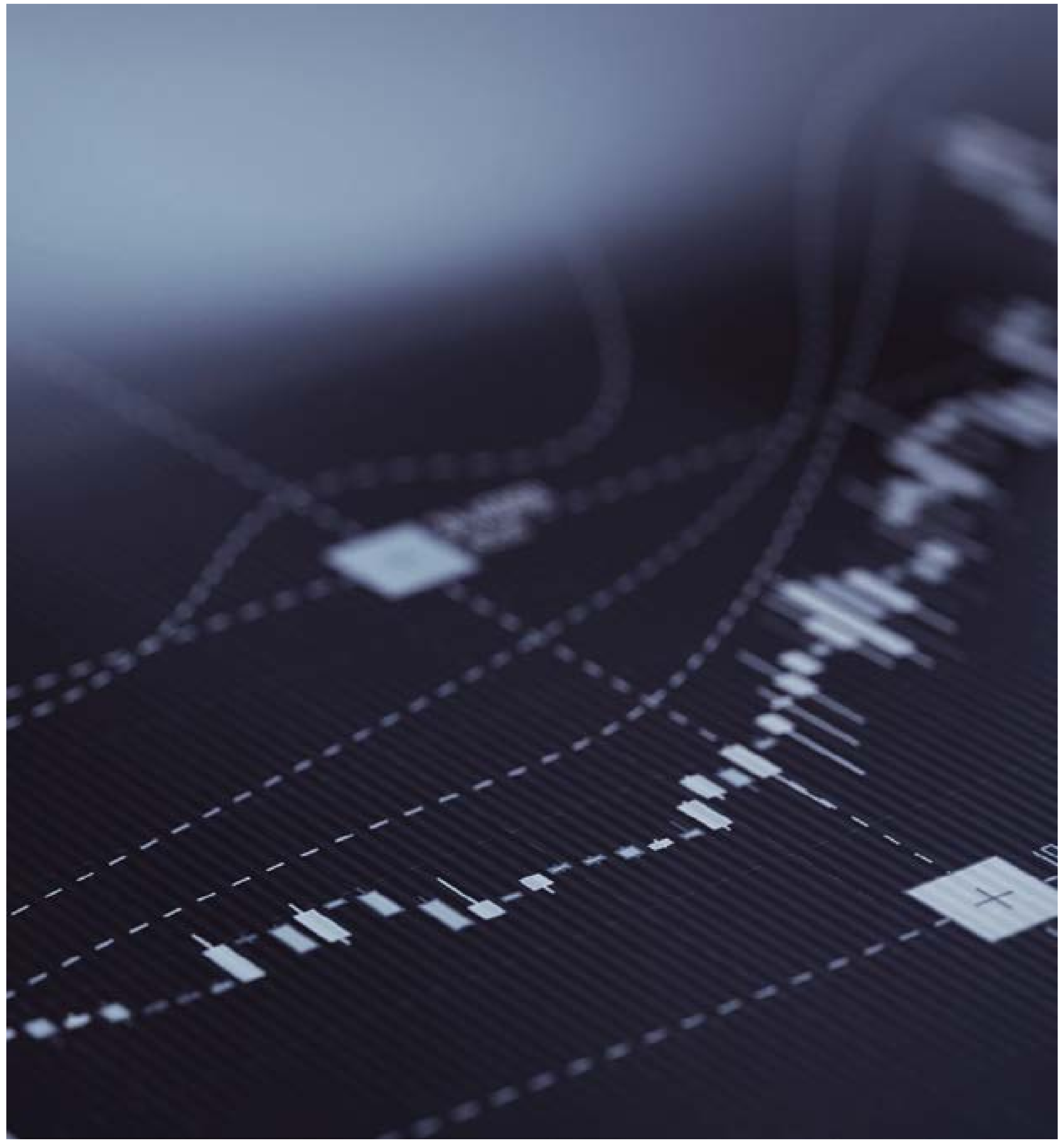
Major Events for the Global Economy in 2022

Watch list

Jul 20	**BOJ Meeting with Macroeconomic projections**	Bank of Japan (BOJ) holds a monetary policy meeting and releases Japan's economic growth forecast
Jul 21	**ECB meeting with Macroeconomic projections**	European Central Bank (ECB) holds a monetary policy meeting and releases Eurozone's economic growth forecast
Jul 25	**Japan House of Councilors elections**	Election in Japan to elect new members for the House of Councilors (Upper House)
Aug 4	**BOE meeting with monetary policy report**	Bank of England (BOE) holds a monetary policy meeting, with the release of England's economic growth forecast and monetary policy report
Sep	**BIS Quarterly Review**	The Bank of International Settlements (BIS) issues performance reviews of the global banking system and financial markets
Sep 8	**ECB meeting with Macroeconomic projections**	The European Central Bank (ECB) holds a monetary policy meeting and releases the Eurozone's economic growth forecast



Source: Data from the Federal Reserve (Fed), European Central Banak (ECB), Bank of Japan (BOJ), Bank for International Settlements (BIS), and Bank of England (BOE)

Major Events for the Global Economy in 2022

Watch list

Date	Event	Description
Sep 20-21	FOMC meeting with economic projections	US Federal Reserve (Fed) holds a monetary meeting and releases US economic growth forecast
Oct 2	2022 Brazilian general election	General election in Brazil to elect the President, Vice President, and the National Congress
Oct 27	ECB meeting with Macroeconomic projections	European Central Bank (ECB) holds a monetary policy meeting and releases Eurozone's economic growth forecast
	BOJ Meeting with Macroeconomic projections	Bank of Japan (BOJ) holds a monetary policy meeting and releases Japan's economic growth forecast
Nov 3	BOE meeting with Macroeconomic projections	Bank of England (BOE) holds a monetary policy, with the release of England's economic growth forecast and monetary policy report
Nov 8	United States Congress Elections	Congressional elections in the US to decide new Senators

Source: Data from the Federal Reserve (Fed), European Central Banak (ECB), Bank of Japan (BOJ), Bank for International Settlements (BIS), and Bank of England (BOE)

Major Events for the Global Economy in 2022

Watch list

Dec	BIS Quarterly Review	The Bank of International Settlements (BIS) issues performance reviews of the global banking system and financial markets
Dec 13-14	FOMC meeting with economic projections	US Federal Reserve (Fed) holds a monetary meeting and releases US economic growth forecast
Dec 15	ECB meeting with Macroeconomic projections	European Central Bank (ECB) holds a monetary policy meeting and releases Eurozone's economic growth forecast
2H2022	The 20th National Congress of the Chinese Communist Party	The National Congress is a major economic event to set key policy directions in China

Key Theme for Global Economy in 2022

Faster-than-expected monetary tightening	Higher recession risk	Slowed-down China	Further intensification of the war in Ukraine	New waves of the pandemic

Source: Data from the Federal Reserve (Fed), European Central Banak (ECB), Bank of Japan (BOJ), Bank for International Settlements (BIS), and Bank of England (BOE)

Global Economic Outlook 2022

3 Key Factors for the Global Economy in 2022

The Global economy in 2022 is expected to slow down from last year amid more risks.

(1) The Russian-Ukraine war has worsened, and supply bottlenecks are more prolonged than anticipated.

(2) Monetary policy tightening in major economies' central banks is becoming faster and more aggressive to curb high inflation.

(3) China's economic slowdown from its Zero COVID policy has resulted in weak domestic demand. EIC has thus revised global GDP downward to 3.2% in 2022.

A continued and rapid surge in global inflation has pressured central banks to tighten monetary policies faster and more aggressively.

EIC expects Fed to hike rates by 50 bps at each meeting in June, July, and September, and by 25 bps for each of the rest of the 2022 meetings. The ECB intends to raise policy rates 4 times in July, September, October, and December this year. With tightening monetary policy, decreasing energy prices, and fading low base effects, EIC expects global inflation to decelerate in 2023.

Stricter monetary policy will result in tighter global financial conditions.

Effects will be seen through 3 channels; 1) higher interest rates and government bond yields will raise borrowing costs 2) capital flows will become more volatile and tend to move from EMs back to DMs, causing USD appreciation. And 3) Liquidity in global financial systems is decreasing, affecting risky assets around the world.

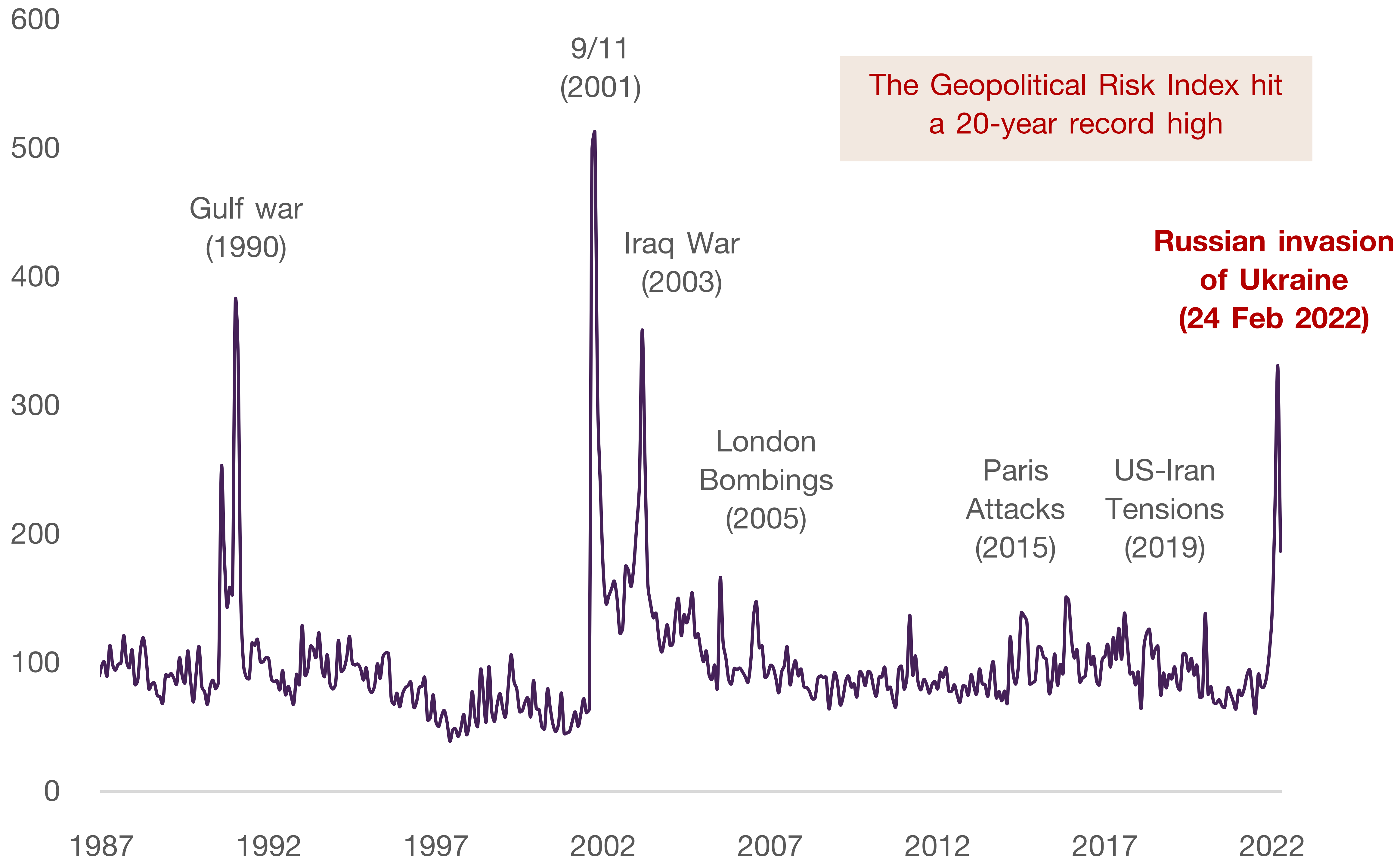
In 2022, the global economy is expected to slow down from last year amid more risks

Key economic indicators signal that global economic growth will decelerate. The Global Purchasing Managers' Index (PMI) in both the manufacturing and service sectors slowed down, reflecting a decline in global economic activities and consumption in the future, especially in countries such as Germany that are severely affected by the Russia-Ukraine war. The global economic slowdown stems from 3 key hindering factors; (1) The Russian-Ukraine war has worsened, and supply bottlenecks have been more prolonged than anticipated, (2) Monetary policy tightening in major economies' central banks has become faster and more aggressive to curb high inflation, and (3) China's economic slowdown from its Zero COVID policy has resulted in weak domestic demand.

Global economic recovery slowed due to the escalation of the Russia-Ukraine war and China's stricter lockdown in major cities, prolonging supply bottlenecks.

Geopolitical Risk Index

Unit: Index



The Russia-Ukraine war has pushed up global commodity prices, including both energy and food, depressing global economic recovery, which was previously expected to recover well once Omicron outbreaks subsided.

Oxford COVID-19 Government Response Stringency Index

Unit: Index

	Jan-22	Feb-22	Mar-22	Apr-22	May-22
China	75.3	64.4	65.4	77.6	79.2
Germany	59.8	48.2	48.2	32.5	22.0
France	68.5	72.2	43.7	23.2	23.2
United Kingdom	47.1	35.1	15.7	13.0	13.0
India	77.6	73.7	53.5	49.2	37.0
Italy	76.9	76.5	63.9	53.7	38.9
Japan	47.2	47.2	46.6	45.4	45.4
South Korea	48.1	47.0	40.7	30.3	16.7
Mexico	43.7	42.7	30.9	23.2	23.2
Malaysia	60.0	54.2	54.2	54.2	63.4
United States	55.6	58.6	56.1	58.8	40.5
South Africa	43.8	40.5	38.0	38.0	34.6

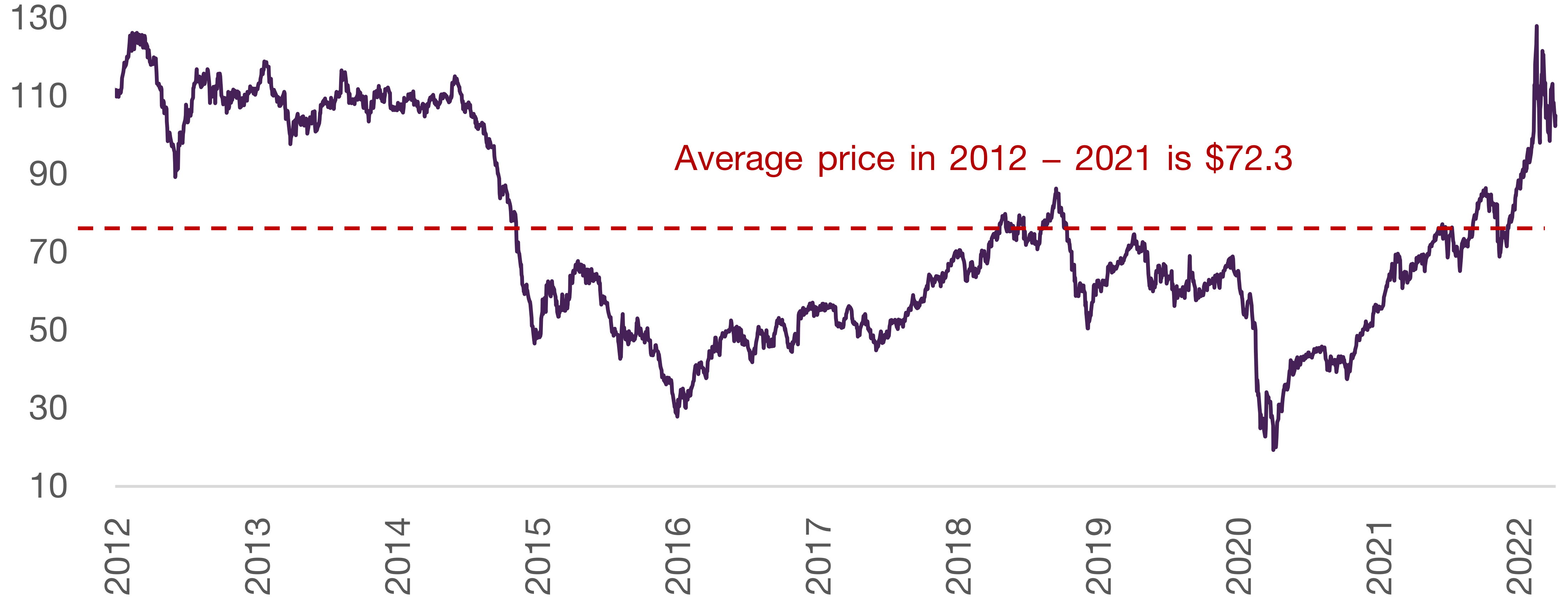
China's strict lockdown has prolonged global supply bottlenecks as manufacturing and logistics sectors in both domestic and international markets were disrupted. As a result, high inflation continues.

Source: EIC analysis based on data from www.matteoiacoviello.com and the University of Oxford

Supply bottlenecks cause commodity prices, delivery times, and business costs to continue rising.

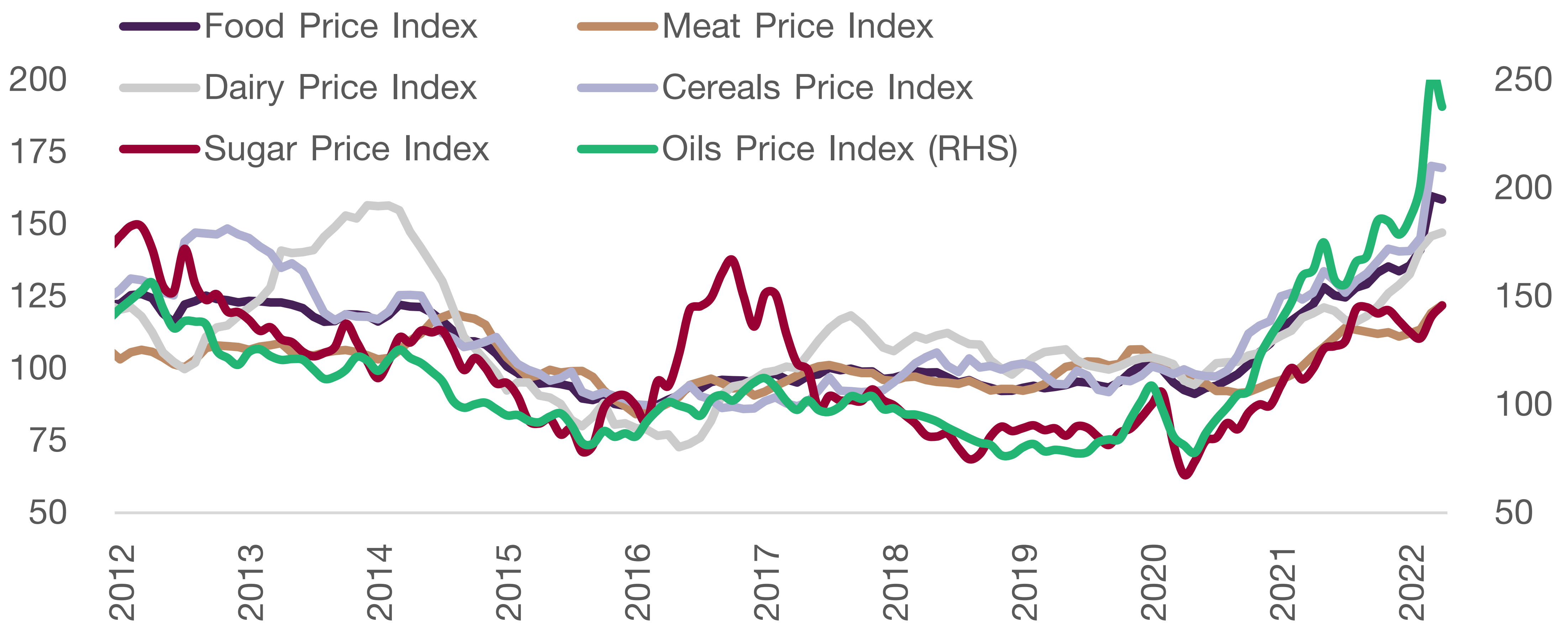
Crude oil prices (Brent) rose sharply and stayed above their 10-year average level.

Unit: USD, data as of 19 May 2022



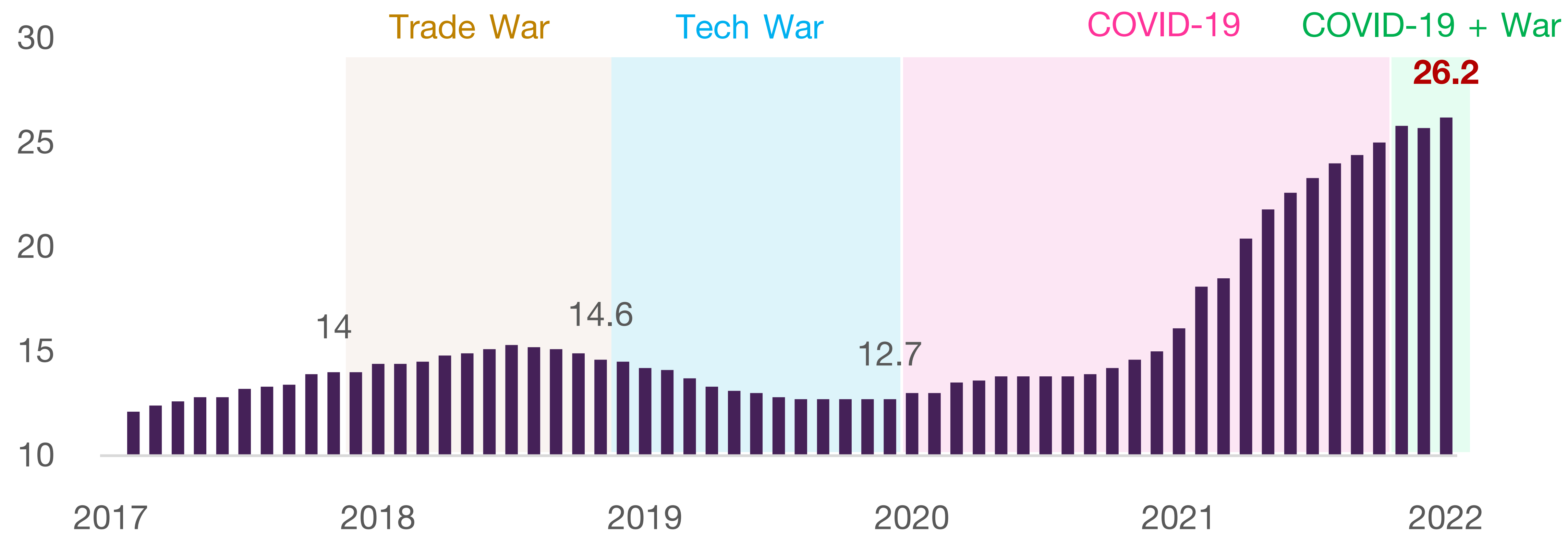
The Food Price Index rose sharply.

Unit: Index, 2014 - 2016 = 100



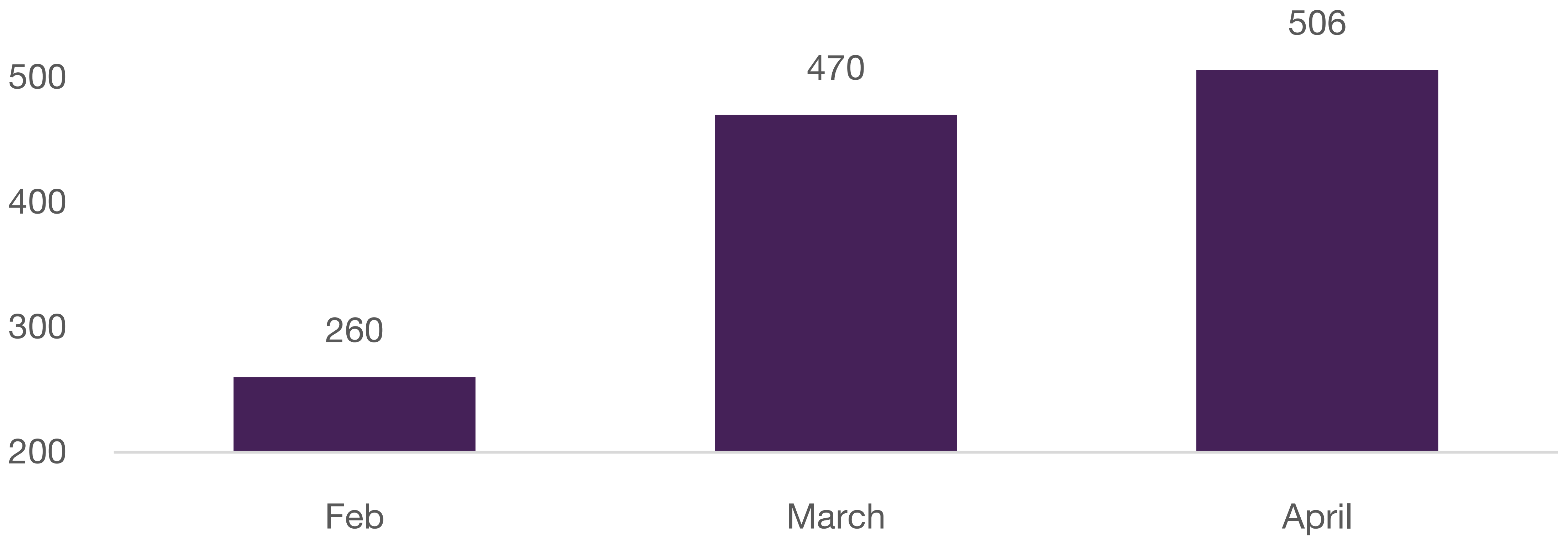
Semiconductor delivery times remained long.

Unit: Week



The number of container vessels waiting outside Chinese ports

Unit: vessels

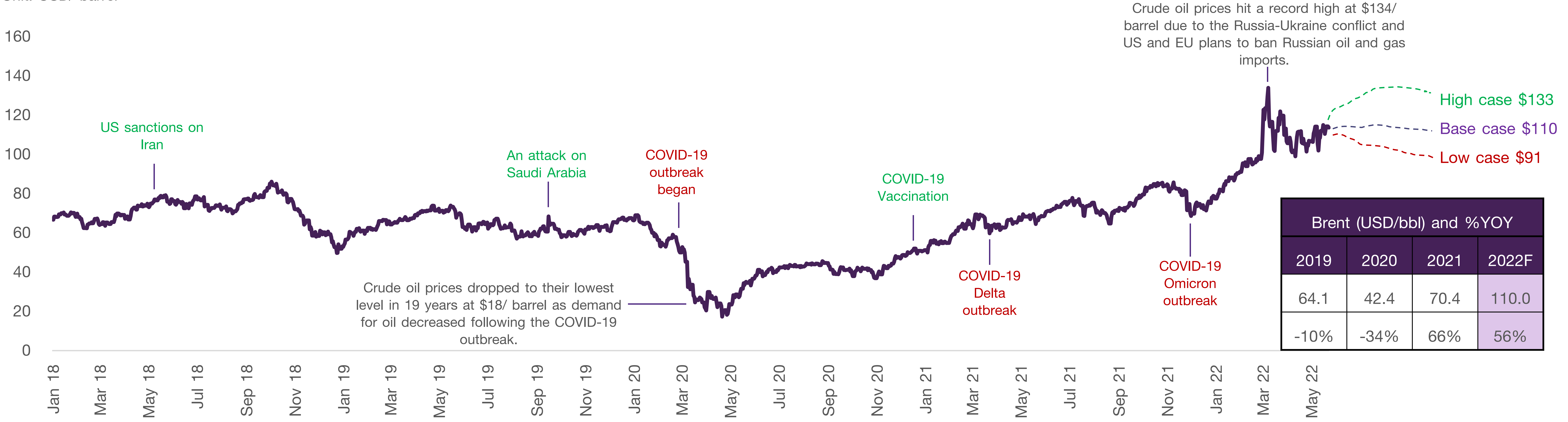


Source: EIC analysis based on data from Bloomberg, The Food and Agriculture Organization of the United Nations, IHS Markit, and Windward

Crude oil prices are likely stay at high levels throughout 2022 due to the Russia-Ukraine war tightening the global oil supply. Eyes are on the ease of sanctions against Iran and Venezuela that could increase the oil supply.

Crude oil price forecast (Brent)

Unit: USD/ barrel



Brent (USD/bbl) and %YOY

2019	2020	2021	2022F
64.1	42.4	70.4	110.0
-10%	-34%	66%	56%

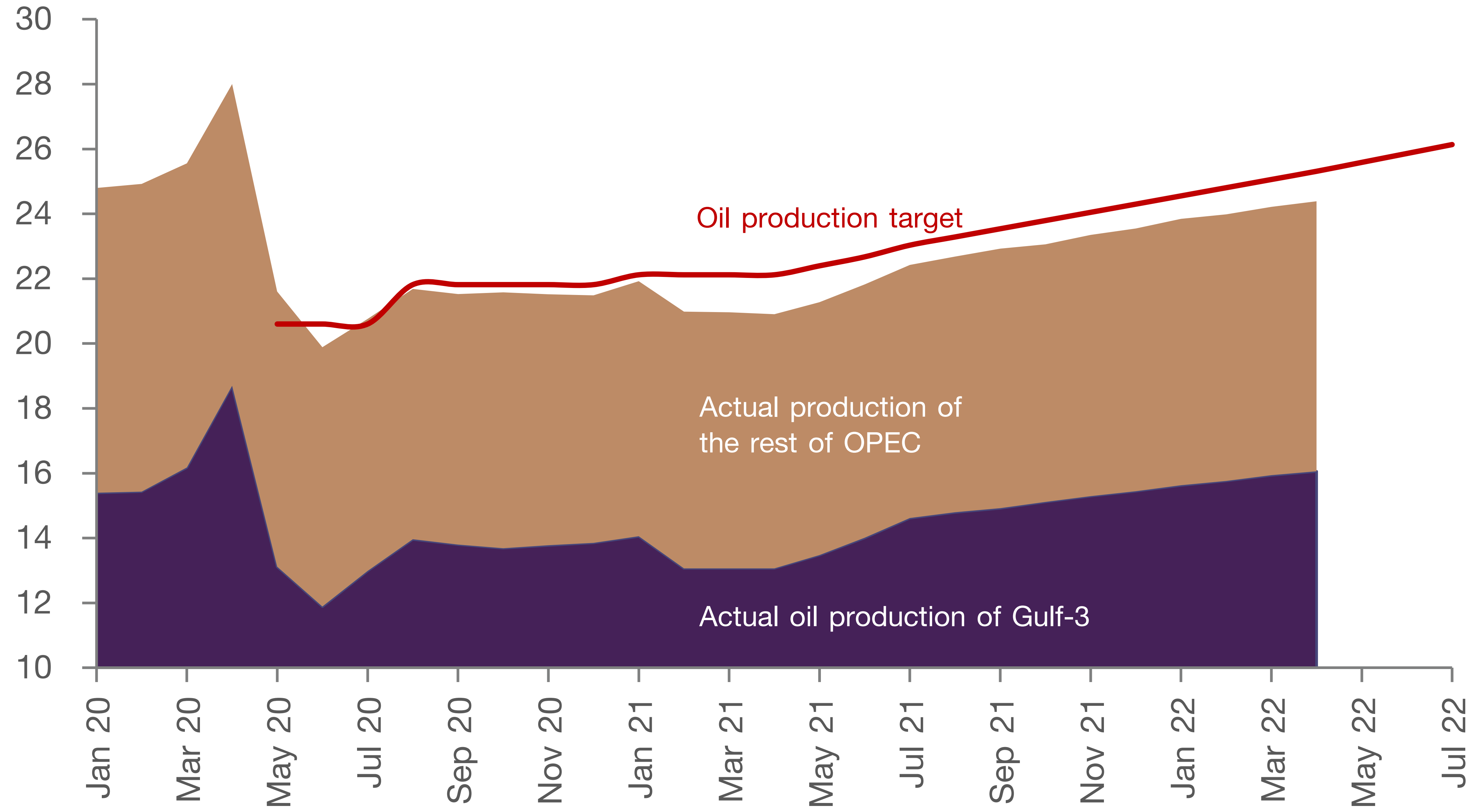
- **EIC forecasts the Brent crude oil price in 2022 on an average Base case = $110/ barrel** from tight oil supply and rising demand for oil in line with the global economy.
- High case = $133/ barrel in case of supply shock due to an escalation of the Russia-Ukraine war and intensified energy crisis.
- Low case = $91/ barrel in case of weak demand for oil, new COVID-19 outbreak, or The Russia-Ukraine war ends sooner than anticipated.
- **Keep an eye on the easing of sanctions against Iran and Venezuela.** The US will allow Iran and Venezuela to export 1.5-2.5 million barrels/day and at least 400,000 barrels/day, respectively. This will help limit an increase in oil prices.

Source: EIC analysis based on data from Bloomberg

An oil supply shortage indicates low crude oil inventories, given OPEC underproducing and the EU considering banning Russian oil imports.

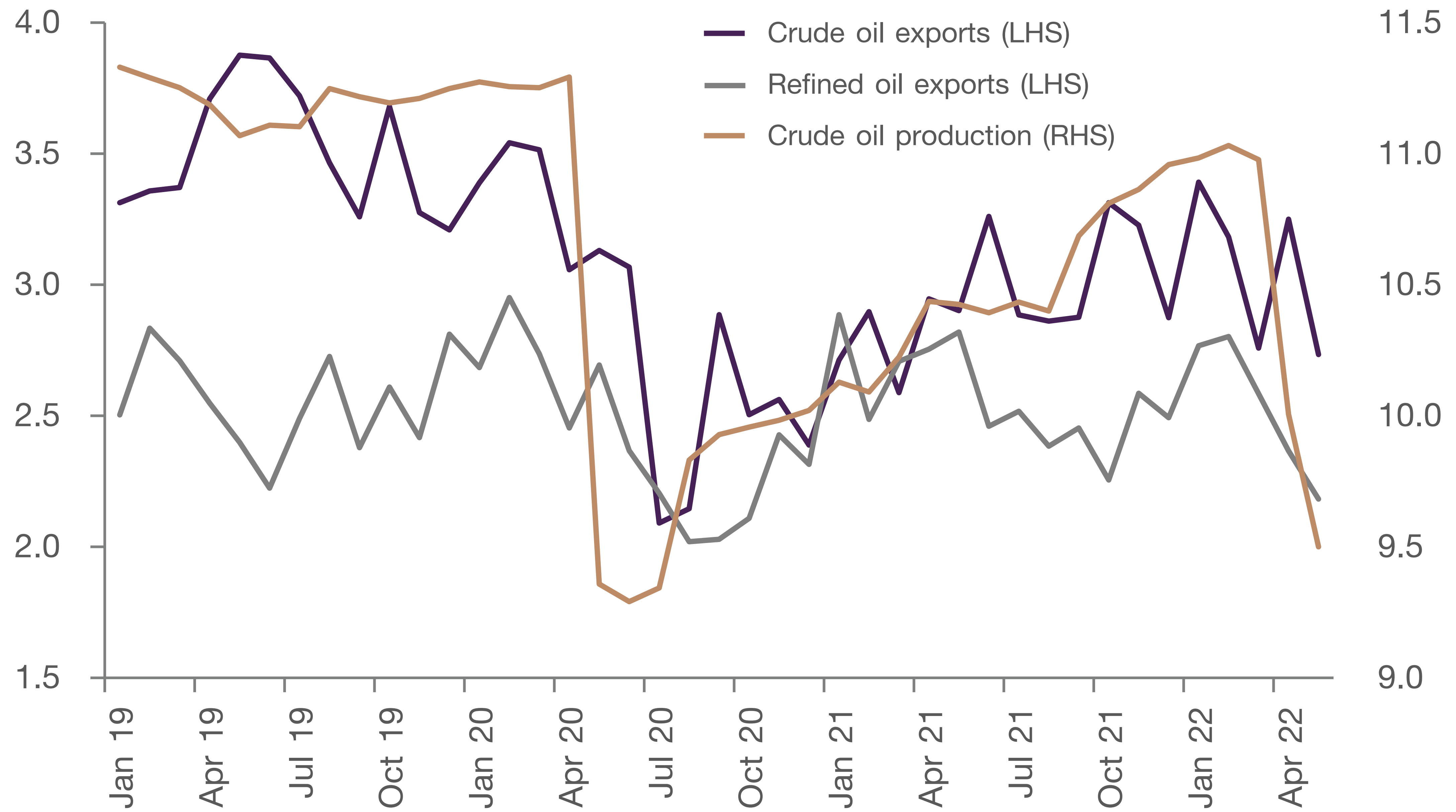
OPEC crude oil production has been below target.

Unit: million barrels/ day



Russia's oil production and seaborne crude oil exports dropped due to international sanctions.

Unit: million barrels/ day



The oil supply remains tight

- OPEC+ agreed to ramp up oil production from 432,000 barrels/ month to 648,000 barrels/ day in July – August 2022. However, underproduction is expected as spare capacity is limited.
- The EIA forecasts US crude oil production at 11.9 million barrels/ day in 2022, still below the pre-COVID level. Moreover, the release of 180 million barrels from the US Strategic Petroleum Reserve (SPR) for 6 months is considered small and unable to put downward pressure on global oil prices amid the Russia-Ukraine war.
- The Russia-Ukraine war saw the EU deciding to ban 90% of Russian oil imports from a total of 3.4 million barrels/ day by 2022. Russia will reduce oil production, which makes the oil supply even tighter.

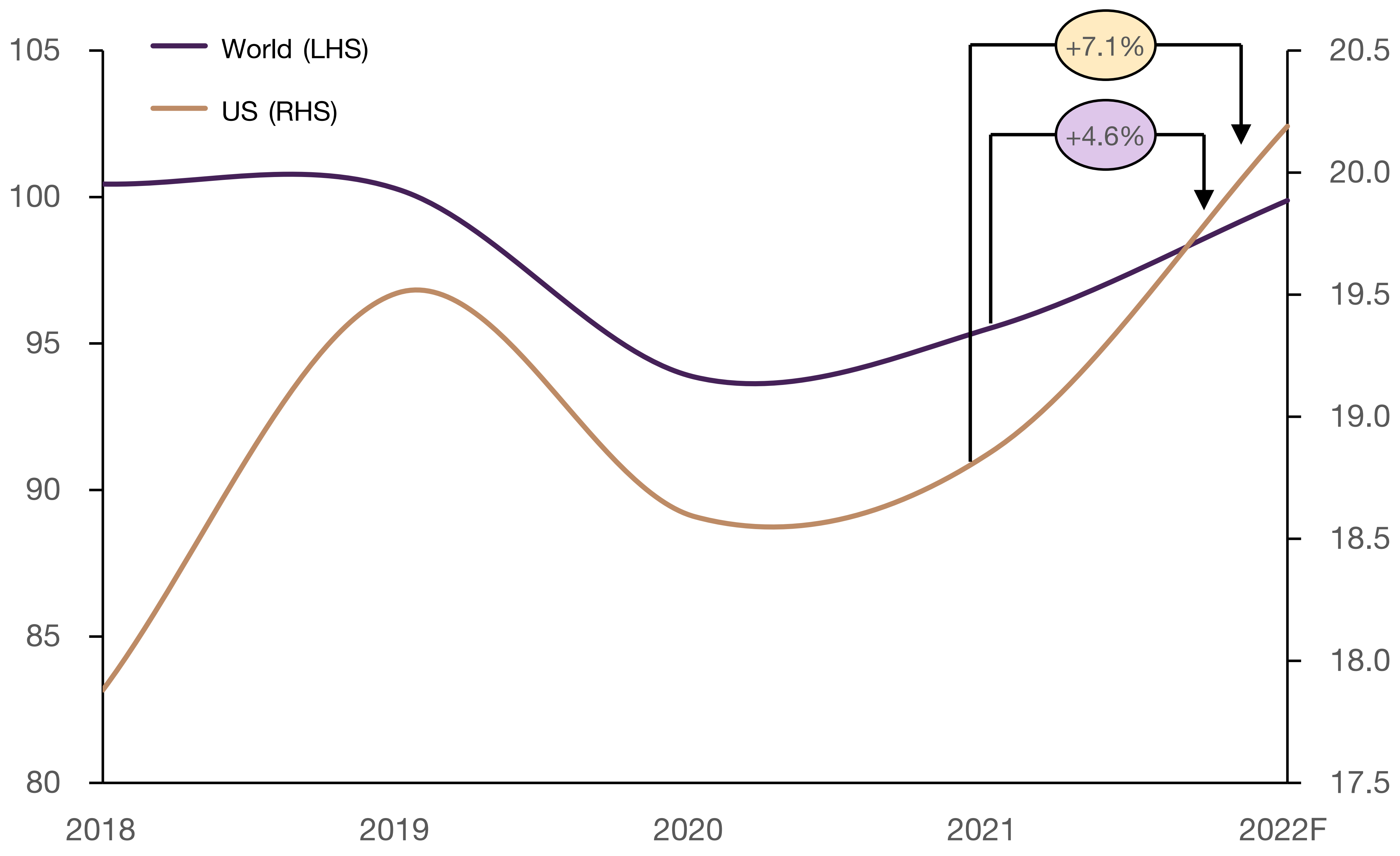
Note: Gulf-3 includes Saudi Arabia, UAE, and Kuwait. The OPEC crude oil production figure excludes the production of Iran, Libya, and Venezuela, which have political problems.

Source: EIC analysis based on data from IHS and EIA (May 2022)

Demand for oil rebounded after the COVID-19 outbreak eased.

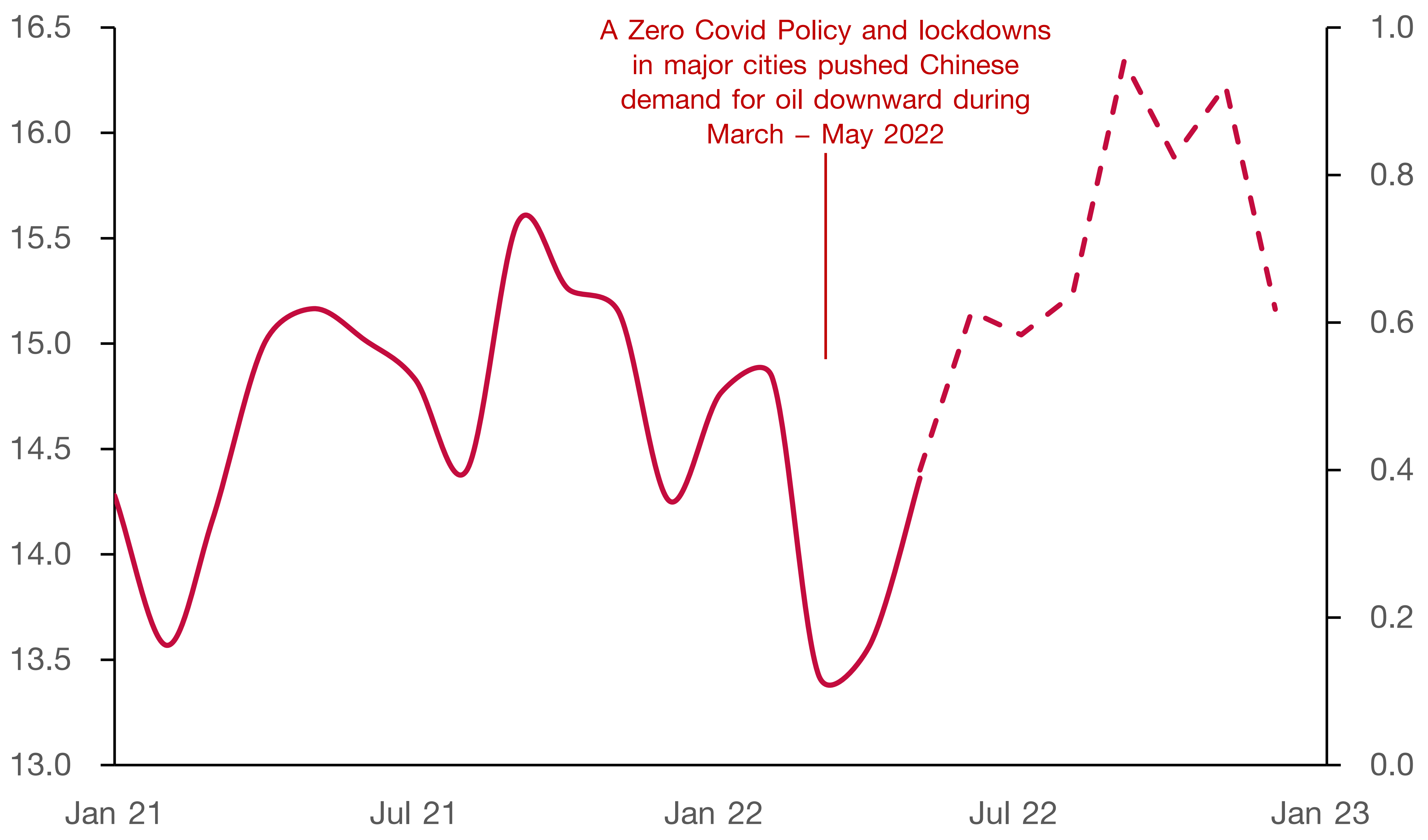
Demand for oil in the global market and US continue growing.

Unit: Million barrels/ day



China’s demand for oil will rise after lockdowns ease.

Unit: Million barrels/ day



Demand for oil has grown significantly.

- US demand for oil is expected to rapidly grow 7%YOY in 2022 and return to stay above pre-pandemic level in 2019.
- China’s demand for oil will rebound once the number of COVID-19 cases decreases and lockdowns in major cities ease.

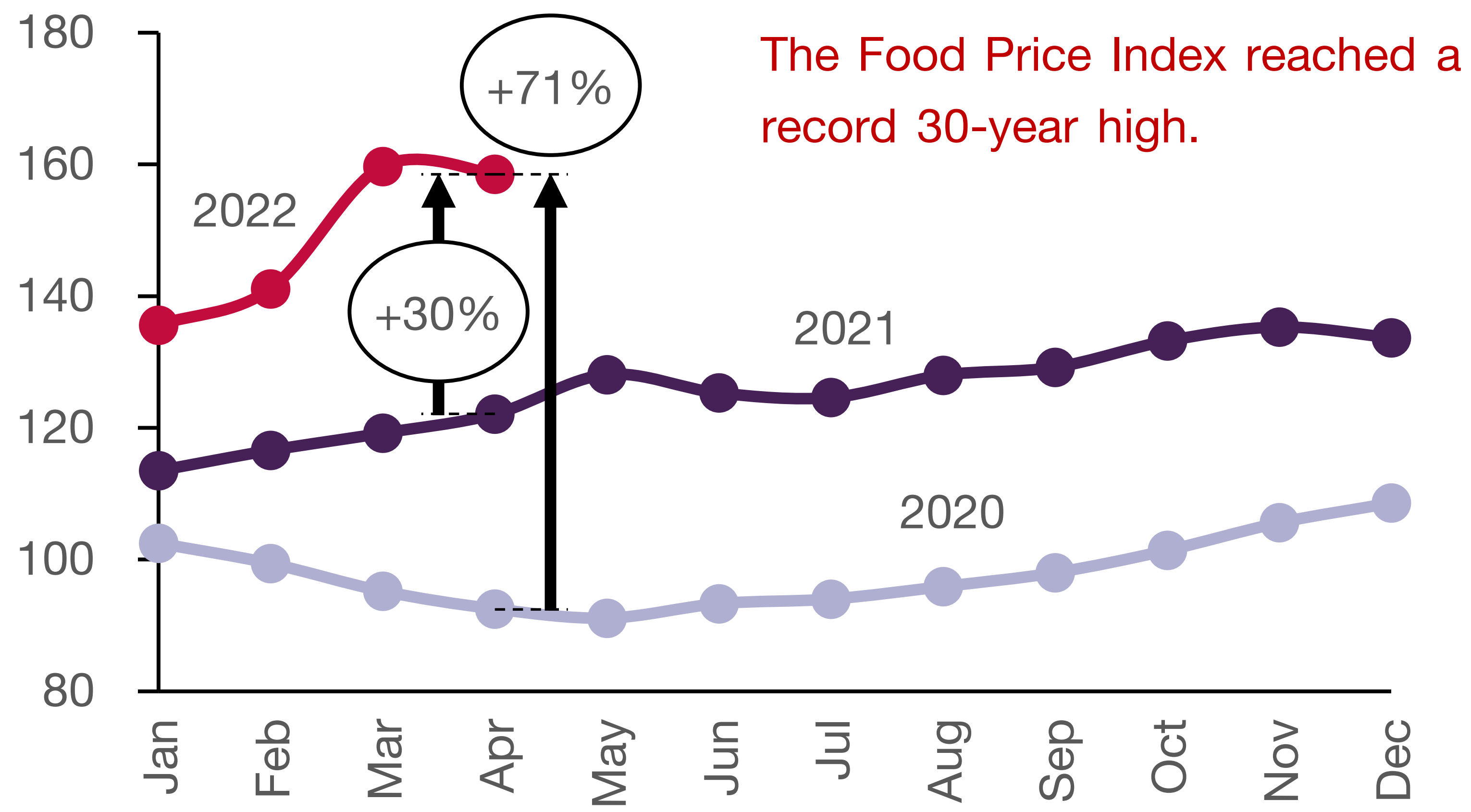
Note: Gulf-3 includes Saudi Arabia, UAE, and Kuwait. The OPEC crude oil production figure excludes the production of Iran, Libya, and Venezuela, which have political problems.

Source: EIC analysis based on data from IHS and EIA (May 2022)

Apart from the energy crisis, the food crisis is becoming another obstacle to global economic recovery.

Food price index

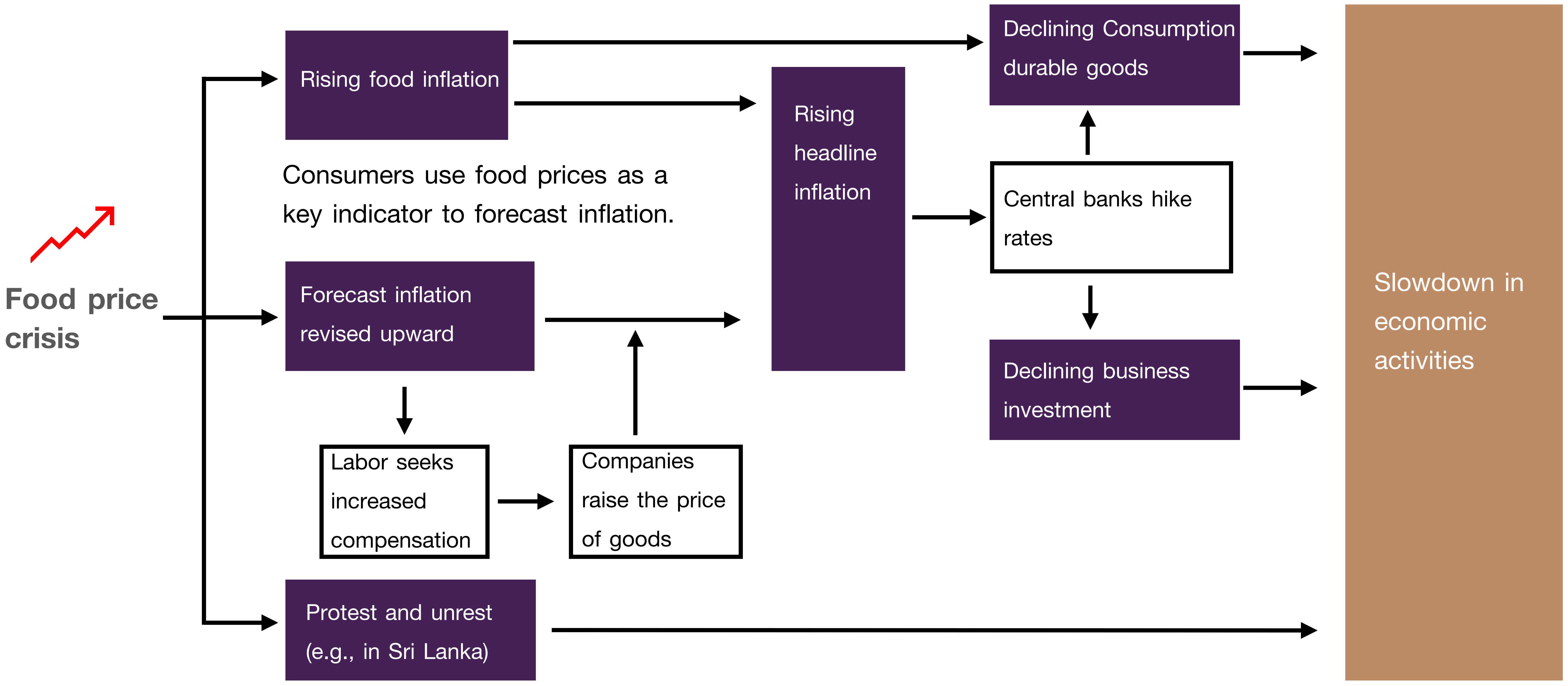
Unit: Index (2014 – 2016 = 100)



Key factors creating a global food price crisis

- **The Russian-Ukraine war has seen demand for agricultural goods from Ukraine and Russia drop.** Both countries are major exporters of key agricultural products, like wheat.
- **La Niña hit South America, producing drought.** South America is the world's major manufacturer of corn, sugar, and soybeans.
- **Export restrictions and a rise in export taxes on food products in many countries.** For example, India banned the export of wheat.
- **Meat prices increased from higher animal feed prices (grains).**

The effect of the food price crisis on global economic growth



Rising food prices will not affect economic activities immediately but 2 quarters later. The study shows that If food prices increase by 10%, economic activities in 75 sample countries will slow down by 0.2 – 0.5 ppt from the normal case. (De Winne and Peersman, 2021)

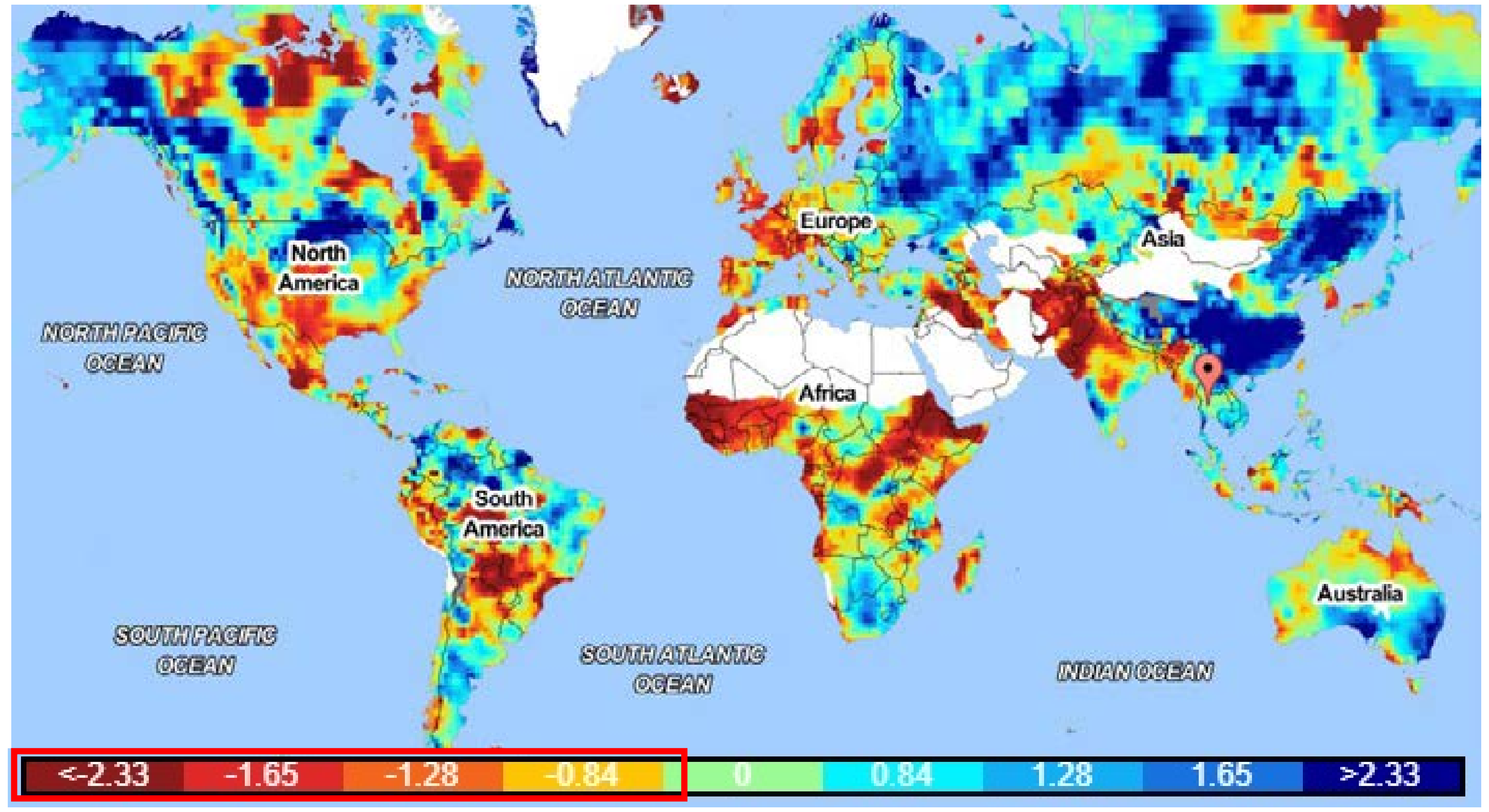
Source: EIC analysis based on data from the FAO and De Winne and Peersman (2021)

EIC expects more risks that could prolong the global food price crisis until early 2023, stemming from 3 key factors 1) The La Niña phenomenon, 2) Food export restrictions, and 3) Fertilizer shortages and soaring prices.

1 La Niña phenomenon

- The La Niña phenomenon began in September 2021.
- La Niña will increase rainfall in Southeast Asia, including Thailand and Indonesia, while bringing drought (lower than average rainfall) to some parts of America, like Brazil and Argentina.

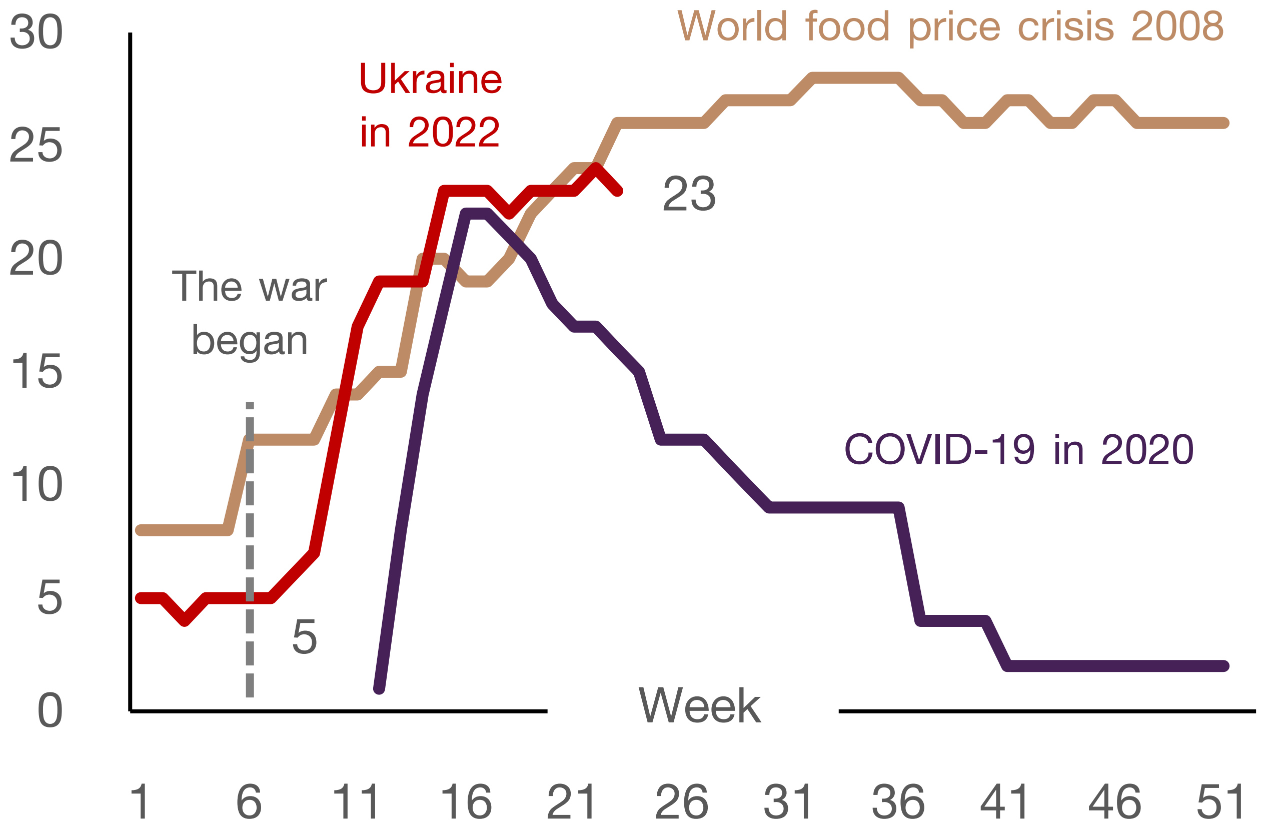
World drought situation during May 21 – April 22



IRI predicted 60% probability that La Niña phenomenon will continue until late 2022. if it does, it would affect global food production until early 2023.

2 Food export restrictions

The accumulated number of countries imposing food export restrictions, weekly, in different periods



- Many countries have started to impose more food export restrictions measures (export bans or quotas). **Currently, there are 23 countries with food export restrictions, an increase from 5 countries before the war began.**
- **More than 20 food products are export restriction lists, including vegetable oil, wheat, soybean, and corn.**
- Food export restrictions also played a role in raising global food prices by 13% during 2018 - 2011 (Giordani et al. 2016)

3 Fertilizer shortages and soaring prices

Crop cultivation takes around 5 – 12 moths. The recent fertilizer shortage and surging prices, caused by the war, will create effects later this year.

Sample of world crop calendar

		Month											
	Season	1	2	3	4	5	6	7	8	9	10	11	12
Corn									The war started				
US (32%)							Cultivation				Harvest		
Brazil (7%)	1st Round												
Rice													
India (24%)	Kharif												
Thai (4%)	In season												
Wheat													
EU (18%)													
Russia (10%)	Spring												
Soybean													
Brazil (35%)													
US (35%)													

(x%) = Share of local production to global production

Source: EIC analysis based on data from SPEI Global Drought Monitor, Columbia Climate School International Research Institute for Climate and Society (IRI), International Food Policy Research Institute, Giordani et al. (2016) and FAO

Although semiconductor price pressure and supply shortage indices have improved from the first quarter of 2022, supply chain disruption continues and could create further impact until 2023.

Semiconductor price pressure and supply shortage indices become more stable but remain higher than normal level.

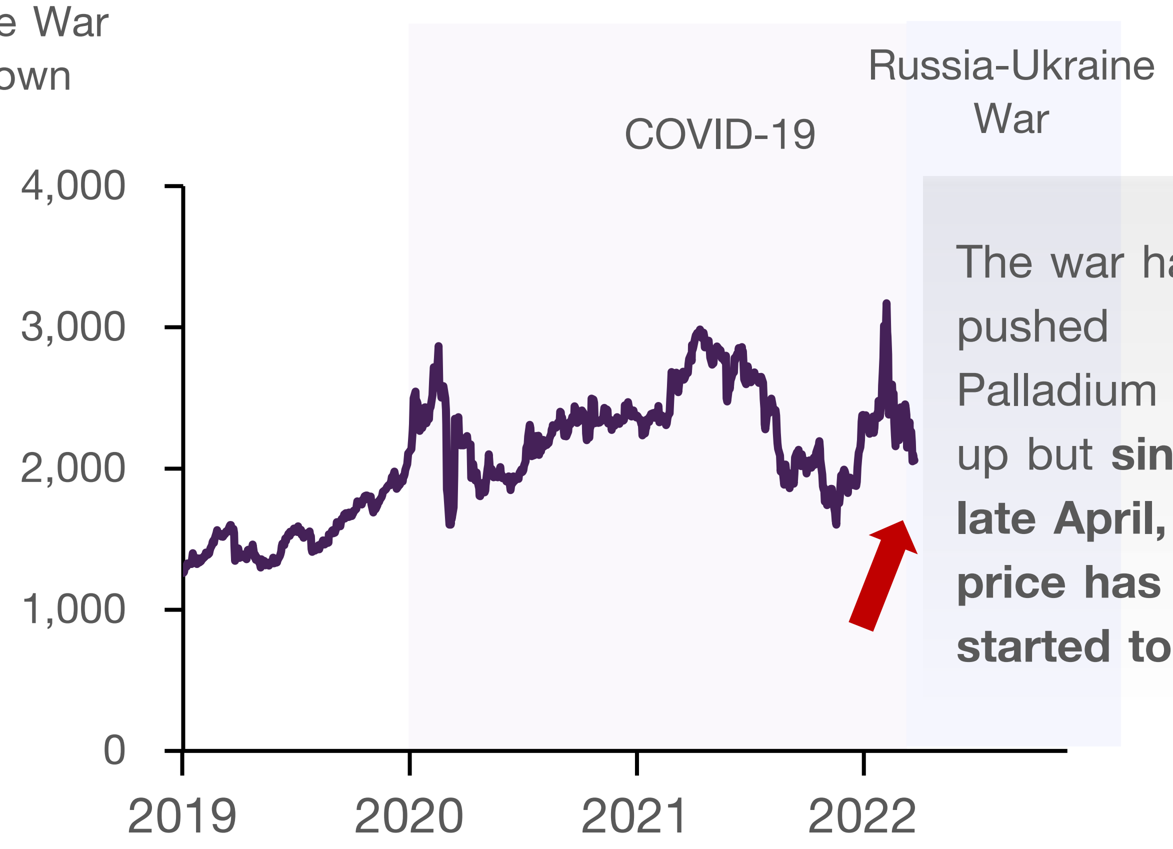
Semiconductor price pressure and supply shortage indices adjusted down in April as material costs and supply problem have improved from first quarter of this year.

Semiconductor delivery time

Unit: Week

Rising Palladium price

Unit: USD/ ounce



The war has pushed Palladium price up **but since late April, the price has started to fall.**

Time to build up new semiconductor plant to solve supply chain disruption in the long-term

	Capacity buildup		Product development		Production
	New plant buildup	Tool lead times	Semiconductor design	Yield and volume ramp up**	Production
Approximate typical duration (months)	12-18	6-18	12-36	6 or more	4 or more

** Ramp up in semiconductor terms means moving a prototype process into production and increasing the volume steadily over time

Key issues to watch

- **Current situation:** S&P Global manufacturing PMI survey showed that semiconductor price pressure index started to decline in April after accelerating from demand boom, rising material costs, like copper, and inflation effects from the Russia-Ukraine. Semiconductor supply shortages index slightly dropped in the first quarter of this year as China, one of the main manufacturers, began to ease lockdowns that affect manufacturing sector. Palladium price with Russia as a major manufacturer, sharply accelerated in the in the first quarter but continued decreasing since late April. **The current Palladium price stayed above pre-pandemic level. In addition, Semiconductor lead time increased significantly to 26.6 weeks in Marc from an average 13-15 weeks.**
- **Long-term effects:** If inflation keeps accelerating, material costs will rise, and also make long-term contracts to buy raw materials from producers globally become more expensive. The new plant setup will take many years to start more production lines. Semiconductor shortages, previously expected to ease within 2023, will likely extend to 2024.
- The effects of the trade & tech war, the Russia-Ukraine war, and China's lockdowns have intensified semiconductor shortages, spreading impacts to producers of final products, particularly the automobile industry.

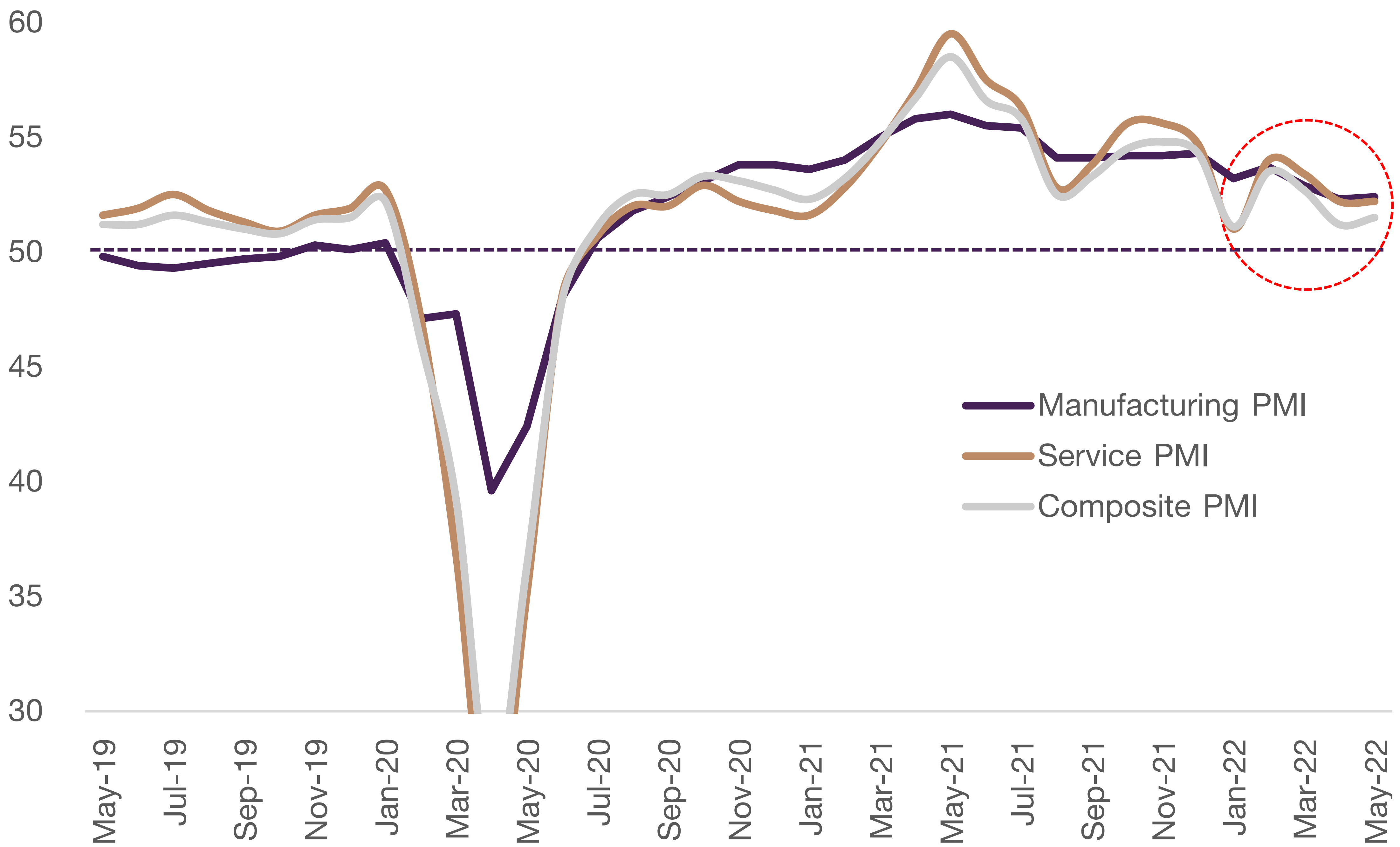
*Price pressures index is calculated by comparing the number of reports by purchasing managers of a specific product with a price increase to the number of reports with a price decrease.
Supply shortages index is calculated from the number of times a specific product being listed as in short supply each month. The index above 1.0 indicates the shortage in that month is higher than the long-term average.

Source: EIC analysis based on data from S&P Global PMITM Commodity Price and Supply Indicators, IHS Markit, Bloomberg, Susquehanna Financial Group, Bloomberg, and McKinsey & Company

Manufacturing activity and logistics slowed due to China's lockdown but signaled a recovery in May.

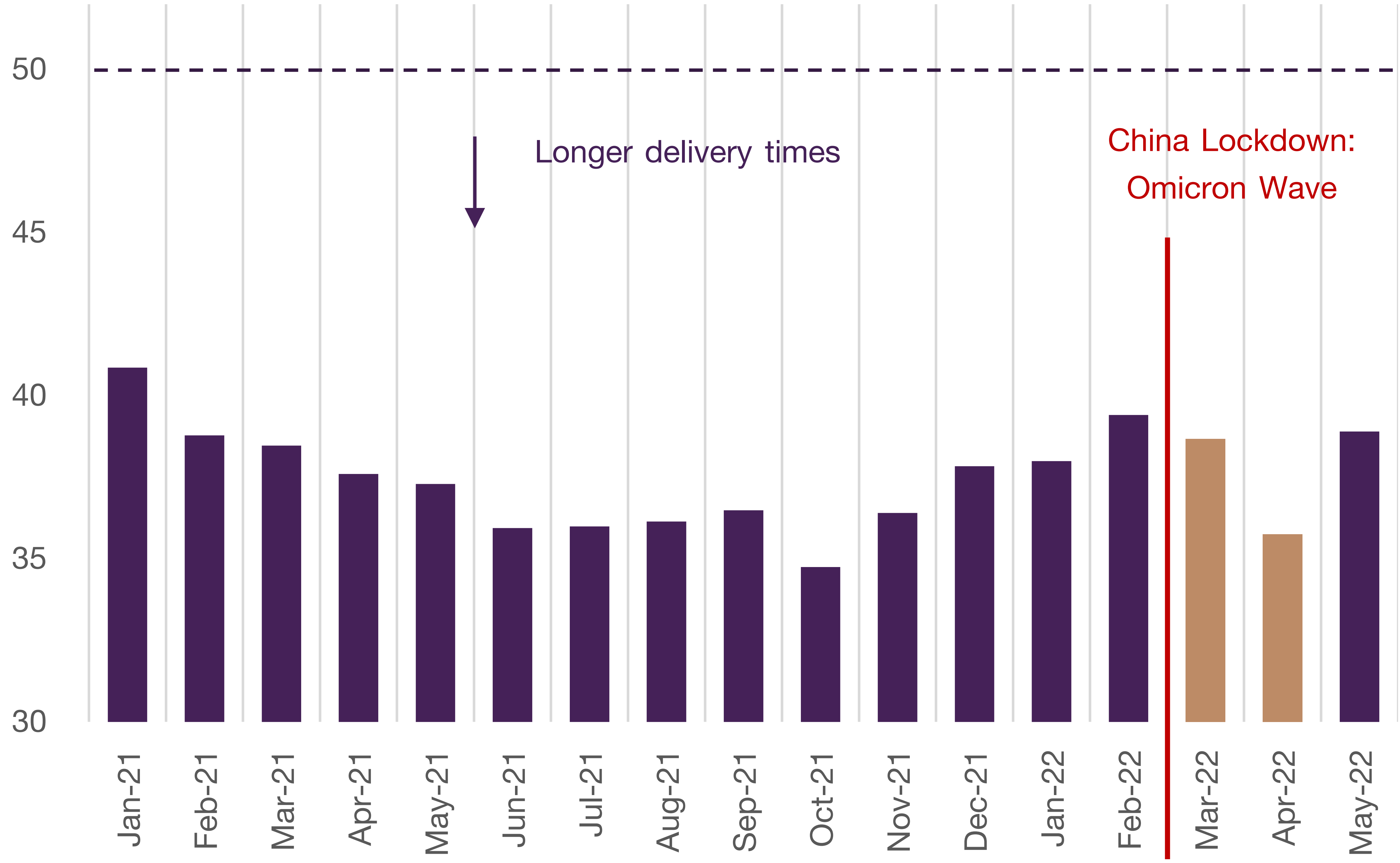
Global Purchasing Manager Index: Manufacturing and service sectors

Unit: Index, (>50 = expansion), seasonally adjusted



Purchasing Manager Index: Delivery times

Unit: Index, (>50 = expansion), seasonally adjusted



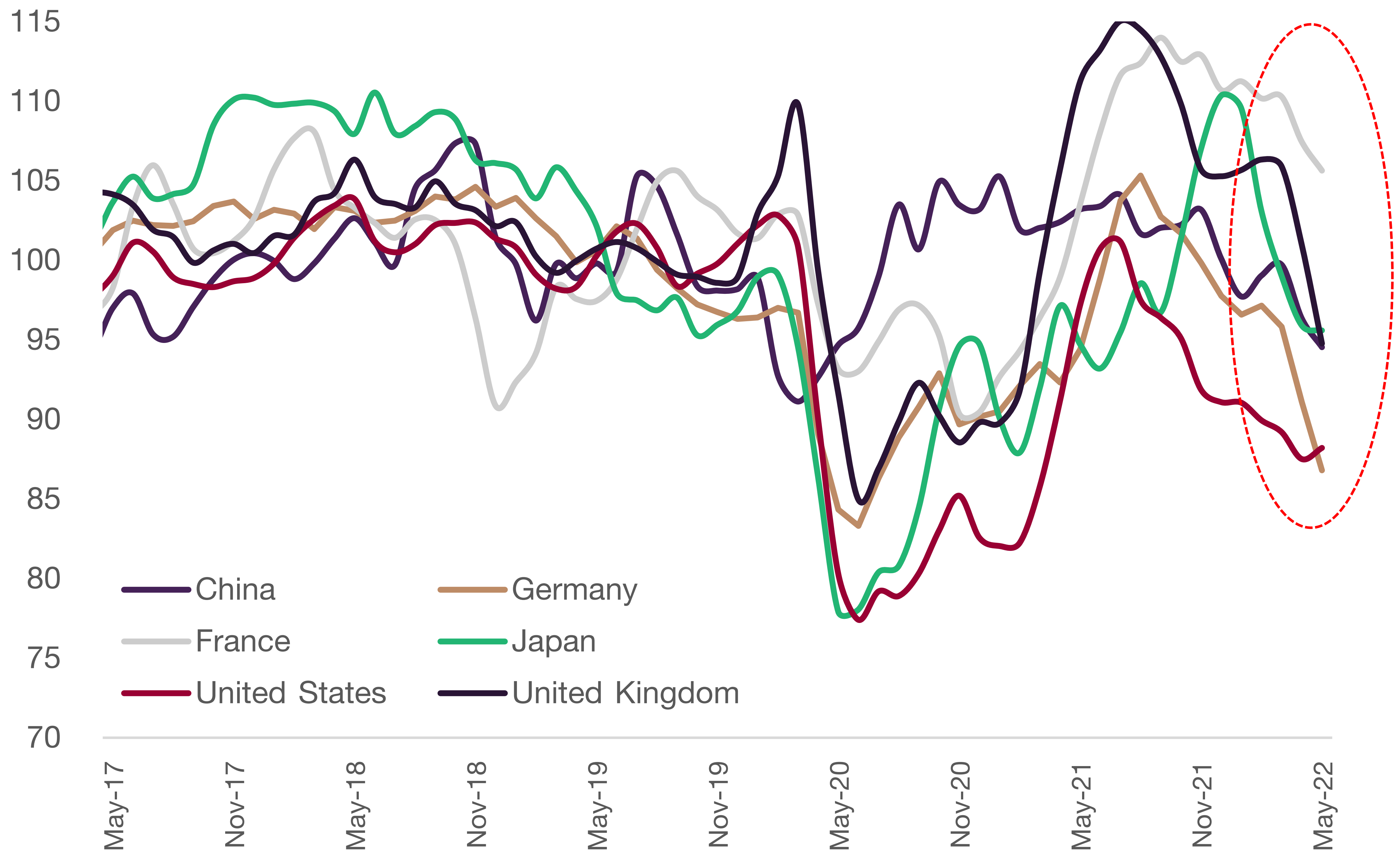
- **Growth in the manufacturing and service sectors was weakened** due to rising uncertainties, reflecting by a slowdown in PMI.
- **Delivery times took longer following the China lockdown announced in early March** and continued to worsen when lockdowns covered major economic cities, like Shanghai, in April.

Source: EIC analysis based on data from IHS Markit and CEIC

Lower confidence in the global economy caused a consumption slump in most economies.

Consumer Confidence Index

Unit: Index, 2019 = 100 (Data as of May 2022)



Retail Sales

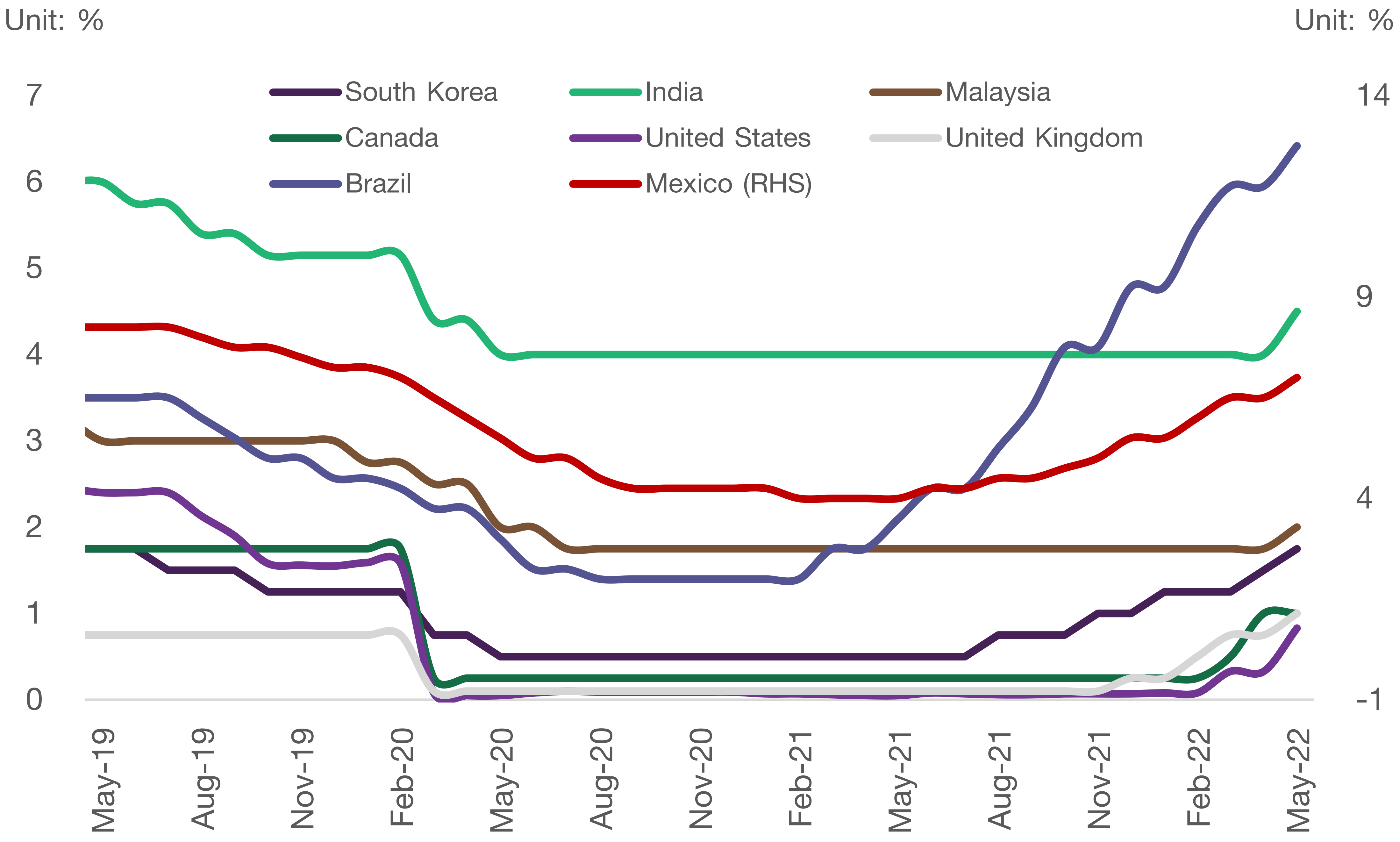
Unit: %YOY

Highly accelerating inflation and economic uncertainties, caused by the war and supply bottlenecks, lowered consumer confidence and purchasing power. This was reflected in a drop in the consumer confidence index and retail sales globally, particularly a sharp decline in the EU compared to pre-war levels.

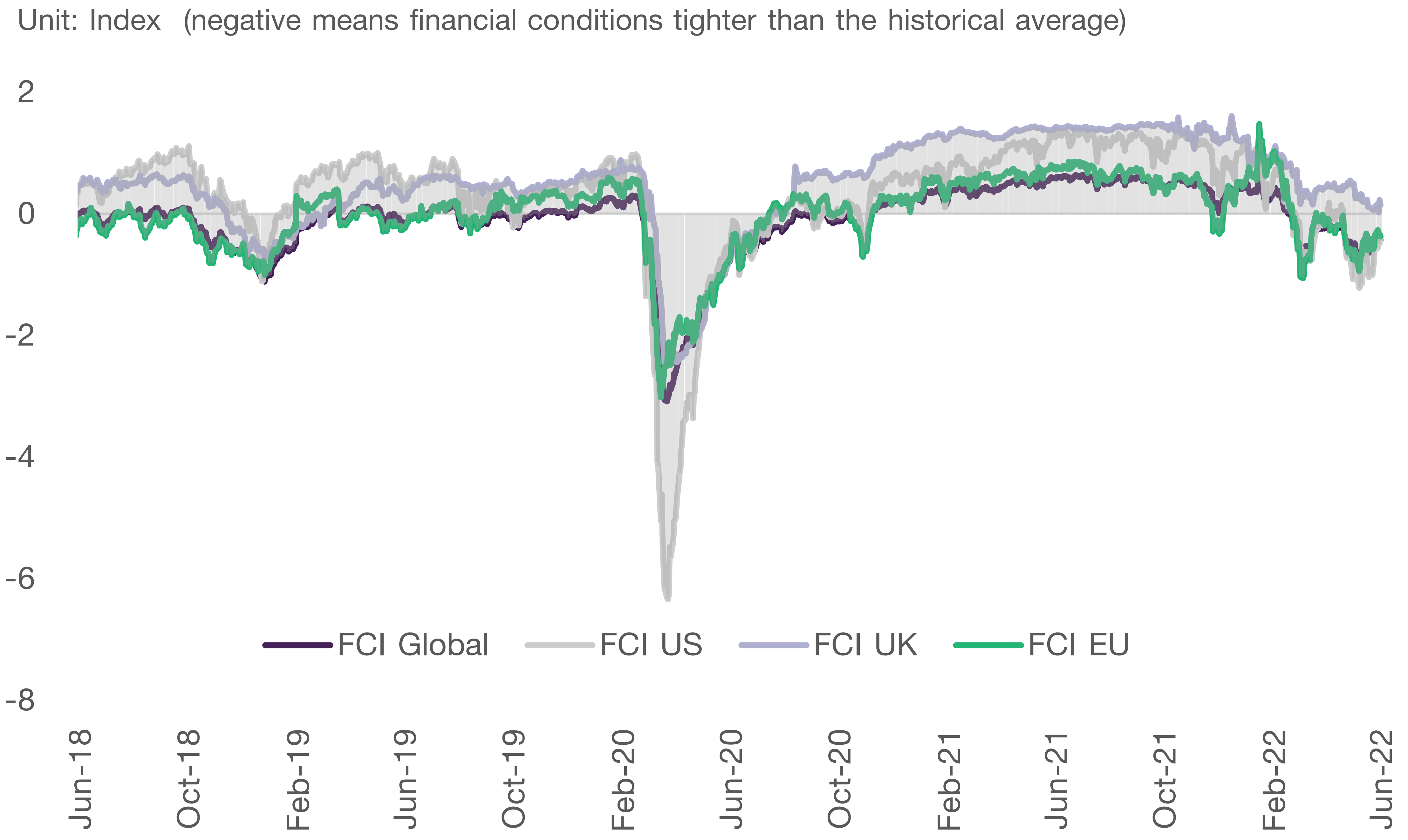
Source: EIC analysis based on data from IHS Markit and CEIC

Rapid tightening in global financial conditions added another pressure to economic recovery as higher borrowing costs will worsen already fragile financial positions in the business and household sectors.

Policy rates in each country



Financial Conditions Index (FCI)



Many central banks elevated monetary policy tightening to control inflation that rose faster than previously forecast. Rapid monetary policy tightening, and higher financial market uncertainty have also tightened the global financial condition.

Source: EIC analysis based on data from CEIC and Bloomberg

Amidst higher risks, still the monetary policy direction in this cycle is unlikely to lead the global economy into a severe recession.

The relationship of central banks' tightening cycle and economic recession

	Tightening cycle	Hikes (bps)	Duration of cycle (months)	Recession (yes/no)	Duration of recession (months)
US	April 1979	750	12	Y	7
	July 1980	1000	12	Y	17
	May 1983	300	15	N	
	March 1988	325	13	Y	9
	Feb 1994	300	12	N	
	June 1999	175	11	Y	3
	June 2004	425	24	Y	19
	Dec 2015	225	36	Y	3
UK	April 1978	950	16	Y	27
	February 1988	600	18	Y	24
	September 1999	100	18	N	
	November 2003	225	44	Y	15
	August 2018	25		Y	6
Euro Area	November 1999	225	16	N	
	Dec 2005	225	32	Y	15
	April 2011	50	4	Y	6

Since late 1970s, US, UK, and EU have gone through 16 tightening cycles, which eventually led to 12 recessions*.

Central banks' monetary policy will be highly challenging because:

The fragile global economy amid higher uncertainties will become even more vulnerable to exogenous shocks in addition to the tightening cycle.

Central banks are facing difficulties in implementing monetary policy. In some countries, central banks are forced to trade off between controlling inflation and promoting economic recovery.

Monetary policies are expected to be tighter as the previous tightening measures were behind the curve, causing inflationary pressure to rise sharply. Thus, many central banks responded with faster and more aggressive tightening measures (e.g., rapid and high rate hikes). This could increase the risks of economic recession.

Monetary policy direction in this tightening cycle might not lead the global economy to recession.

- The rise in inflation remains below the 1970's level and is expected to slow down in the future.
- The current unemployment rate is much lower.
- The acceleration of technology transformation during the pandemic will maintain the economy, together with strong consumption and higher savings as additional supporting factors.
- However, the EU economy is more like to enter recession due to greater effects from the war.

Note: *Recession in this report refers to a situation of GDP growth declines for at least 2 consecutive months.
Source: EIC analysis based on data from CEIC and Bloomberg

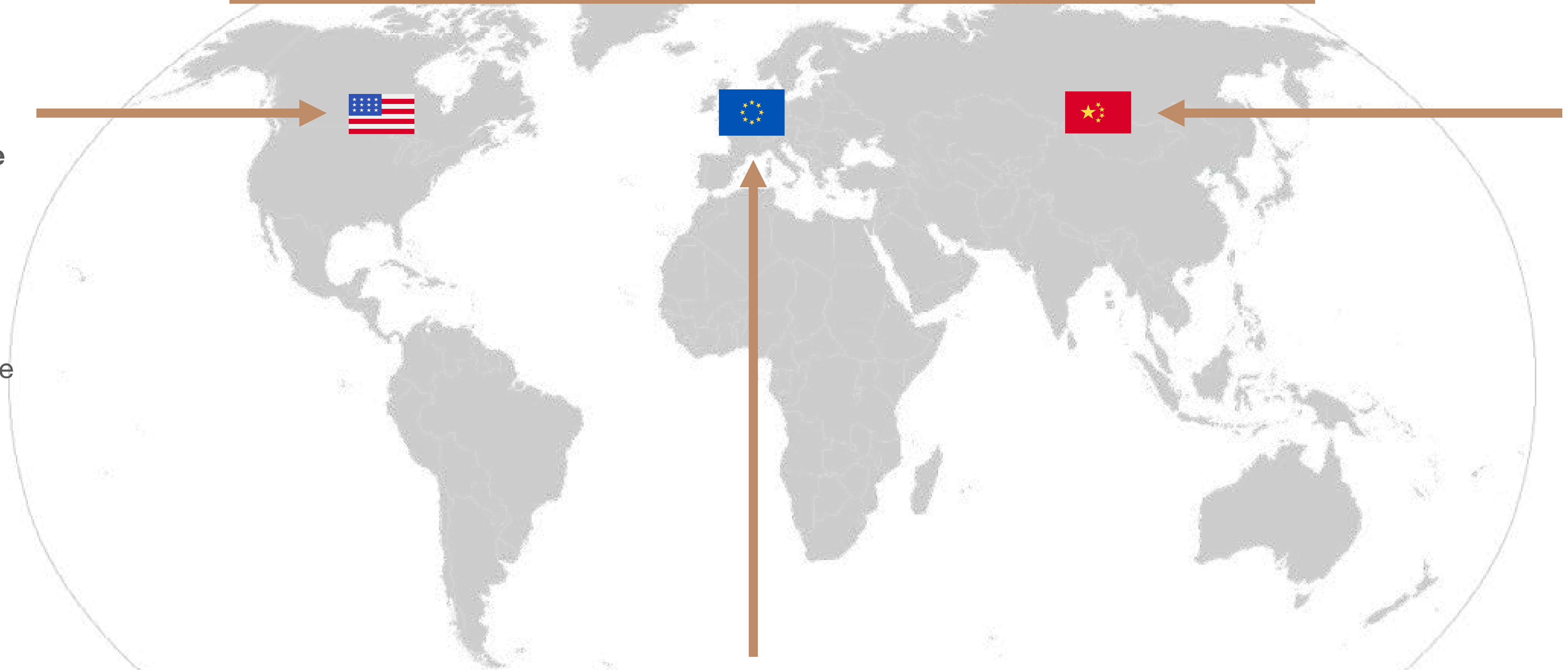
The global economy is facing various downside risks, including uncertainties about the war, prolonged supply bottlenecks, and rising risks to financial conditions. These will likely see the EU, China, and US economies slow down at the same time.

Signs of global recession are on the rise ...

- **Central banks are globally speeding up rate hikes amid rising uncertainties.** This could increase the risk of policy mistakes and potentially lead to recession.
- **The Russian invasion of Ukraine has scarred the global supply chain,** affecting manufacturing activity. Rising inflation also lowers real income, which will put more pressure on consumption recovery.
- **China's Zero COVID policy has worsened and prolonged supply bottlenecks in durable goods and logistics,** which will also extend the effects of high inflation. This situation has forced many central banks around the world to tighten monetary policy aggressively, potentially leading to recession.

EU, China, and US economies likely to slow down.

- **Concerns about the US economy entering recession are rising** from record 40-year high inflation and continued tightening financial conditions.
- **The US economy might enter recession in 2023** if Fed is unable to control inflation this year.



- **The EU economy is exposed to the highest risk of recession** as it is directly impacted by the Russia-Ukraine war, which will likely cause the EU economy to slow down significantly and become more vulnerable to uncertainties than the US and China.
- **Effects from the war in the EU have lowered business confidence and caused severe volatility in financial markets around the world.**

- **China's Zero COVID policy resumed as the latest outbreak in China was more severe than the first. China's economy has continued to slow down,** worsening other problems, such as real estate issues, weak domestic demand, and underperforming exports, compared to the previous year's growth.
- **China's economic slowdown in 2022 will put additional pressure on global economic recovery** as China is the world's second largest economy, with 18% of the global economy, following the US.

Source: EIC analysis

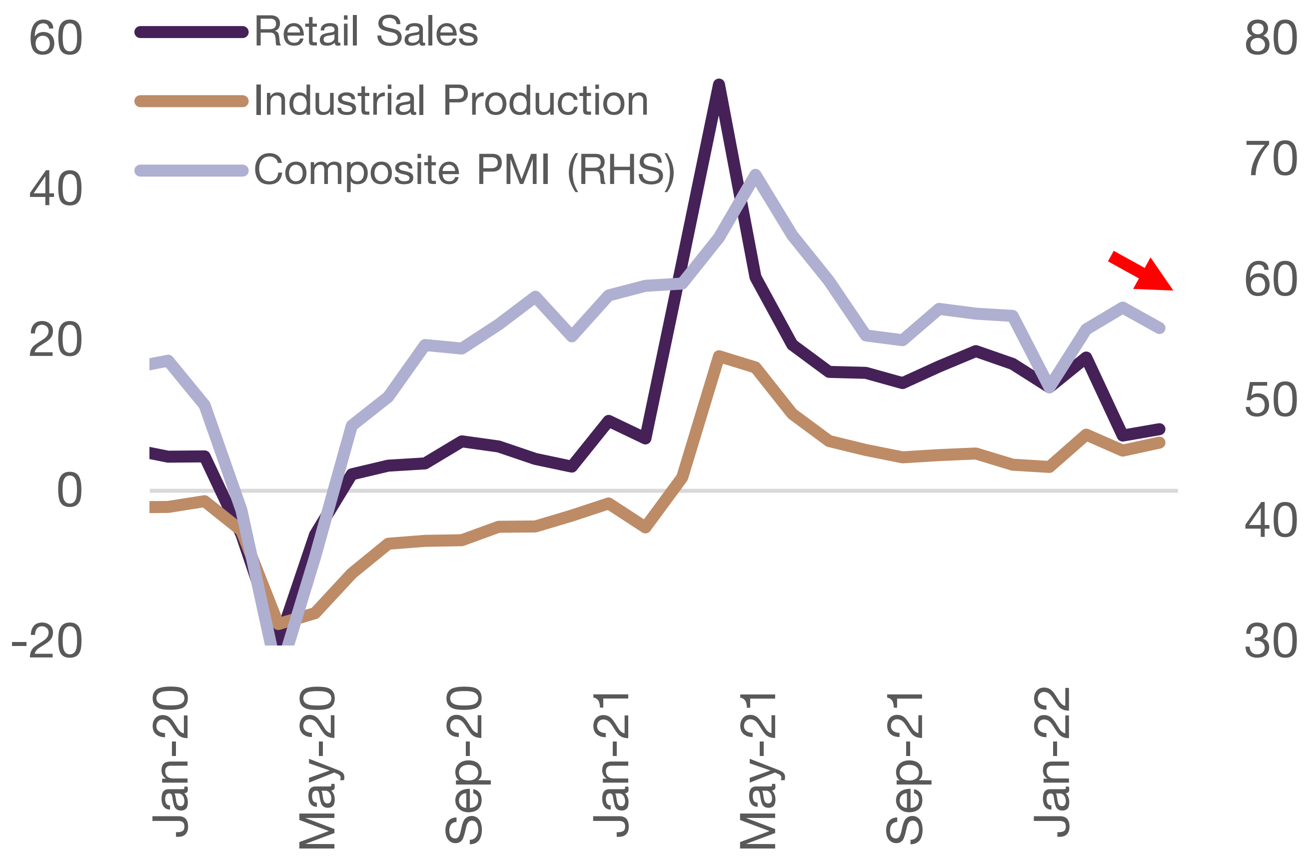
The US Economy

The US economy signaled a deceleration, dragged downward by surging inflation and a continued tightening monetary policy. Going forward, EIC expects US consumption and production to slow down further, but not enter into recession this year. The strong financial position of the private sector and higher savings accumulated during COVID-19 will additional supporting factors allowing the private sector to handle the impact of tightening monetary policy.

The US economy signaled a deceleration, dragged downward by surging inflation and monetary policy tightening. Consumption and production are expected to slow down further this year but not turn into recession.

US economic indicators

Unit: %YOY Unit: Index (>50 = expansion)

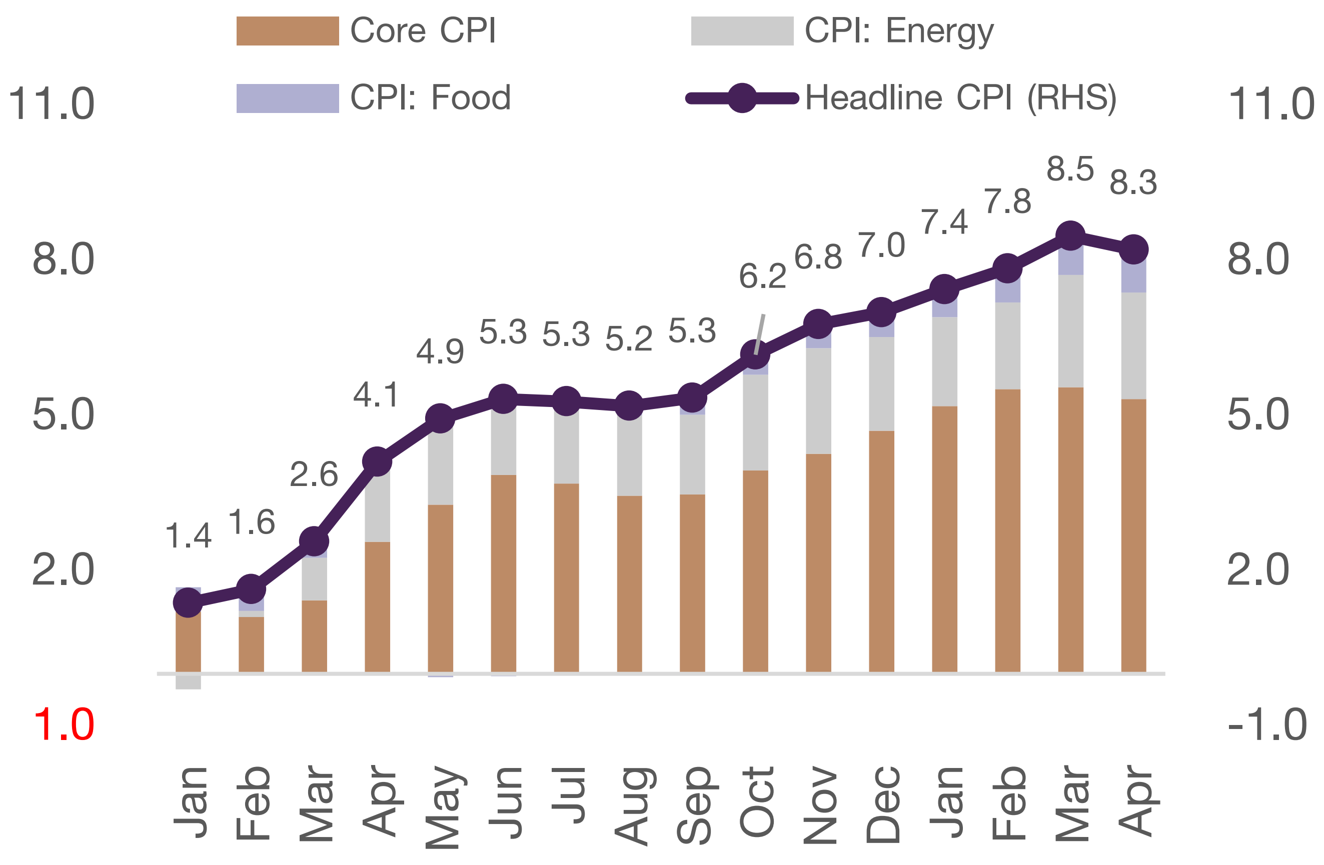


The US economy has decelerated since early this year

- **Retail sales have continued to slow down** as inflation surged higher, causing real income to decrease.
- **Composite PMI and Industrial Production Indices are still growing** but will likely slow down in the future following higher interest rates and tightening financial conditions.
- **Consumer confidence for the next 6 months dropped sharply.**
- **Federal spending dropped as the government could not disburse the budget as expected.**

Inflation contribution in 2021-2022

Unit: percentage point



A rapid increase in inflation caused by

- **Supply bottleneck recovery was delayed more than expected** due to the Russia-Ukraine war and the strict Zero COVID policy in China.
- **Demand has grown strongly** following economic reopening and consumption activity, causing supply shortages.
- **Wages continue to rise** due to a tightening labor market.

The effects of high inflation on the economy

- A decline in purchasing power has pressured consumption recovery.
- Higher raw material costs have lowered business profitability and investment.
- Lower real wages have hindered laborers returning to the market.

US inflation and financial condition index

Unit: %YOY Unit: Index (down means tightened)

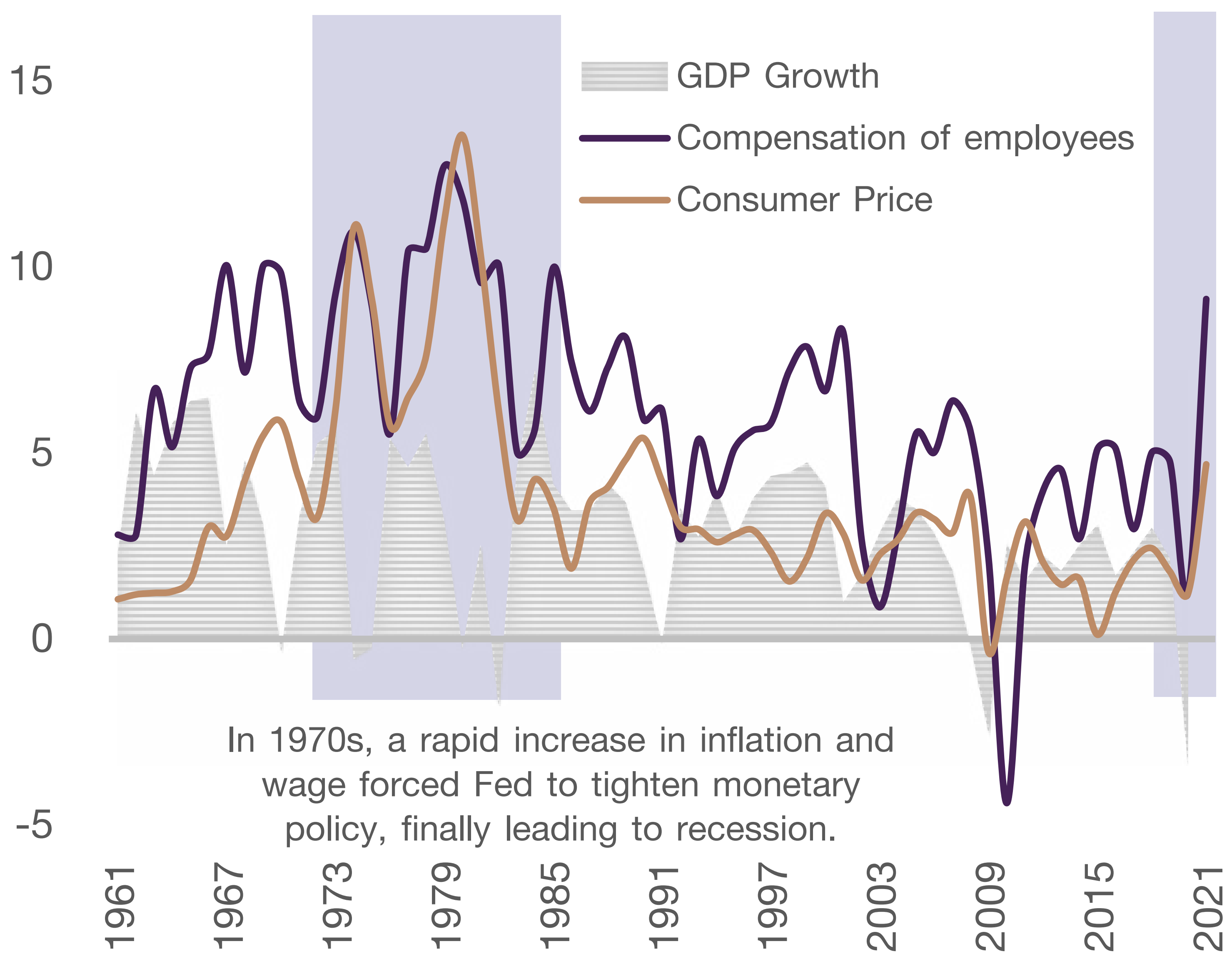
	1979-80	1983	1988	1994	1999	2004	2015	2022
Hikes (bps)	1750	300	325	300	175	425	225	75

- **The financial condition tightening will cause an economic slowdown.** However, the current tightening is still less severe than previous crises, partly due to Fed monetary policy tightening being not so aggressive.

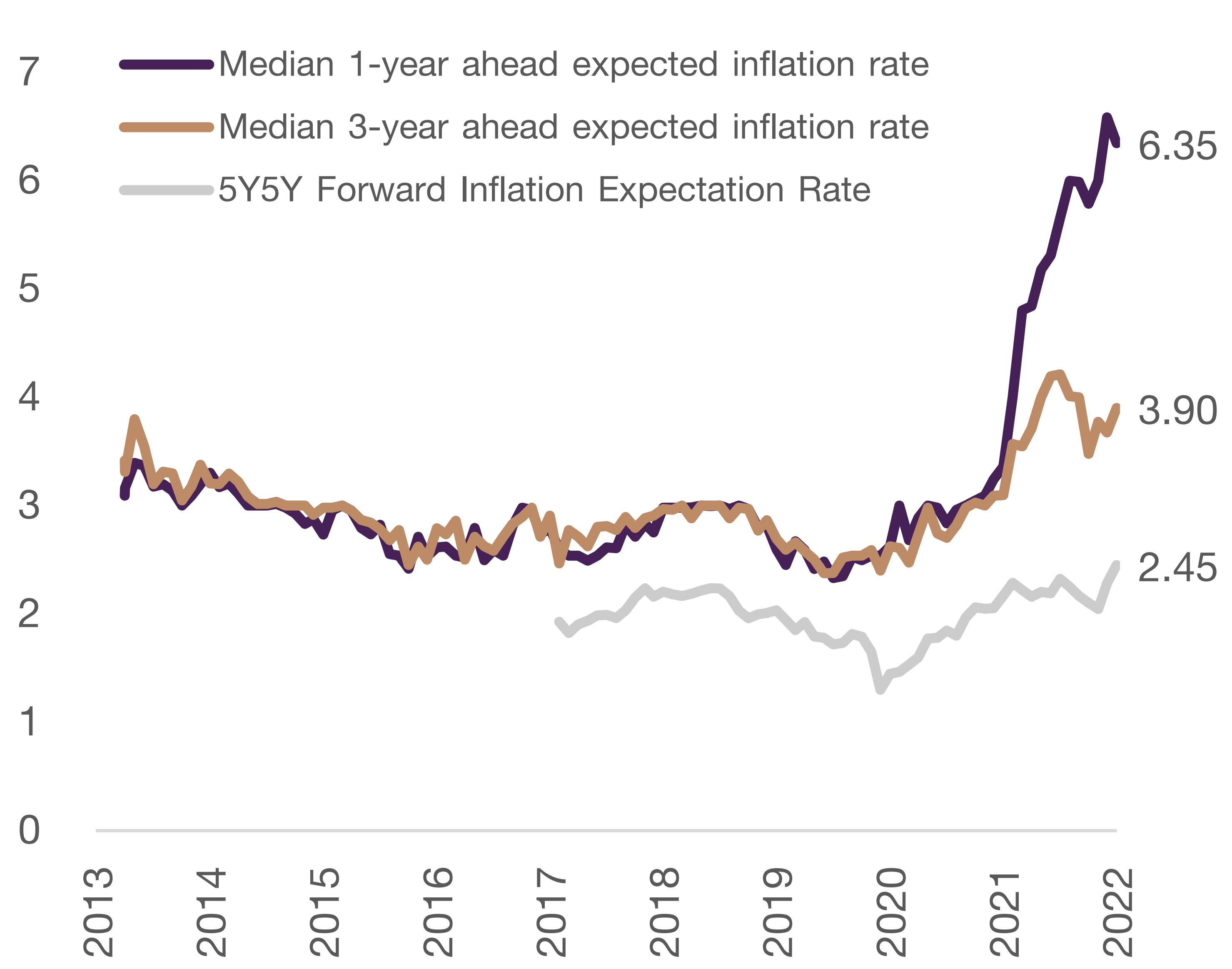
Source: EIC analysis based on data from the CEIC and Federal Reserve Bank of St. Louis

A rapid surge in both inflation and wages have created market concern over a wage-price spiral*. However, as inflation forecast for the medium term is not too high and the labor supply likely recovers, a wage-price spiral is unlikely.

Wage, inflation, and US economic cycle



US inflation expectations from NY Fed and Bloomberg



Inflation is expected to gradually decline in 2023.

- **Low-base effects will fade,** starting in the second half of 2022
- **Supply disruption will gradually ease** in 2023, despite a recovery delay, caused by the war and Omicron outbreak.
- **Russia-Ukraine tensions will likely unwind.**
- **Inflation forecasts remain close to inflation targets.**
- **Wages decrease from a recovery of labor supply.**
- **Durable goods prices drop following a consumption slowdown** from reduced financial aid and more spending on services.
- **Rising energy and other commodity prices decelerate** from high-base effects and more production of new inventory.

Tight labor market and higher wages add more risks of a wage-price spiral

The US has job openings ≈2 times of unemployed labors, the highest record since the 1970s, due to:

- **Higher demand for labor,** following an economic recovery.
- **The pandemic has pushed some groups of laborers permanently out of the market,** such as the early-retired and self-employed groups.
- **A decline in foreign labor** from travel restrictions and visa approval difficulties.

A wage-price spiral will not happen because

- **Inflation expectations in the medium- and long-term were not revised too much.** High inflation expectations in the short-term reflect the energy crisis and supply bottlenecks, which are expected to ease in 2023.
- **Rising labor supply will gradually lower wages in the future,** following concerns over COVID subsiding and government restrictions easing.

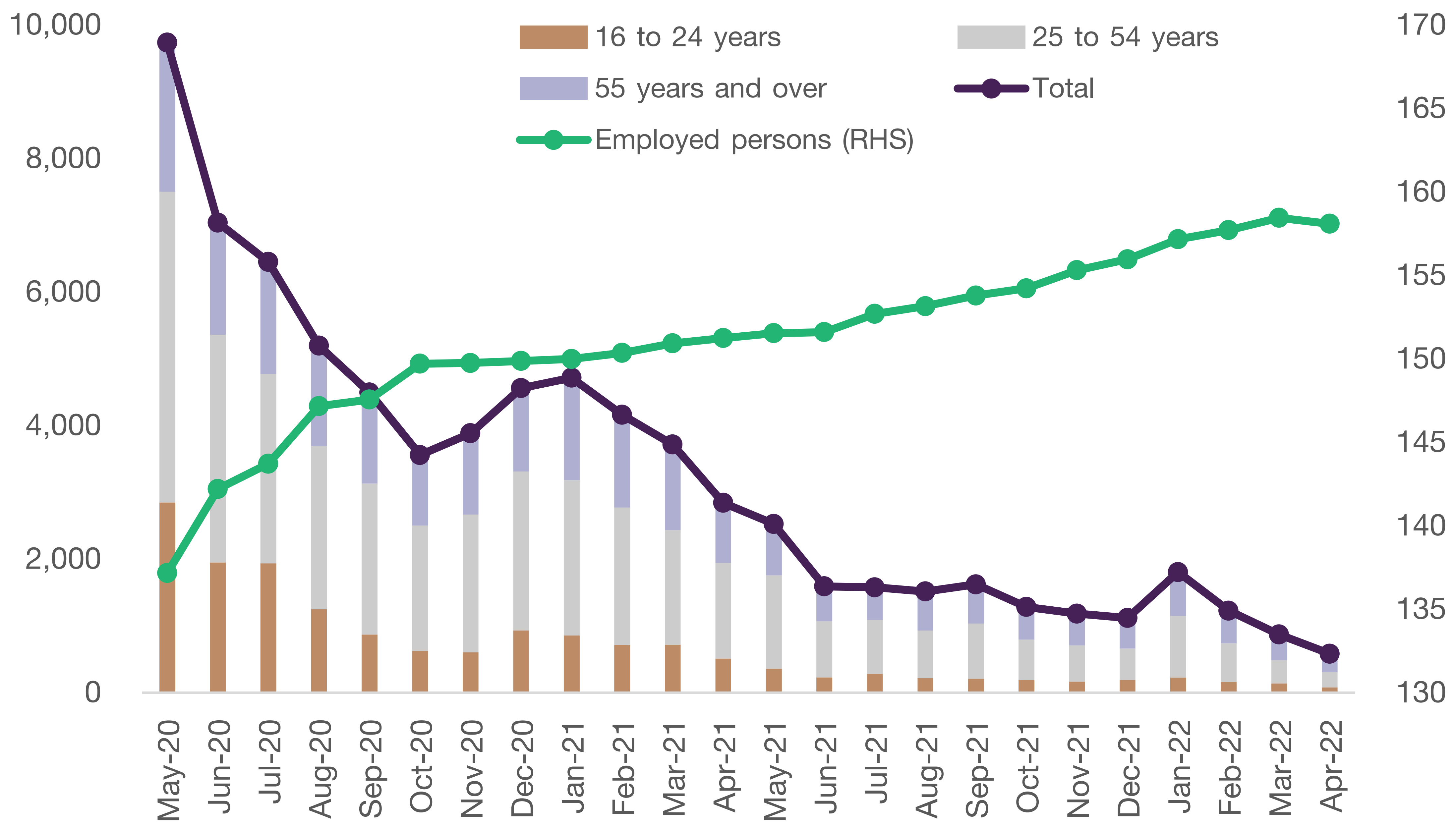
Note: *Wage-Price Spiral refers to an event in which the inflation rate rises sharply and then creates upward pressure on wages, following demand for wages raise to meet higher living costs. An increase in wages causes the cost of production to increase, leading to a rise in final product prices and inflation, respectively. This situation may repeat and become a cycle that leads to Hyperinflation.

Source: EIC analysis based on data from the New York Federal Reserve, Bloomberg, and U.S. Bureau of Labor Statistics

The labor market will likely become less tight as more workers return to the market, decreasing wages going forward. An increase in the supply of low paid workers will be an important factor in lowering wages.

Workers not returning to the market due to COVID and employed persons

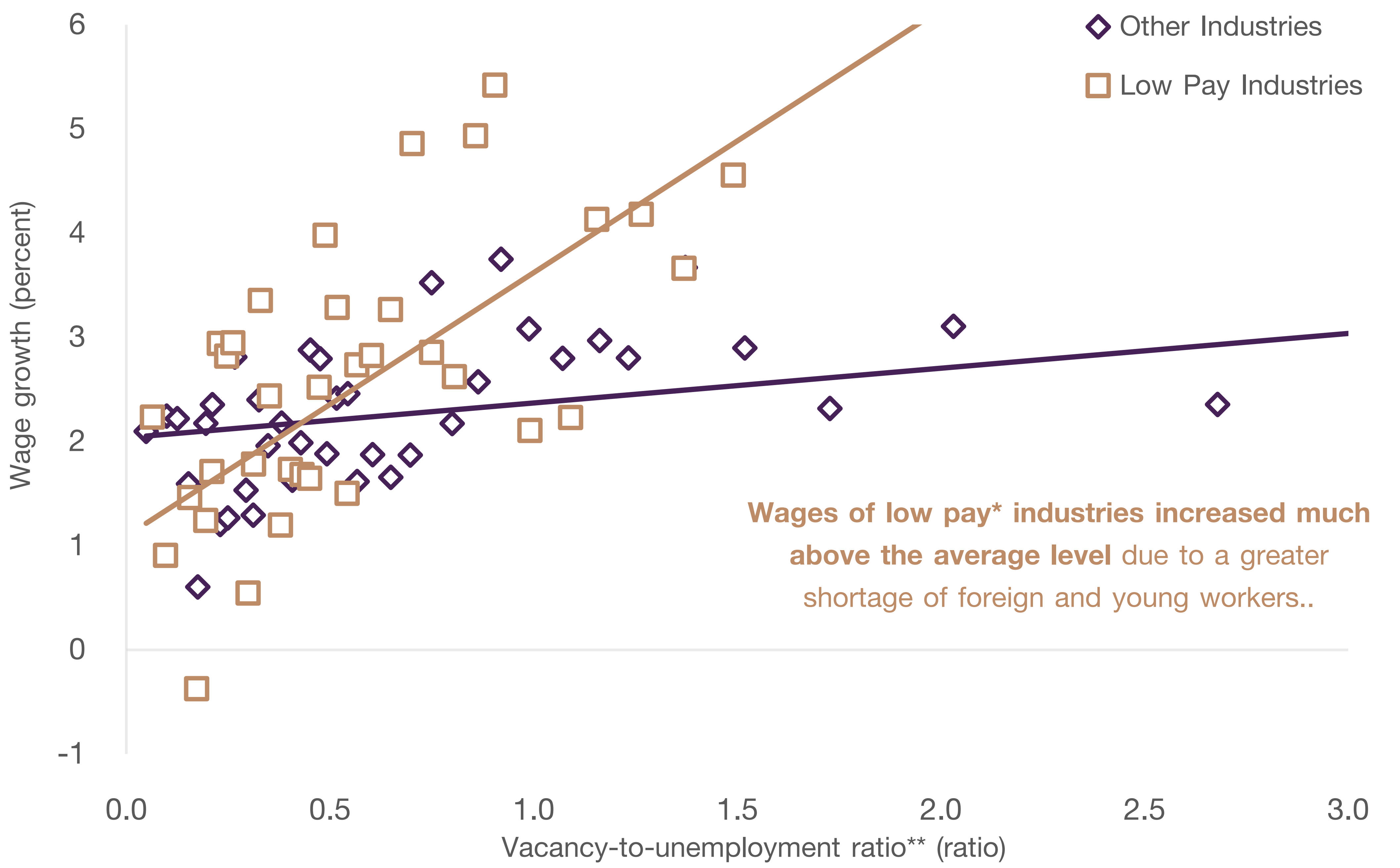
Unit: Thousand persons Unit: Thousand persons



- **Wages tend to be lower as the labor supply gradually returns,** following fewer concerns over COVID infection and reduced savings and financial aid.
- **Labor union negotiating power is not as strong as in 1970s,** limiting the risk that workers will call for wage hikes that can lead to a wage-price spiral.

US wage by industry (IMF analysis)

Unit: %, ratio



- **The US government needs to support more employment of foreign workers** due to a supply shortage. Despite returning to the pre-pandemic level, the supply of foreign workers is still not enough to replace some labor group (early-retired and self-employed). Moreover, increased employment of foreign workers will help in reducing wage pressure, especially in low pay industries. c

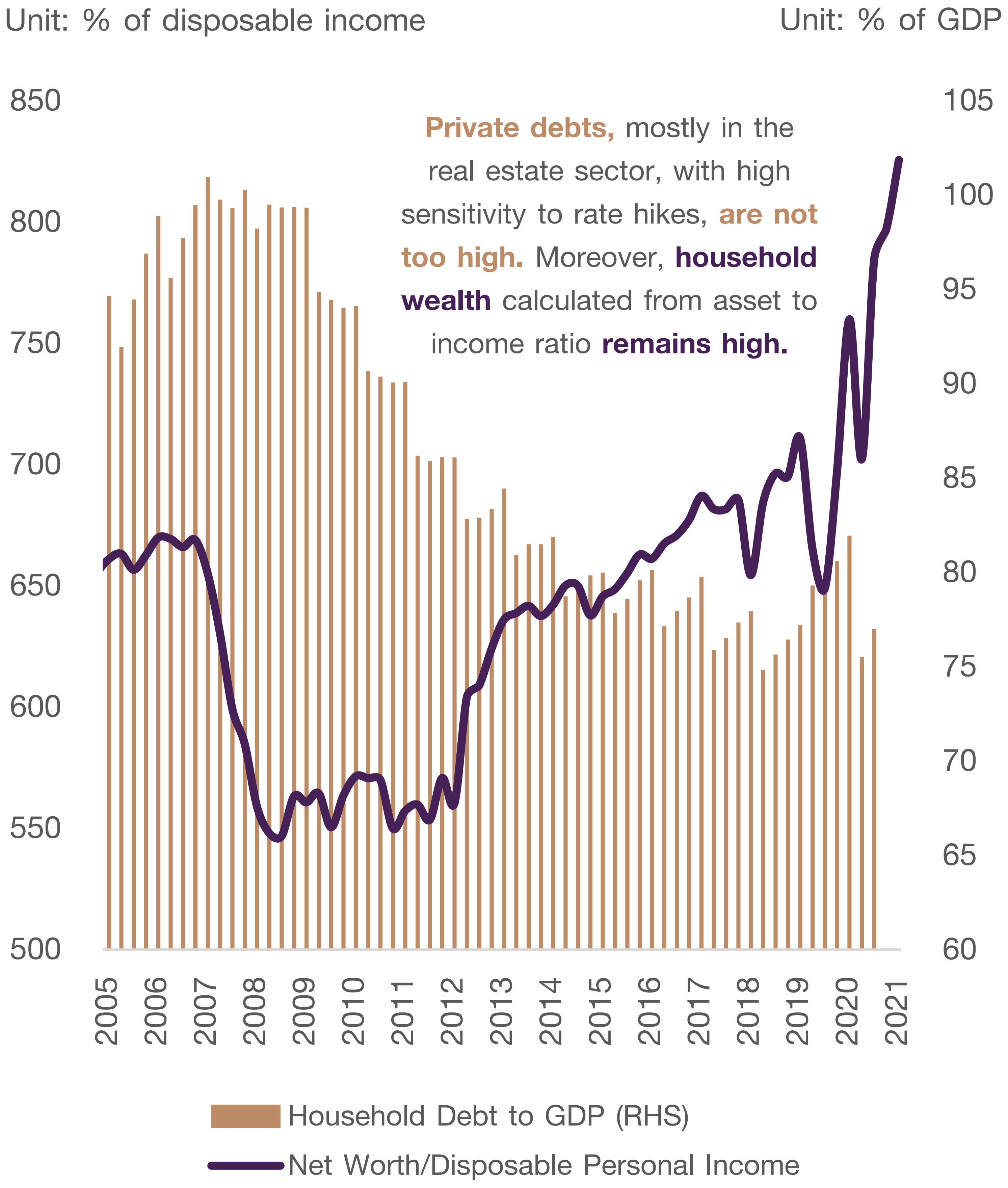
*Low pay industry e.g., accommodation, restaurants, retail sales & wholesale businesses, and recreational activity.

**Vacancy-to-unemployment ratio indicates the level of tightness in the labor market.

Source: EIC analysis based on data from Federal Reserve Bank of St. Louis, Bloomberg, and IMF WEO April 2022

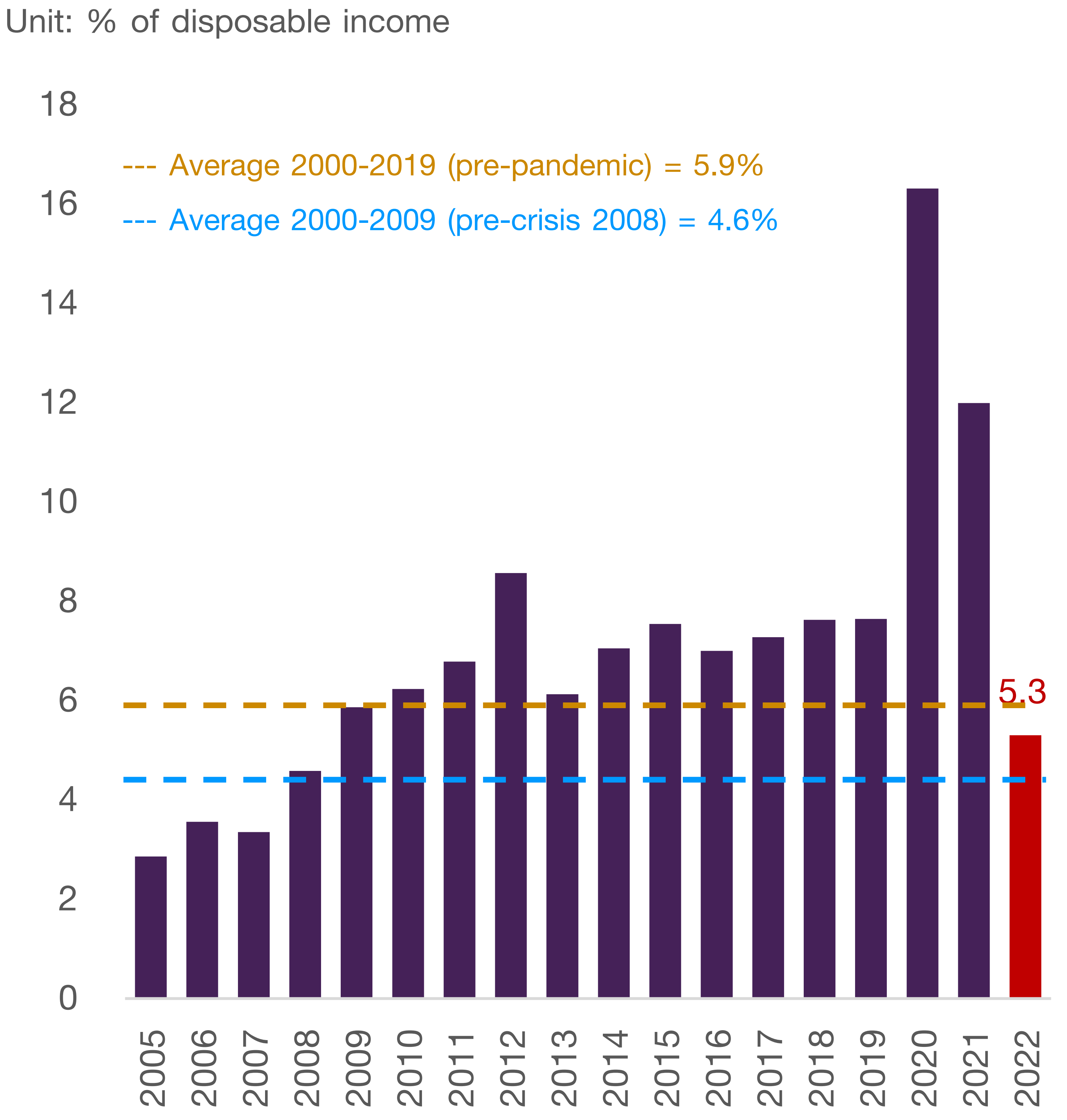
A strong financial position and higher savings will provide additional support helping the private sector to handle the impact of tightening monetary policy and avoiding a severe slowdown in consumption and investment.

The private sector's financial position remains strong.



*Households includes nonprofit organizations; net worth is assets minus liabilities.

US savings to net income ratio



Note: 2022 data is average data during January – April.

Supporting factors preventing the US from entering recession

Although consumption (68% of GDP) dropped slightly from: (1) tightening financial conditions and higher financial costs (2) lower demand for goods and more spending on services, **consumption remains strong** as:

1. **Wages increased** following high demand for workers
2. **Higher accumulated savings**

The default rate remains low:

1. **The degree of debt survivorship remains high** as many businesses with weak financial positions have closed during the COVID-19 pandemic, raising the quality of businesses in the market compared to the pre-pandemic level.
2. **The default rate of the commodity sector is low,** supported by a rise in prices.
3. **The business sector's financial position remains strong.**

Growth in manufacturing and private investment continues, but at a slower pace:

1. **Supply bottlenecks eased** both in product and labor markets
2. **Very low inventory boosting investment in new products**
3. **Profit remains high** as manufacturers transfer higher costs to consumers. This will partly compensate for higher borrowing costs.

Source: EIC analysis based on data from Federal Reserve Bank of St. Louis

SCB Economic Intelligence Center

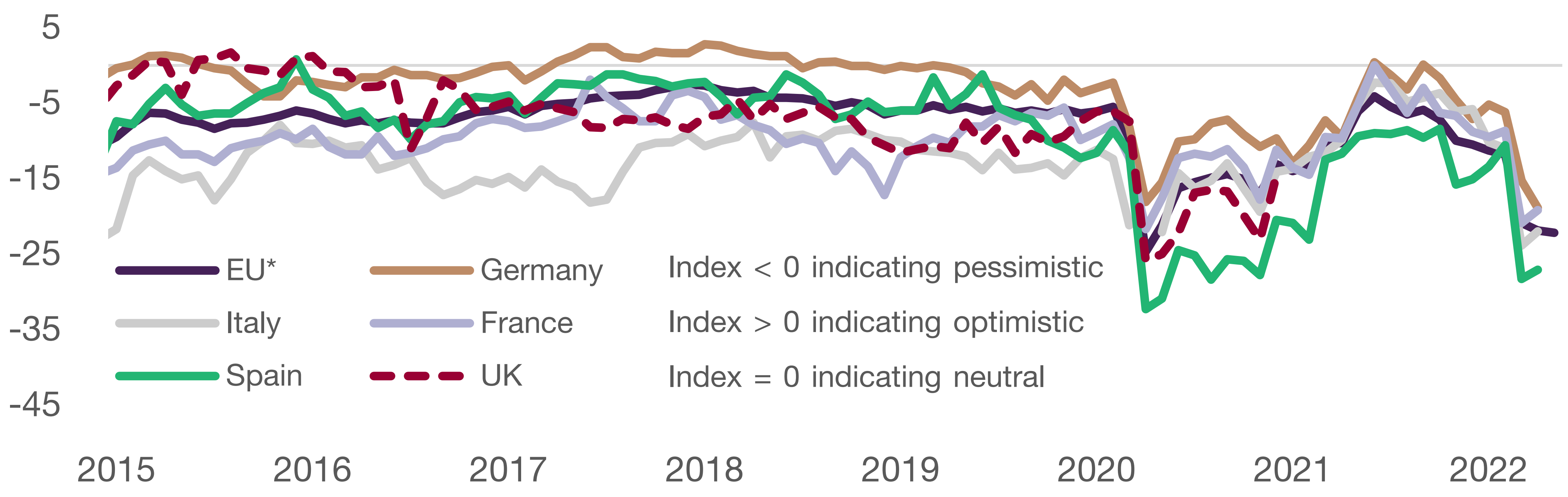
The EU Economy

The EU economy has been the economy most severely affected by the Russia-Ukraine war, exposing it to more risks of recession than the US economy. The German and Italian economies are at high risk of entering recession, given their high dependency on Russian energy. However, the EU labor market is not as tight as in the US, resulting in reduced pressure on wages.

The EU is facing an increased risk of recession in 2022 compared to the US and China as it has been more severely affected by the Russia-Ukraine war.

Consumer confidence

Unit: % point



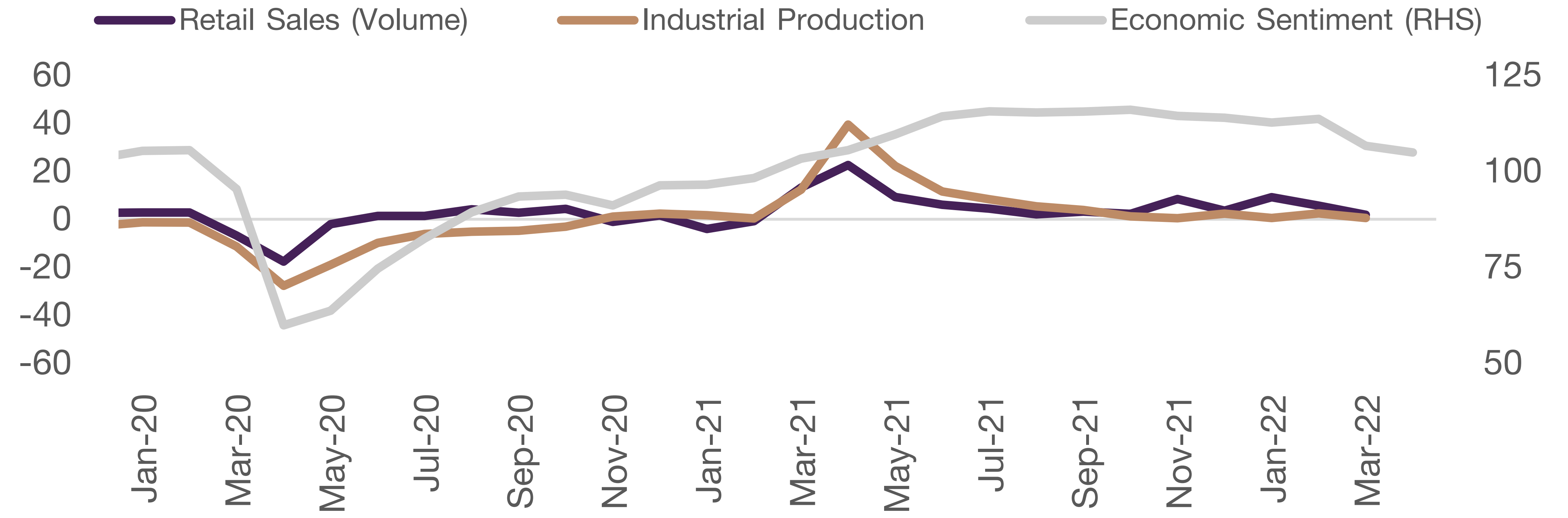
The EU economy has the highest chance of slowdown among AEs with various risks.

- **The Russia-Ukraine war has pressured purchasing power and the manufacturing sector** as the EU is a net importer of energy, particularly major economies like Germany and Italy that are highly dependent on Russian energy.
- **Government policy decisions are highly challenging. If policy is slightly too tight, the economy could easily enter into recession** because economic growth is already at a low level amid high uncertainties from the war.
- **A slowdown in China,** the top trading partner of EU, will lead to a deceleration in international trade and then the EU economy.
- **Growth in the credit sector is very tight.** Although the ECB continues its accommodative monetary policy, the ECB cut its bond purchases, reflected by a sharp drop in high-yield bond issuance compared to the same period last year.

EU economic indicators*

Unit: %YOY

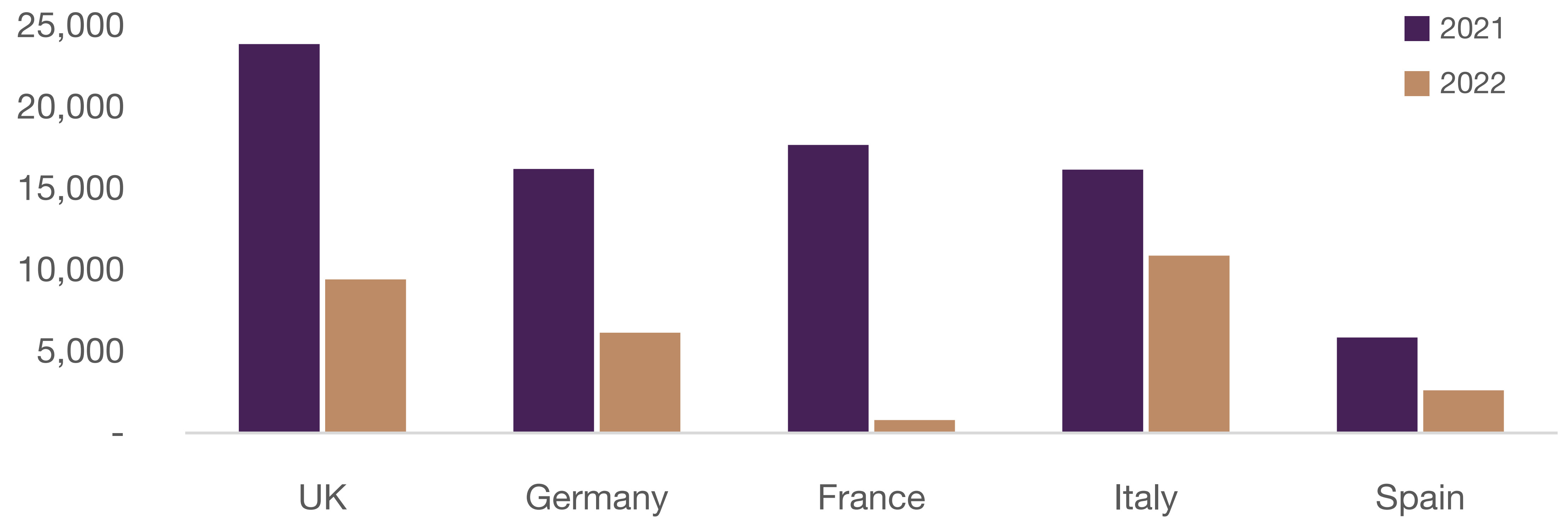
Unit: Index (>100 = expansion)



*EU = European Union 27 countries excluded UK

High Yield Bond Issuance in Europe (the first 20 weeks of each year)

Unit: USD million

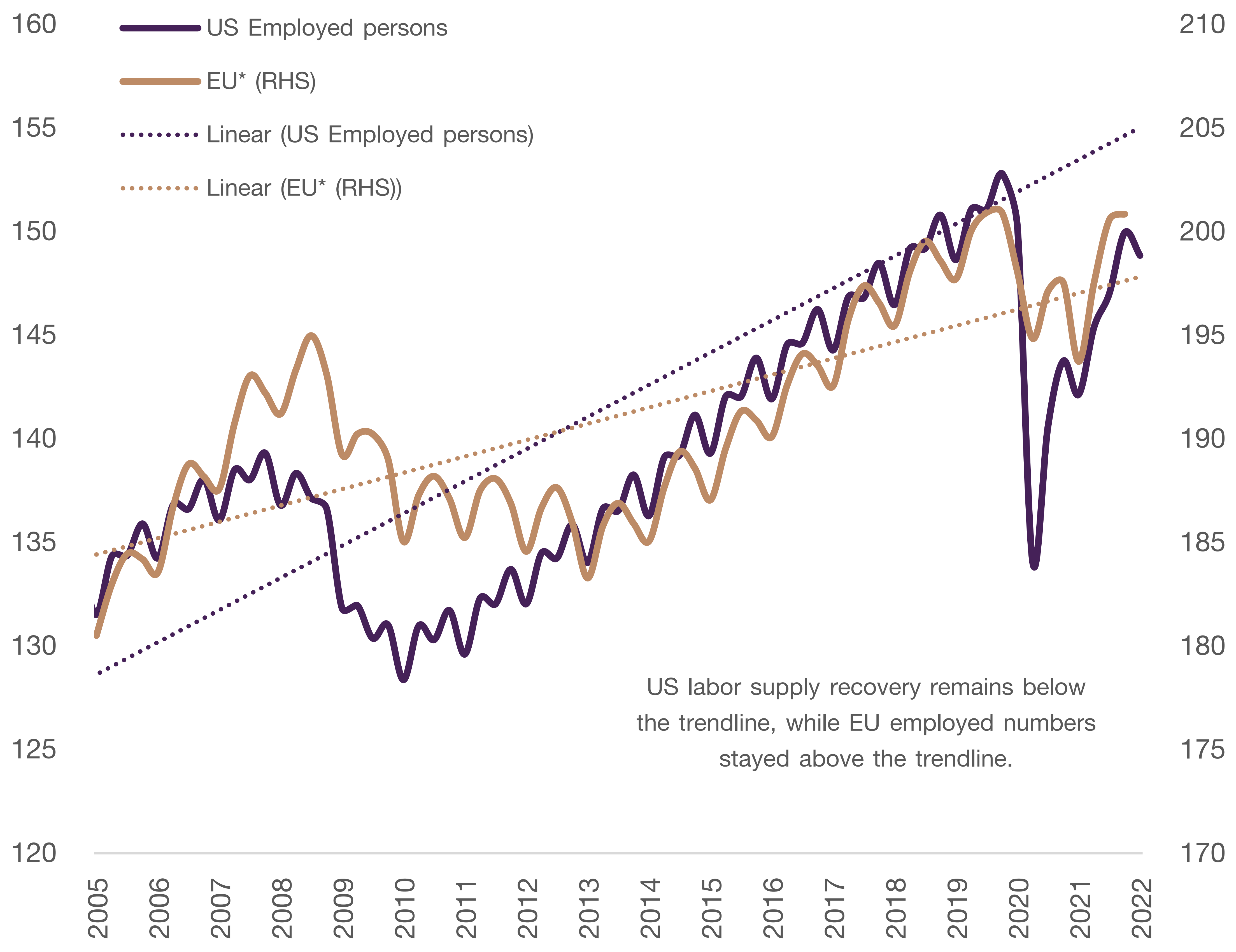


Source: EIC analysis based on data from the CEIC and Bloomberg

The risk of a wage-price spiral in the EU is less than in the US as the EU labor market is not as tight, resulting in less pressure on wages.

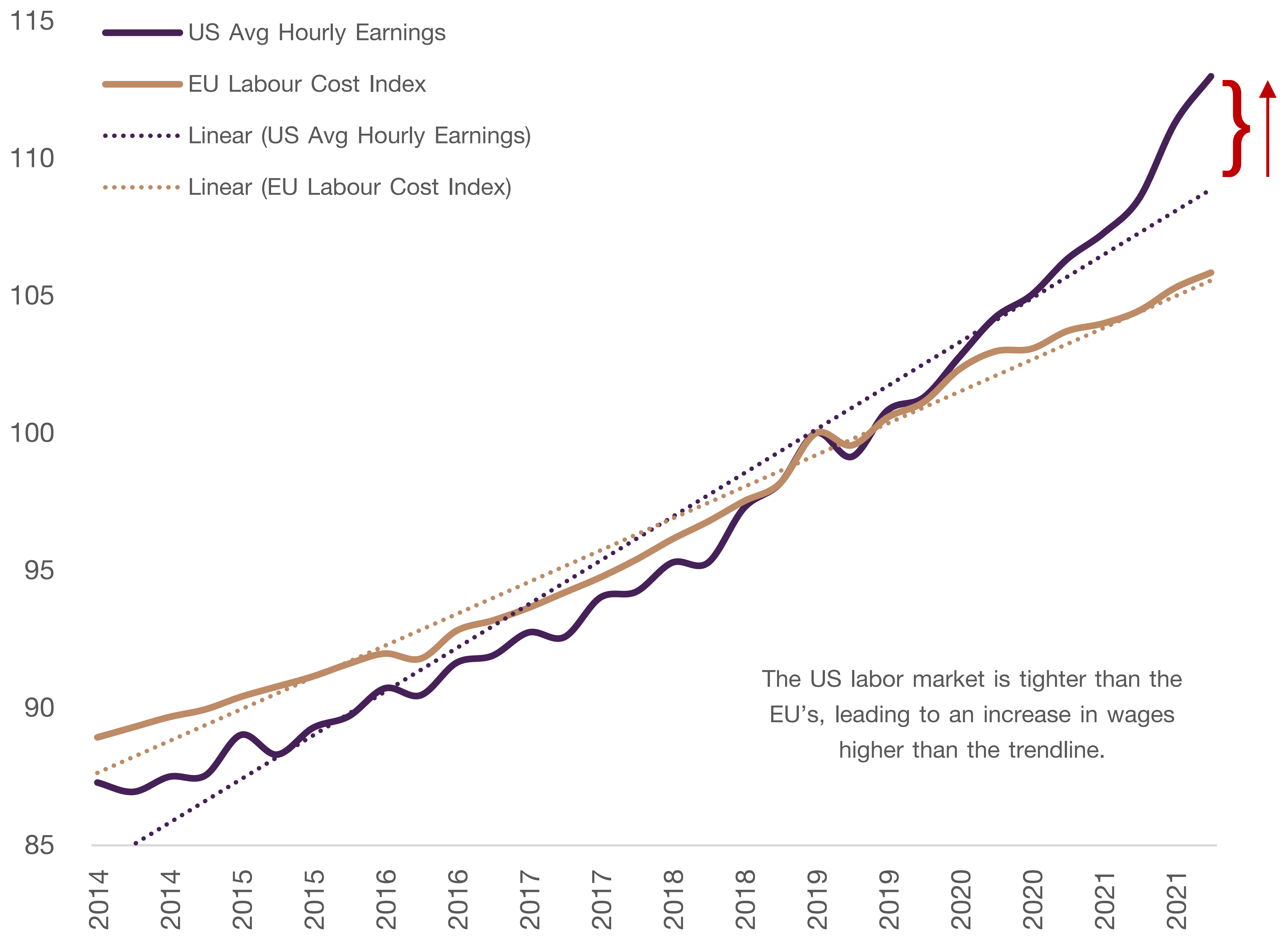
Employed persons

Unit: Million persons



Earning growth in US and EU

Unit: Index, 2019 = 100, Quarterly



Note: *EU includes European Union 27 Excluding UK

Source: EIC analysis based on data from the CEIC and Bloomberg

The Chinese Economy

China's economy is expected to slow more than previously forecast due to a Zero COVID policy that suppressed the recovery of supply bottlenecks and affected employment and domestic economic activity. In addition, exports, the main economic driver last year, also face a downward trend as exports to major trade partners, particularly the EU, slowed down significantly.

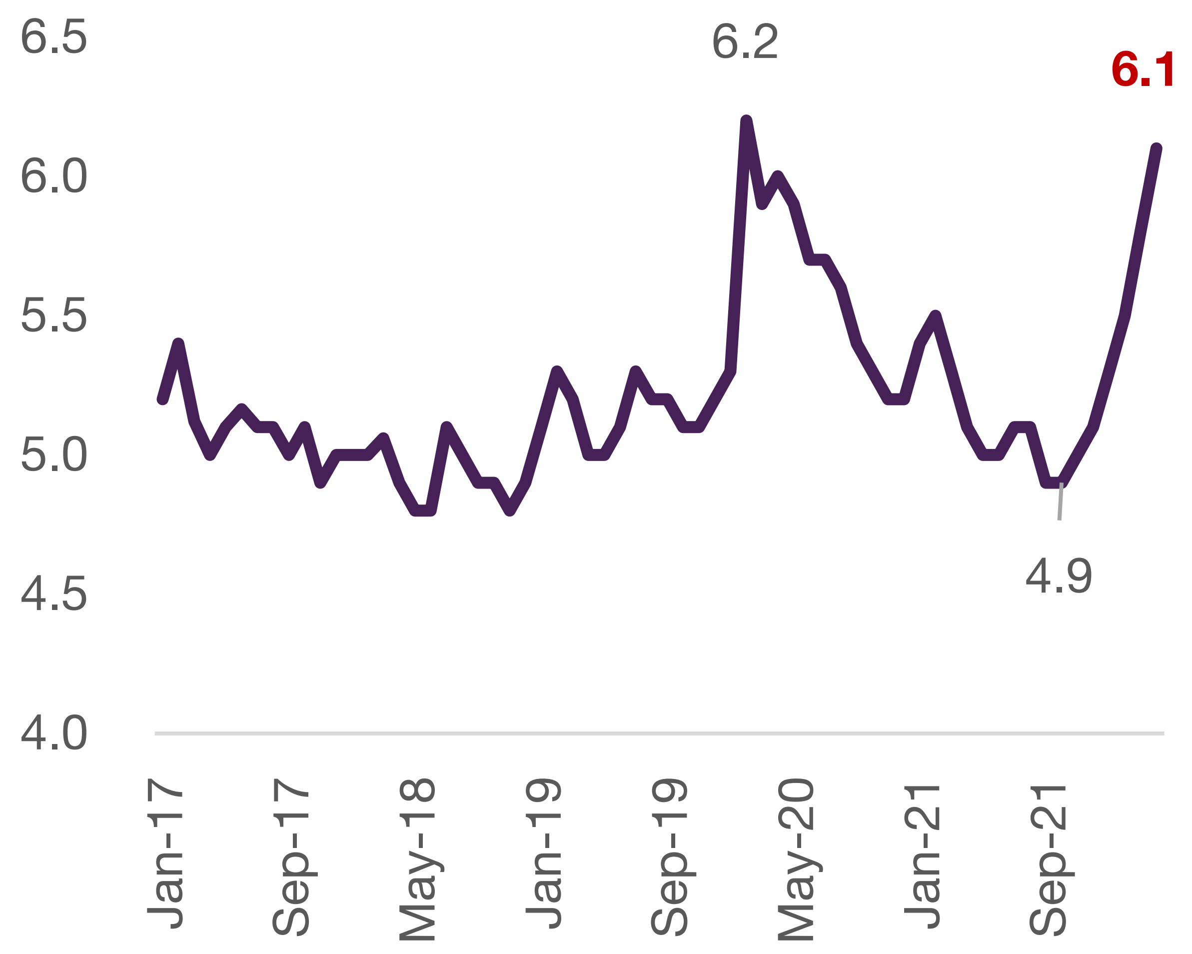
China's economy is expected to slow down more than anticipated due to a Zero COVID policy that has suppressed the recovery of supply bottlenecks and affected employment and domestic economic activity.

Growth of retail sales and industrial production in China

Unit: %YOY

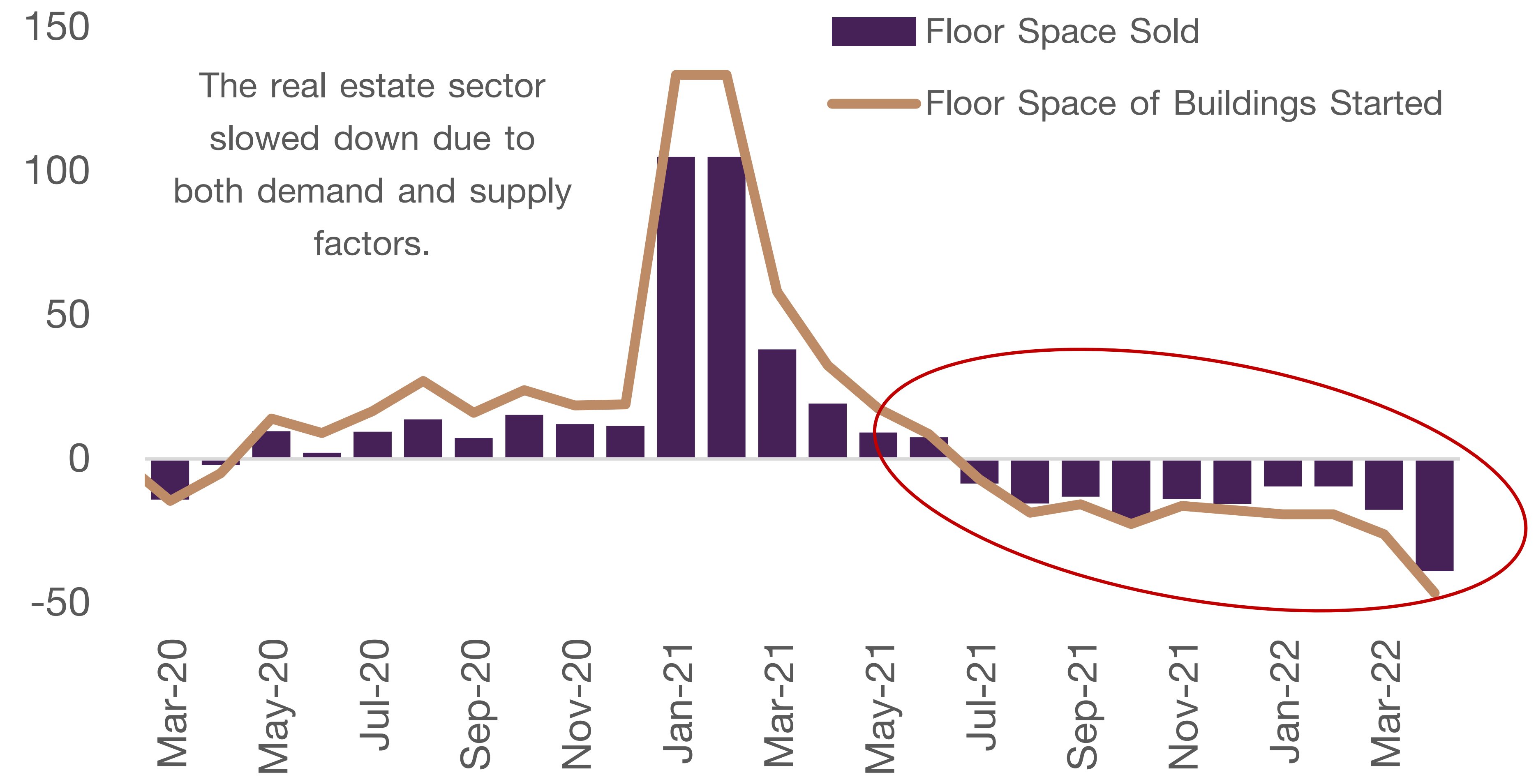
China's unemployment rate

Unit: %



China's floor space sold and floor space of buildings started (sq.m.)

Unit: %YOY



Factors pressuring China's economic growth

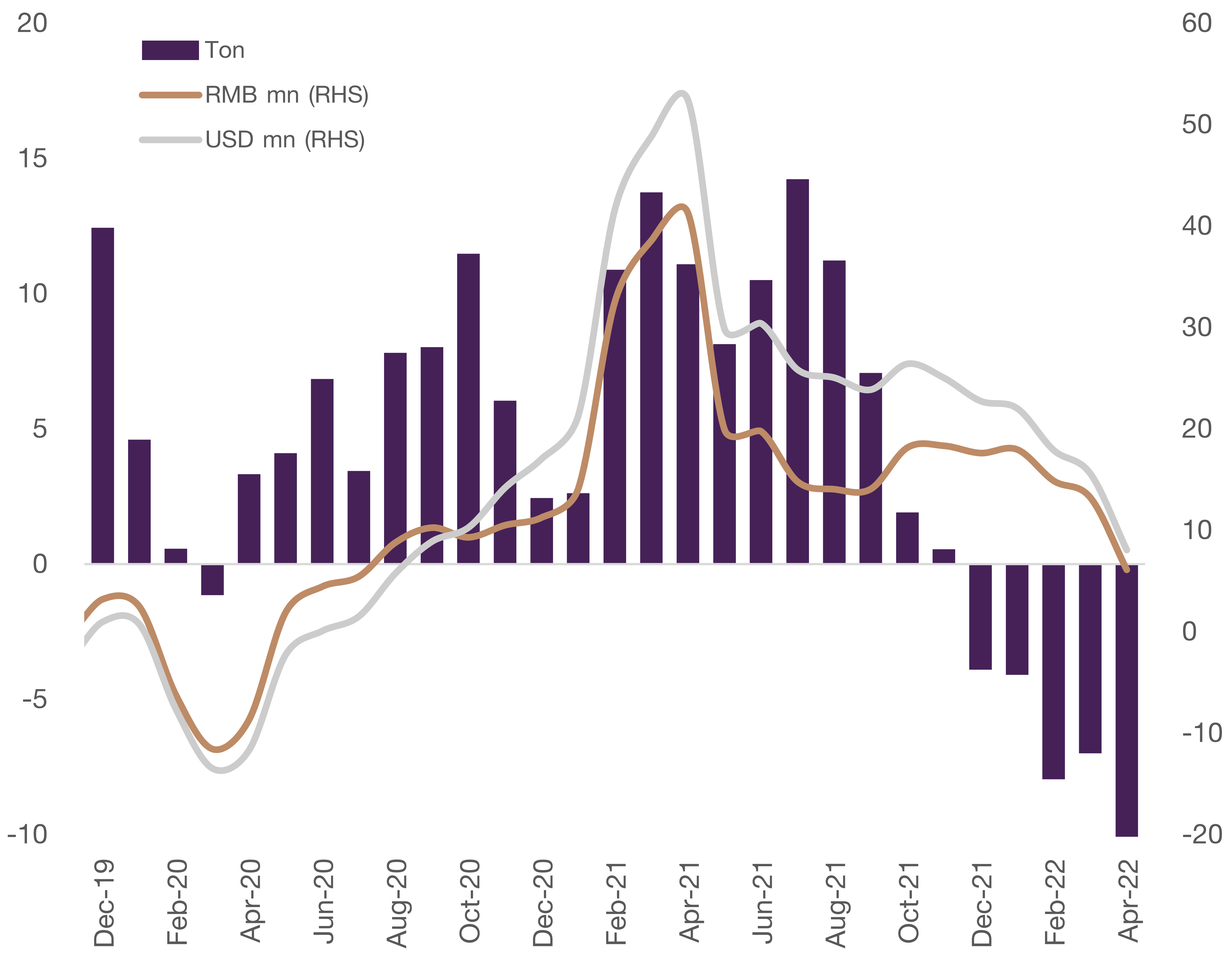
- **Strict Zero COVID policy,** suppressing the recovery of global supply chains and domestic demand.
- **Domestic activity is fragile** in both the consumption and production sectors.
- **The unemployment rate reached its highest level since 2020,** reflecting a disruption of economic activity caused by lockdowns.
- **The risk of global financial conditions tightening caused concerns over capital outflows** under China's accommodative monetary policy. The CNY has already depreciated 5% against the USD since mid April.

Source: EIC analysis based on data from the CEIC

China's exports, the main economic driver last year, also face a downward trend as the Russia-Ukraine war has significantly dampened China's exports to major trading partners, particularly the EU.

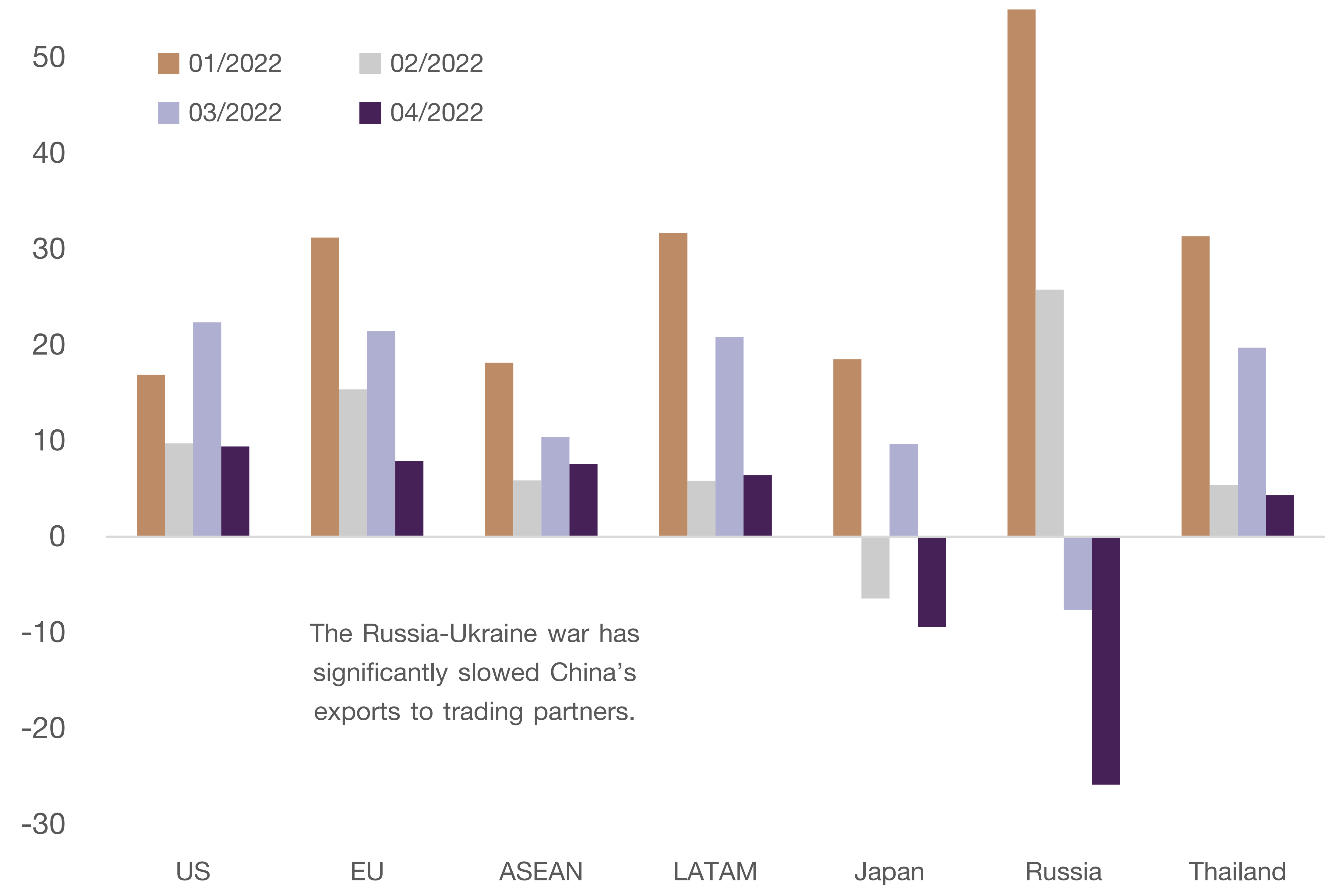
China exports

Unit: %YOY, 3 months moving average



China exports by trading partner

Unit: %YOY



China's export growth is expected to slow down with every trading partner, caused by (1) **High-base** from last year, (2) **Prolonged supply bottlenecks in China,** affecting manufacturing and logistic sectors, and (3) **The Russia-Ukraine war,** causing inflation to accelerate and affect global demand.

Source: EIC analysis based on data from the CEIC

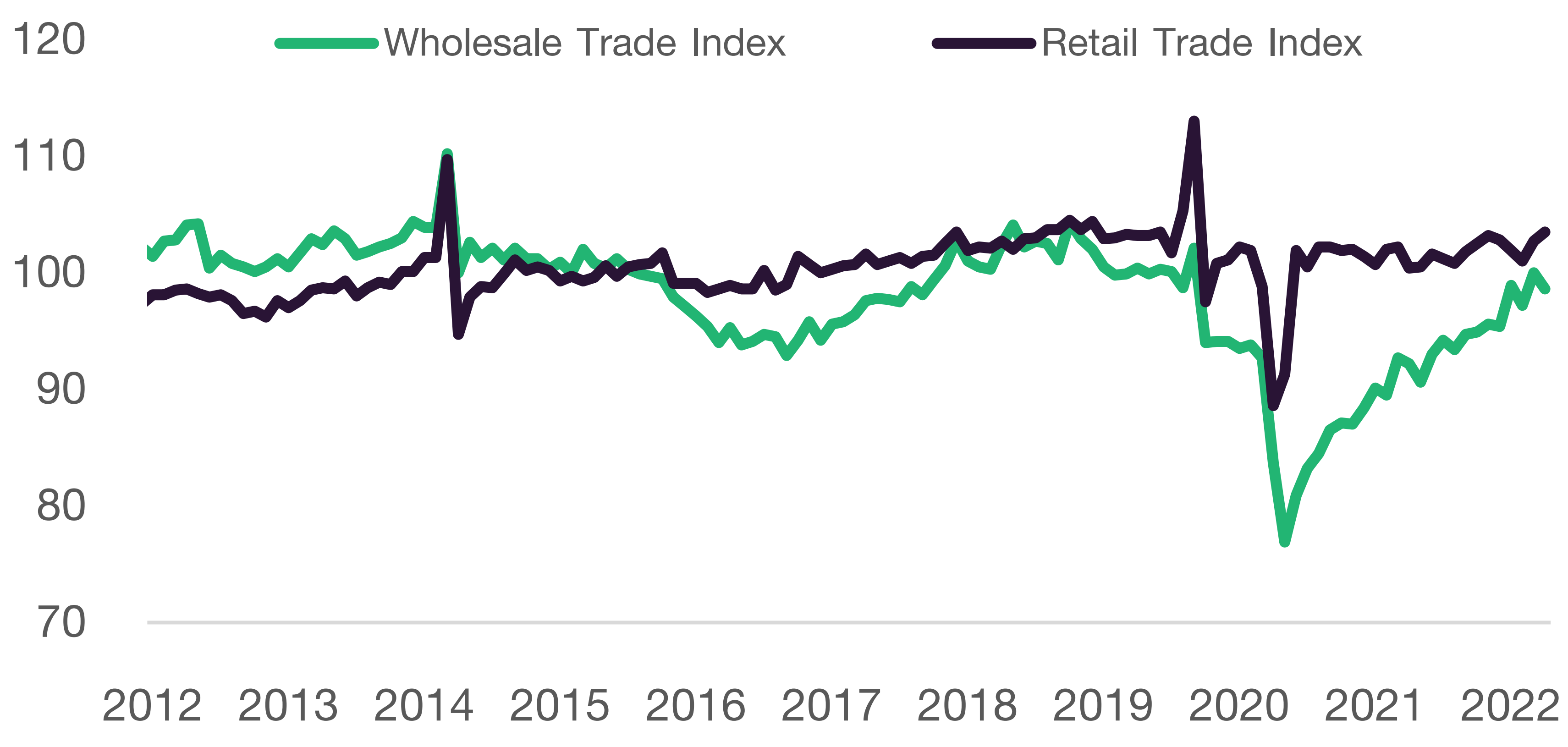
The Japanese Economy

Japan's economy is expected to recover gradually amid existing downside factors, including a slower recovery of the consumption of durable goods compared to other DMs, a delay in Go To Travel measures, and decelerating exports from last year. Meanwhile, recovery in the manufacturing sector is still facing high risks from an increase in material costs and prolonged supply bottlenecks caused by China's lockdown.

Japan's economy is expected to recover gradually amid existing downside factors.

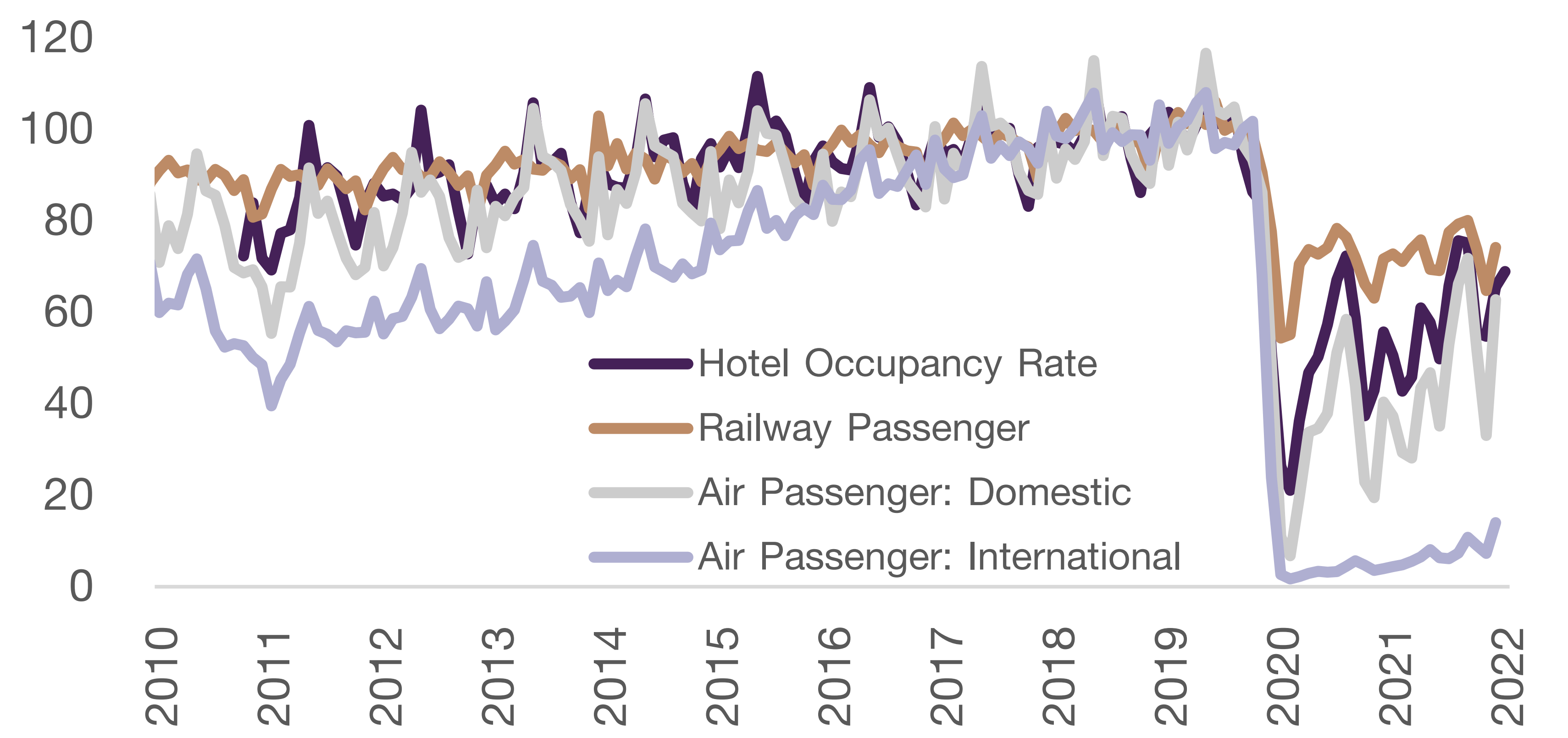
Japan's retail trade and wholesale trade indices

Unit: Index, 2015 = 100, Seasonally adjusted



Service and travel activities

Unit: 2019 % change



Consumption recovery remains weak

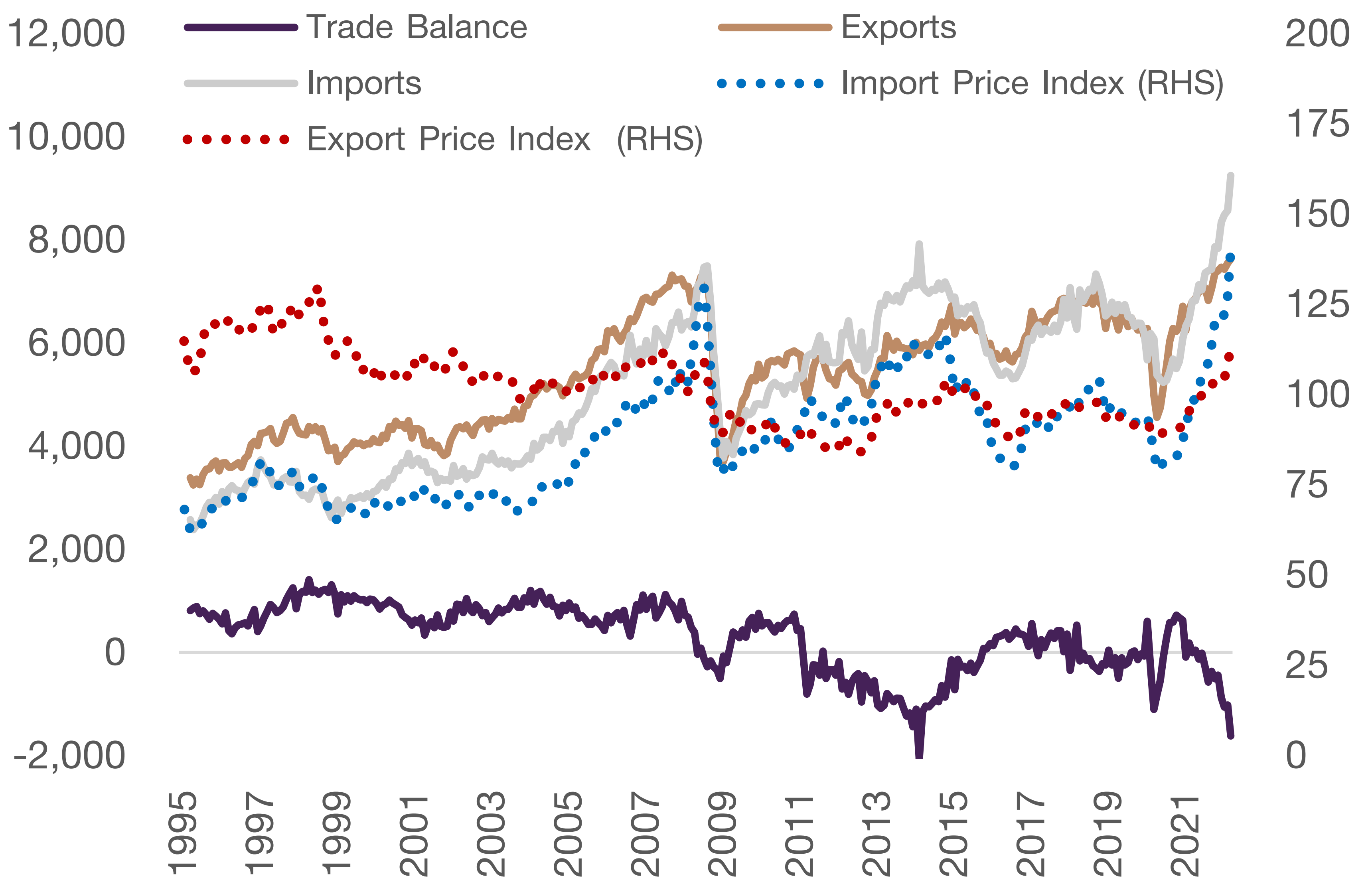
- **Although consumption of durable goods appears to have recovered, the pace is still slower than other DMs'.** Higher inflation makes consumers more cautious when spending.
- **Spending in the service sector has recovered only slightly** from concerns over COVID outbreaks in the short-run. A survey* showed that most people (>90%) still avoid going to crowded places.
- **The announcement of Go To Travel measures to support domestic travel was delayed** as the government promotes traveling between nearby cities first.

Manufacturing recovery faces high risks

- **Higher raw material costs** from the war have raised commodity prices significantly.
- **Prolonged supply bottlenecks** from the China lockdown.

Japan international trade indicators

Unit: JPY Billion | Unit: Index, 2015 = 100



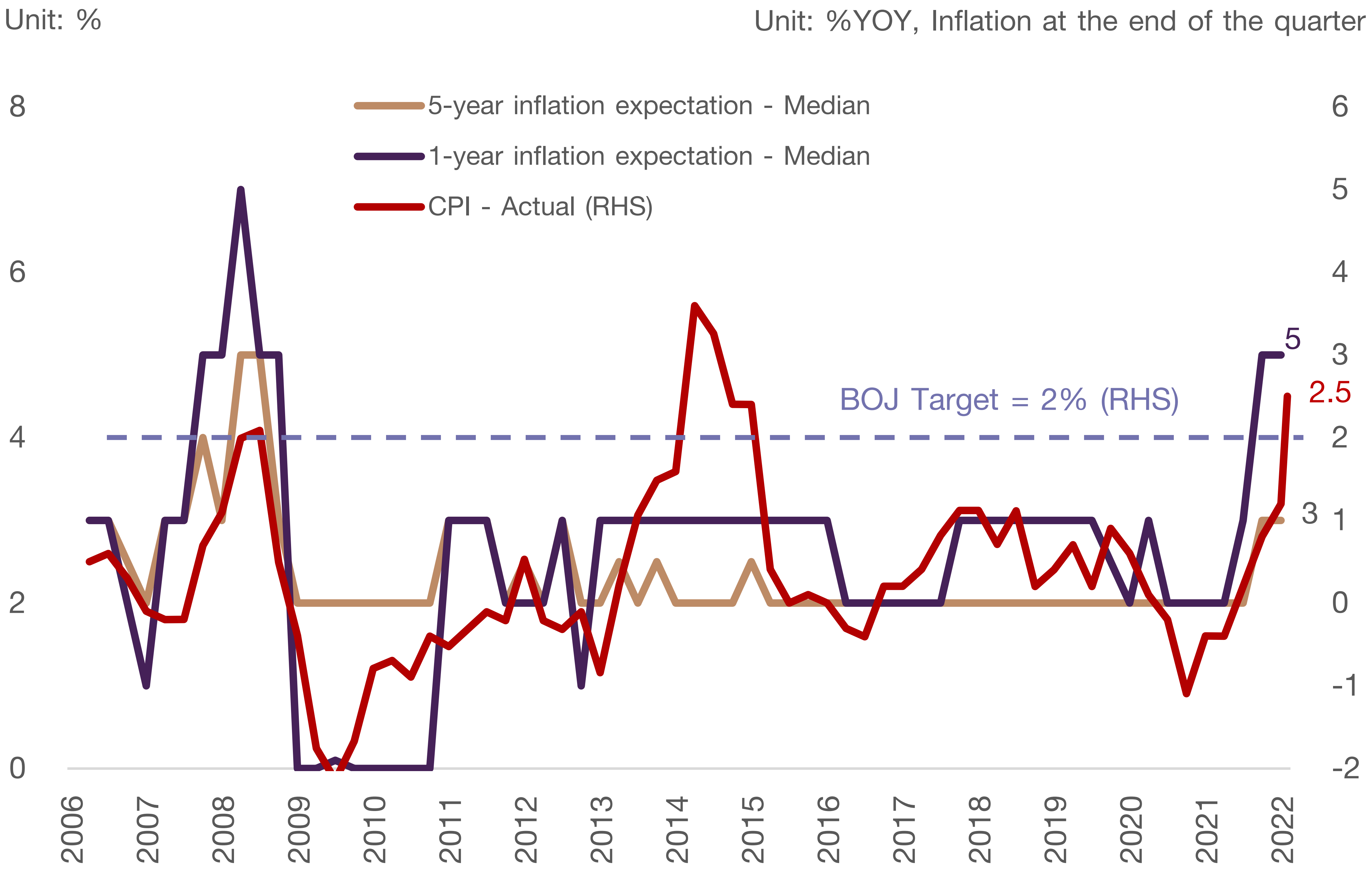
Export growth likely slow down from last year.

- **Growth divers** are (1) supply bottlenecks gradually easing and (2) sharp depreciation of the JPY
- **While exports remain under pressure** from (1) a slowdown in trade partners' economies, particularly China and (2) Import prices, especially commodity prices, increased higher than export prices, depressing business profitability.
- **The trade balance deficit is expected to hit its highest level in 10 years** as sharp JPY depreciation has raised import prices, even though export growth continues.

Source: EIC analysis based on data from the CEIC, BOJ, and Capital Economics

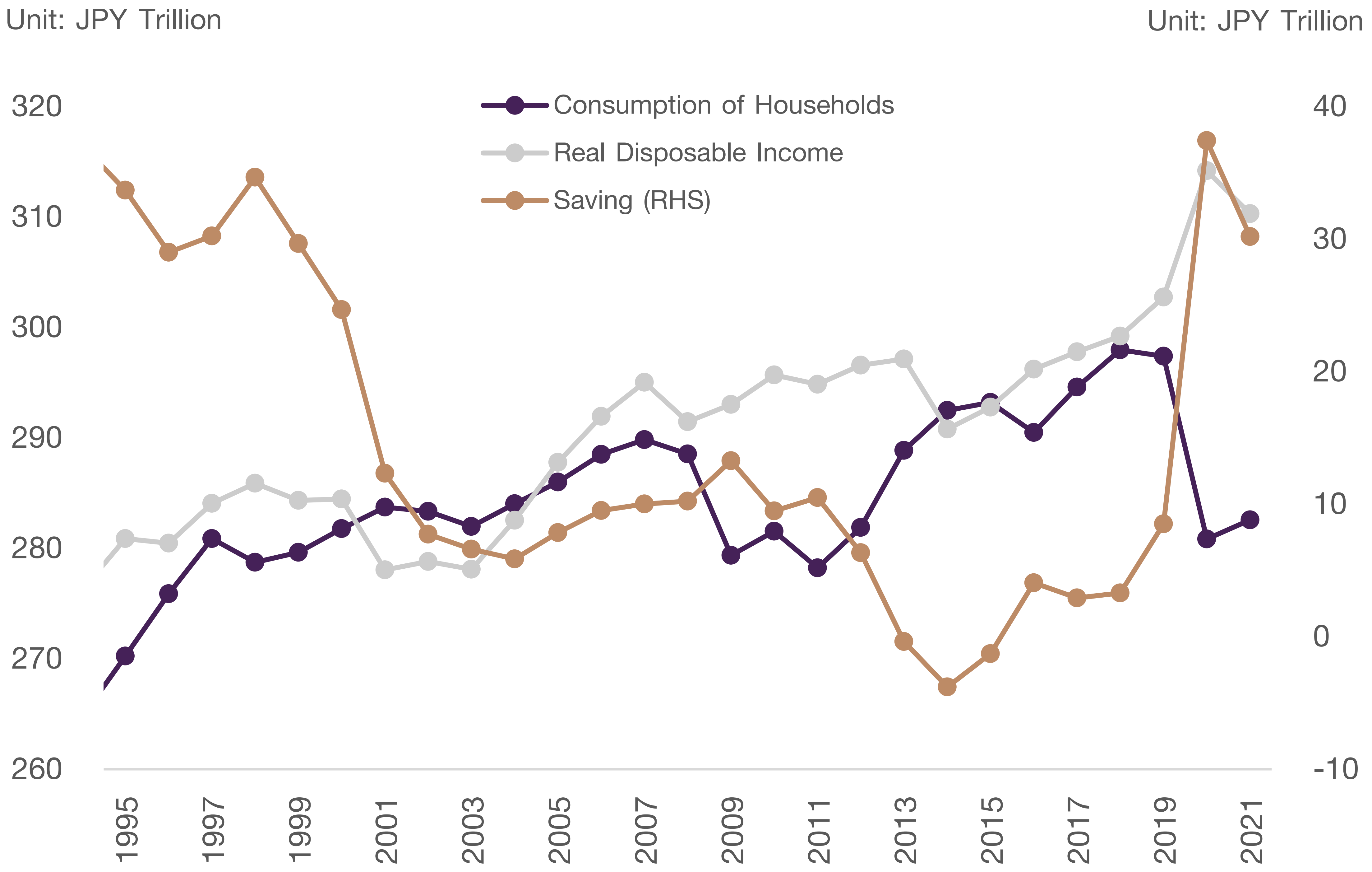
Higher inflation in Japan has had less effect on the household sector compared to other DMs as Japan inflation is lower and high savings can still support consumption. Thus, BOJ will likely maintain its policy rate.

Japan inflation expectations from BOJ survey (Quarterly)



- **Inflation surged to 2.5%YOY in April,** breaking BOJ target for the first time in 7 years. Short-term inflation expectations have also increased considerably.
- **However, BOJ will not raise its policy rate** as it aims to support a currently vulnerable economic recovery.

Japan disposable income, savings, and household consumption



Surging inflation is expected to continue, but the effects on the household sector are smaller than in other DMs.

- **Japanese inflation remains largely below the level of other DMs'** (April CPI: JP 2.5% vs US 8.2%, UK 9%, EU 8.1%)
- **Household savings are high** as the pandemic has limited consumption. High savings will support household consumption during a period of rising inflation.

Source: EIC analysis based on data from BOJ and CEIC

EIC expects the global economy to decelerate to 3.2% from greater risk of entering recession, a simultaneous slowdown in the US, EU, and China, and continued surging inflation.

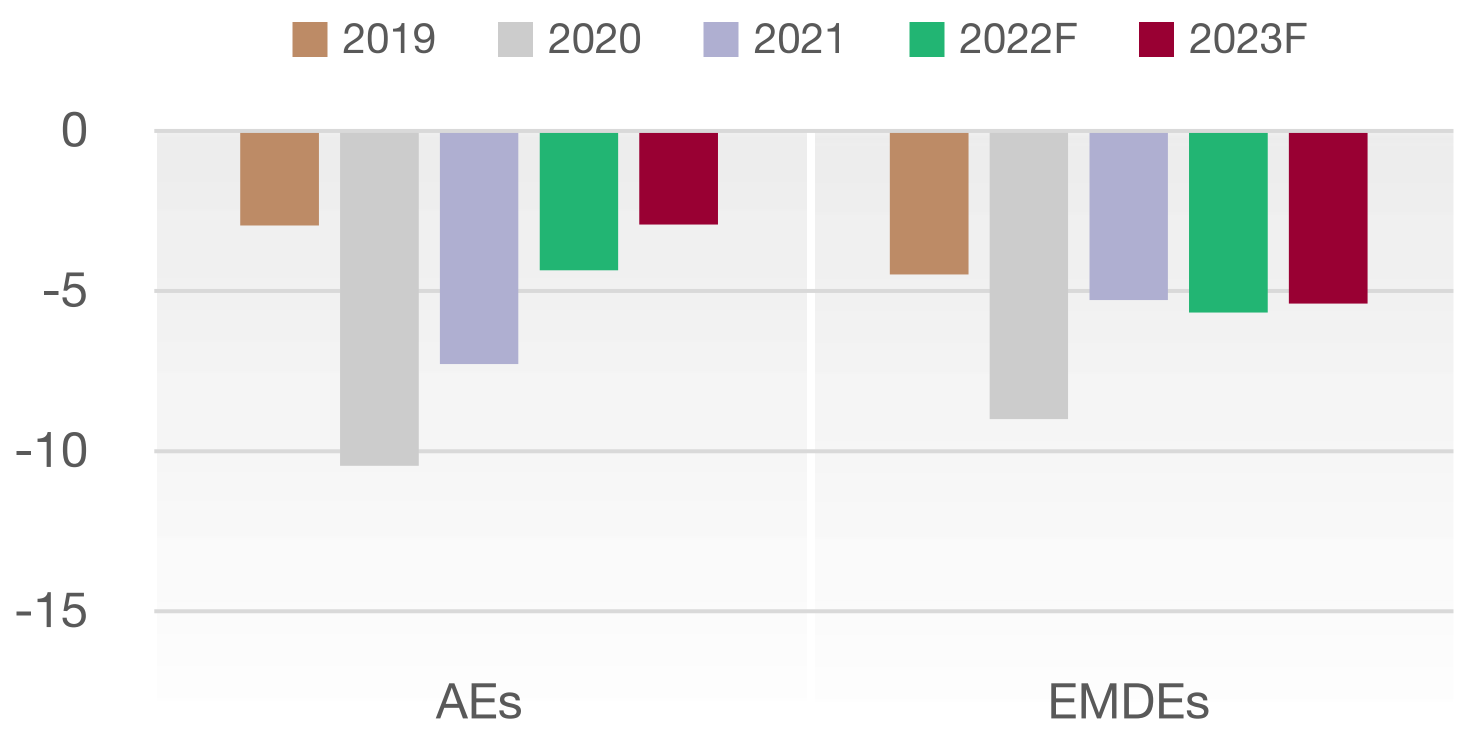
EIC GDP growth forecast by economy

Unit: %YOY

GDP growth (%YOY)	2021	2022	
		Prev	Current
World	5.8%	3.4%	3.2%
US	5.5%	3.2%	2.6%
Euro	5.0%	2.7%	2.4%
Japan	1.9%	1.7%	1.4%
China	7.8%	4.5%	3.8%
India	8.8%	7.8%	7.2%
Brazil	4.7%	0.1%	1.3%
Korea	4.0%	3.0%	2.5%
Malaysia	3.0%	5.7%	7.0%
Philippines	5.0%	6.8%	7.1%
Global Inflation	3.7%	7.0%	7.3%

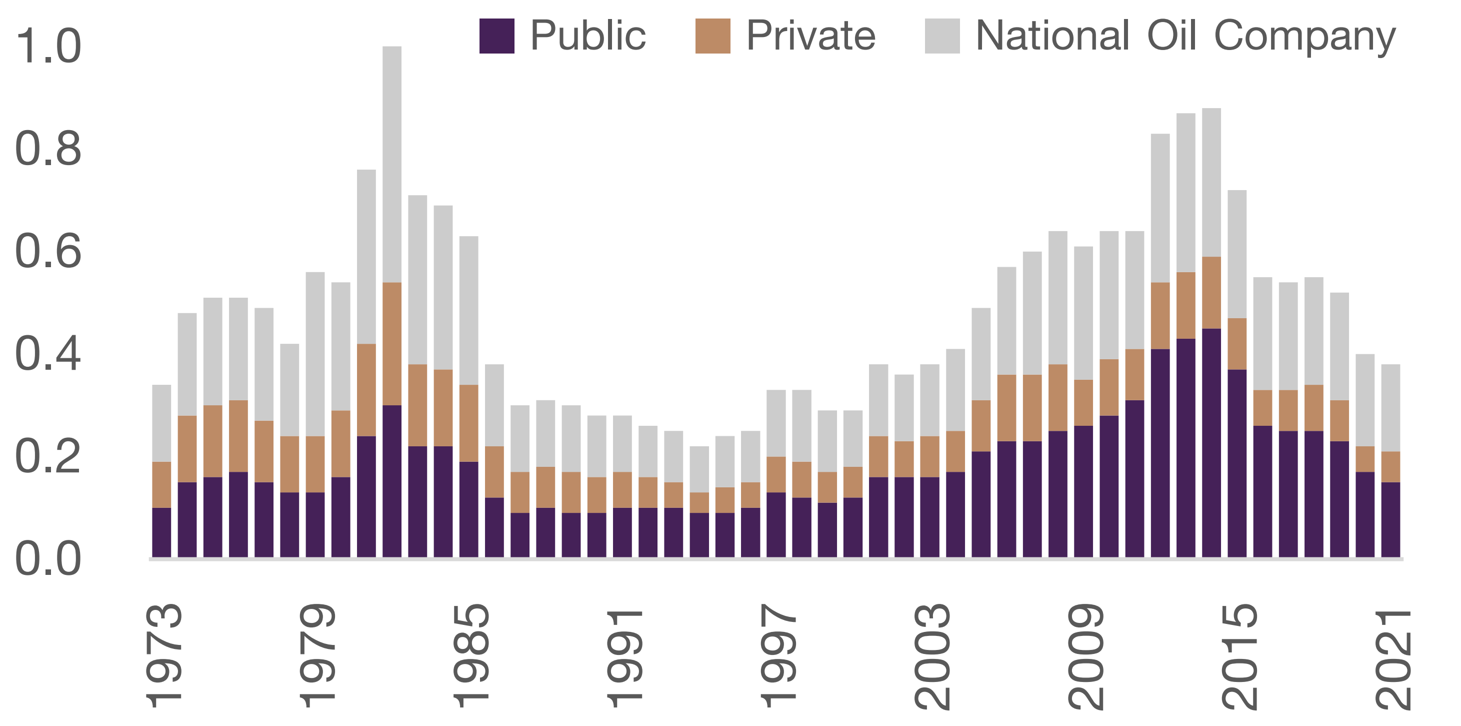
Government fiscal balance

Unit: %YOY



Global Oil and Gas Investment

Unit: % world GDP, US dollars a barrel



Risks factors pressuring the global economy to slow down

- **Rising geopolitical risks** affect international trade and manufacturing globally.
- **The ease of supply bottlenecks** has been delayed by intensified Russia-Ukraine tensions and China's Zero-COCID policy.
- **AEs monetary policy tightening faster and more aggressively has also tightened global financial** conditions amid a not yet fully recovered global economy.
- **China's economy began to slowdown** from strict COVID restriction measures, weak domestic consumption, and a slowdown in the real estate sector.
- **Deglobalization** caused by global supply chain disruption from US-China conflicts and the pandemic led to reduced efficiency in resource allocation and increased costs.
- **Government subsidies were largely downsized** due to limited policy space and rising borrowing costs during a rate-hike trend.
- **Uneven access to vaccines, especially in low-income countries, would be an additional risk to virus mutation and lead to a new wave of outbreaks** and economic lockdowns.
- **Climate change** has reduced the food supply and increased food prices.
- **Government clean energy policies have pressured investment in the traditional energy** sector, leading to a rise in fuel prices.

Source: EIC analysis based on data from the CEIC and IMF WEO April 2022

The effects of tighter monetary policy on global financial conditions

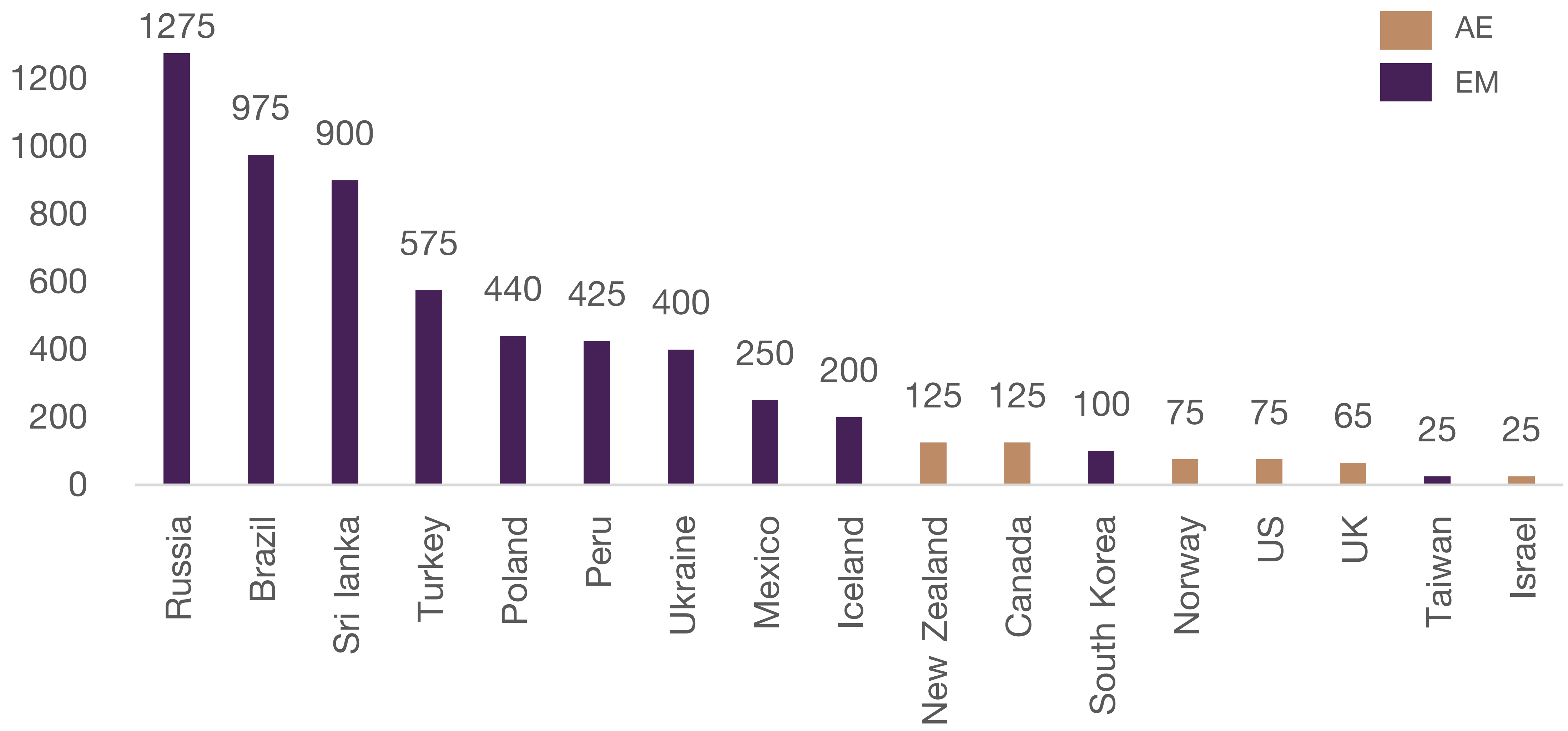
1. **Borrowing costs increase following higher interest rates and government bond yields.** Borrowing costs increase following higher interest rates and government bond yields.
2. **Capital flows will become more volatile with larger outflows from EMs back to the US market and other DMs, where real interest rates are higher and risks lower. Thus, the USD is expected to appreciate against most EM currencies.**
3. **Returns on risky assets decrease due to lower liquidity in the global financial system,** affecting business and household wealth (wealth effect).

Monetary policy tightening in major economies, especially the US, will have different effects on each EM. EM-LATAMs are exposed to the highest risks from weak international price stability. Thailand's stability is weakened by the current account deficit and rising inflation. However, recovery is expected at the end of this year following a rebound in the tourism sector.

Many countries are entering a tightening cycle. Central banks in AEs and EMs have raised policy rates and decreased liquidity to curb continued rising inflation.

Policy rate hikes by country

Unit: bps, since the lowest rate in 2020



Expected policy rate by country at the end of 2022

Unit: %

	Expected policy rate YE2022	Amount of change from now
US	3.0 (upper bound)	+200 bps
EU	1.0 (deposit rate)	+150 bps
UK	1.75	+100 bps
CAD	2	+100 bps
JP	0	+10 bps
TH	0.75	+25 bps

Note: Policy rate at the end of 2022 forecast by Bloomberg Consensus and EIC

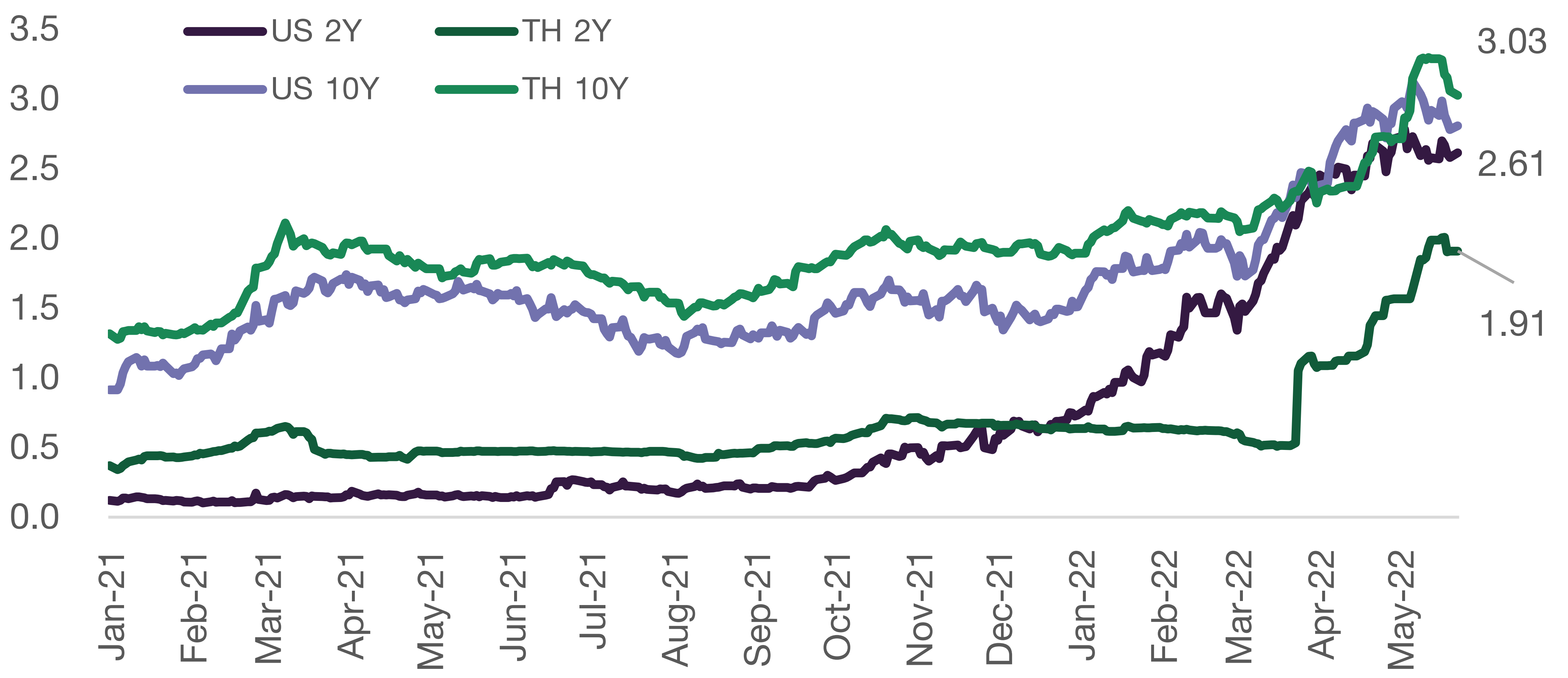
- **Many central banks in AEs and EMs , such as the US, UK, and South Korea** are tightening monetary policy to curb continued rising inflation.
- Fed increased its policy rate to **0.75-1.0% in June. Fed balance sheet (QT) will be reduced by USD 47.5 billion per month starting in June and by USD 95 billion starting in September. Meanwhile, the ECB has signaled stopping QE at the end of quarter 2, drawing out liquidity from the global financial market.**
- **Moreover, central banks in AEs, such as the UK, Canada, Sweden, and New Zealand have also planned QT, likely further decreasing liquidity in the global financial market.**
- **EIC expects Fed to hike rates at every meeting for the rest of this year (7 meetings in 2022), raising by 50 bps in the June, July, and September meetings and by 25 bps starting in the October meeting. Fed fund rate will reach** 2.75-3.0% at the end of 2022. In addition, Fed may increase the rate 2 times in 2023, hitting a terminal rate of 3.25-3.5% in the first quarter of 2023.
- **The ECB is expected to raise the deposit rate 4 times this year, potentially with a 25 bps raise in June and then 50 bps in September and October, as inflation remains high. The ECB may return to a 25 bps hike in December based on inflation that is forecasted to slow down in quarter 4, marking an end to EU negative interest rates within the year.**

Source: EIC analysis based on data from Bloomberg

EIC expects that US monetary policy will affect global financial market through 3 channels.
1) Higher interest rates and government bond yields will increase borrowing costs.

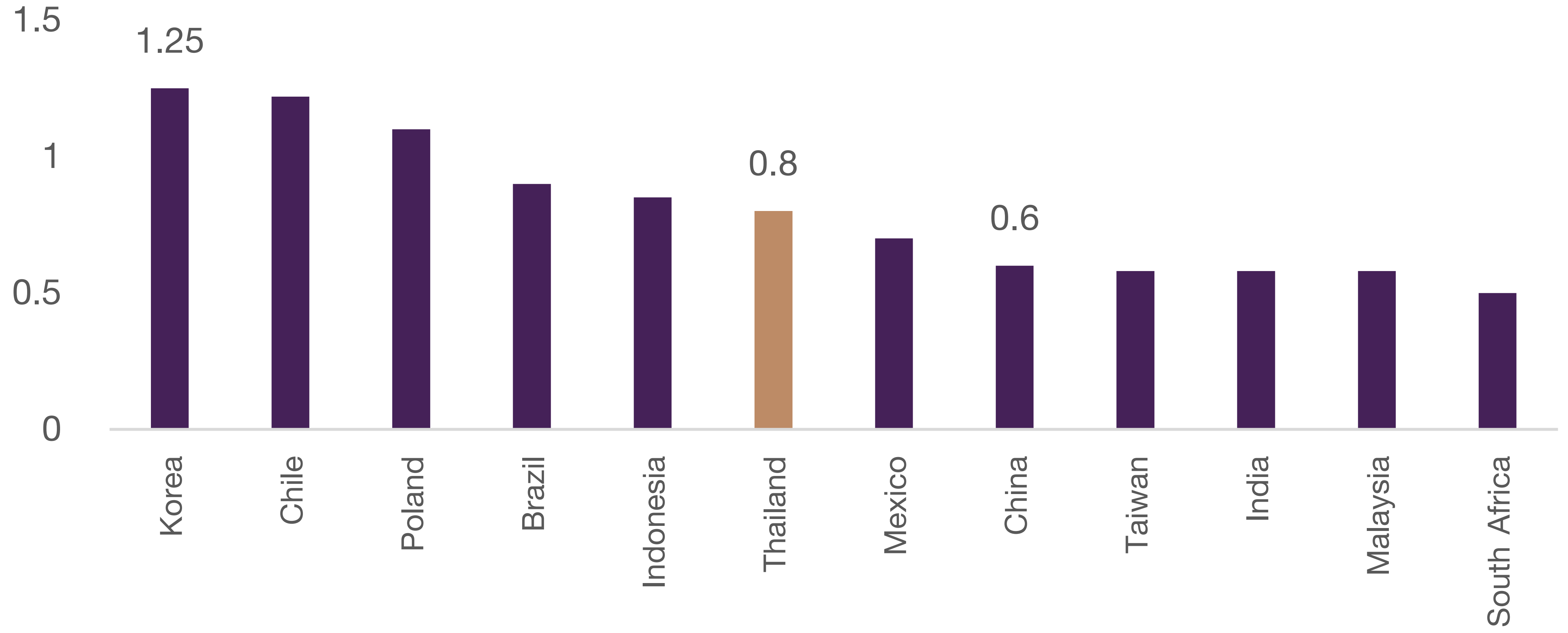
US and Thailand Long-term government bond yields

Unit: %



Response of 10Y Bond Yield to 1 pp increase in Yield of G3*

Unit: percentage point



* G3 consists of US, EU, and Japan

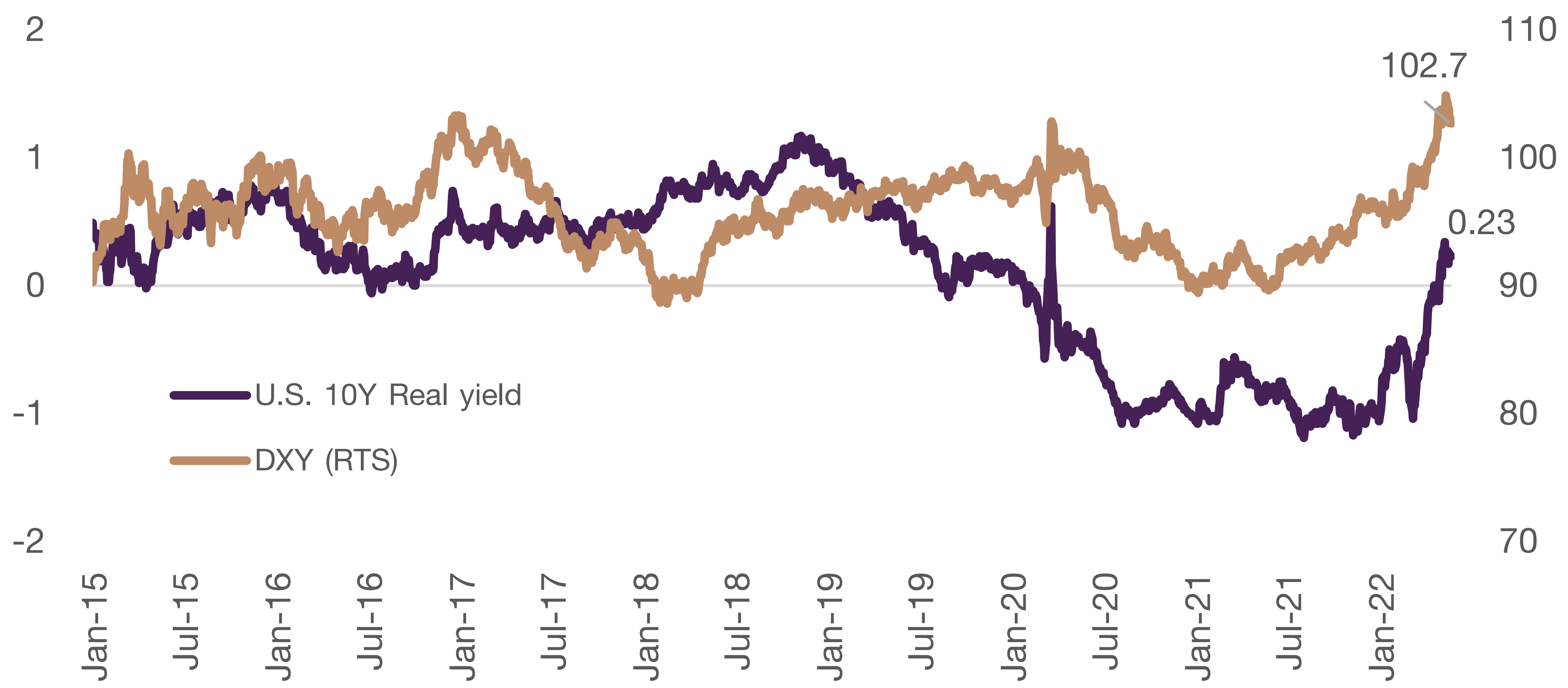
- **Fed rate hikes and Quantitative Tightening (QT)** have continued increasing US government bond yields, making borrowing costs for business and household sectors and mortgage rates in the real estate sector higher. A rise in borrowing costs tightens financial conditions and potentially depresses demand and economic activities.
- **A rise in UST 10Y yields has pulled up government bond yields in other countries, including Thailand. This also affects business costs, particularly those businesses with fragile incomes due to a weak domestic economy.**
- **However, the risk of a severe market meltdown is limited** as central banks have clearly communicated their QT plans and measures to reduce balance sheets through allowing assets to mature passively rather than selling outright. Moreover, central banks in many countries, including the EU, Switzerland, and Australia, maintain asset levels while BOJ is still running QE.

Source: EIC analysis based on data from Bloomberg and Goldman Sachs

2) Capital is flowing back to the US following continued rising interest rates. As a result, the USD is expected to appreciate against most EM currencies this year.

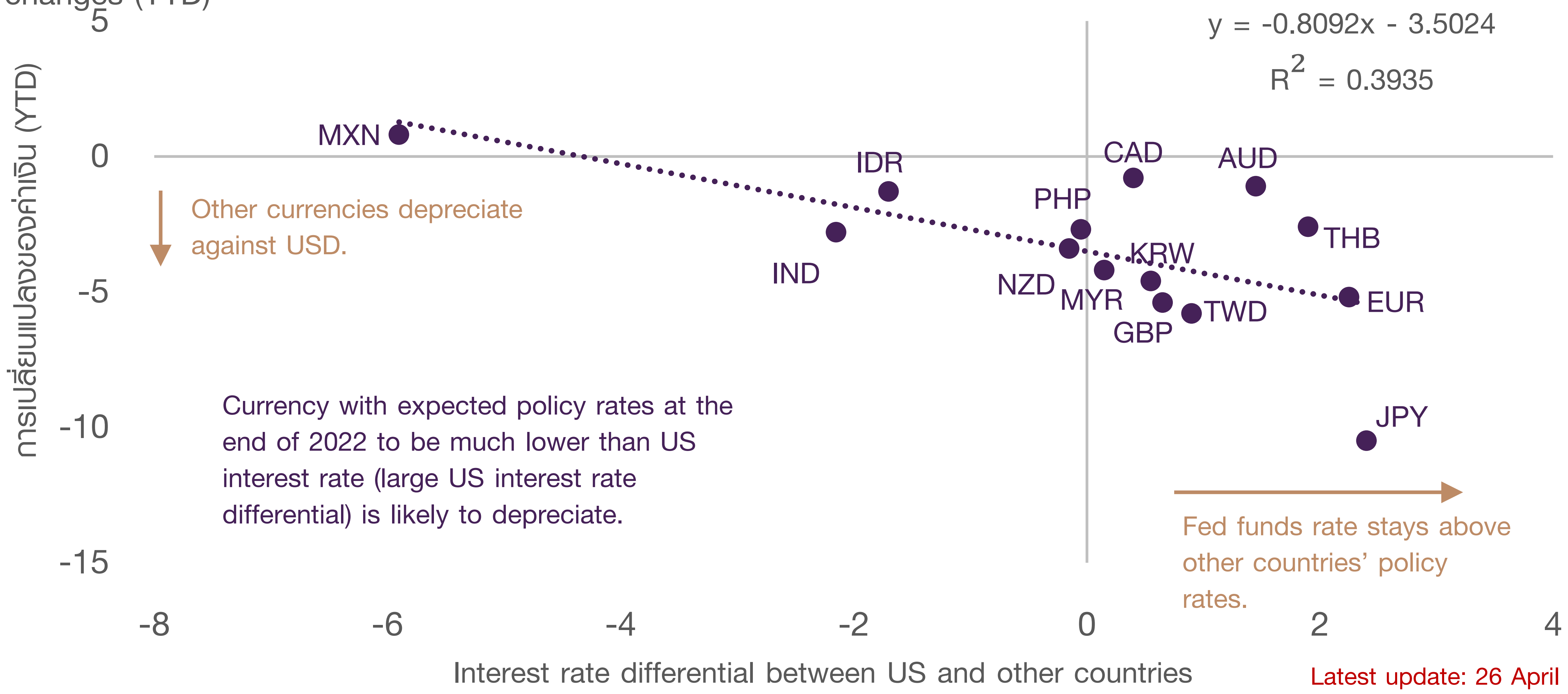
US 10Y real yield and DXY

Unit: % Unit: Index



Expected US interest rate differential and currency changes

Unit: %, Horizontal axis = Interest rate differential between US and other countries, vertical axis = Currency changes (YTD)



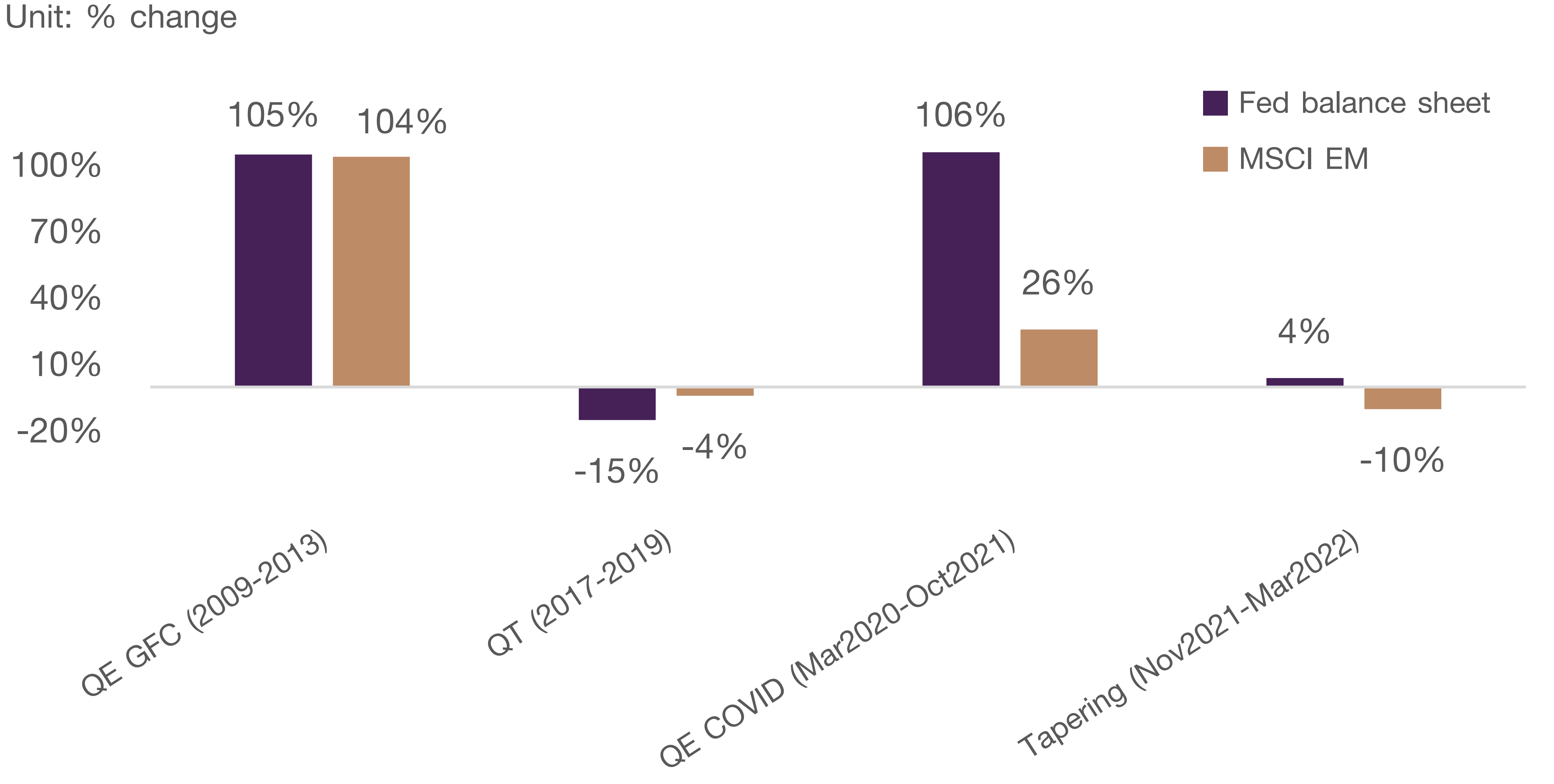
Latest update: 26 April 2022

- **Rising US interest rates potentially attract more capital inflows back to the US,** following higher returns on holding USD. As a result, the USD is expected to appreciate against other currencies.
- **Other currencies, particularly in countries with easing monetary policy, will have large interest rate differentials and then cause a sharp depreciation in other currencies from capital outflows.** Holding these currencies gives lower returns compared to USD assets.
- **Capital outflows from EMs are expected to be larger than in 2021, likely moving to the US or AEs, where real rates turn positive and lower risk than EMs.** Therefore, risky assets in EMs will face pressure from both bond and stock markets, causing EM currencies to depreciate.

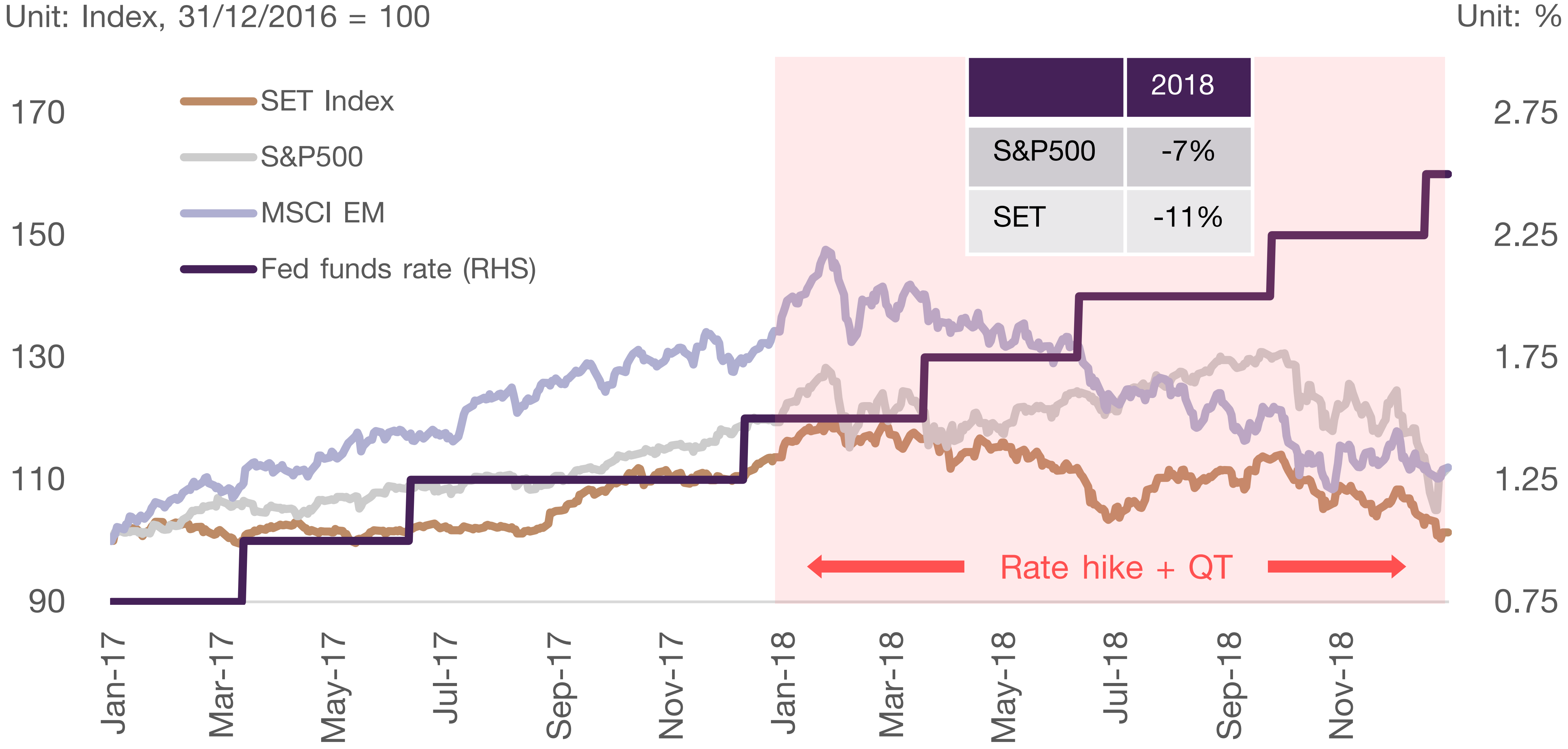
Source: EIC analysis based on data from Bloomberg and BIS

3) Lower liquidity in financial systems following Fed QT will decrease global investment in risky assets going forward. Returns on stock exchanges in EMs are expected to decline.

The relationship between Fed balance sheet and EM MSCI



S&P 500 Index and SET Index during tightening cycle 2018



	2018
S&P500	-7%
SET	-11%

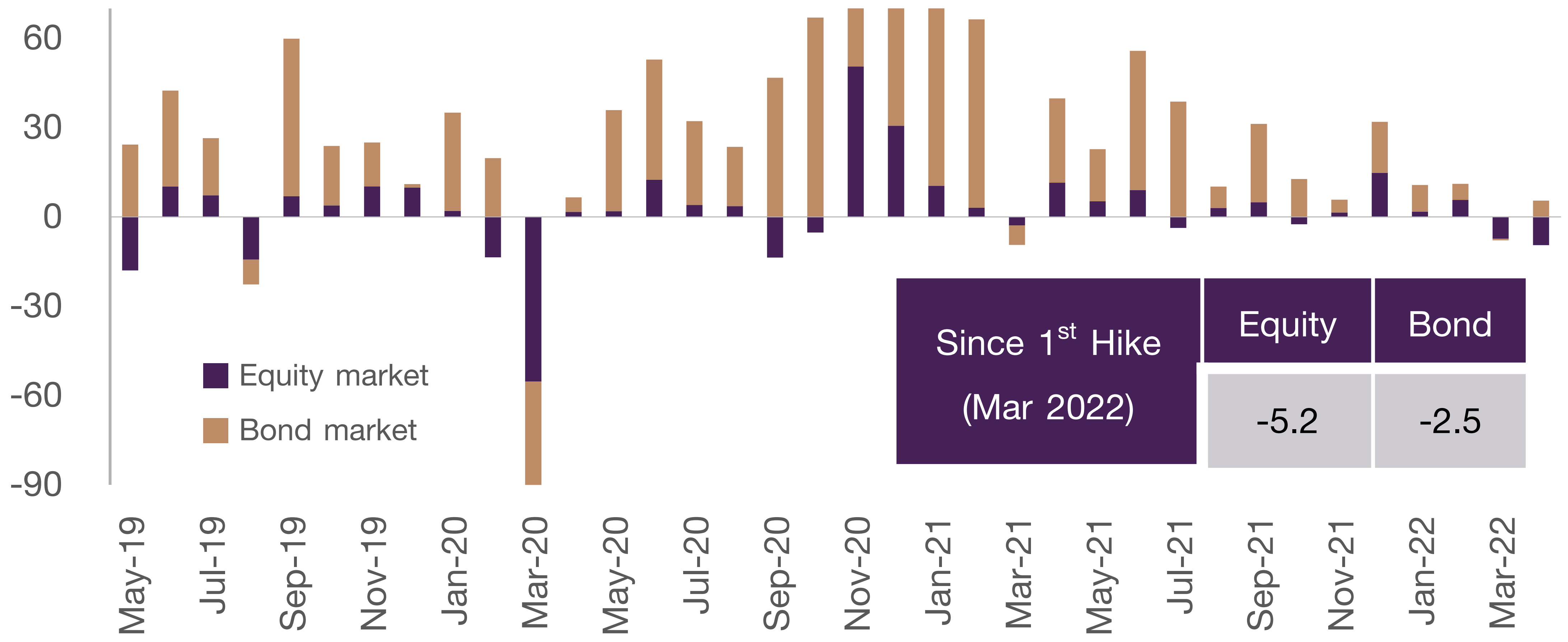
- **US monetary policy tightening will decrease liquidity in the global financial system.** During FED QE 2020-2021, risky asset prices increased globally in line with a rise in liquidity. When Fed begins quantitative tightening (QT), liquidity shrinks, and risky asset prices drop. **In the future, risky asset prices around the world and in Thailand will become more volatile and decrease following lower liquidity, which might further affect business and household wealth (wealth effect).**
- **In 2018-2019, Fed QT caused a severe liquidity crunch** in the overnight-borrowing market, together with a drop in the S&P Index (-7% in 2018). However, **EIC sees the risk of a liquidity crunch is limited in the current situation** as Fed still provides an overnight-lending facility, but stock exchanges around the world may decline.

Source: EIC analysis based on data from Bloomberg and BIS

Fed rate hikes will result in volatility in capital flows. More capital outflows are expected for the rest of this year as high economic uncertainties make investors more risk averse.

Foreign investors' capital flows in EMs

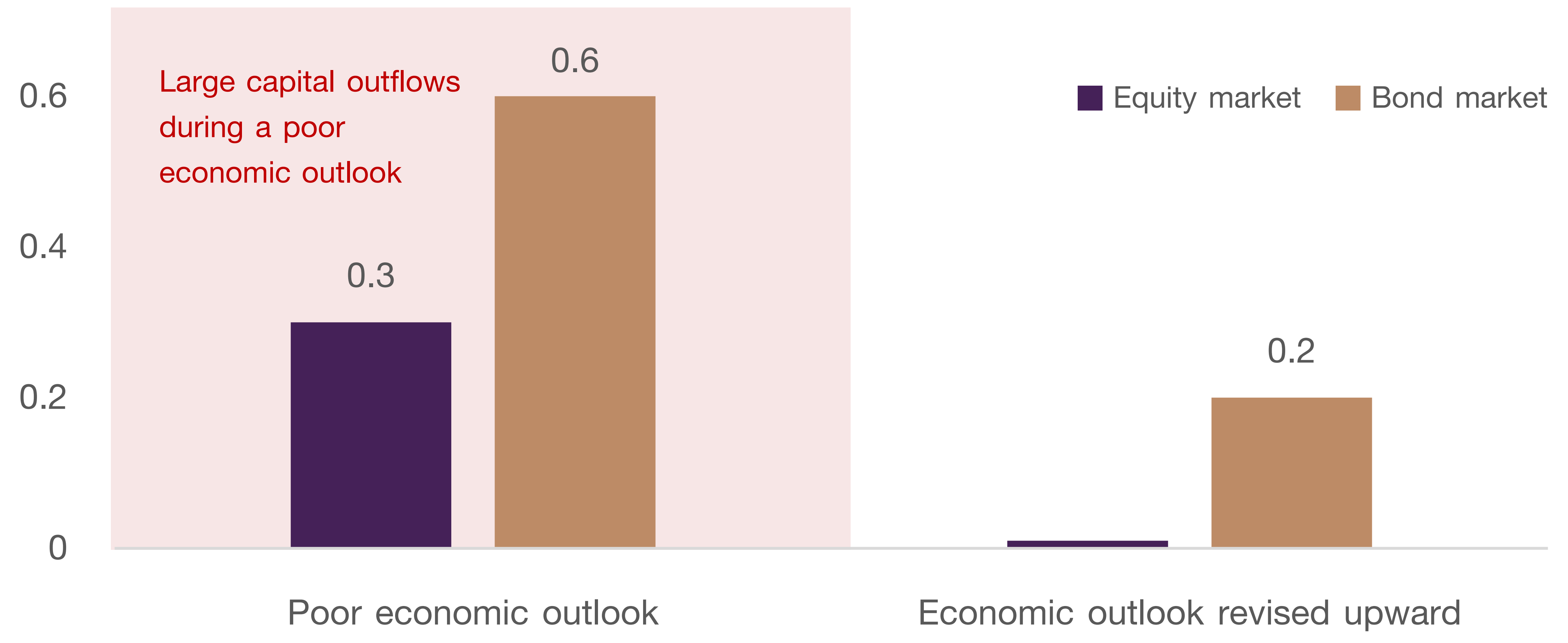
Unit: USD billion



Since 1st Hike (Mar 2022)	Equity	Bond
	-5.2	-2.5

The effect of Fed rate hike by 10 bps on Capital outflows from EMs

Unit: percentage points



- **A VOXEU study found that if Fed increases rates without revising economic outlook upward, capital flows will move out from mutual funds globally, especially EMs.** This is because any communication about poor economic outlook will increase uncertainties in the economy. Investors become more risk averse and capital flows move toward safe-haven assets.
- **In this rate-hike cycle, Fed revised the US economic outlook downward in its March meeting.** EIC expects that Fed will announce another downward revision in its June meeting, leading to further capital outflows from EMs and adding more **pressure to EM stock markets for the rest of this year.**
- **Fed is expected to increase the rate by 2.75% in 2022, which will cause more capital outflows from EMs by 7.5 ppt. At its two latest meetings, Fed rate went up by 0.75% and led to USD 7.7 billion in capital outflows** from EMs and a 2% decline in EM stock exchanges (based on MSCI_EM index) since the first Fed rate hike.
- **Large capital outflows indicate that Fed rate hikes significantly impact EM financial conditions** due to lower investor confidence following a slowdown in the US and global economies. Further capital outflows from EMs are expected for the rest of this year if Fed continues increasing rates and revising the US economic outlook downward.

Source: EIC analysis based on data from VOXEU Bloomberg and IIF

Monetary policy tightening in major economies, especially the US, will affect economic recovery in EMs. Weaker stability will see more severe effects.

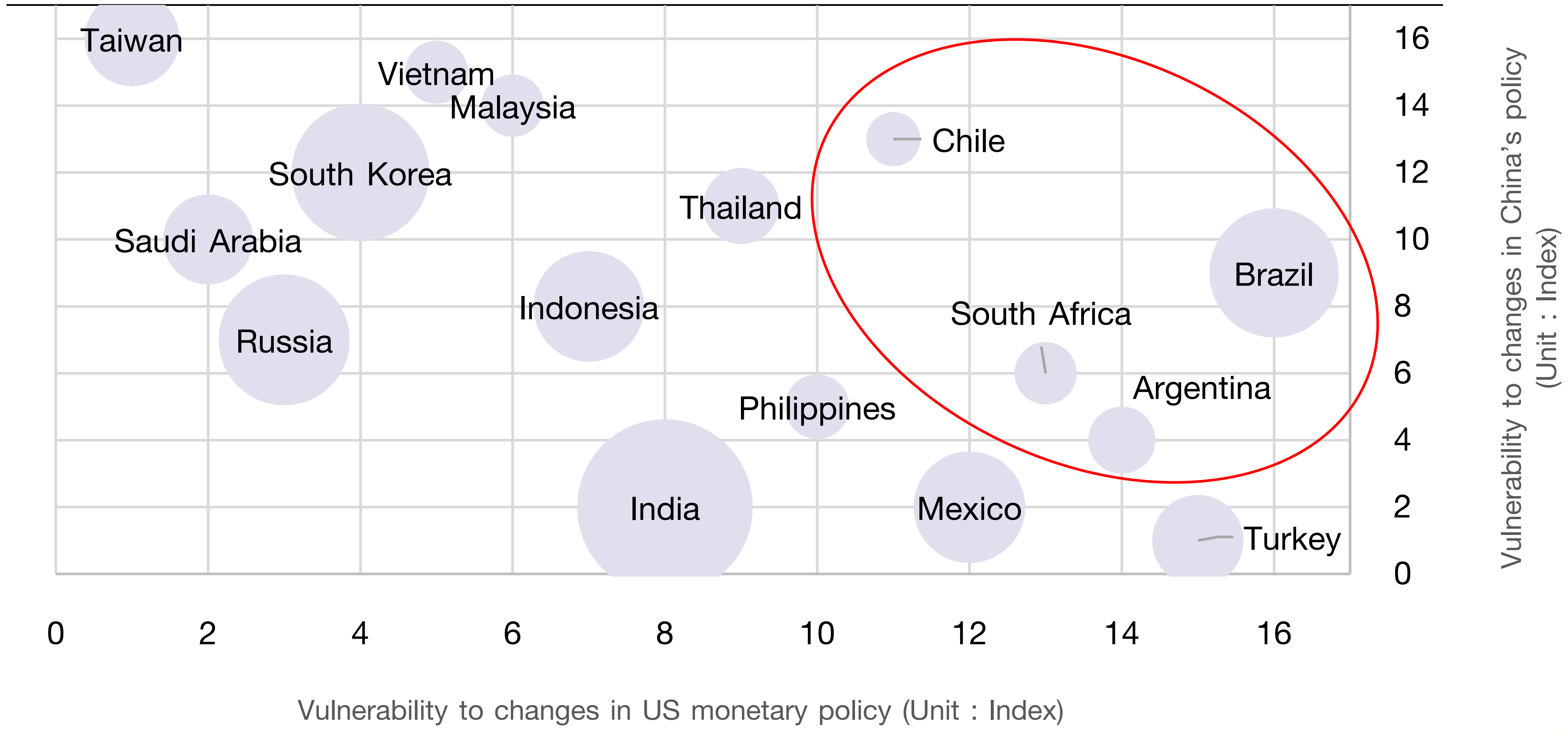
Vulnerability to US monetary policy (Vulnerability Index)*

	Current account balance[1]	Gross public debt[1]	Foreign exchange reserve[1]	Consumer Prices[2]	External debt[3]	Export to China[1]	Vulnerability Index Score
Brazil	-1.7	80.3	20.6	12.1	75.4	5.5	17
Argentina	1.4	76.1	7.4	58	35.3	1.3	16
Turkey	-1.7	42	8	70	54.3	0.5	15
South Africa	3.7	69.1	10.3	5.9	55.9	3.2	14
Chile	-6.4	32.4	14.9	10.5	34.7	11.2	13
Mexico	-0.4	50.8	14	7.7	47.4	0.7	12
Thailand	-2.1	52.8	44.4	4.7	38.2	7.4	11
Malaysia	3.5	63.5	28.8	2.3	69.3	12.4	10
Vietnam	-1.1	40.2	29.6	2.6	47.9	15.4	9
Philippines	-1.8	60.4	24.1	4.9	27	2.9	8
Indonesia	0.3	40.7	11.1	3.5	35	4.5	7
India	0.9	58.7	17	7.8	21.2	0.7	6
South Korea	4.9	45.6	24.4	4.8	35	9.1	5
Russia	6.9	16	26.3	17.8	27	3.8	4
Taiwan	15	32.6	70.6	3.4	27.6	16.2	3
Saudi Arabia	5.3	30	51.5	2.3	38.5	6.1	2
China	1.8	20.3	18.2	2.1	15.5	N/A	1

Unit: [1]As % of GDP, 2%YOY (April 2022), 3As % of reserves data as of year end 2021

- **A tightened US monetary policy will have different impacts on each EM.** Countries experiencing high current account deficits, high public debt, low reserves, high foreign debt, and high inflation will have low price stability, leading to currency depreciation and worsened domestic inflation, exposing them to high risk.
  - **LATAMs face the highest risk** from weak international and price stability. **While Thailand's stability is weakened by the current account deficit and rising inflation.** However, the recovery is expected at the end of this year following a rebound in the tourism sector.
- Furthermore, China's economic slowdown is due to lockdowns in many cities, tending to affect countries with large exports to China.

Vulnerability to US monetary policy and Chinese economic slowdown

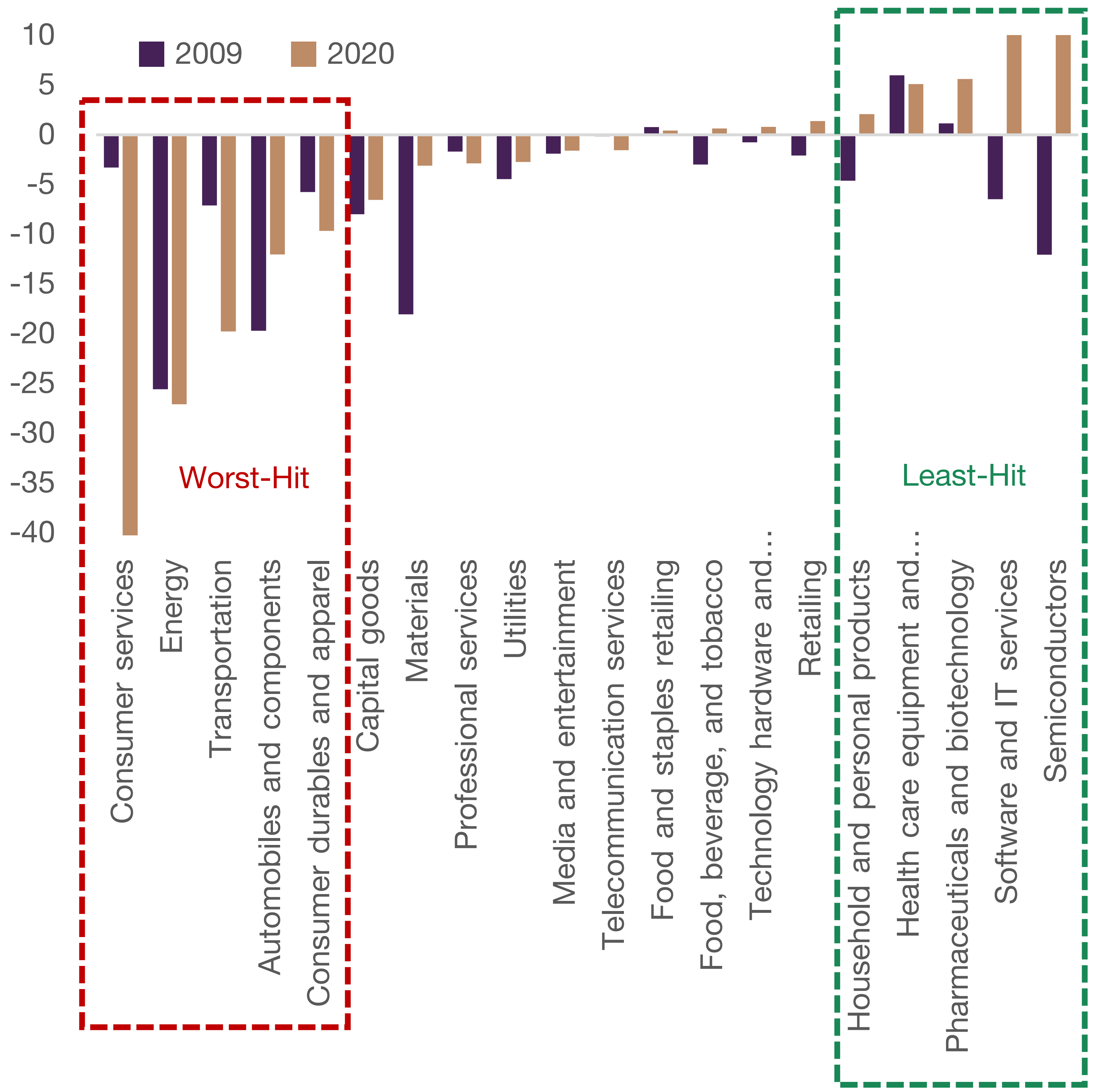


Source: EIC analysis based on data from the CEIC and The Economist

Businesses with weak financial positions tend to be more affected by monetary policy tightening. This can potentially lead to a slowdown in the whole economy as those fragile businesses have high economic value added.

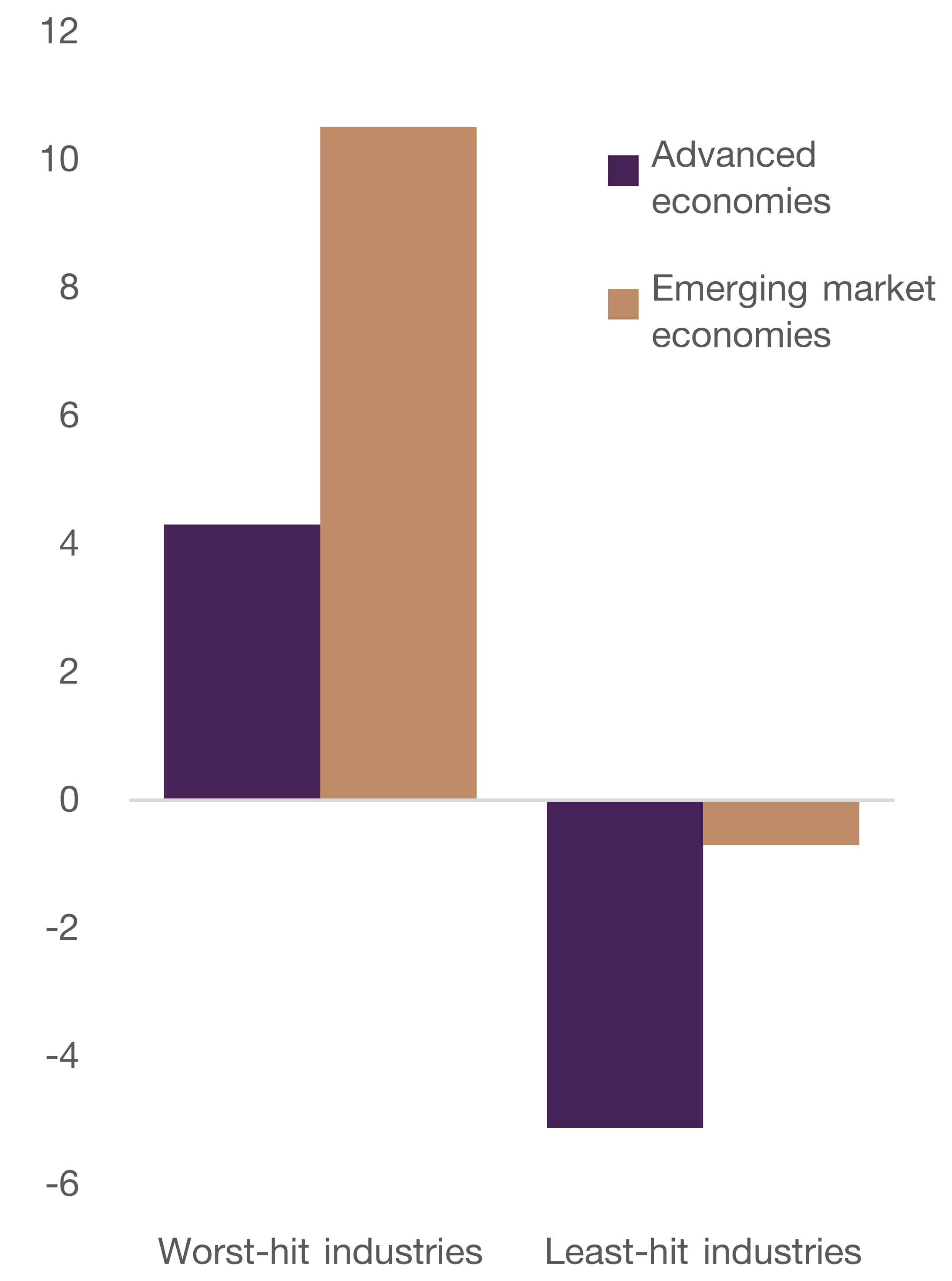
Business revenue growth during COVID and 2008 crisis

Unit: %



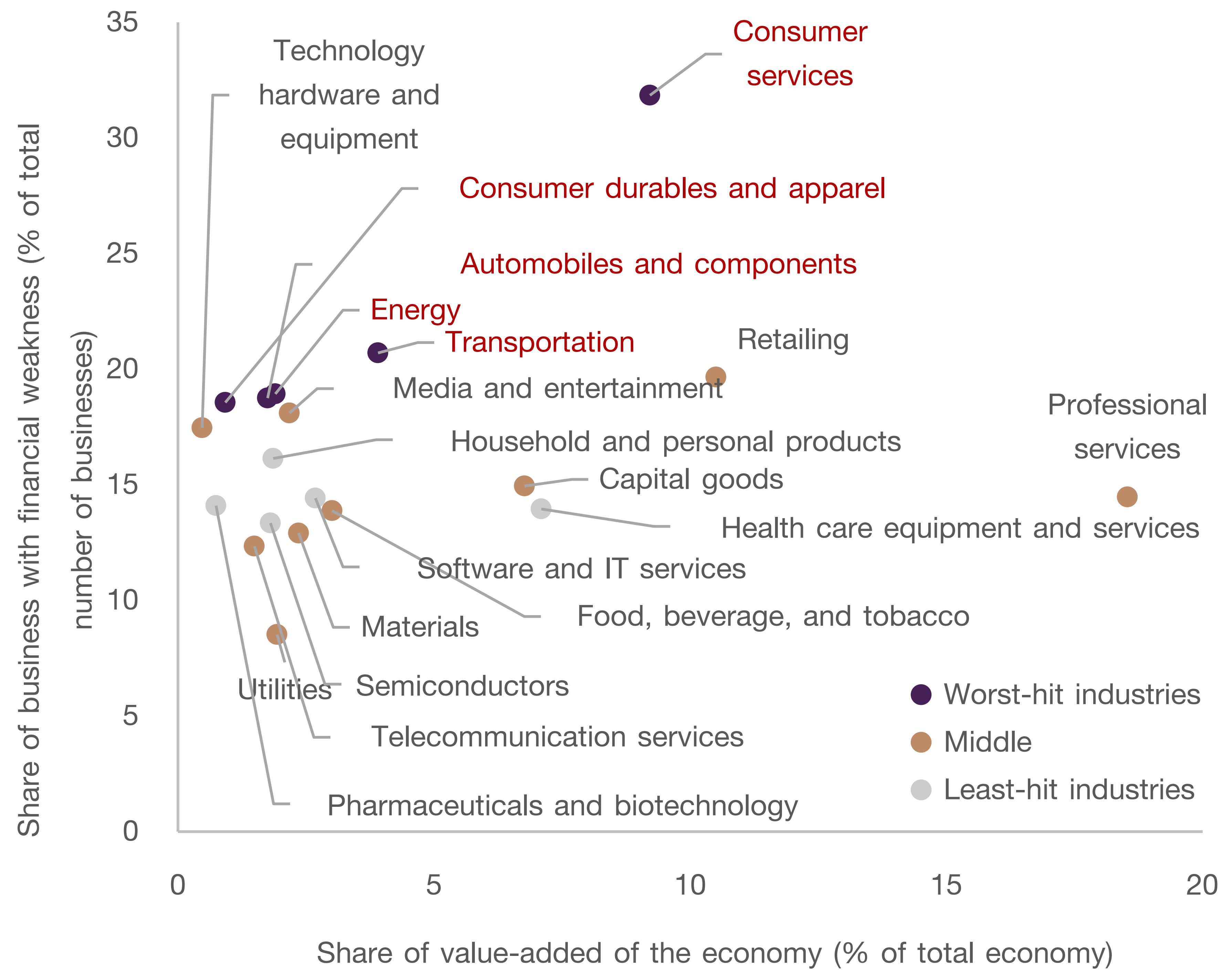
Change in net debt (4Q19 vs 2Q21)

Unit: USD billion



Share of fragile businesses and value-added

Unit: %YOY



- **The effects of COVID is concentrated in some industries, which is different from the crisis in 2008** that affected and reduced revenues of most businesses.
- **Business groups entering weak financial stage* clusters in service, logistics, and car and parts sectors.** These businesses are facing a sharp reduction in revenue (>-10%) and a significant increase in bad debt.

- **The number of businesses with a weak financial position increased in the service, logistics, energy, automobile, durable goods (red) sectors.** This can cause an economic slowdown as business investment and repayment capabilities decline while financial conditions tighten. These businesses account for 18% of total economic value-added.**

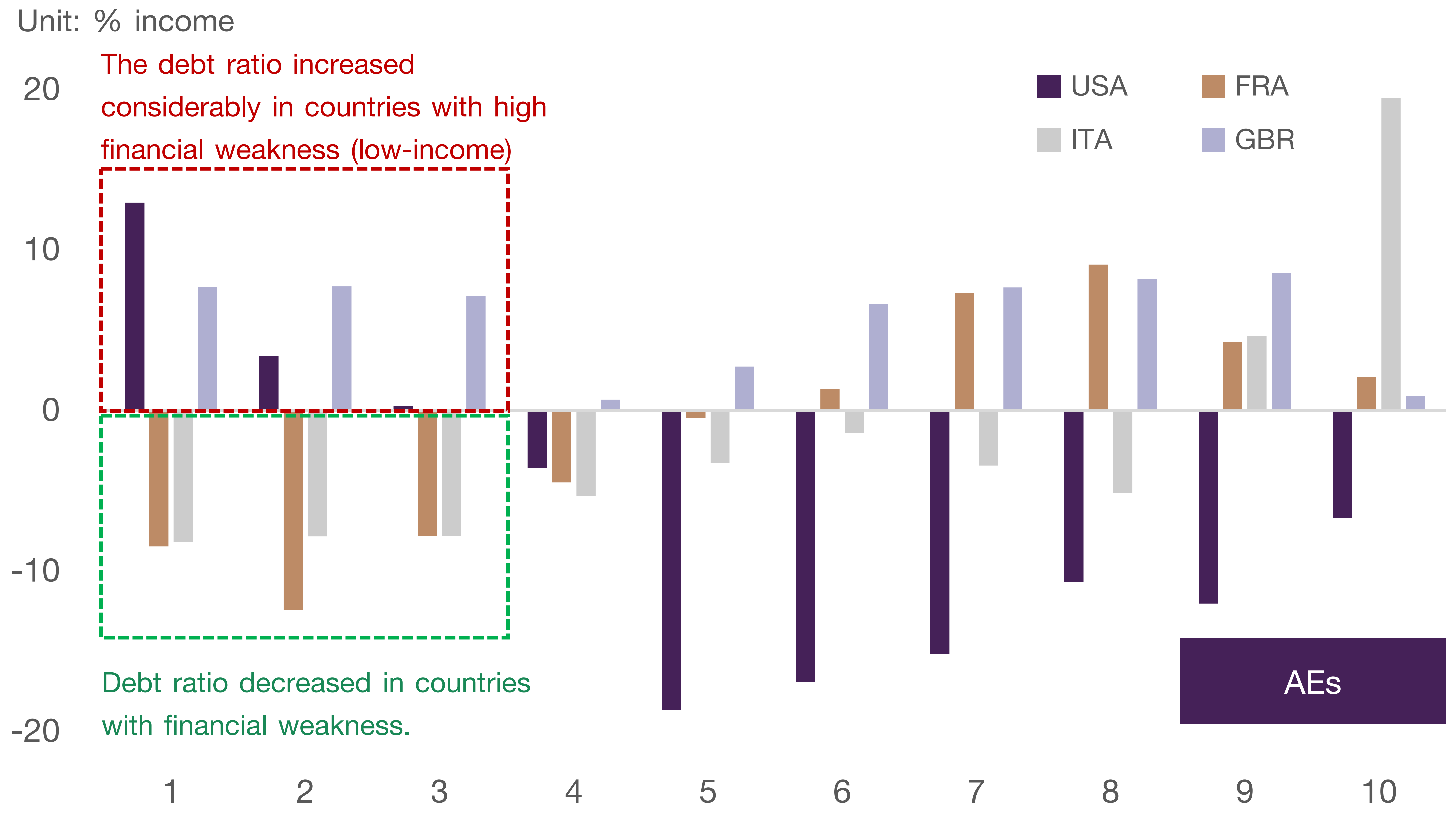
Note: *Business with weak financial positions refers to a business that has a high debt ratio, severe profit reduction, and an interest coverage ratio of less than 1

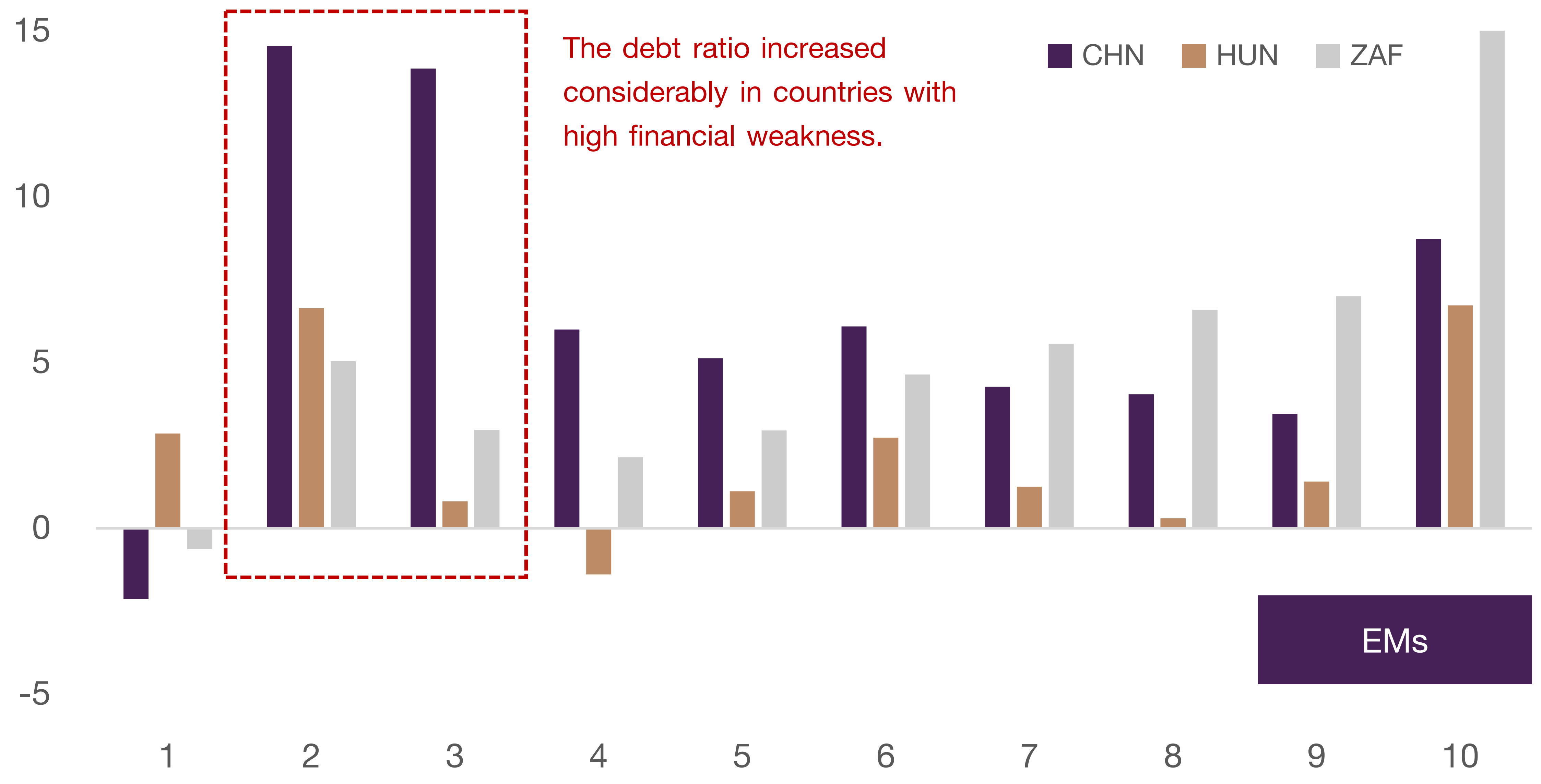
**For an analysis of industries affected by COVID, the IMF calculated based on registered companies in 71 countries in AEs and EMs.

Source: EIC analysis based on data from the IMF WEO April 2022

Countries with debt concentrated in low-income households are more likely to slow down from tightening monetary policy as higher costs of debt depress already limited consumption growth.

Change in debt-to-income ratio by deciles of income in 2020





- **Consumption in the US, UK, and China is expected to slow down significantly** as the lowest-income group (30% of total population) face higher debt ratios compared to higher-income groups. This will intensify a slowdown in consumption, which already has low-income constraints. France and Italy may face a less severe slowdown in consumption since the government has been able to allocate financial aid to low-income households.
- **Countries with debt concentrated in low-income groups, limited fiscal space, accumulating public and private debts, and inefficient debt restructuring may experience a more severe slowdown in consumption. Stimulus policies need to be more group-specific,** or the government may collect additional taxes from businesses with pandemic-related excess profit as new sources of revenue to support a recovery in weak sectors.

Source: EIC analysis based on data from the IMF WEO April 2022

Thai Economic Outlook for 2022

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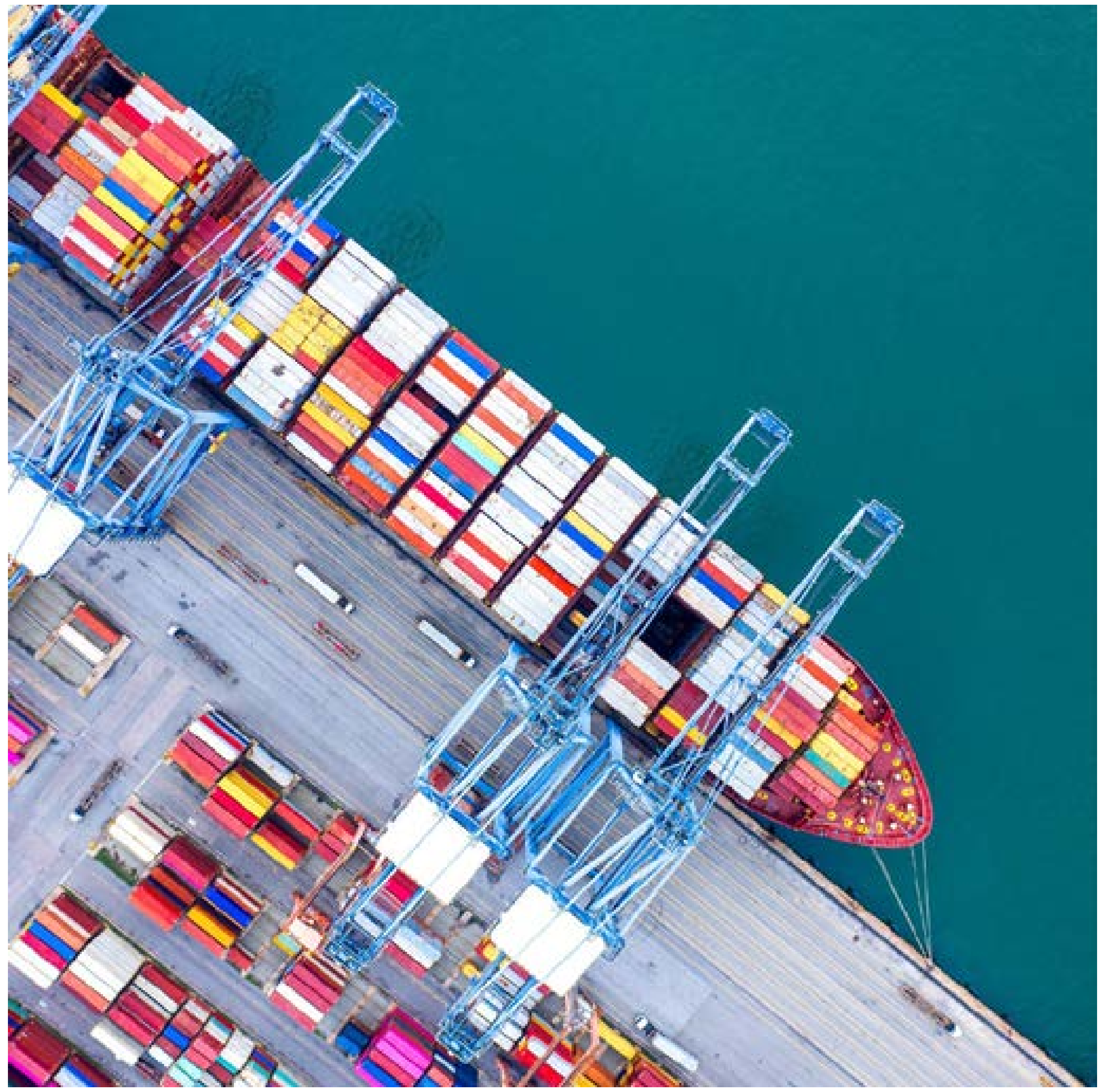
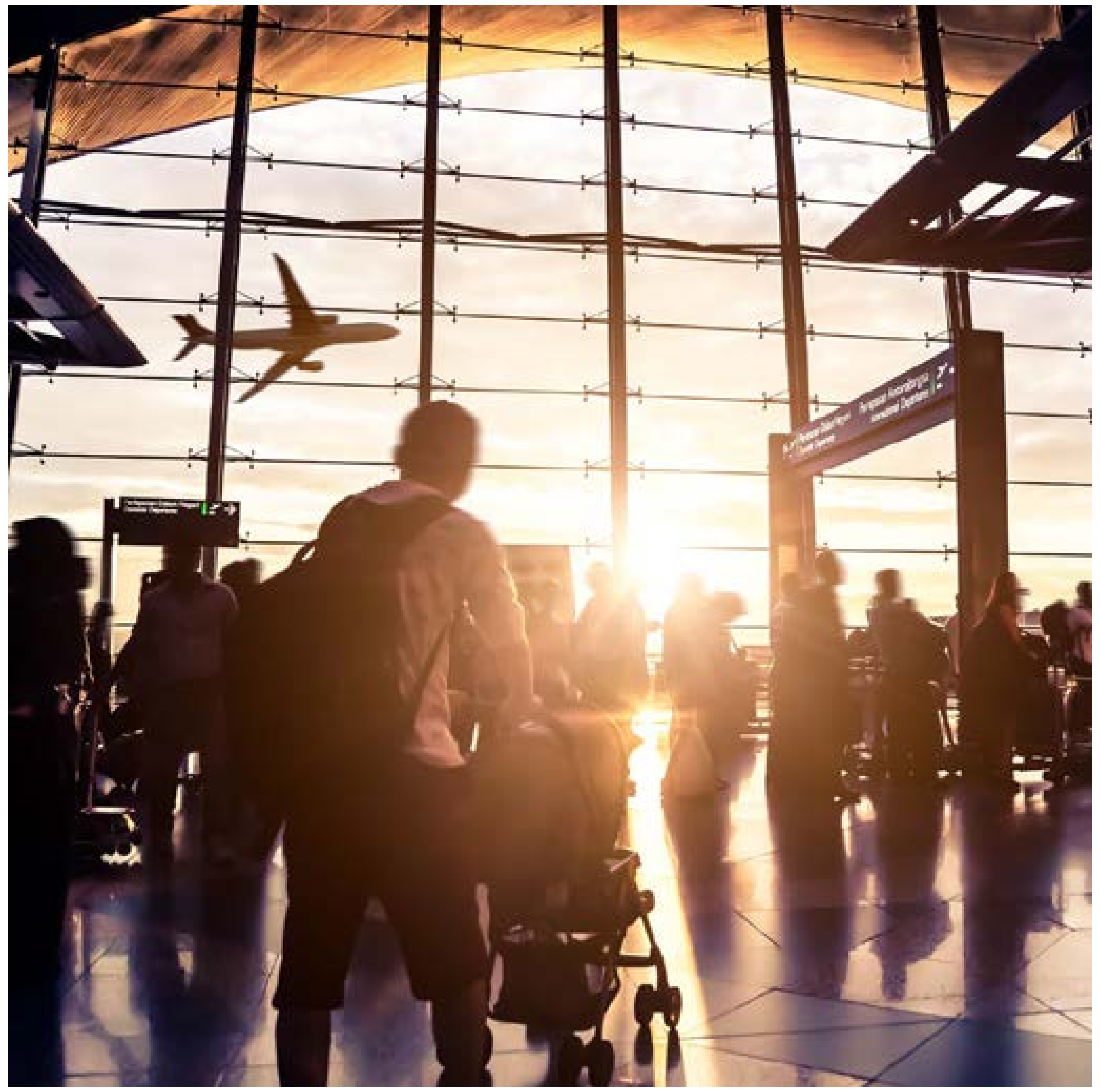


Thai export growth momentum should slow from strong expansion in prior periods as demand from trading partner economies weakens.



The tourism and service sectors will be the main drivers of Thai economic growth throughout the remainder of the year as various countries start to ease international travel restrictions.

Inflation and economic volatilities will undermine business and household recovery. The government will continue to play a vital role in supporting economic growth in 2022.

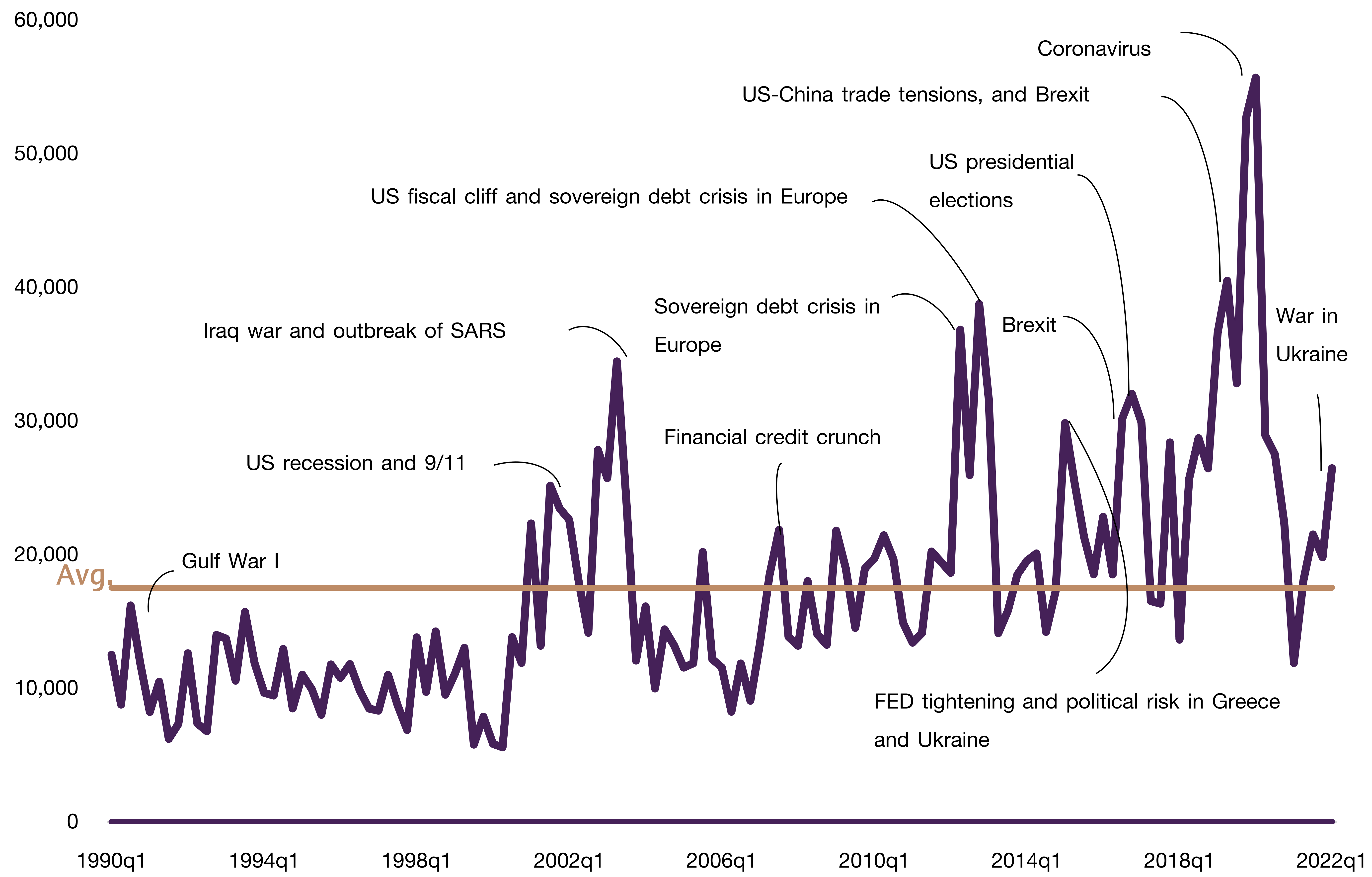
Thai export growth momentum should slow from strong expansion in prior periods as demand from trading partner economies weakens.

The export sector continued to boost Thai economic growth throughout prior periods. However, going forward, exports should expand at a slower rate due to weakening demand from trading partner economies following global economic and trade conditions. In particular, slowing demand from the Chinese economy due to strict virus containment measures will inevitably exacerbate private investment conditions that were already hampered by serious supply disruptions in the wake of the war in Ukraine and city lockdowns in China.

High Thai economic volatility anticipated in the periods ahead due to various factors.

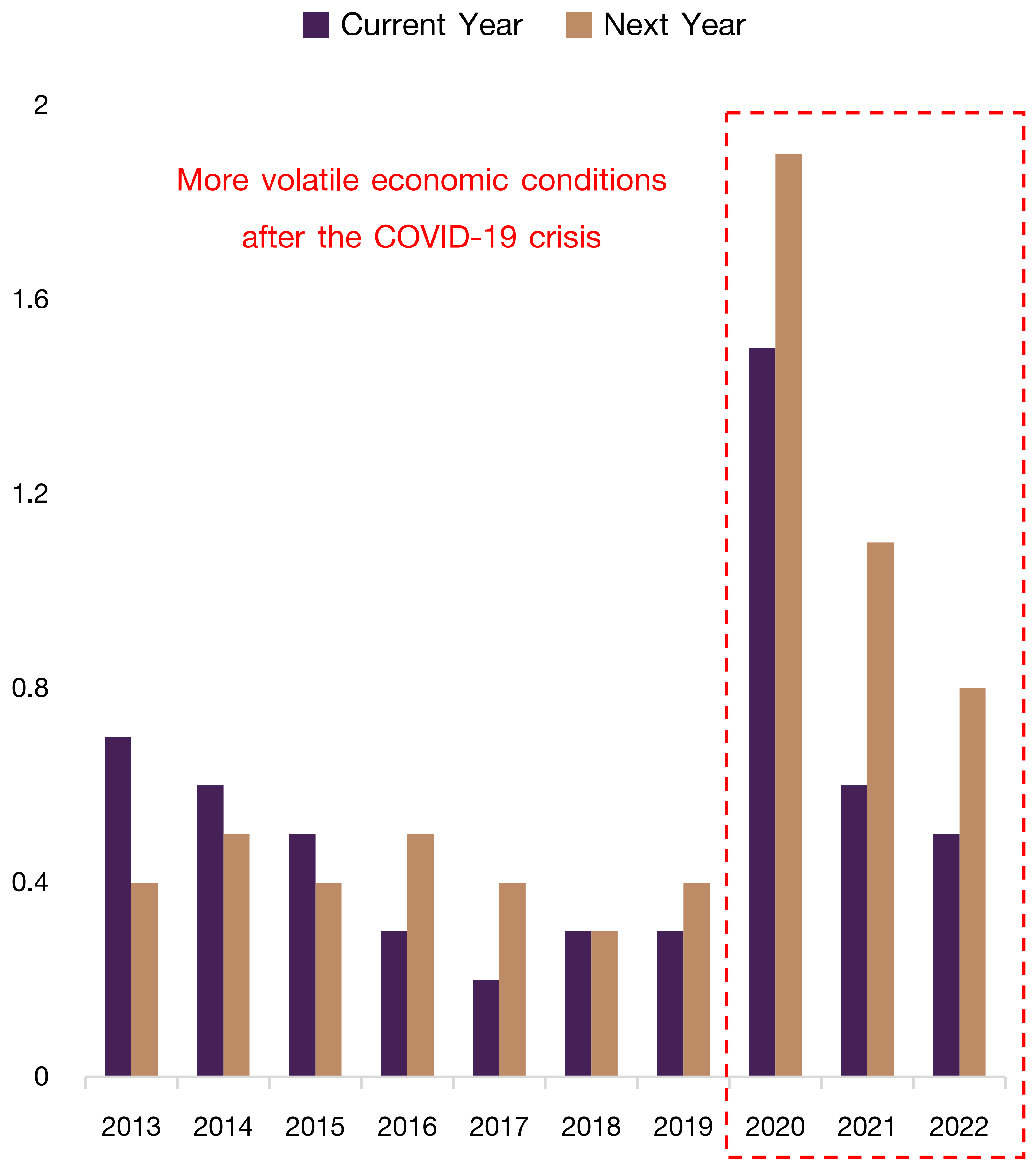
World Uncertainty Index

Unit: Index, weighted average according to economic size



Standard Deviation of Thai GDP Forecast*

Unit: % (as of May in each year)



Note: * The standard deviations of GDP growth forecasts from different research houses in May were calculated by APAC

Source: EIC analysis based on data from APAC, Ahir, H, N Bloom, and D Furceri (2018), "World Uncertainty Index", and Stanford mimeo

According to monthly data, the Thai economy strengthened during January and February while slowing in March and April following inflation, global interest rate hikes, and escalating war tensions.

Thai Economy	Unit	2020	2021	Q3/21	Q4/21	Q1/22	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	YTD
Gross Domestic Product (GDP)	%YOY	-6.2	1.5	-0.2	1.8	2.2	na	na	na	na	na	na	na	2.2
Demand-side														
Private Consumption Index	%YOY	-1.3	-1.6	-7.1	-2.7	2.5	-2.9	-3.8	-1.2	-1.2	5.0	2.2		2.5
Domestic Motor Vehicle Sales	%YOY	-21.4	-6.8	-26.5	-13.6	22.7	-13.0	-9.4	-17.2	25.8	26.3	17.4	9.1	19.5
Private Investment Index	%YOY	-5.4	9.6	8.1	5.9	4.1	8.0	5.8	3.9	7.5	3.3	1.9		4.1
Exports ex. gold (Customs basis)	%YOY	-8.5	22.4	23.6	21.6	10.1	17.0	23.7	24.1	7.7	13.2	9.5	8.9	9.8
Google Mobility (Retail & Recreation)	% compared to 3 Jan-6 Feb 20	-15.2	-9.0	-21.5	5.6	1.0	-1.4	6.6	11.5	-0.9	7.9	-4.0	-4.2	-0.3
Consumer Confidence Index	Index (100 = previous month)	52.6	44.7	40.6	45.0	43.4	43.9	44.9	46.2	44.8	43.3	42.0	40.7	42.7
Business Sentiment Index	Index (50 = previous month)	43.1	45.3	41.3	48.1	48.6	47.0	48.4	49.0	47.2	47.8	50.7	48.2	48.5
Supply-side														
Farm Income	%YOY	5.2	2.7	-0.8	-4.8	9.4	-11.0	-4.1	-1.1	5.4	9.2	14.6	13.2	10.2
Manufacturing Production Index (MPI)	%YOY	-9.5	5.8	-0.3	4.7	1.6	2.7	4.6	6.7	2.0	2.5	0.4	0.6	1.4
Capacity Utilization (CapU) sa	%	60.1	63.0	59.9	64.0	63.3	63.3	64.0	64.6	63.5	63.8	62.8	64.2	63.6
Number of Foreign Tourist Arrivals	%YOY (2020), thousands	-83.2	427.9	45	342	498	20	91	230	134	153	211	293	791
Domestic Trips	%YOY	-46.4	-41.7	-87.8	-30.9	74.4	-66.4	-30.9	4.7	127.2	72.4	42.7	138.9	87.9
Occupancy Rate	%	29.5	14.0	5.5	26.2	36.2	16.2	25.0	37.5	35.6	35.6	37.4	41.9	37.6
Number of Domestic Flight Passengers (28 Airports)	%YOY	-40.5	-55.0	-92.0	-49.4	42.7	-68.1	-51.8	-29.6	121.9	64.8	0.1	42.7	42.7
Labor market														
Unemployment Rate	%	1.7	1.9	2.3	1.6	1.5	na	na	na	na	na	na	na	1.8
Youth Unemployment Rate	%	7.3	8.2	8.6	7.2		na	na	na	na	na	na	na	8.2
Unemployment Rate under SSO	%	3.1	2.8	2.7	2.5	2.3	2.6	2.6	2.3	2.1	2.0	2.7	2.0	2.2
Private Sector Working Hours	hours/week	43.0	44.5	44.0	45.7	43.8	na	na	na	na	na	na	na	43.8

Source: EIC analysis based on data from CEIC, Bank of Thailand, Office of Agricultural Economics, Office of Industrial Economics, National Statistical Office of Thailand, Tourism Authority of Thailand, and Google

In the past, exports strengthened both in terms of price and volume. However, momentum should slow following global economic and trade conditions. Thus, EIC is cutting the merchandise export growth forecast for 2022 to 5.8% from 6.1%.

Value of Thai exports by key products

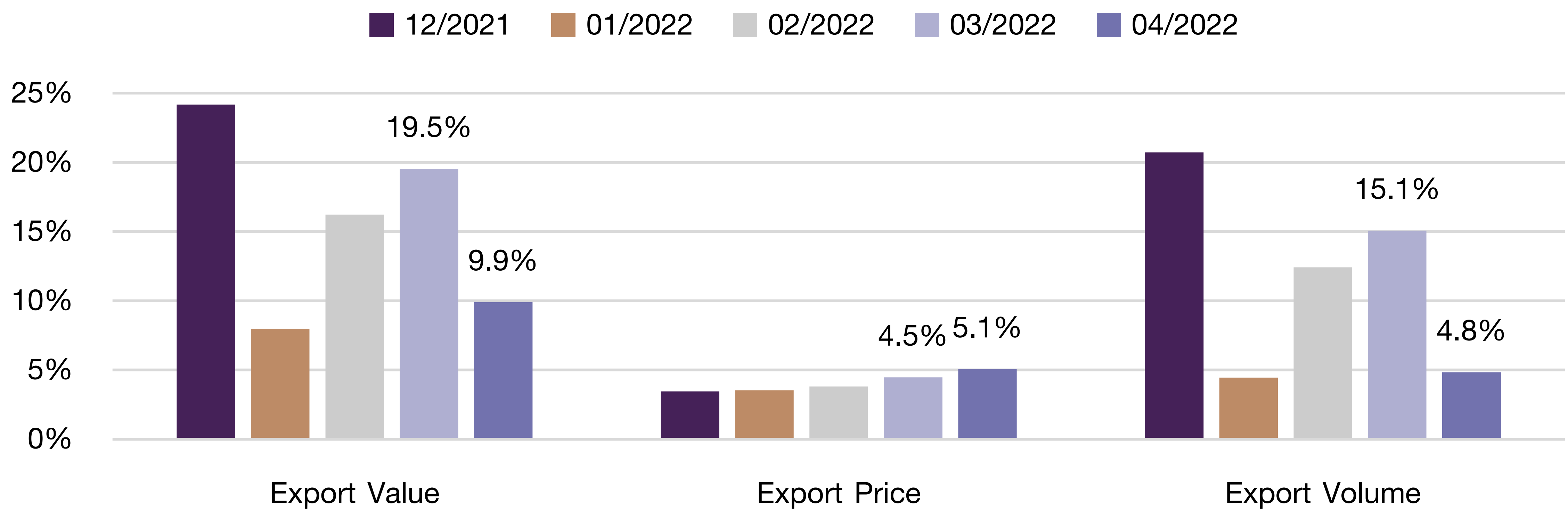
Unit: %YOY, proportion in 2021

	2021	Feb-22	Mar-22	Apr-22	YTD
Total (100%)	17.1%	16.2%	19.5%	9.9%	13.7%
Excluding gold (98.6%)	22.4%	13.2%	9.5%	8.9%	9.8%
Electrical Appliances (10.4%)	20.3%	14.1%	4.1%	-1.7%	6.3%
Automotive (10.7%)	36.2%	-1.1%	-10.9%	-9.5%	-11.0%
Agriculture (9.6%)	23.5%	-1.7%	3.3%	3.0%	2.2%
Chemicals and Plastic (9.4%)	36.4%	19.9%	11.8%	8.3%	15.8%
Agro-Industrial (7.1%)	6.7%	34.8%	27.6%	22.8%	26.7%
Computers (8.1%)	18.0%	0.6%	32.3%	-25.1%	0.3%
Rubber Products (5.3%)	19.4%	-8.3%	-13.4%	-5.2%	-7.5%
Electronic Integrated Circuits (3.1%)	18.7%	20.9%	11.0%	15.3%	17.1%
Refined Fuel (3.3%)	65.2%	23.3%	19.8%	53.4%	30.7%

The recent baht depreciation will continue to support export growth throughout the year.

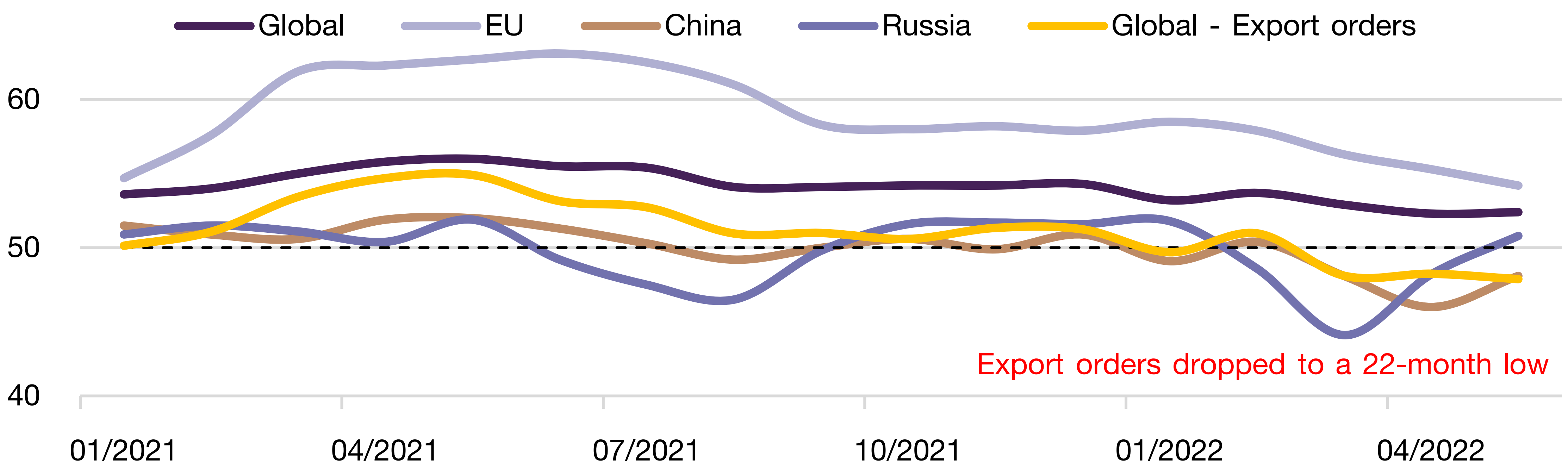
Thai export value, price, and volume during recent periods

Unit: %YOY



Manufacturing PMI

Unit: Index > 50 indicates better conditions, seasonally adjusted



Source: EIC analysis based on data from the Ministry of Commerce, IHS Markit, S&P Global, JP Morgan, and CEIC

SCB Economic Intelligence Center

Exports to China contracted by -7.2% in April, with slowing growth in nearly all key products following China's strict virus control measures. Going forward, export volume should continue to drop.

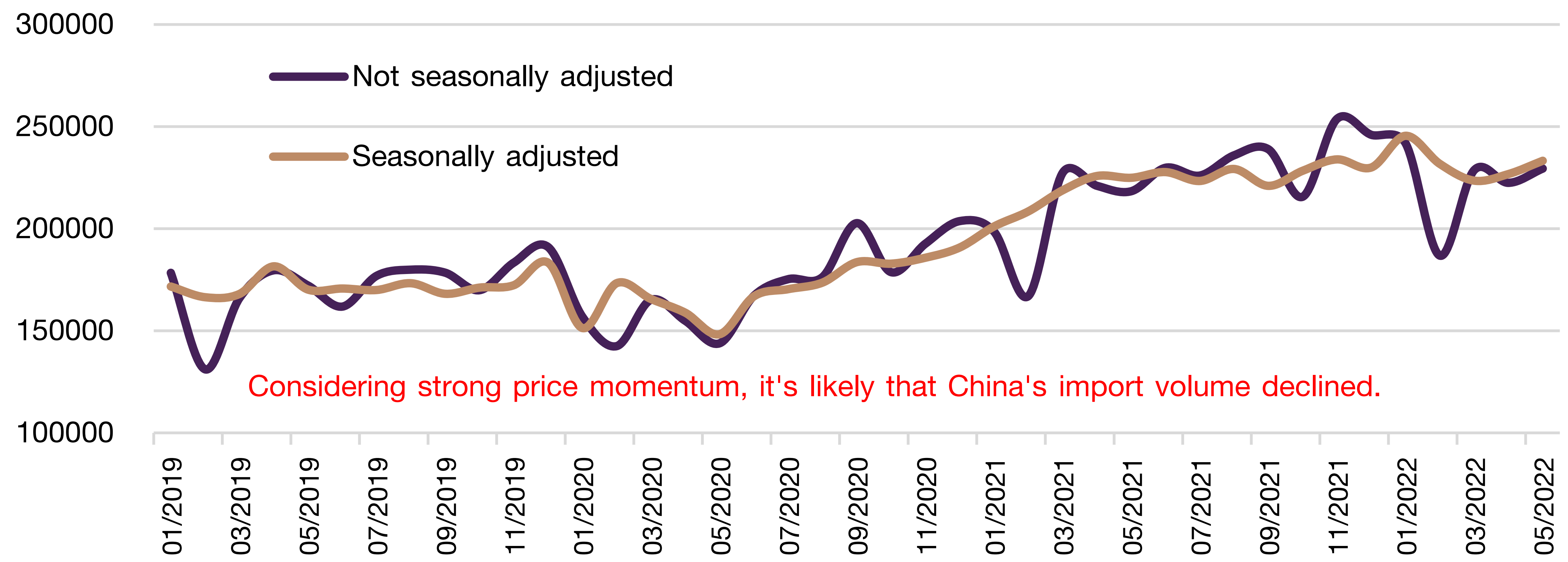
Value of Thai exports to China by key products

Unit: %YOY, proportion in 2021

	2021	Feb-22	Mar-22	Apr-22	YTD
Total (100%)	24.8%	3.0%	3.2%	-7.2%	0.9%
Excluding gold (98.6%)	-16.7%	3.0%	2.3%	-7.2%	0.6%
Agriculture (29.3%)	59.7%	-14.5%	-10.6%	-0.9%	-3.7%
Chemicals and Plastics (16%)	-1.0%	-0.9%	-1.7%	1.5%	3.0%
Computers (7.7%)	29.3%	2.4%	119.8%	-18.0%	23.1%
Rubber Products (7.6%)	-0.3%	-2.1%	-10.5%	13.5%	4.1%
Electrical Appliances (4.7%)	1.5%	17.0%	-12.0%	-14.6%	-5.0%
Automotive (3.7%)	-2.0%	-29.7%	-54.8%	-57.3%	-47.0%
Agro-Industrial (3.3%)	7.3%	62.8%	24.5%	-0.9%	33.5%
Machinery (2%)	32.9%	31.1%	12.9%	-12.1%	6.1%
Electronic Integrated Circuits (1.9%)	2.4%	24.0%	4.2%	-13.2%	6.7%
Refined Fuel (1.1%)	-0.3%	-19.0%	-66.4%	45.6%	-32.3%
Textile (1.1%)	3.1%	-7.2%	-8.4%	-0.9%	-7.4%

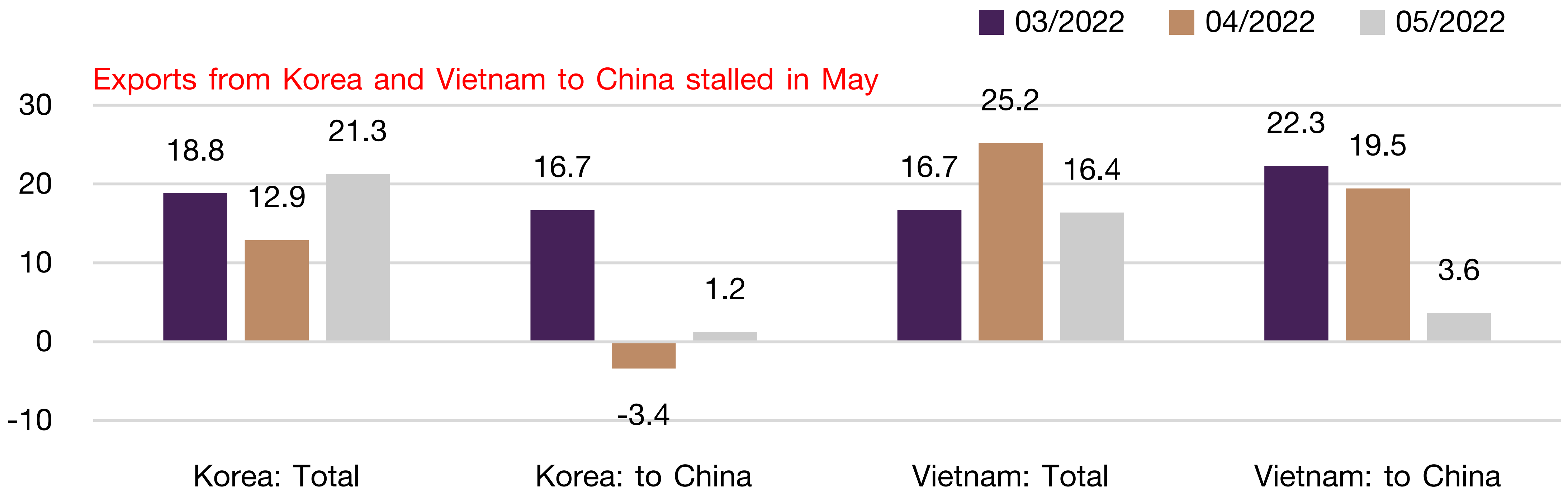
China import figures

Unit: USD Million



South Korea's first 20-days export figure

Unit: %MOM, seasonally adjusted



Source: EIC analysis based on data from the Ministry of Commerce, IHS Markit, S&P Global, JP Morgan, and CEIC

China's economy should slow, thereby directly undermining Thai export products with high dependency on China and manufacturing sectors that rely on Chinese imports with disrupted supply chains.

China's economy should expand below the official target set due to various factors

China's strict Zero-COVID policy
(Short-term impact)

China had to reimpose strict virus curbs and travel restrictions following its Zero-COVID policy. With city lockdowns and closures of various important ports, business and manufacturing activities in affected areas were suspended, thereby complicating the imports and exports of certain goods and raw materials between China and other countries involved in the global supply chain.

China's self-sufficiency policy
(Medium to long-term impact)

Economic reform in China puts greater emphasis on self-sufficiency and internal strength, aiming to achieve long term economic and financial sustainability by reducing reliance on manufacturing input and technology from abroad. As such, China produced more products for domestic use as well as exports, while gradually lowering imports. Furthermore, China shifted more toward Go hi-tech and Go green economy, in which the proportion of Thai exports to China to support such trends is low, representing great opportunities for Thailand in the long run.

Direct impact on exports that heavily rely on the Chinese market

Exports to China could face challenges from more stringent and complicated import and inspection procedures.

Fresh/ chilled/ frozen/ dried fruits	Rubber	Plastic beads	Chemicals
83.4%	35.2%	29.4%	23.8%

(% represents export portion to China to total export value of such category in 2021)

Indirect impact on the production and exports of products relating to China's supply chain

Manufacturing sectors that are reliant on Chinese goods should suffer from raw material and intermediate goods shortages due to supply chain disruption in China.

Household electrical appliances and parts	Computer, parts, components	Electrical machinery and parts	Machinery and parts
75.2%	48.9%	42.8%	30.5%

(% represents import portion from China to total import value of such category in 2021)

Source: EIC analysis based on data from the Ministry of Commerce and the Office of the National Economic and Social Development Council

In terms of key destinations, exports to China and Europe dragged growth. However, exports to other Asian markets that recovered from economic re-openings supported growth.

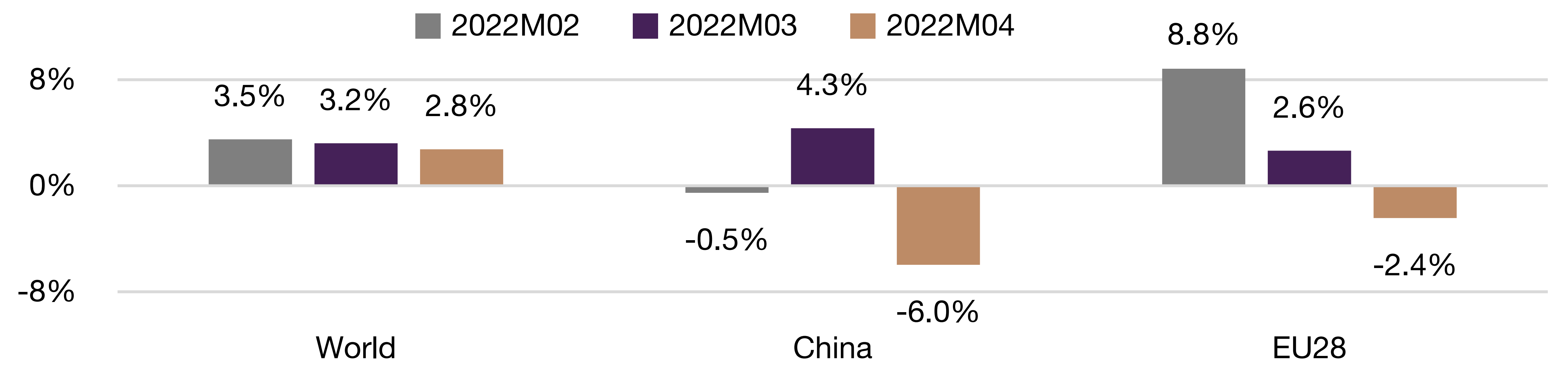
Value of Thai exports by key destinations

Unit: %YOY, proportion in 2021

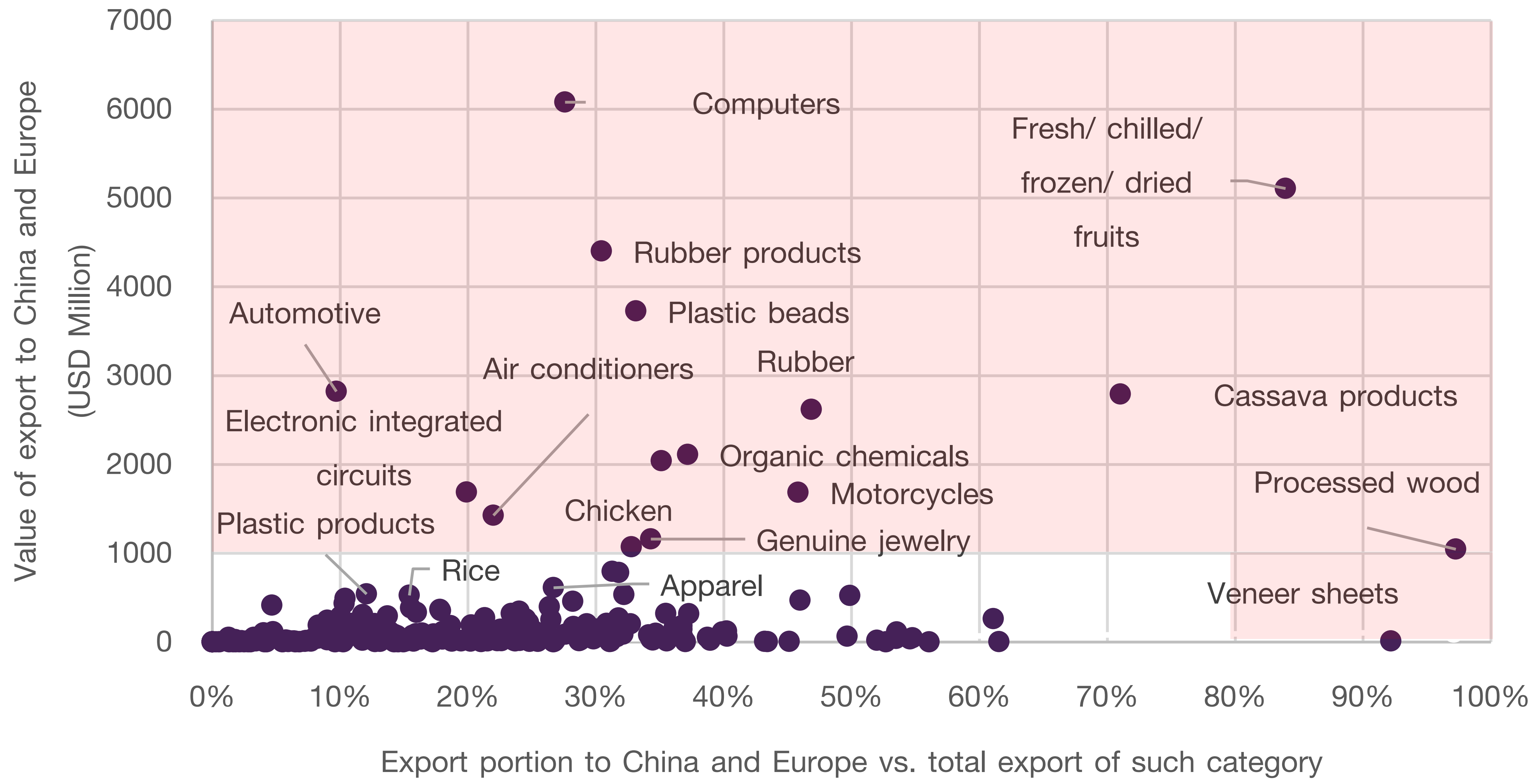
	2021	Feb-22	Mar-22	Apr-22	YTD
Total exports	17.1%	16.2%	19.5%	9.9%	13.7%
US (15.4%)	21.5%	27.2%	21.5%	13.6%	21.5%
China (13.7%)	24.8%	3.0%	3.2%	-7.2%	0.9%
ASEAN5 (13.7%)	19.4%	31.5%	34.8%	26.9%	26.9%
CLMV (10.3%)	14.4%	14.4%	1.0%	9.3%	6.4%
Japan (9.2%)	9.5%	2.6%	1.0%	-0.3%	0.9%
EU28 (9.3%)	21.2%	9.6%	8.0%	0.0%	5.7%
Hong Kong (4.3%)	2.6%	29.7%	-1.0%	10.6%	6.5%
Australia (4%)	10.9%	-2.6%	-2.2%	-3.9%	-2.7%
Middle East (3.3%)	21.5%	14.1%	30.0%	26.0%	18.0%
India (3.1%)	55.1%	23.0%	43.4%	43.4%	35.8%
Russia (0.4%)	41.7%	33.4%	-73.0%	-76.8%	-23.6%
Ukraine (0%)	35.7%	-43.8%	-77.8%	-94.9%	-60.1%
Switzerland (0.5%)	-81.3%	491.7%	2865.0%	392.2%	1021.4%

Value of Thai exports, excluding gold, by key destinations

Unit: %MOM_sa



Thai export products with high reliance on China and Europe

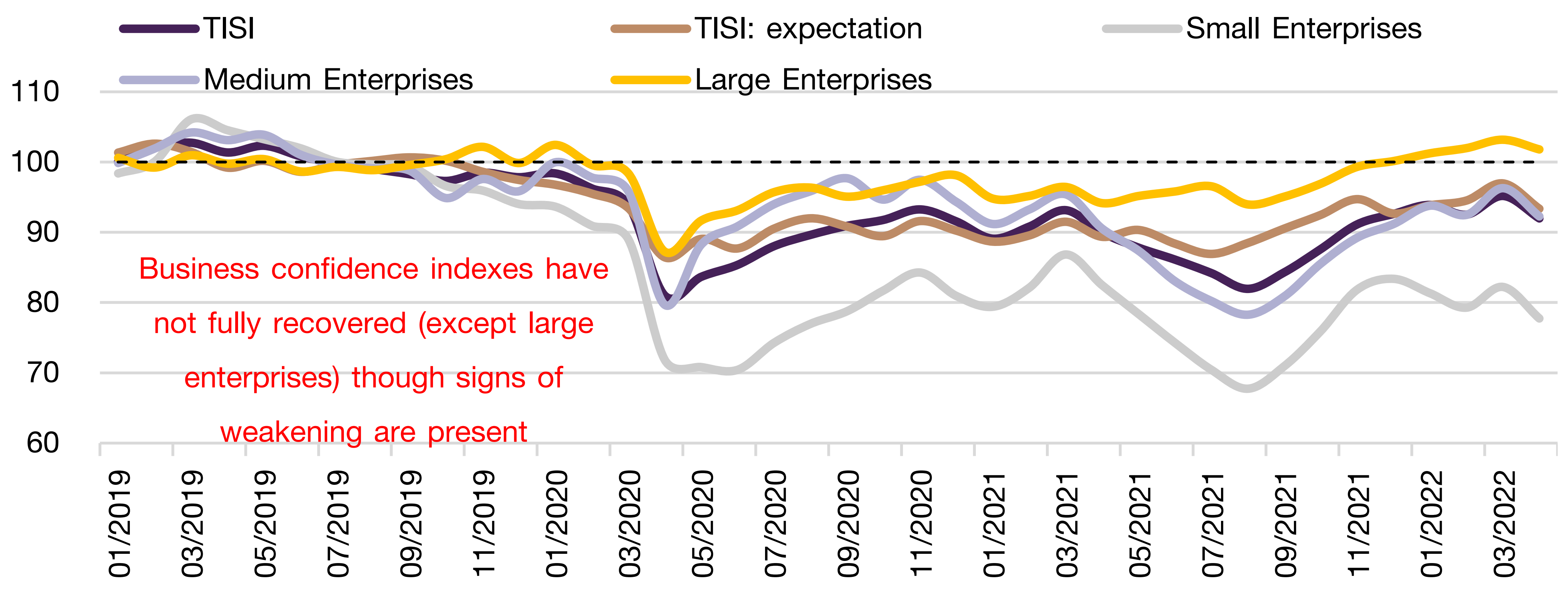


Source: EIC analysis based on data from the Ministry of Commerce, IHS Markit, S&P Global, JP Morgan, and CEIC

Manufacturing sector growth momentum should slow following exports, global supply disruption, and changing consumer preferences to spend more on services after the domestic outbreak eased.

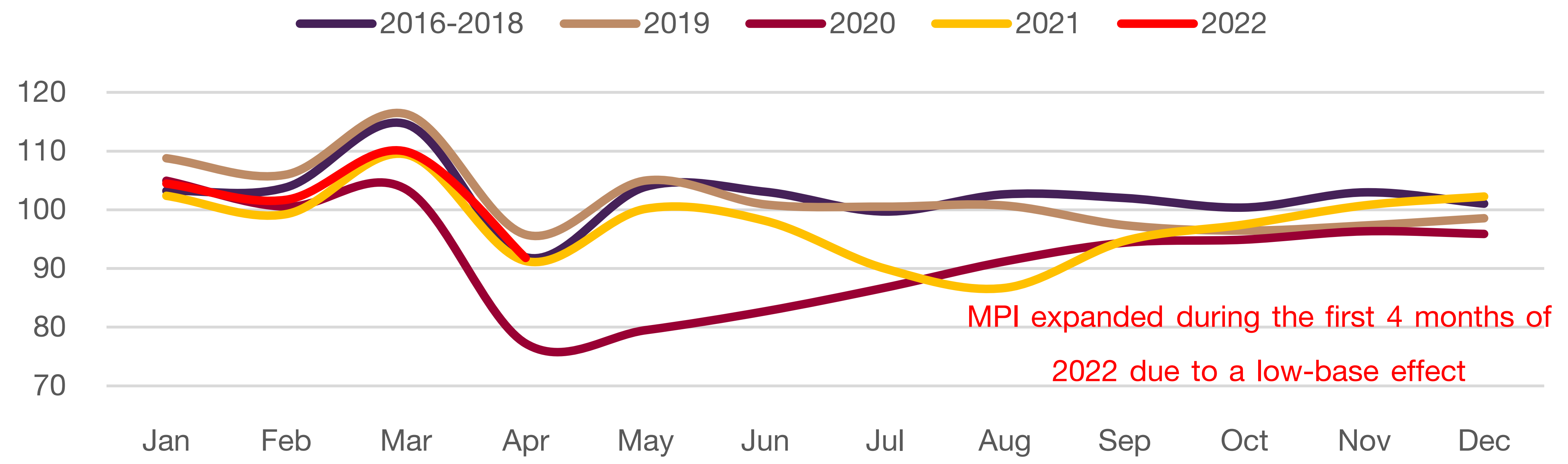
Thai Industries Sentiment Index

Unit: Index (2019=100)



Manufacturing Production Index

Unit: Index (2000=100)



MPI weakened, especially HDD, beer, and furniture

Unit: %YOY

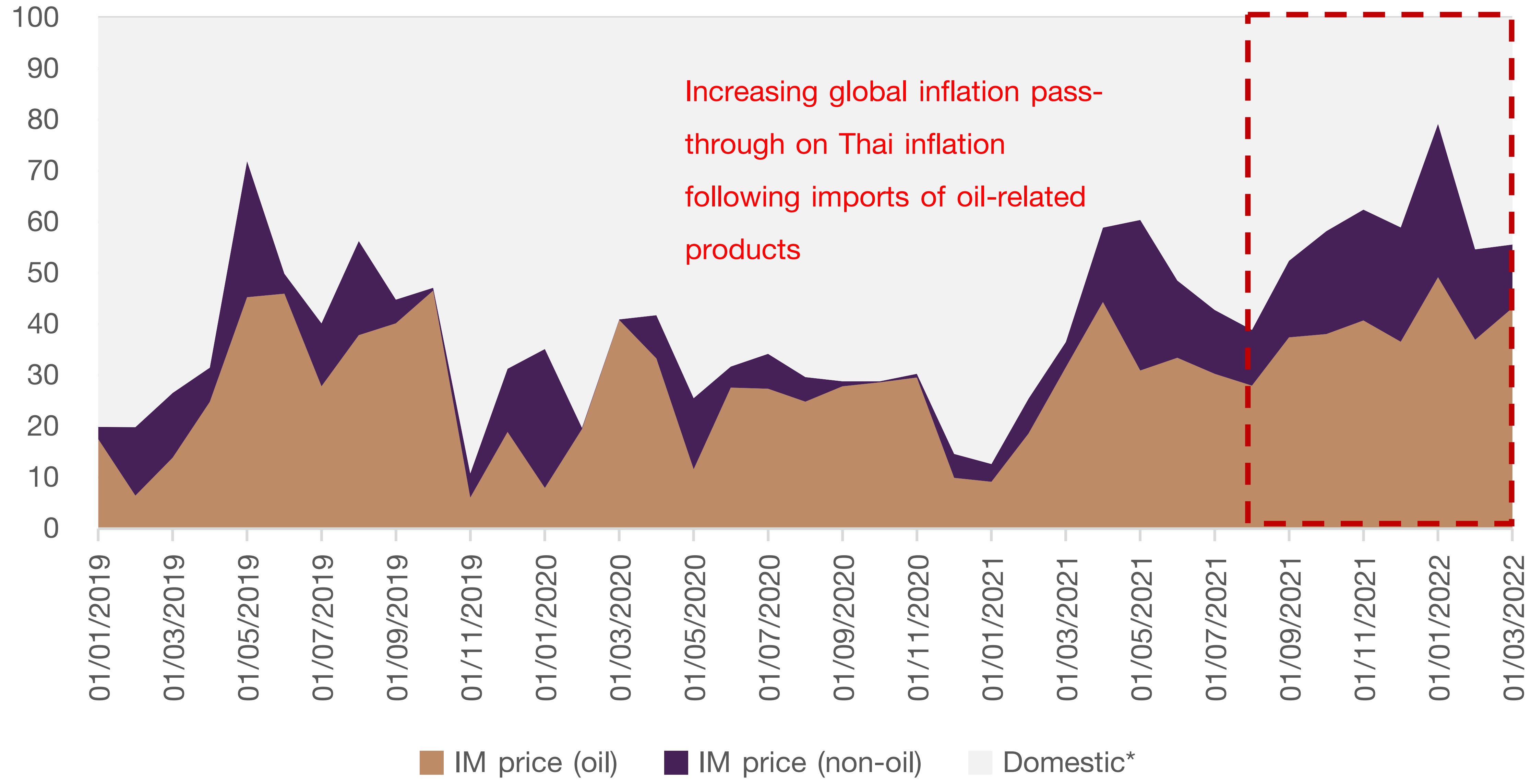
%YOY	2021	Q4/2021	Q1/2022	Feb-22	Mar-22	Apr-22	YTD
MPI	5.8%	4.7%	1.6%	2.5%	0.4%	0.6%	1.4%
Food Products	3.2%	6.5%	3.0%	2.9%	3.1%	-4.3%	1.4%
Beverages	-0.3%	0.2%	6.5%	15.0%	-1.2%	-10.1%	2.2%
Tobacco Products	-6.0%	-42.8%	-16.6%	4.1%	-30.5%	-14.8%	-16.2%
Wearing Apparel	-9.0%	12.2%	-0.6%	15.1%	-9.9%	-5.7%	-1.7%
Leather & Related Products	9.5%	29.2%	12.5%	17.5%	12.6%	14.5%	13.0%
Paper & Paper Products	3.5%	0.1%	-3.2%	-4.8%	-3.1%	-6.4%	-4.0%
Coke & Refined Petroleum	-2.1%	8.2%	14.3%	15.9%	18.1%	12.5%	13.9%
Chemicals & Chemical Products	3.7%	5.1%	-2.0%	-3.2%	-2.0%	-2.8%	-2.2%
Pharmaceutical Products	-5.0%	22.0%	17.4%	14.2%	24.0%	27.7%	19.7%
Rubber & Plastic	6.2%	4.1%	-0.1%	-0.5%	-3.3%	8.1%	1.6%
Basic Metal	14.3%	1.4%	-9.3%	-7.9%	-4.1%	-6.6%	-8.7%
Fabricated Metal	4.3%	-3.2%	5.5%	10.7%	-0.4%	-8.8%	1.9%
Computer & Electronic	8.9%	4.1%	-0.9%	-1.5%	-2.0%	-7.8%	-2.6%
Electrical Equipment	5.7%	-1.6%	-3.2%	-1.2%	-5.7%	-2.6%	-3.1%
Machinery & Equip	11.9%	2.8%	-7.3%	-4.9%	-12.3%	-7.3%	-7.3%
Motor Vehicles	19.0%	3.6%	3.5%	2.4%	3.3%	12.7%	5.2%
Other Transport Equip	4.7%	-15.4%	-20.7%	-27.5%	-19.2%	-0.4%	-16.6%
Furniture	23.4%	27.8%	1.1%	14.0%	-15.5%	-17.9%	-3.4%
Other Manufacturing	15.9%	15.4%	5.8%	8.4%	1.7%	22.2%	9.4%

Source: EIC analysis based on data from the Ministry of Industry and the Federation of Thai Industries

Thai inflation was among the lowest due to limited transmission from global inflation following energy price control measures. However, transmission will be greater in the periods ahead due to lowering energy subsidies.

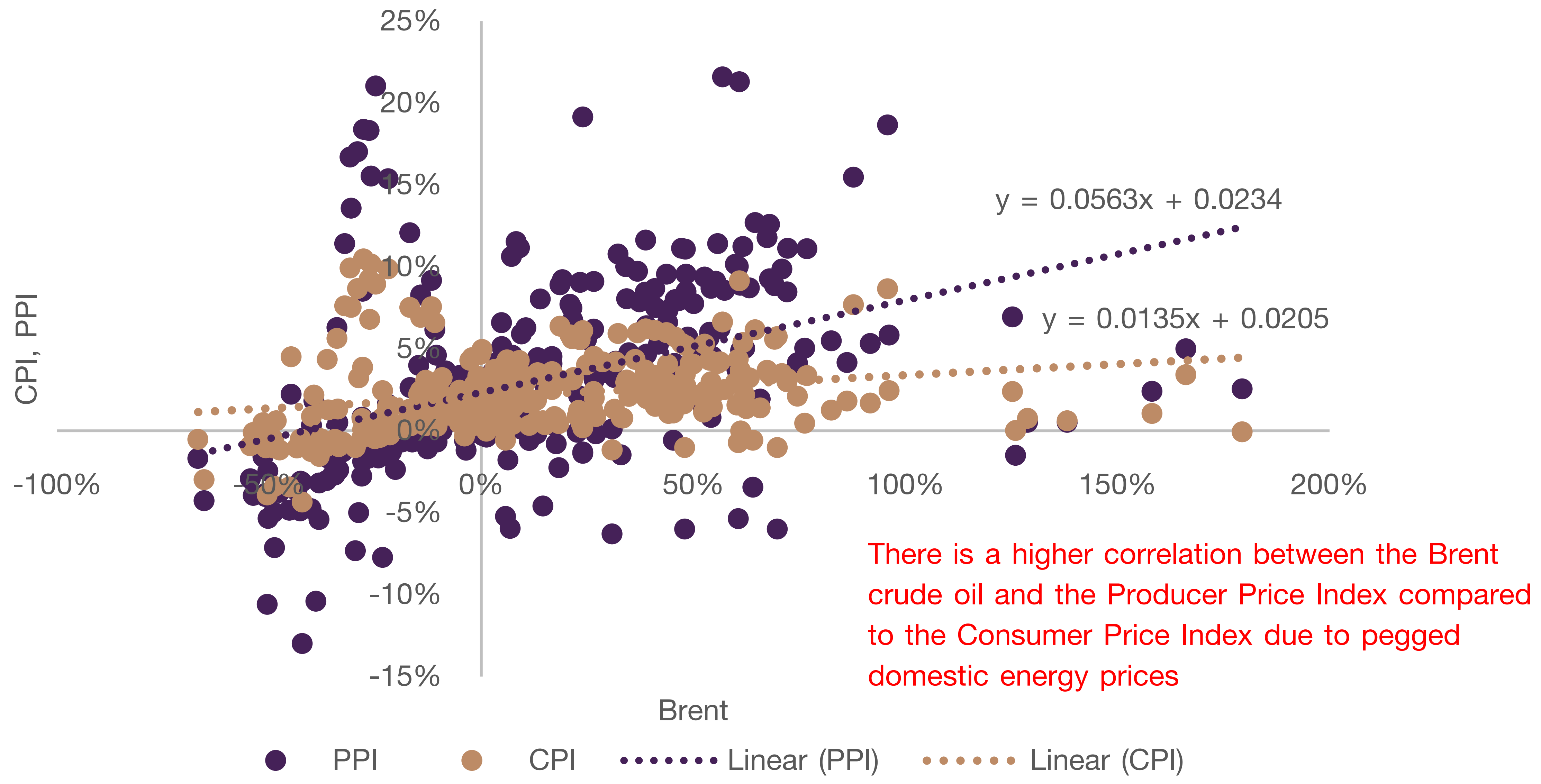
Percentage of impact from different factors on the Consumer Price Index

Unit: %



Relationship between Brent crude oil price and the Consumer Price Index and the Producer Price Index

Unit: %YOY

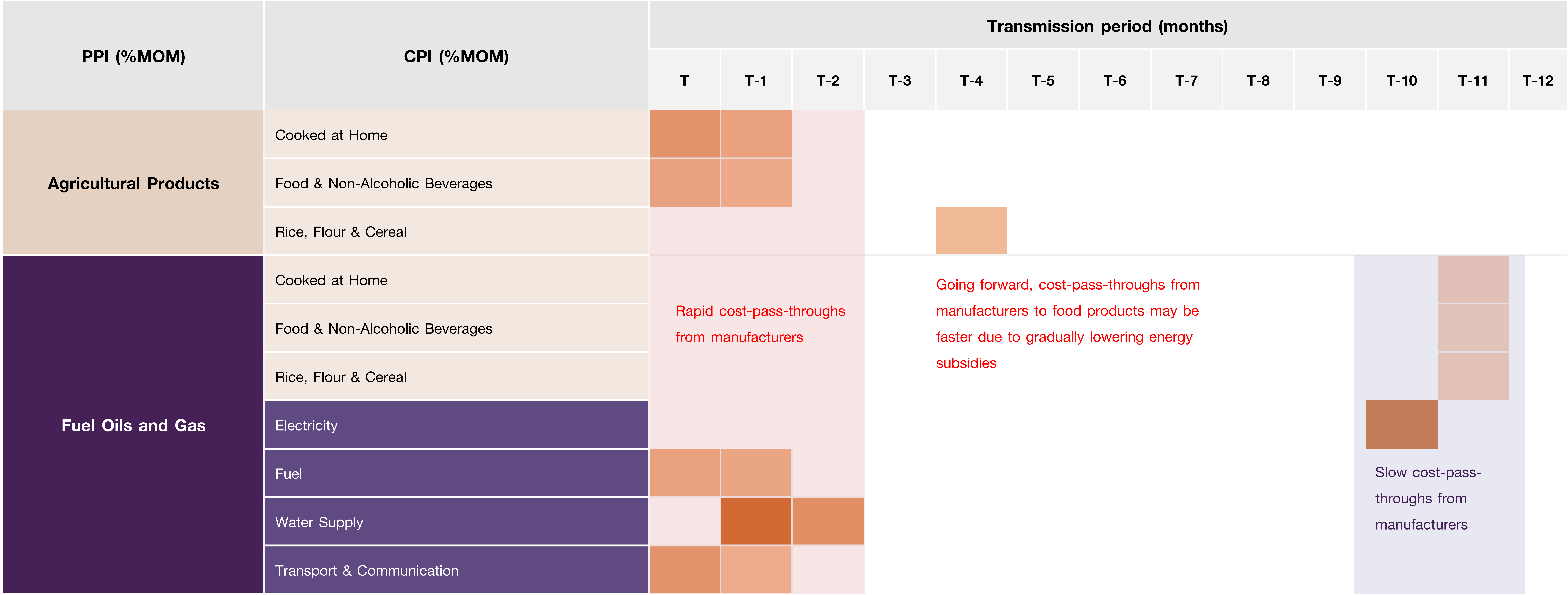


In the past, transmission from global inflation to Thai inflation was low due to energy price subsidy policies. According to EIC analysis, inflation from 2019 to 2022 was attributed to the transmission of oil-related import prices at 28.93%, non-oil-related import prices at 10.98%, and domestic and other factors at 60.09%. However, in 2021, the price transmission magnitude from oil-related imports soared as oil prices in the global market continued to surge in tandem with the domestic relaxation of the oil price fix.

Source: EIC analysis based on data from the Ministry of Commerce and CEIC

Uneven cost-pass-throughs among different products. In some products, cost transmissions were fast, while cost transmissions were limited in some products regulated by the government.

The transmission of PPI prices by category to CPI prices

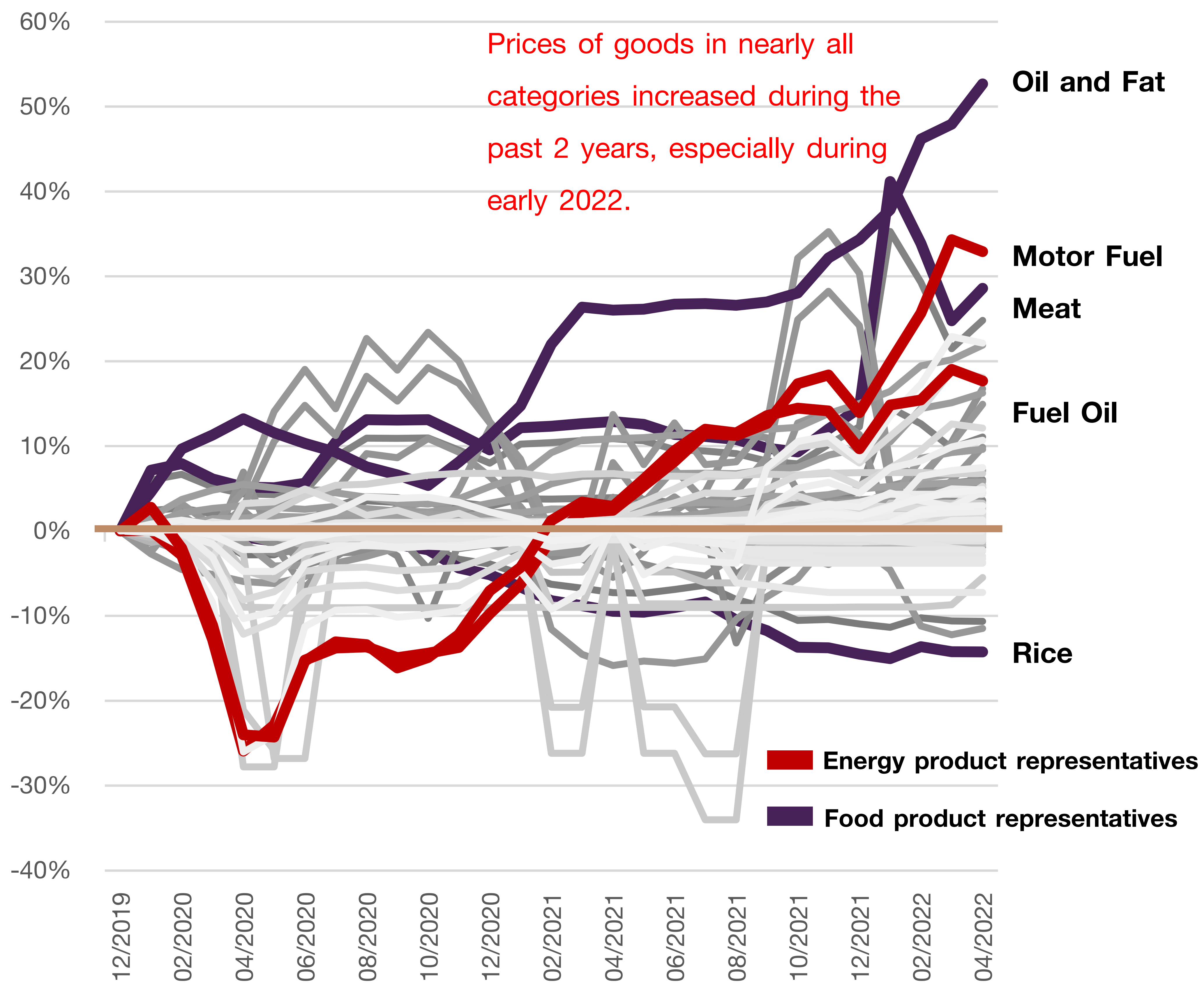


Source: EIC analysis based on data from the Ministry of Commerce and CEIC

The latest inflation figures in May accelerated from the prior month. Figures should continue to soar in the periods ahead following lower energy subsidies.

Changes in Consumer Price Index by key products (versus 12/2019)

Unit: %



The expansion of Consumer Price Index in Feb 2022 by key products

%YOY	Share	2021	Mar-22	Apr-22	May-22	YTD
Total	100%	1.2%	5.7%	4.6%	7.1%	5.2%
Food and non-alcoholic beverages	40.4%	-0.1%	4.6%	4.8%	6.2%	4.5%
Fresh food	20.6%	-1.0%	3.7%	3.2%	3.5%	3.3%
- Meat	3.5%	2.3%	17.1%	9.8%	12.6%	15.5%
Apparel and footwear	2.2%	-0.3%	-0.2%	-0.2%	-0.1%	-0.2%
Housing	23.2%	-1.7%	5.7%	1.0%	6.6%	3.9%
Electricity, fuel, water supply, lighting	5.5%	-7.3%	28.2%	28.2%	3.5%	14.4%
Medical and personal services	5.7%	0.2%	0.5%	0.8%	1.1%	0.6%
Vehicles, transportation, and communications	22.7%	7.7%	11.3%	10.7%	13.1%	10.8%
Entertainment, reading, education, religion	4.5%	-0.4%	-0.9%	-0.8%	-0.6%	-0.8%
Tobacco and alcoholic beverages	1.4%	0.3%	2.2%	2.2%	2.2%	2.0%
Core Consumer Price Index	67.1%	0.2%	2.0%	2.0%	2.3%	1.7%

The expansion of the Consumer Price Index in May 2022 by key regions

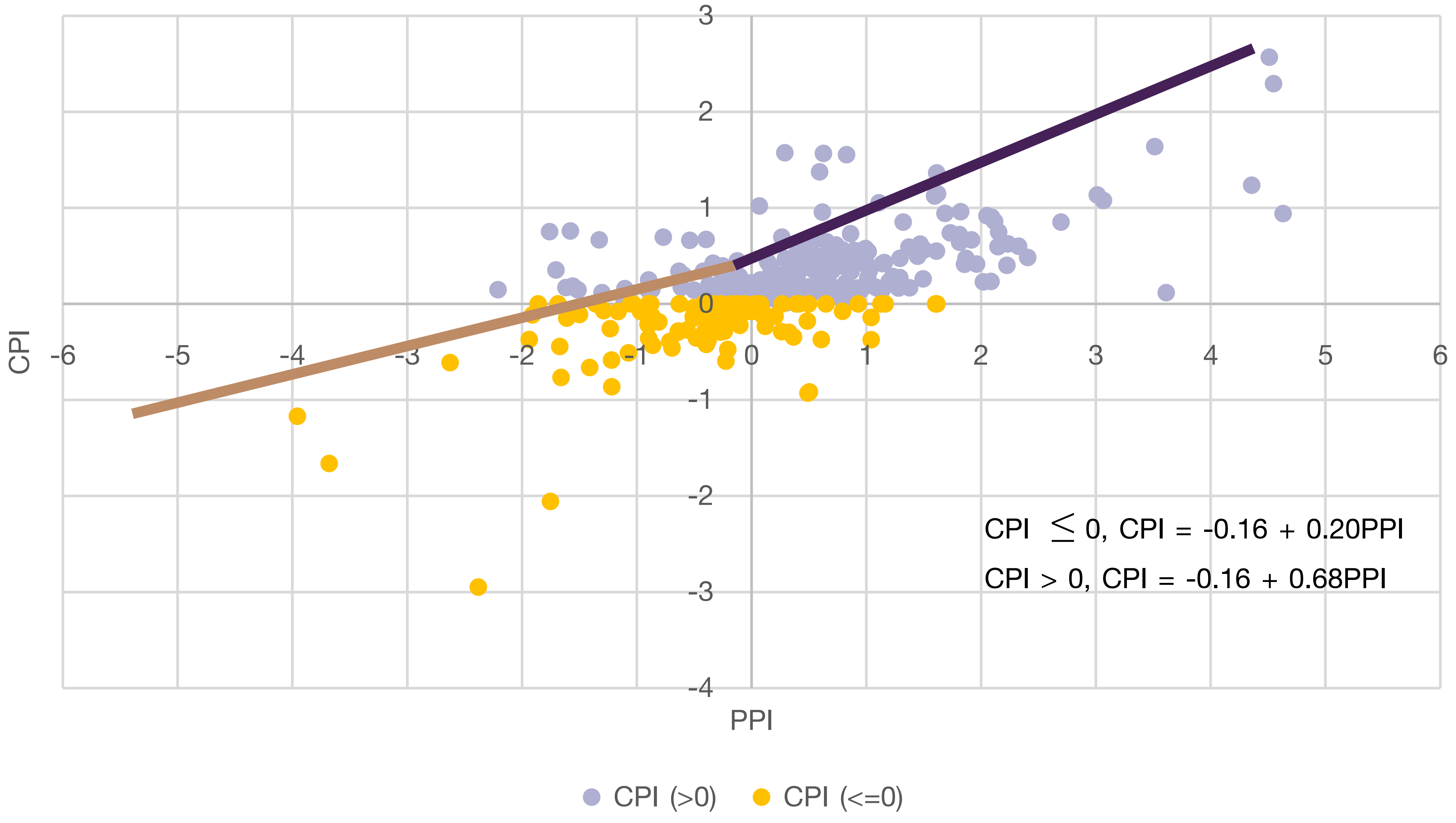
%YOY	Mar-22	Apr-22	May-22	เฉลี่ย 3 เดือนล่าสุด
CPI Bangkok and Vicinity	5.76	4.58	6.85	**5.01**
CPI Central Region	6.25	5.02	7.46	**5.63**
CPI Northern Region	5.44	4.25	6.98	**5.16**
CPI Northeastern Region	4.99	4.14	6.53	**4.62**
CPI Southern Region	6.18	5.33	7.95	**5.70**

Source: EIC analysis based on data from the Ministry of Commerce and CEIC

EIC anticipates Thai inflation standing at 5.9% in 2022 on the assumption that the government will still exert some control over energy prices.

Relationship between Consumer Price Index (CPI) and Producer Price Index (PPI)

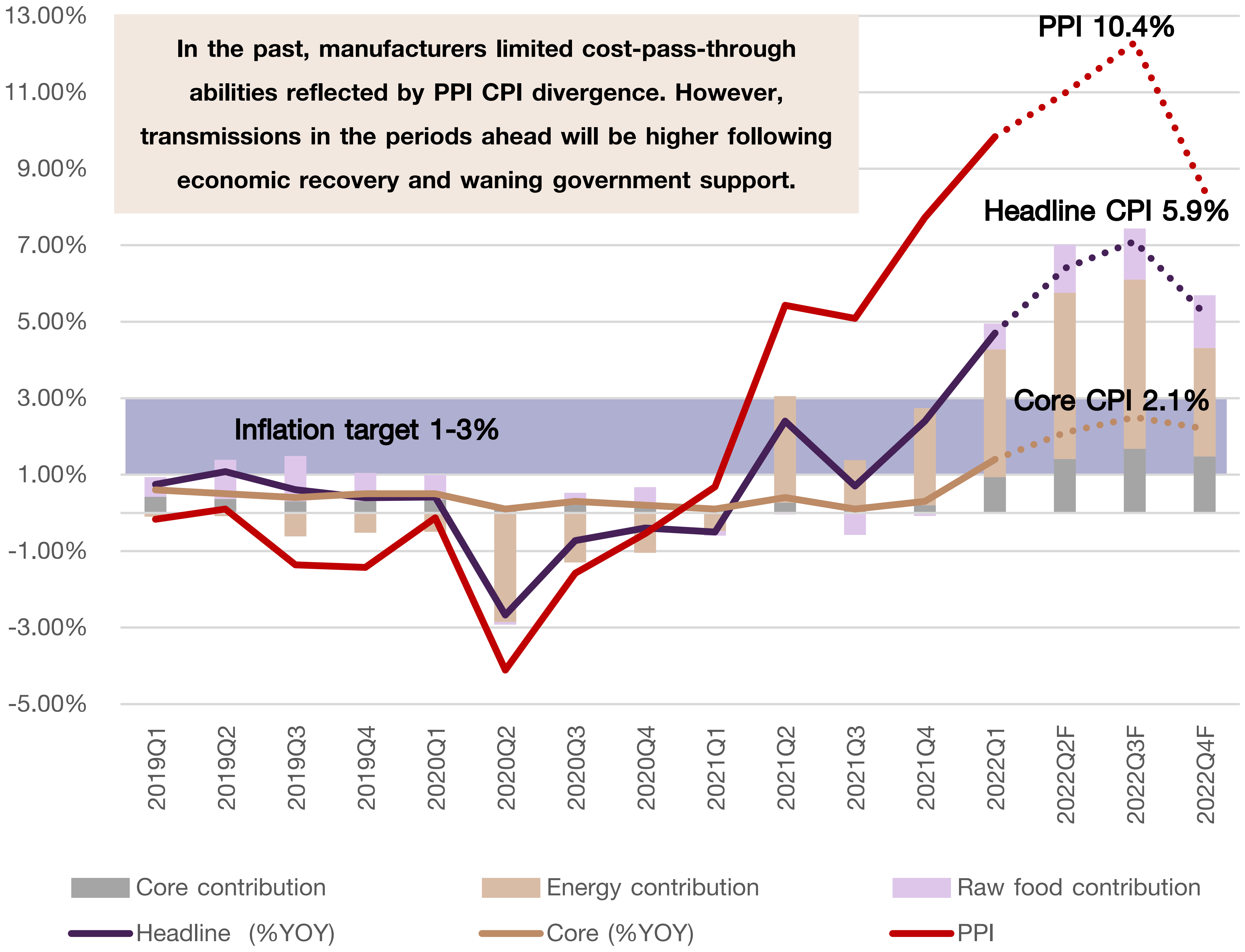
Unit: %MOM



According to EIC analysis, the CPI and PPI were positively correlated. If the CPI increases, the impact of PPI on CPI will be greater than when CPI **decreases. In other words, when manufacturing costs increase, prices should increase, respectively. However, when manufacturing costs decrease, prices should drop at a slower rate.**

Consumer Price Index (CPI) and Producer Price Index (PPI)

Unit: %YOY

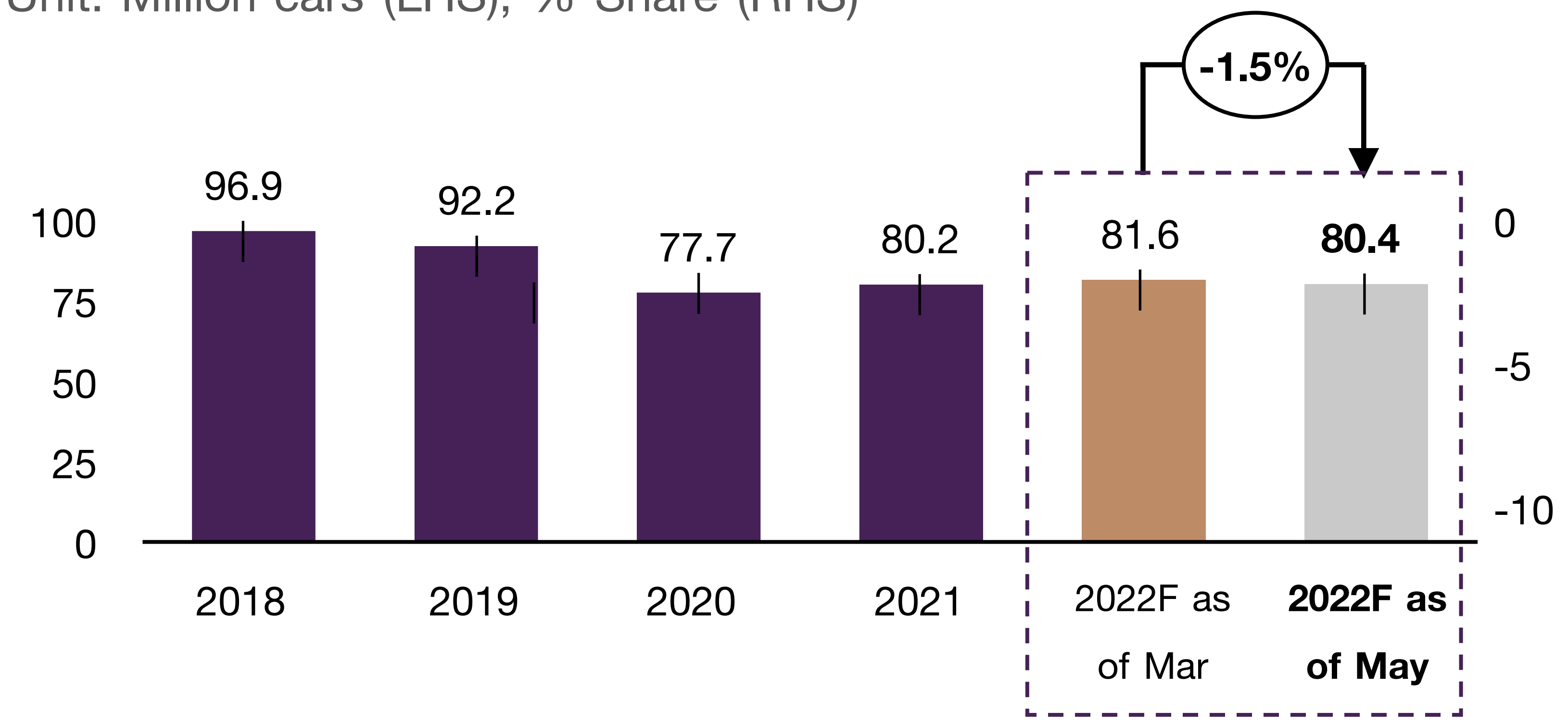


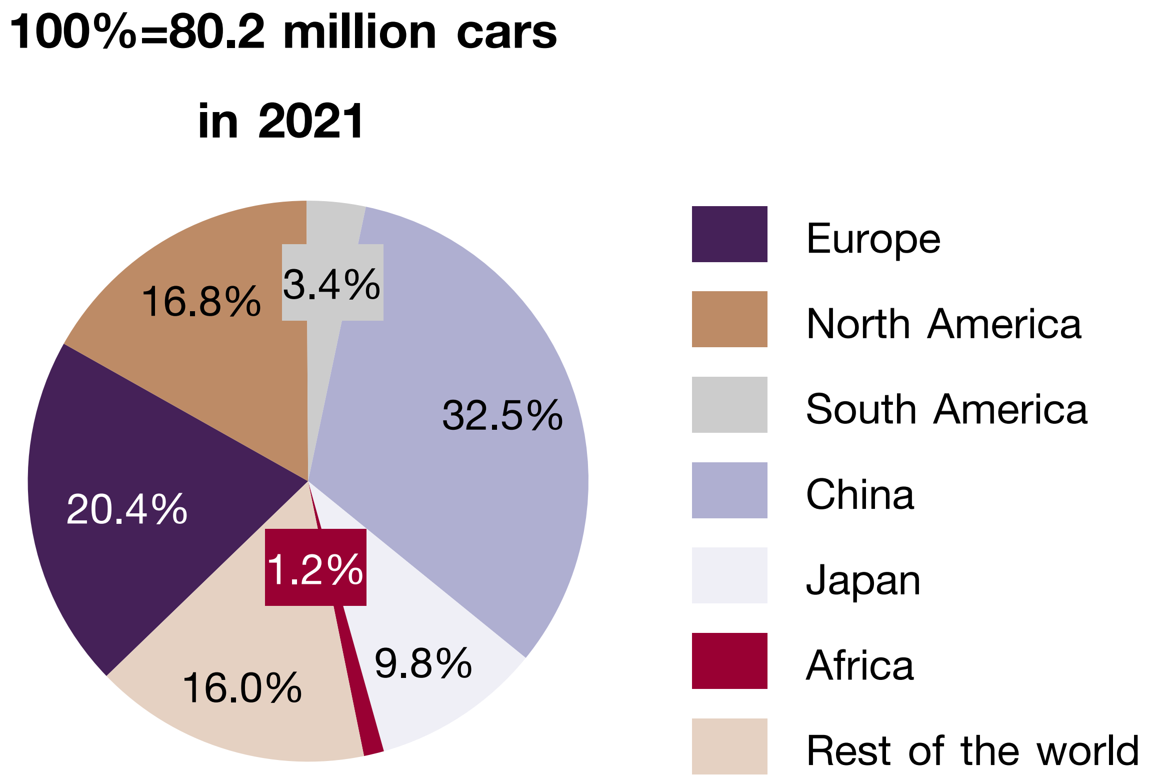
Source: EIC analysis based on data from the Ministry of Commerce and CEIC

The global automotive manufacturing supply chain, including Thailand's, was hampered by semiconductor shortages and surging raw material costs. EIC believes that Thai car production will grow by merely 2%YOY or 1.72 million units.

Global car production, 2022 forecast, and 2021 car production by key regions

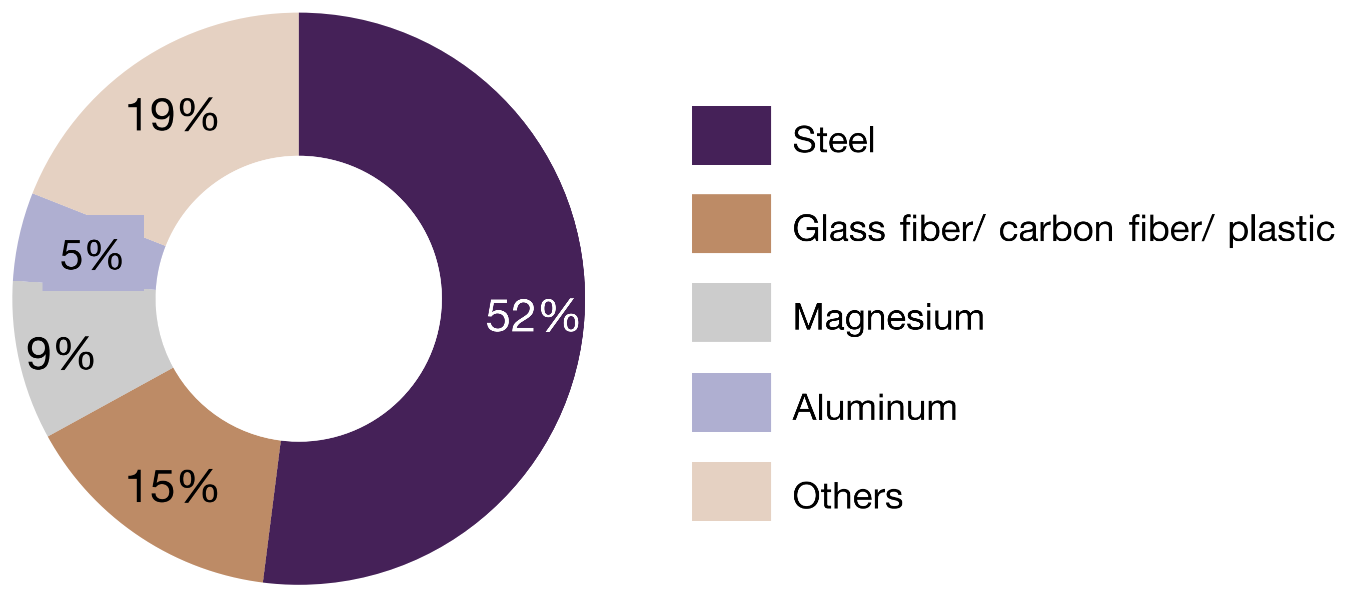
Unit: Million cars (LHS), % Share (RHS)





Materials and proportion used to manufacture cars

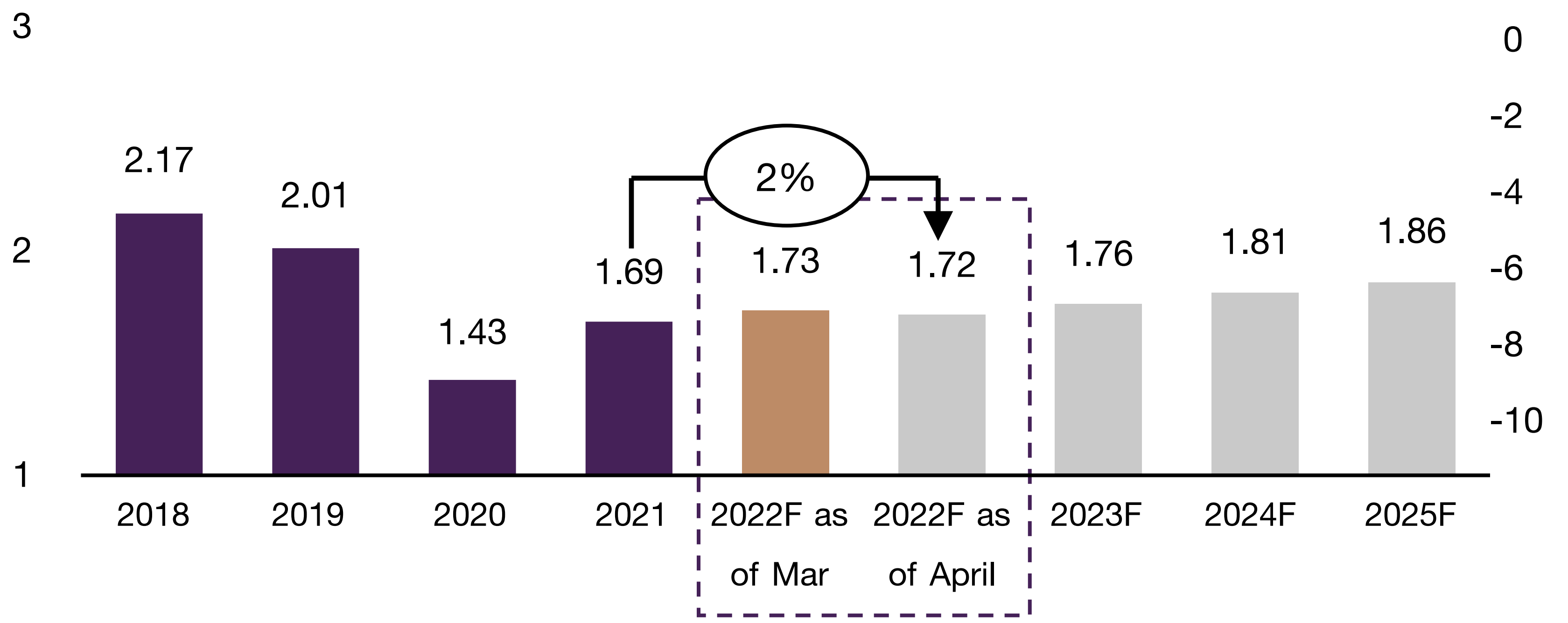
Unit: % of total usage



- **Prolonged Russia-Ukraine war tensions** continue to weaken the semiconductor manufacturing industry as well as increase production costs as Russia and Ukraine are the main suppliers of key raw materials, such as neon gas and palladium.
- **The cost of producing cars should continue to increase following the price of raw materials and other products used in the manufacturing process, such as steel and aluminum, with higher prices in line with global crude oil prices.**

Thai car production and 2022 forecast

Unit: Million cars



Factors warrant monitoring:

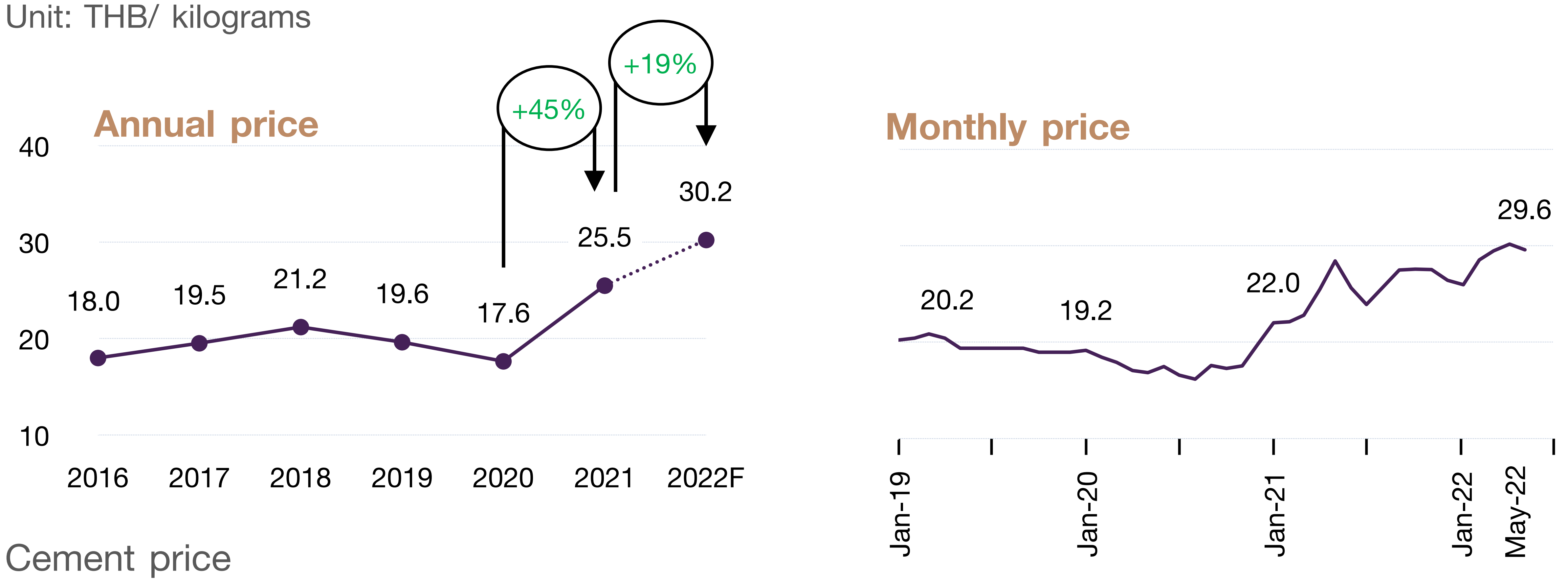
- **The shortages of car parts,** including semiconductors, impaired Thai car production both for exports and domestic sales. Newer car models with modern technology were particularly hampered. According to the latest news, 4 car manufacturers in Thailand announced and admitted that there were constraints in the production supply chain. As such, production will be suspended. Furthermore, car delivery times will increase from the usual 30 days to 45-60 days.
- **Rising costs of raw materials in the global market** inevitably heightened Thai car production costs. Since early May 2022, some car manufacturers announced selling price hikes due to soaring raw material costs.
- **The lockdown and the recent wave of the COVID-19 outbreak in China** impaired the global automotive manufacturing supply chain that relies on imports of parts and semiconductors from China. Even though Thailand imported an insignificant volume of parts from China, with most of such imports from Europe and Japan, the situation should still be closely monitored as upstream assembly of such parts, such as those used in Japan, are from China. Furthermore, in the present, Japan is experiencing shortages of parts from China.

Source: EIC analysis based on data from CEIC, IHS Markit, S&P Global Mobility, FTI , The Standard, and Prachachat

Construction costs in 2022 will continue to increase from 2021. Prices of steel and cement products should continue to heighten following energy costs. Meanwhile, labor costs will also increase due to labor shortages, particularly foreign workers.

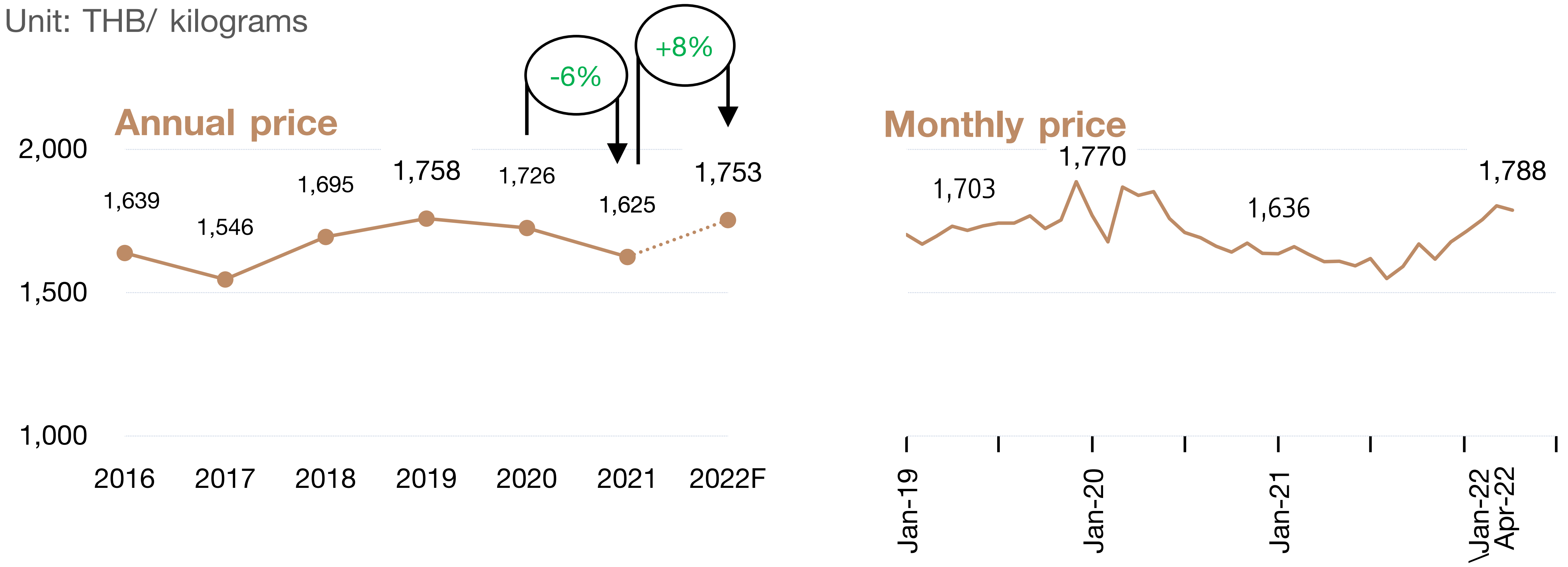
Thai long steel price

Unit: THB/ kilograms



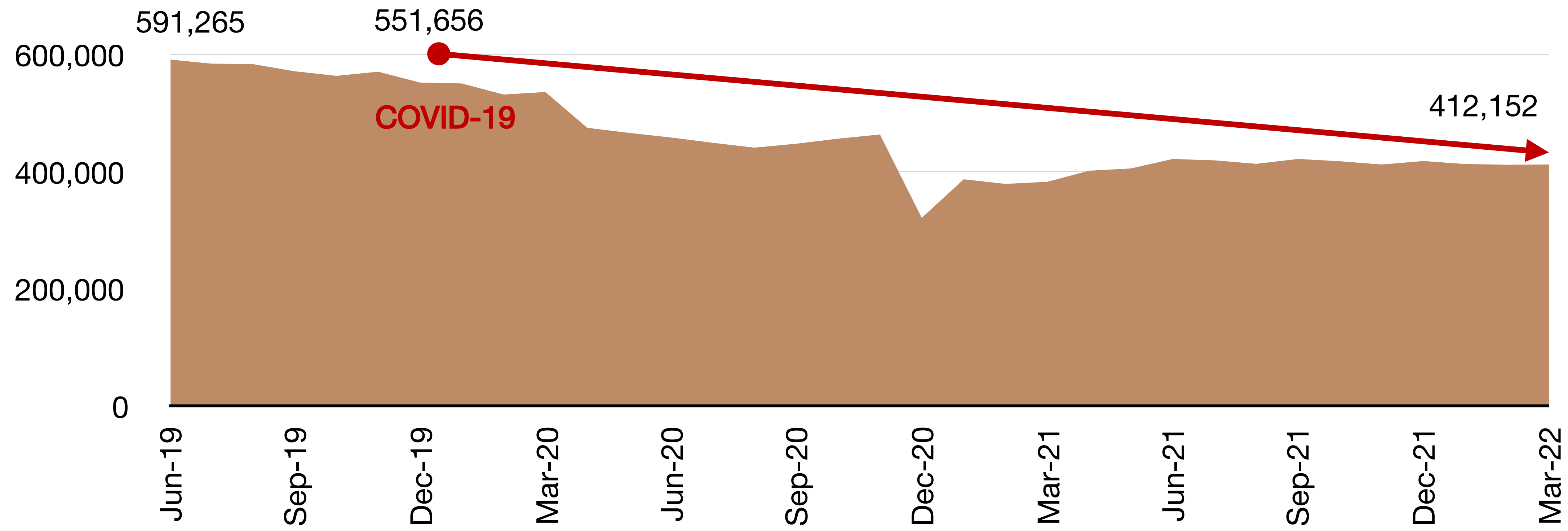
Cement price

Unit: THB/ kilograms



Number of Myanmar, Laos, Cambodia, Vietnam workers in the construction sector

Unit: persons



Construction costs in 2022 will continue to increase from 2021.

Building materials: Prices of steel and cement products in early 2022 continue to heighten following higher energy costs

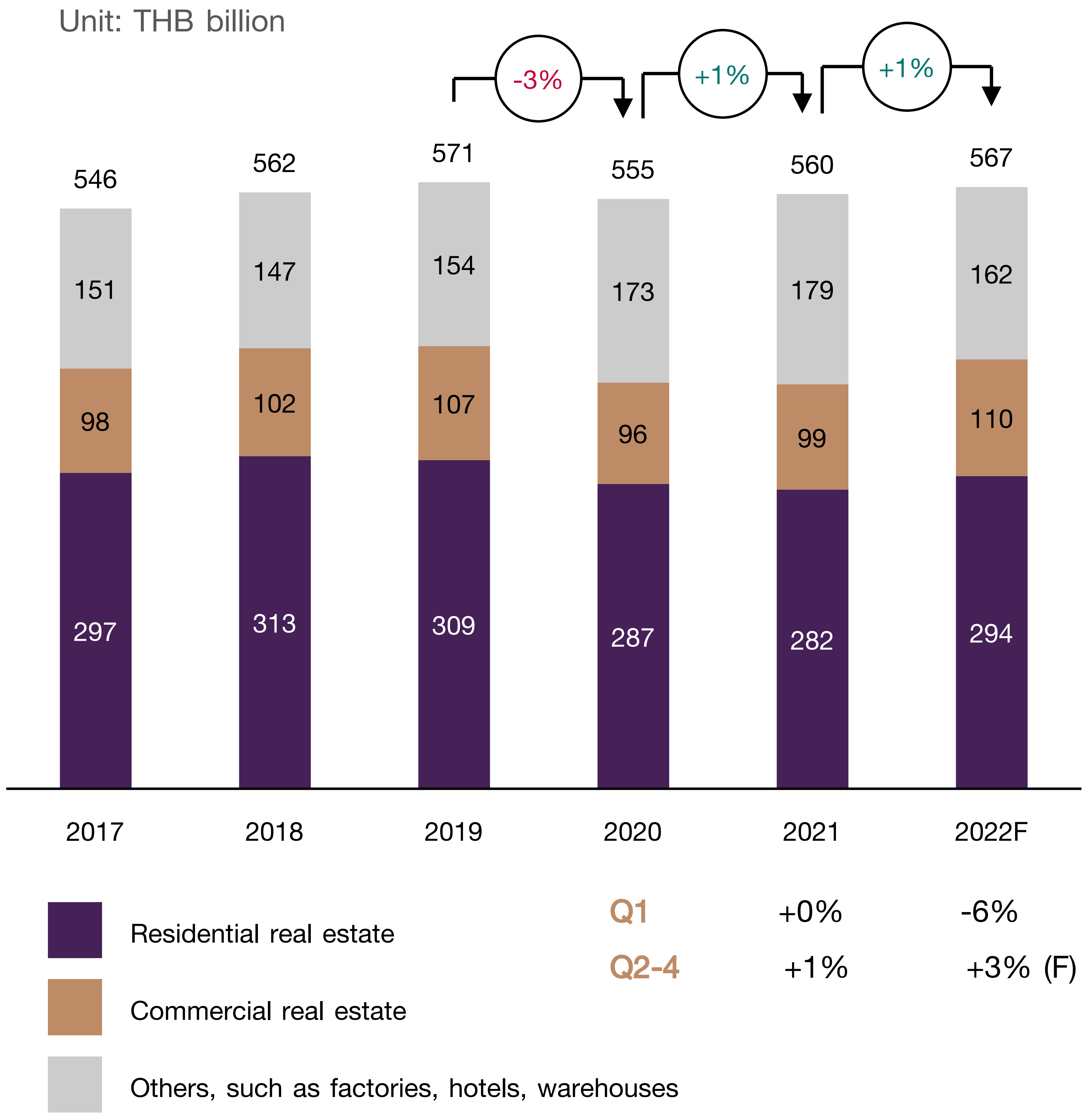
Labor : Higher labor costs from labor shortages

- The number of foreign workers in the construction sector was still lower than during pre-COVID-19 periods

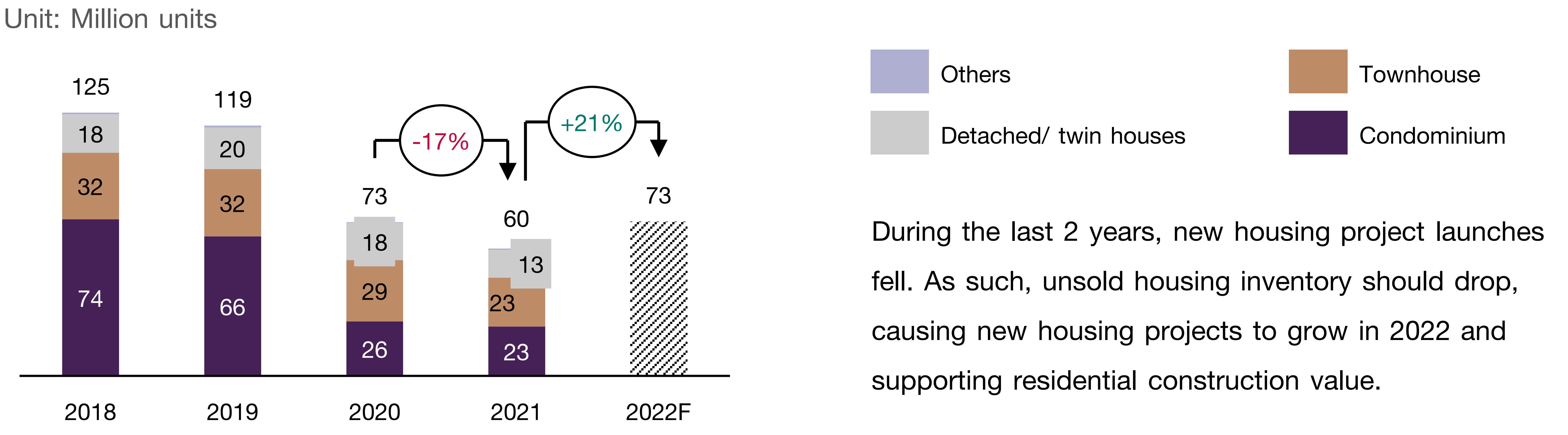
Source: EIC analysis based on data from ISIT, Office of Industrial Economics, and the Department of Employment

The private construction value in 2022 should improve by merely 1%YOY due to a slow real estate sector recovery.

Private Construction Value

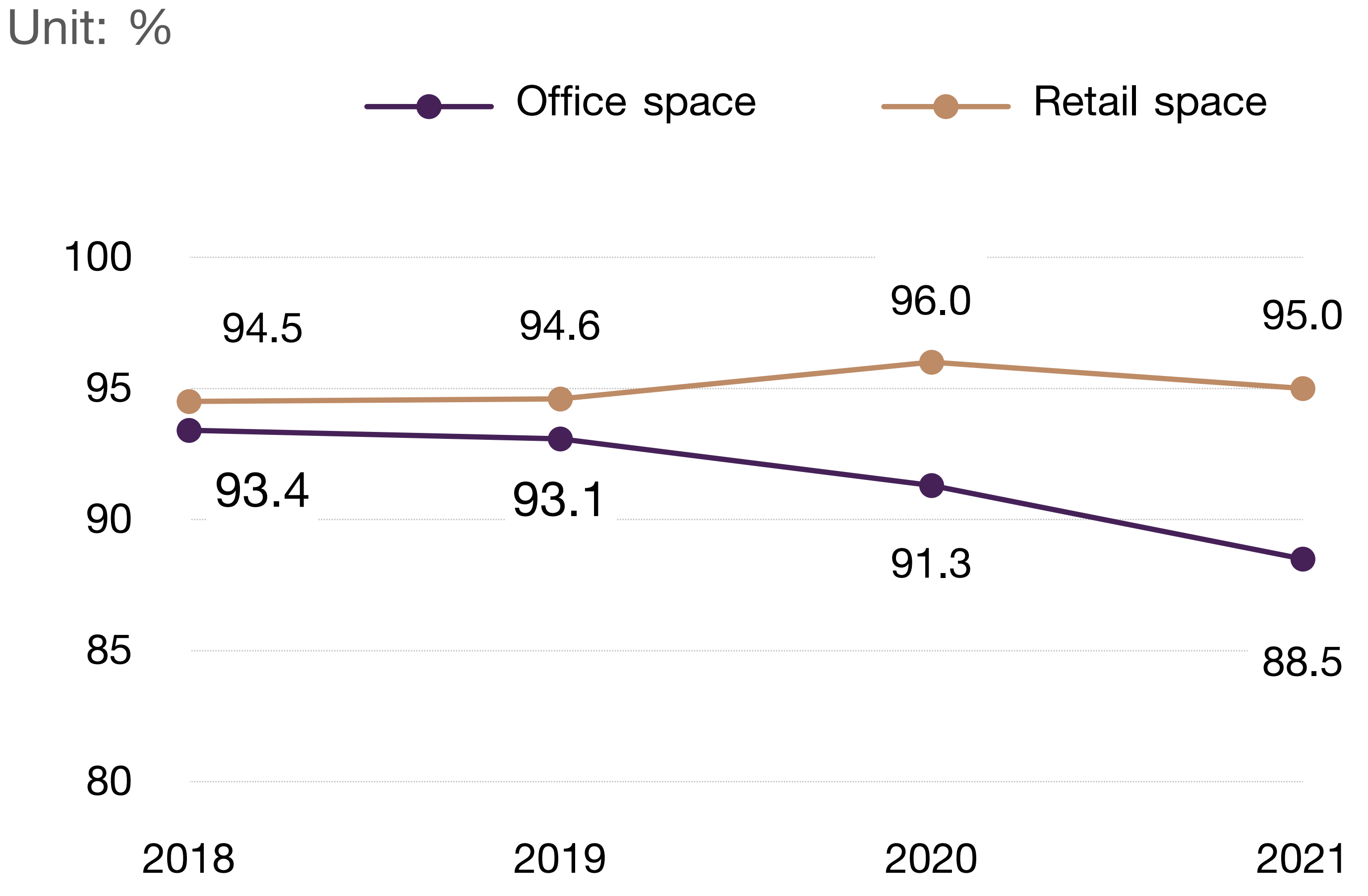


Number of new housing units launched in Bangkok and Vicinity



During the last 2 years, new housing project launches fell. As such, unsold housing inventory should drop, causing new housing projects to grow in 2022 and supporting residential construction value.

Occupancy rate of commercial real estate properties



Opportunities: Areas applying for office and retail construction permission recovered in 2021

Challenges:

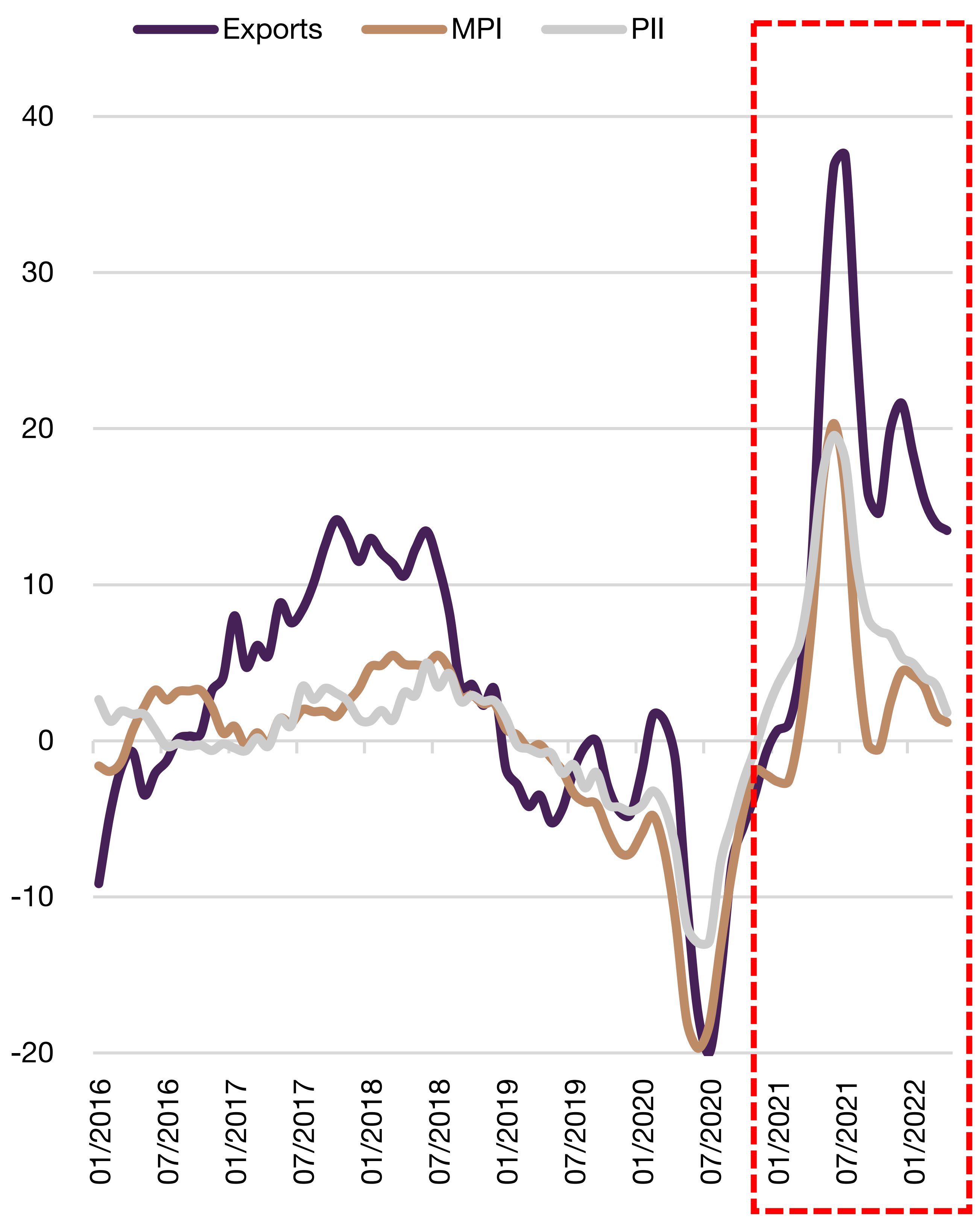
- Hybrid workplace trend reducing demand for office rent
- Not fully recovered purchasing power and online shopping trend may slow retail space rent growth
- Oversupply conditions may delay/ cancel construction of low feasibility projects

Source: EIC analysis based on data from the Office of the National Economic and Social Development Council, AREA, and CBRE

Overall, private investment should weaken following exports and rising costs. As such, businesses could delay investments in the periods ahead. EIC is cutting its private investment growth forecast from 3.5% to 3.2%.

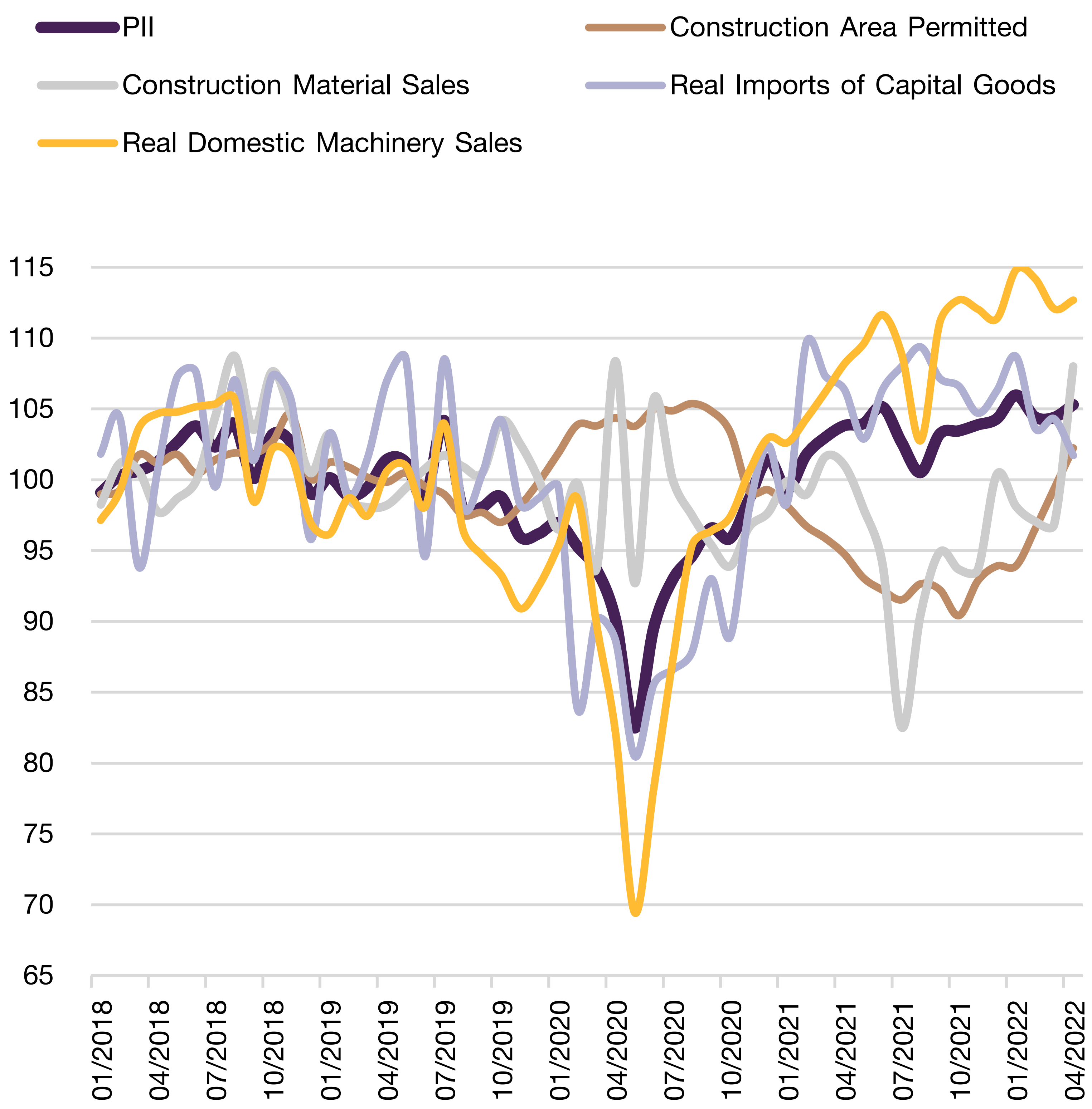
Private Investment Indicators

Unit: %YOY



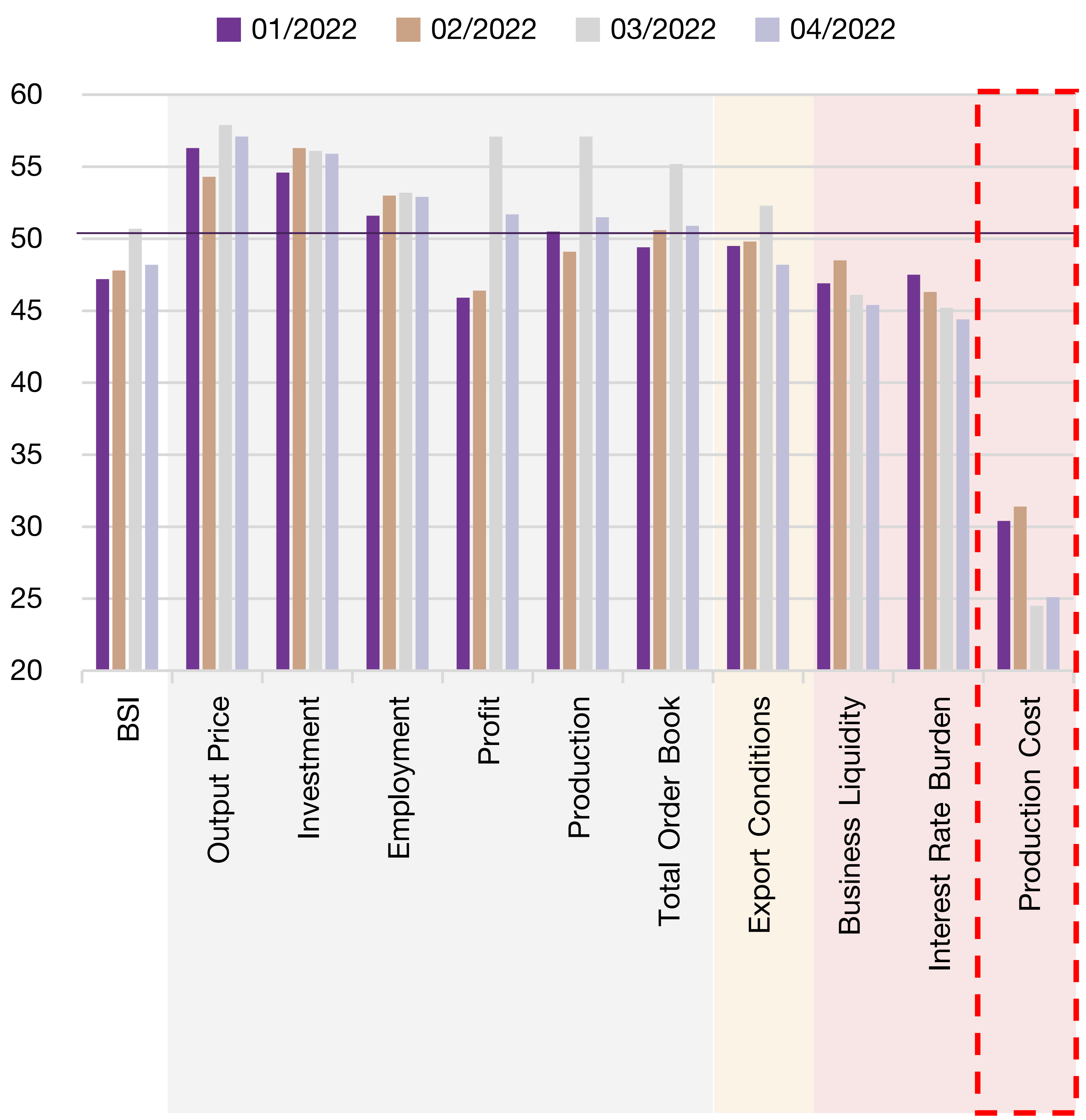
Private Investment Indicators

Unit: Index (2018Q1=100), seasonally adjusted



Thai Business Sentiment Index

Unit: Index > 50 reflects better conditions, seasonally adjusted



Source: EIC analysis based on data from the Ministry of Commerce and Bank of Thailand

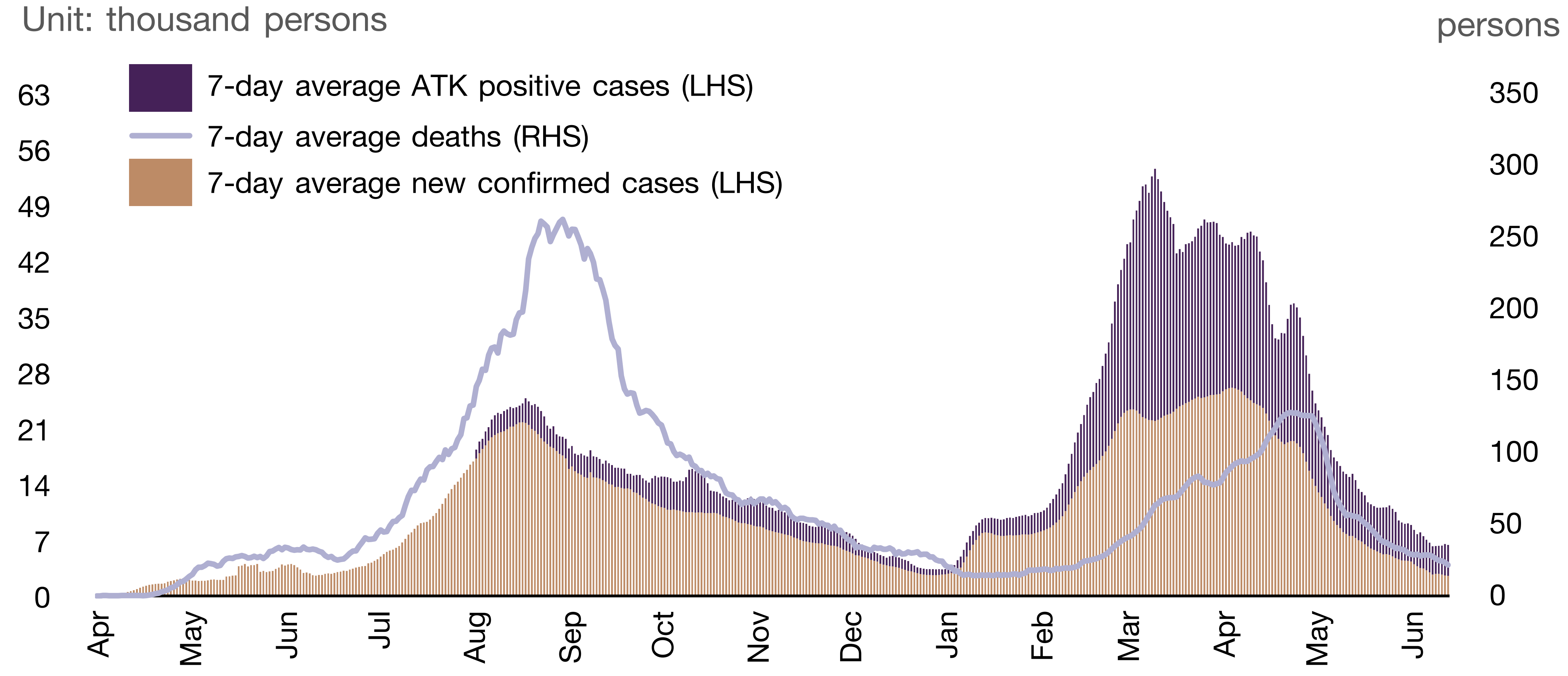
SCB Economic Intelligence Center

The tourism and service sector will be the main drivers of Thai economic growth throughout the remainder of the year as various countries start to ease international travel restrictions.

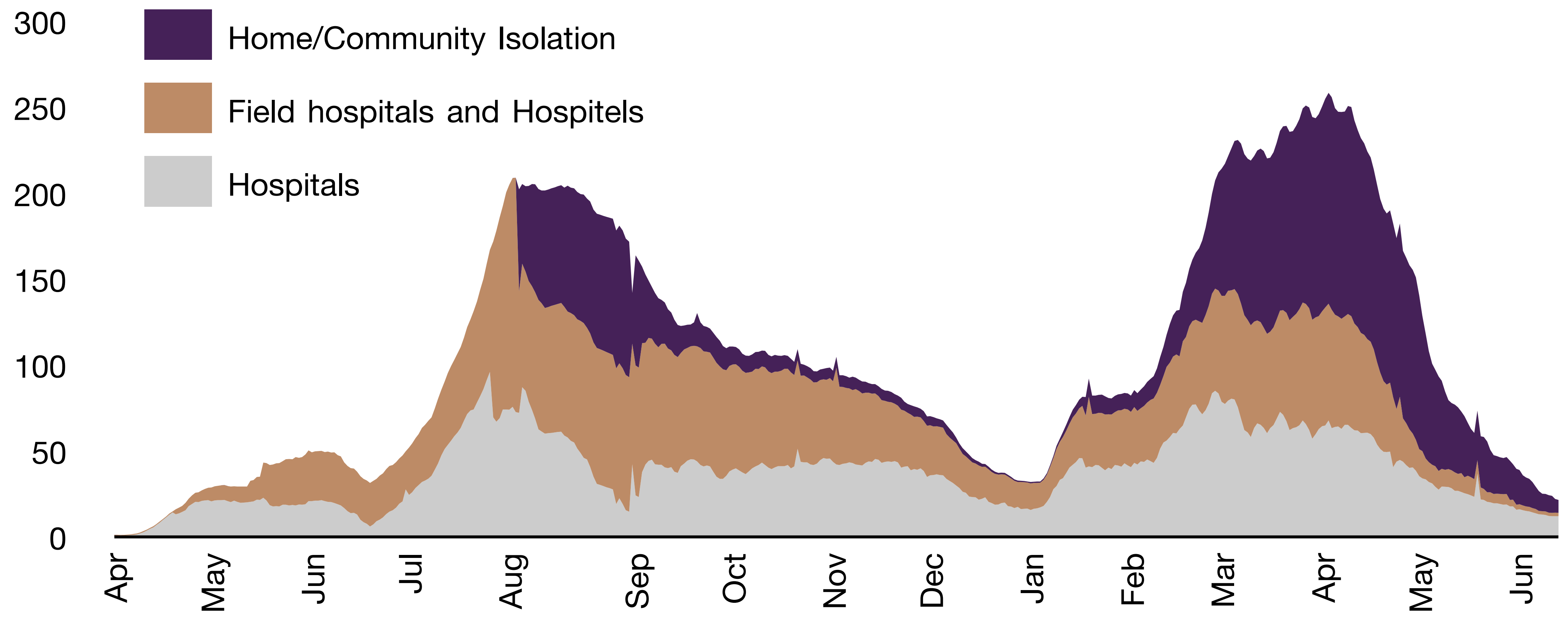
Country re-openings and easing international travel restrictions will boost tourism and service sector recovery. Such sectors remain a major source of employment in Thailand. EIC estimates that a total of 7.4 million international tourists will enter Thailand in 2022 (from the prior estimate of 5.7 million). Furthermore, the agricultural sector will benefit from rising global food prices following heightening commodity prices, thus supporting household spending.

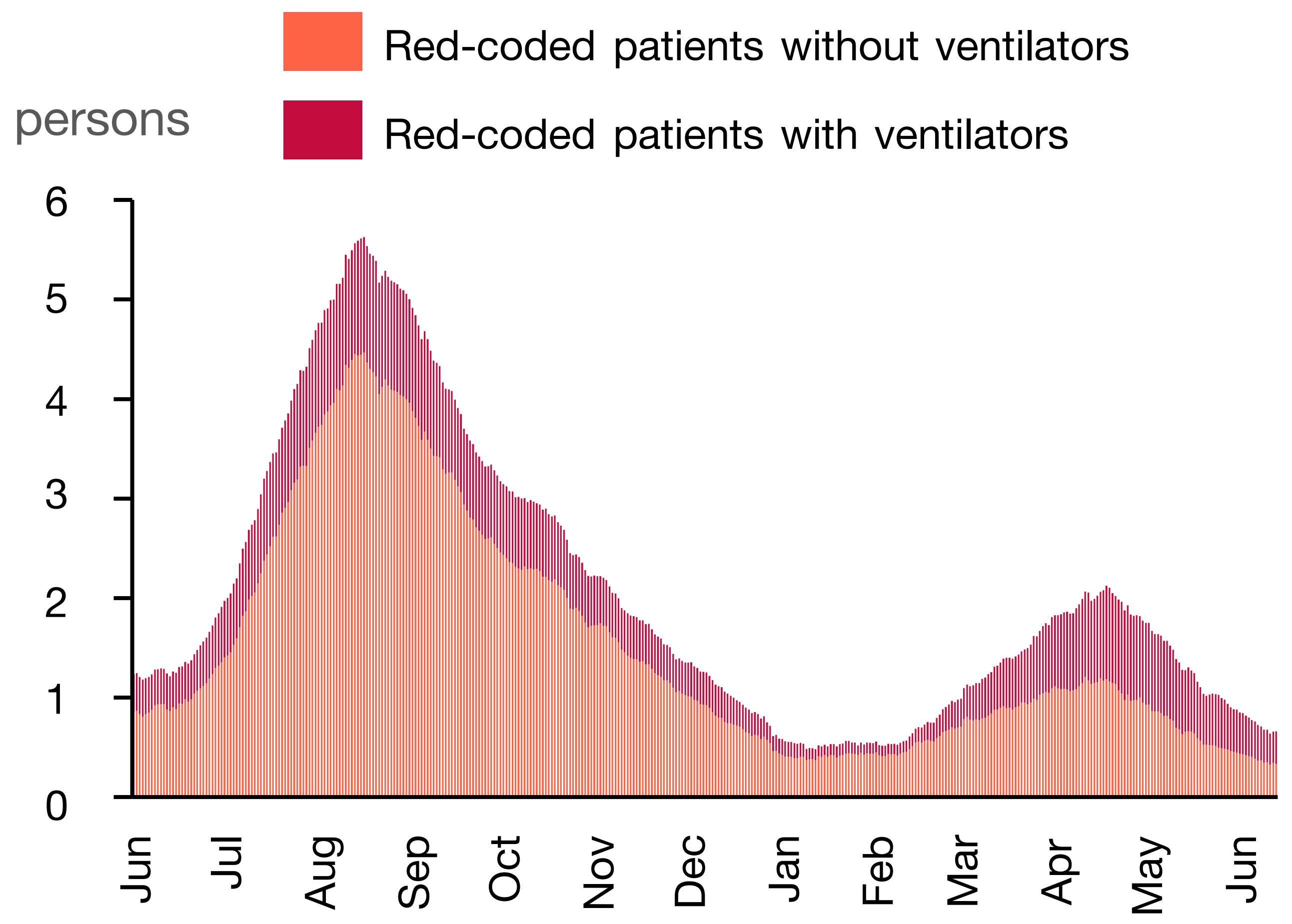
Given the continually dropping numbers of new infections and deaths in Thailand as well as the high proportion of those vaccinated domestically, the government is planning to treat COVID-19 as an endemic.

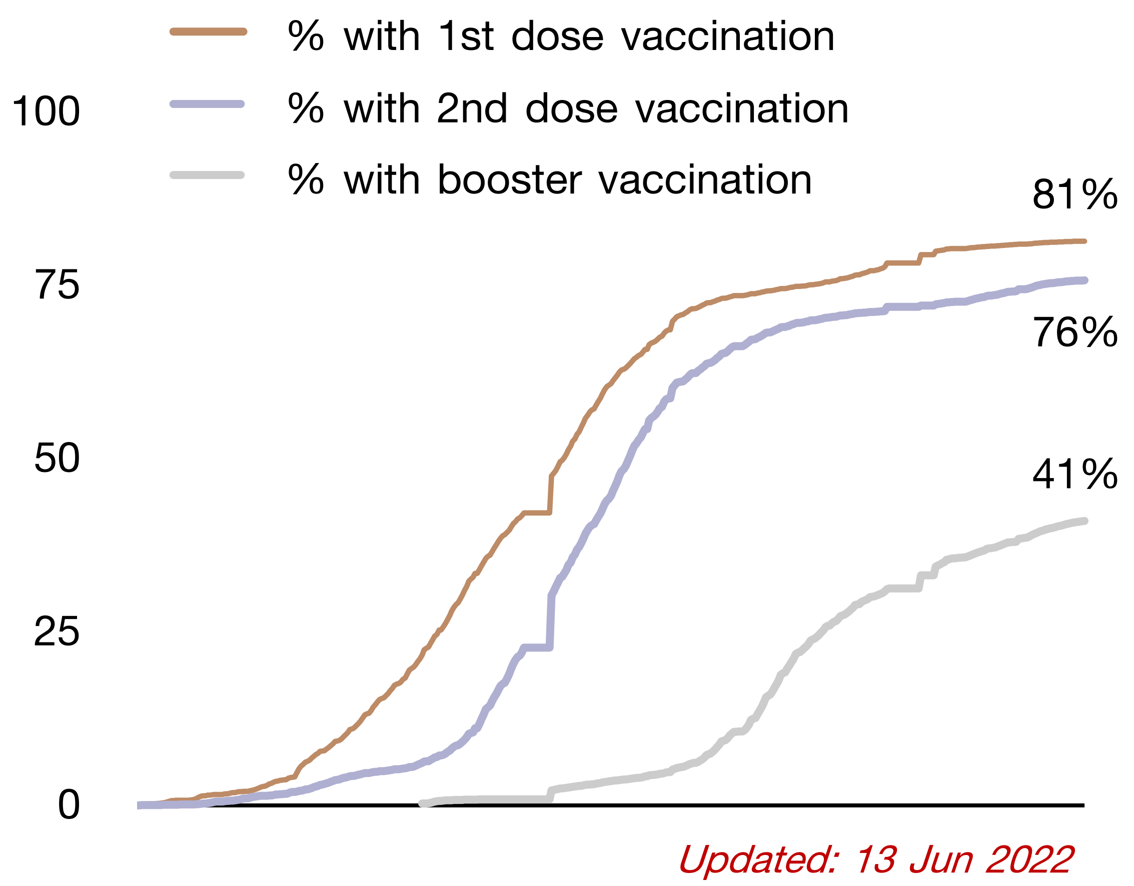
Thailand's COVID-19 situation



Wave	Duration	Infected cases	Deaths	Mortality rate
1	15 Mar – 26 Apr	2,713	50	1.8%
2	23 Nov – 29 Feb	22,038	23	0.1%
3	1 Apr – 31 Dec	2,194,572	21,604	0.98%
4	**1 Jan 22 - Current**	**2,245,520**	**8,500**	**0.38%**







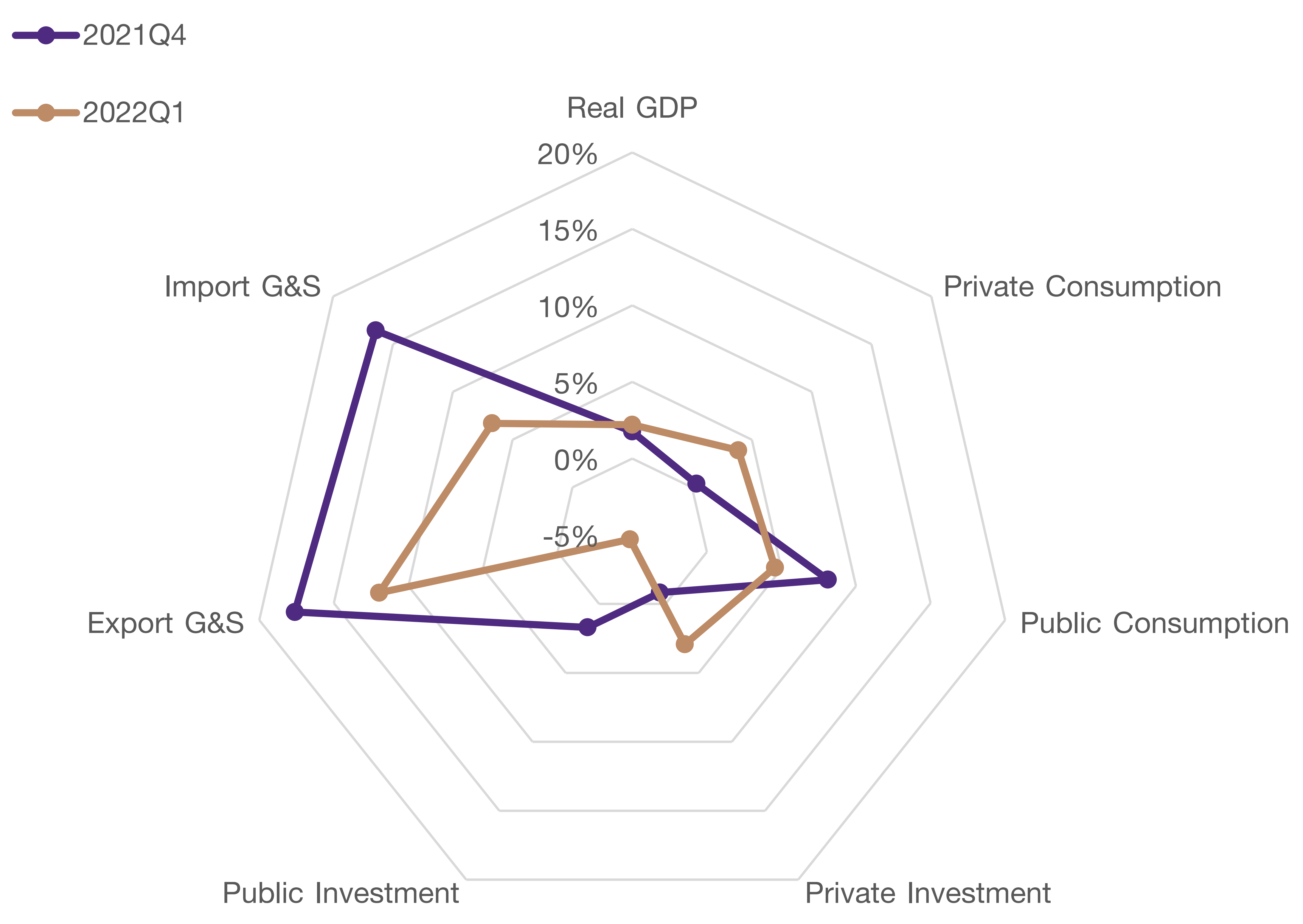
Note: The Centre of COVID-19 Situation Administration (CCSA) adjusted the death toll reporting method from 1 May 2022 onward

Source: EIC analysis based on data from The Centre of COVID-19 Situation Administration (CCSA) and Ministry of Public Health

Thai Q1/22 economic growth exceeded expectations with growth of 2.2%. Exports, tourism, and private consumption supported growth following global trade and tourism and easing Thai outbreak conditions.

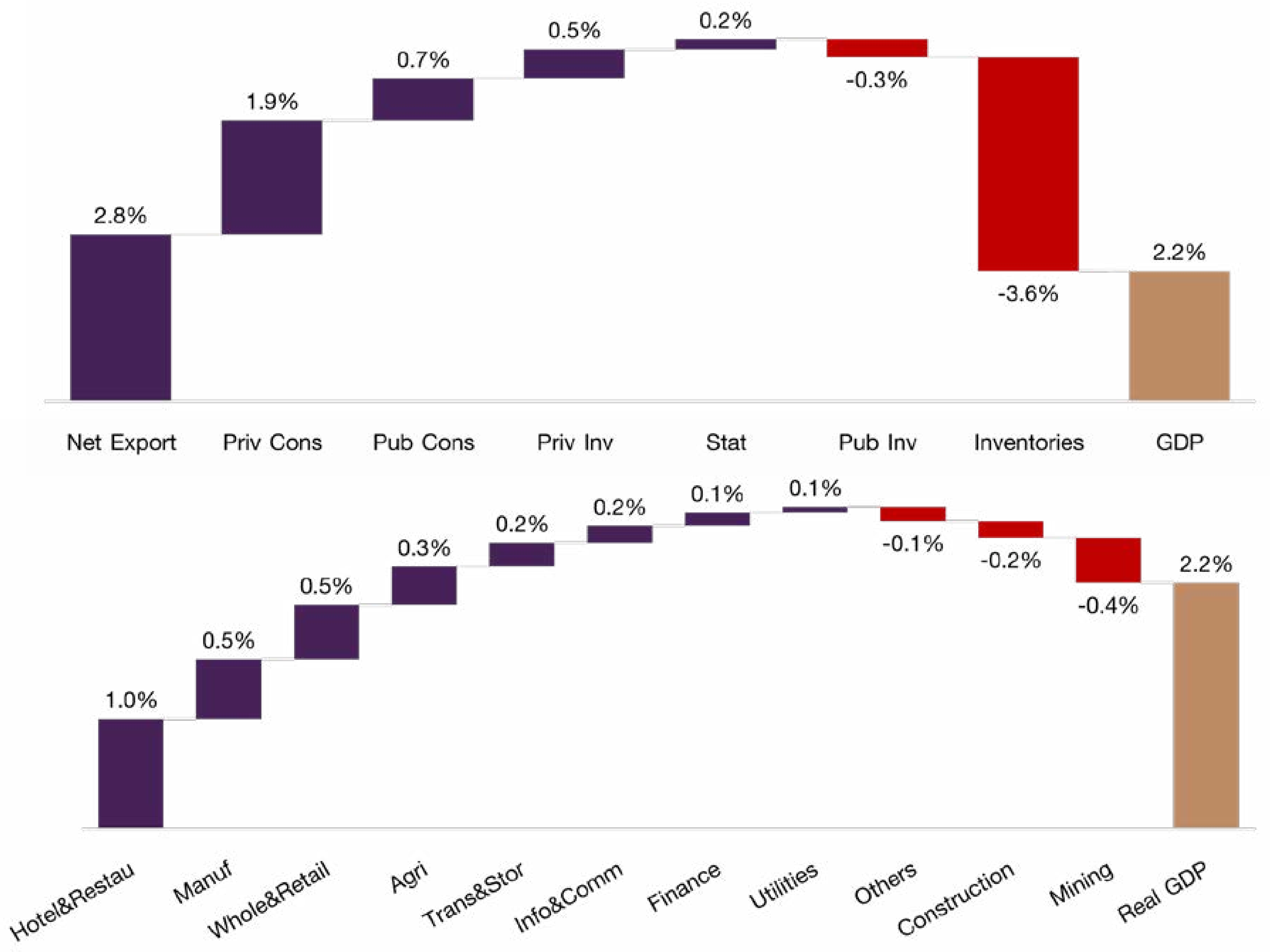
GDP growth, expenditure method

Unit: %YOY



Contribution to 2.2%YOY GDP growth in Q1/2022

Unit: percentage point



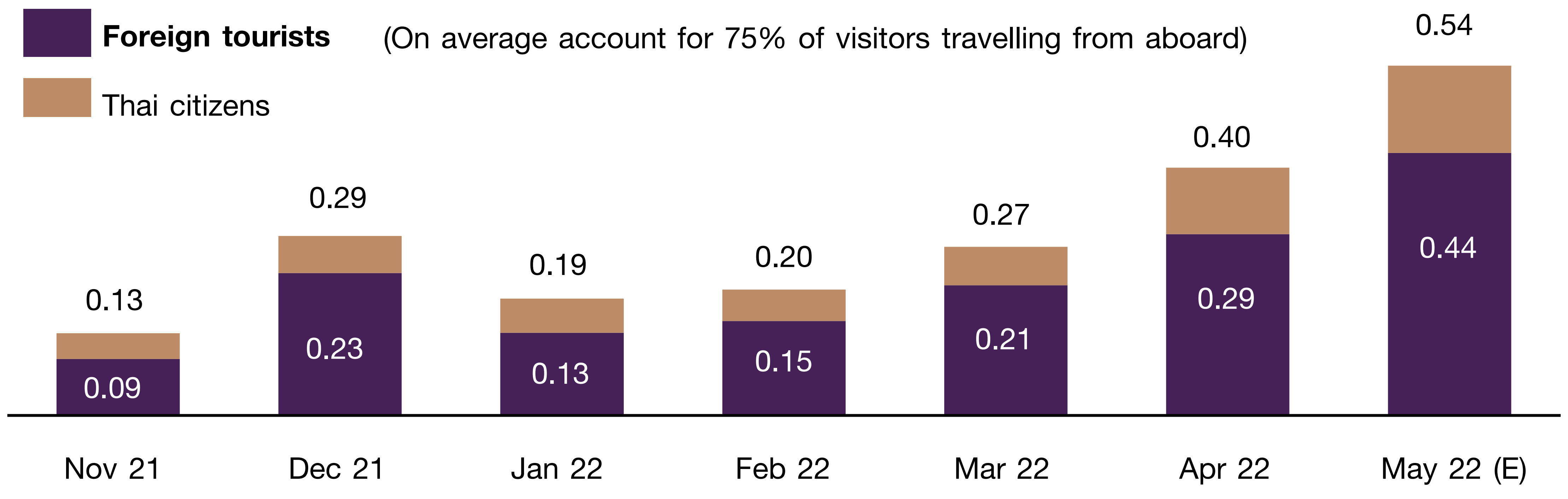
Source: EIC analysis based on data from the Office of the National Economic and Social Development Council

SCB Economic Intelligence Center

The number of foreign tourists entering Thailand continued to increase after travel restrictions eased. The proportion of ASEAN tourists also grew significantly, and tourist numbers from the Middle East, South Asia, and Europe continued to recover.

Number of foreign tourists entering Thailand and measures for foreign tourists entering Thailand

Unit: Million persons



1 Nov 21 gradual reopening after Phuket Sandbox (Jan 21)

4 Jan 22 suspension of Test & Go registration due to Omicron outbreak

1 Feb 22 reopening of Test & Go registration

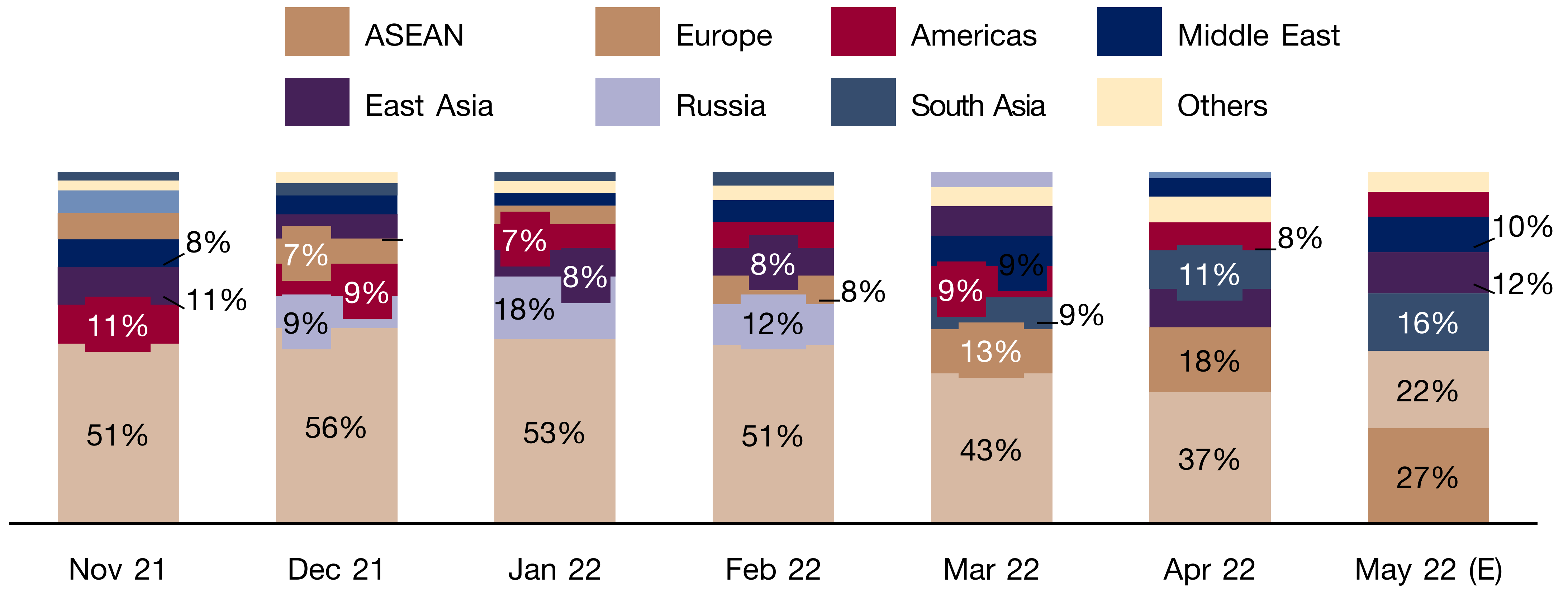
1 Mar 22 ATK test instead of RT-PCR test for 2nd test after arriving in Thailand

1 Apr 22 Cancellation of RT-PCR screening before entering Thailand

1 May 22
- Cancellation of on arrival RT-PCR screening for vaccinated visitors
- Reopen border checkpoints

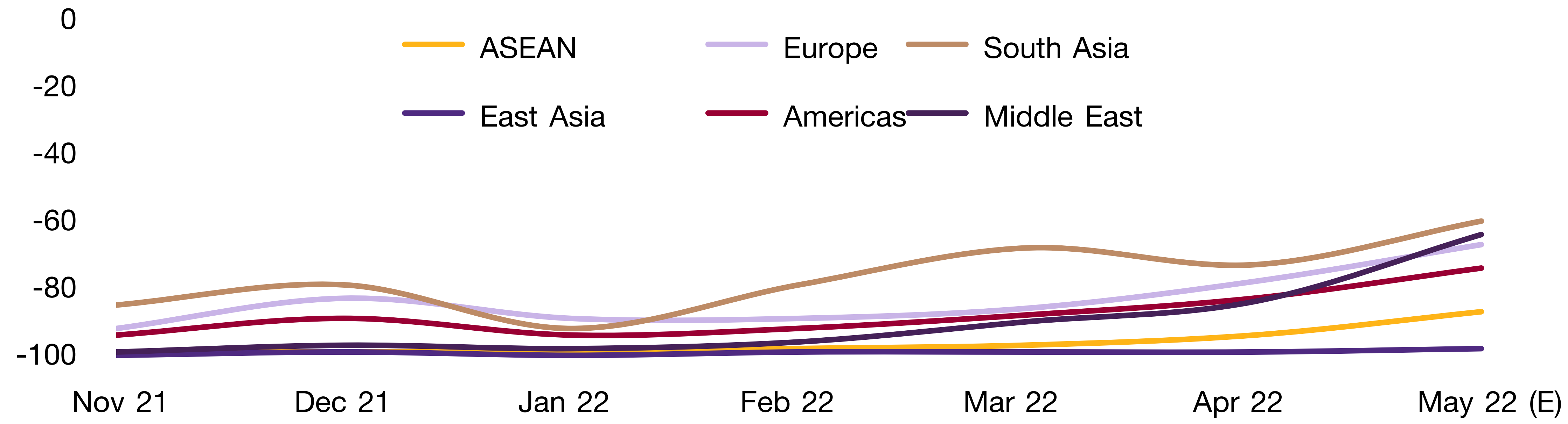
1 Jun 22
- **Thailand Pass instantly issuing QR code**
- **Cancelling quarantine for unvaccinated persons**

Proportion of foreign tourists visiting Thailand



The recovery of foreign tourists visiting Thailand

Unit: % (base = 2019)



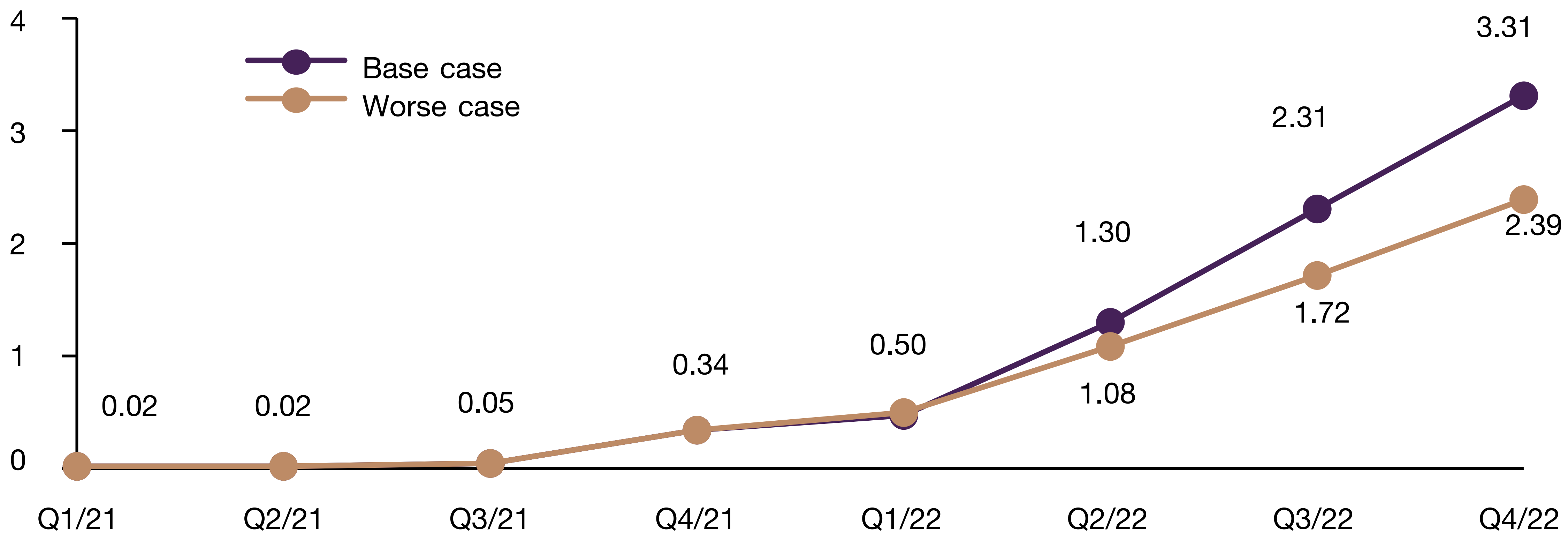
Note: Forecasted May 2022 figures based on information during 1-13 May 2022

Source: EIC analysis based on data from the Ministry of Tourism and Sports, Office of the Prime Minister, Centre of COVID-19 Situation Administration (CCSA), and Ministry of Foreign Affairs

Despite global inflationary pressure, EIC is revising its foreign tourist arrivals forecast in 2022 upward to 7.4 million from 5.7 million following higher travel demand in line with easing international travel restrictions.

Estimated number of foreign tourists visiting Thailand

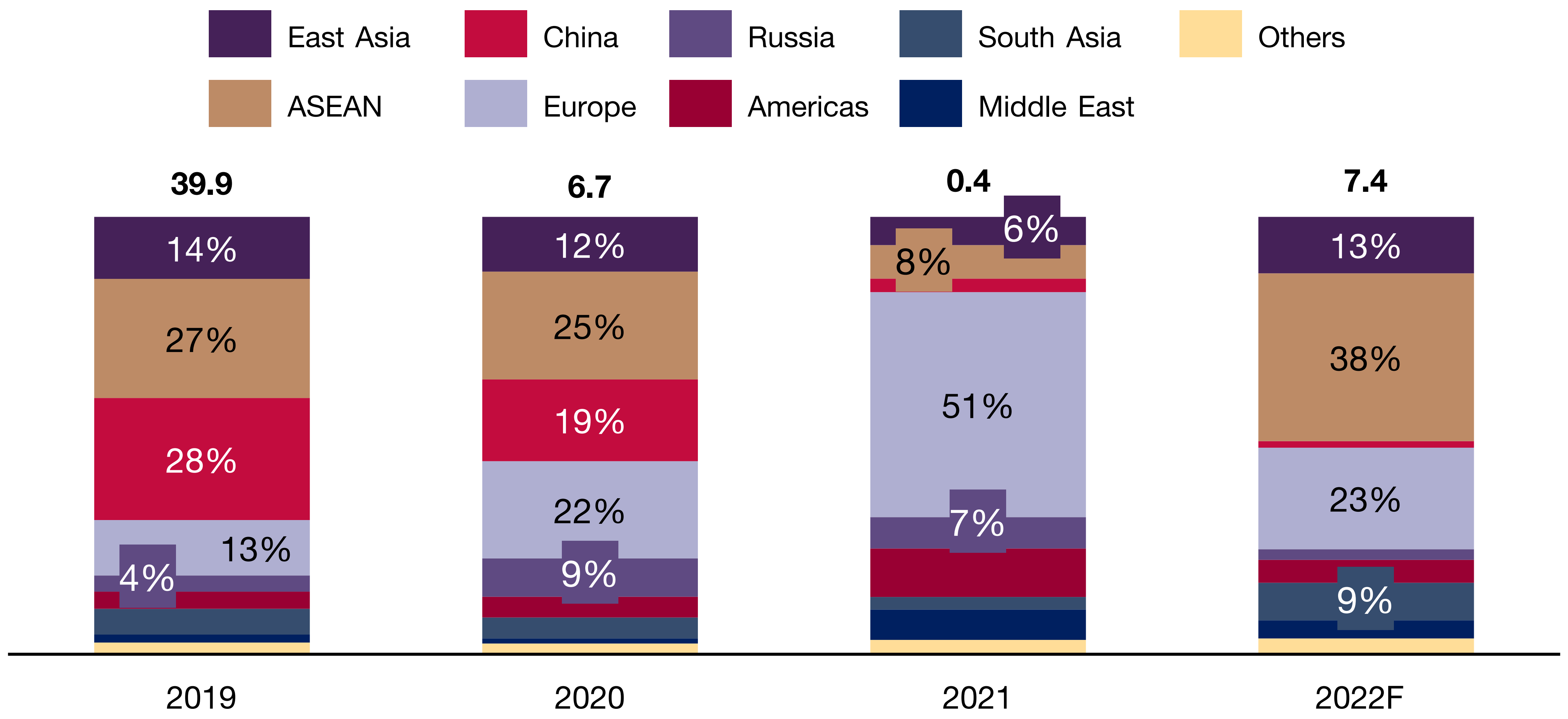
Unit: Million persons



	Base case 2022F = 7.4 Million persons	Worse case 2022F = 5.7 Million persons
Assumptions	**Strong foreign tourist arrival growth:** • Pent-up demand • Gradual easing of international travel restrictions in many countries	**Gradual foreign tourist arrival growth:** • Accelerated inflation hikes • Prolonged Russia-Ukraine tensions • Some countries implemented travel measures over monkeypox concerns

Proportion of foreign tourists visiting Thailand

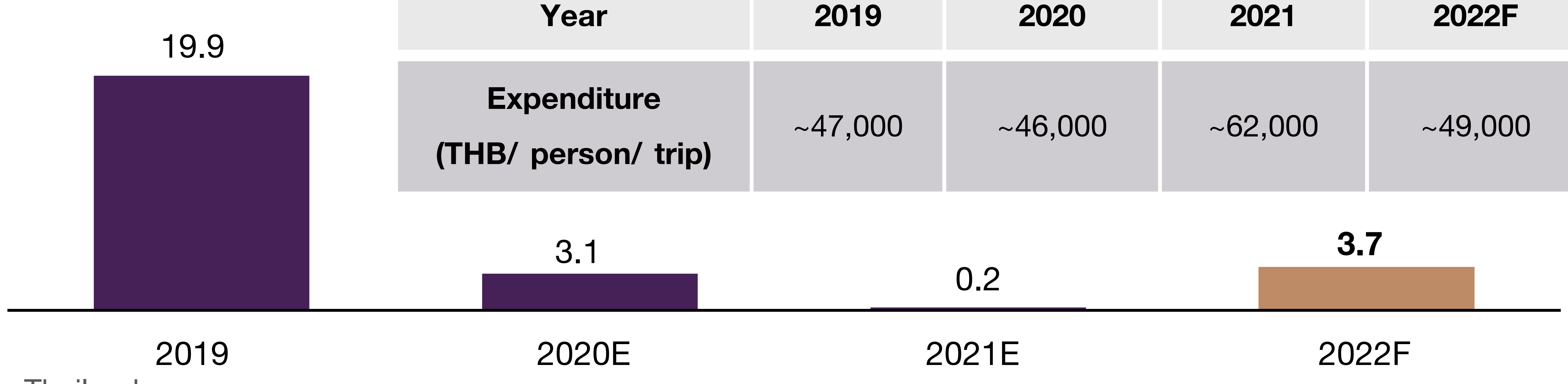
Unit: Million persons



Estimated income from foreign tourists visiting Thailand*

Unit: THB '00 Billion

Year	2019	2020	2021	2022F
Expenditure (THB/ person/ trip)	~47,000	~46,000	~62,000	~49,000



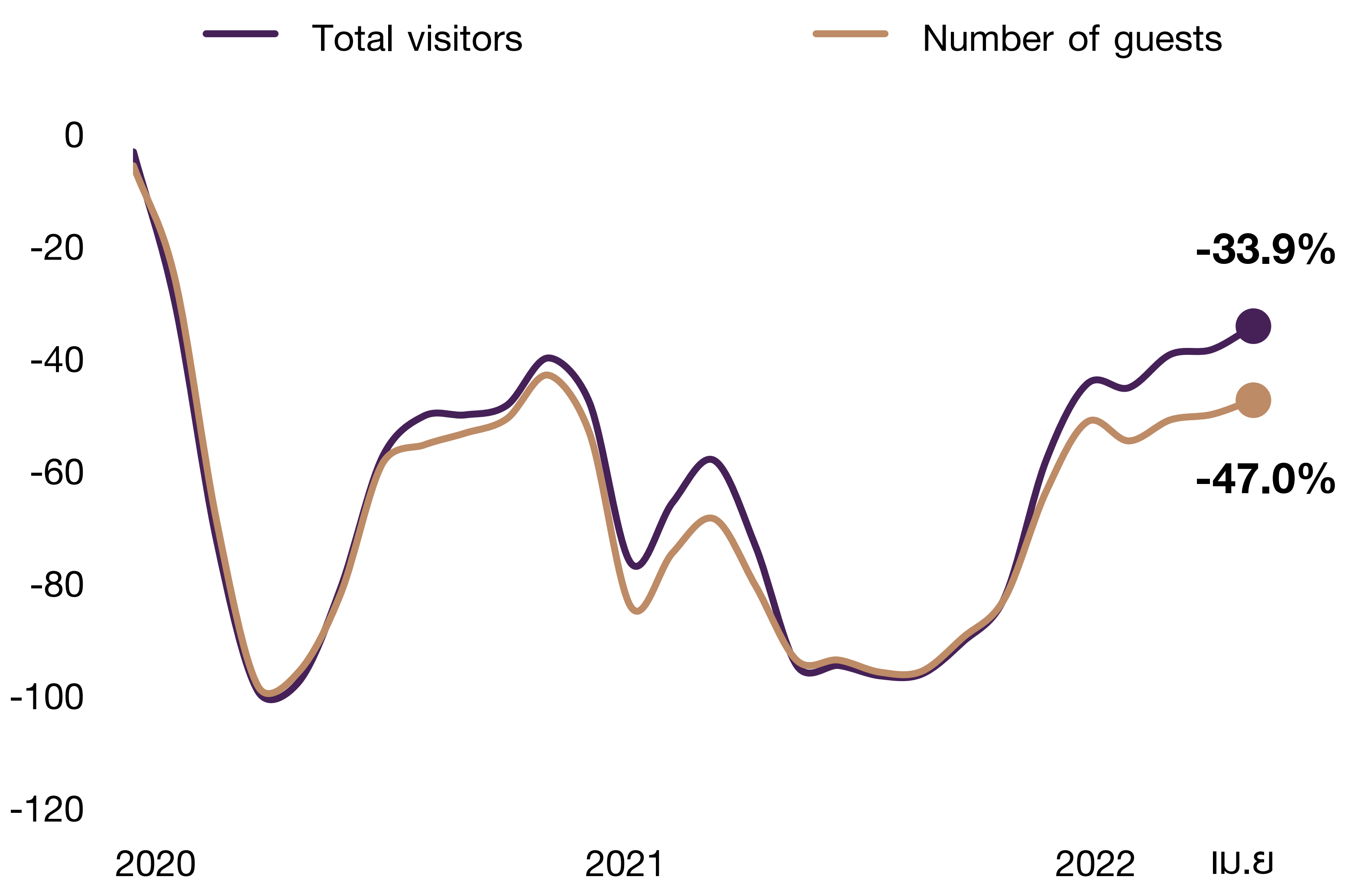
Note: Estimation based on spending per person per day and number of days in Thailand in 2019 / foreign tourist expenditure in Thailand in 2021 was significantly higher due to quarantine measures, causing tourists to stay in Thailand longer

Source: EIC analysis based on data from the Ministry of Tourism and Sports, Office of the Prime Minister, Centre of COVID-19 Situation Administration (CCSA), and Ministry of Foreign Affairs

Guest numbers and occupancy rates should improve, though at a gradual rate following the relatively low number of foreign tourist arrivals.

Recovery of total visitors and guests

Unit: % compared to 2019

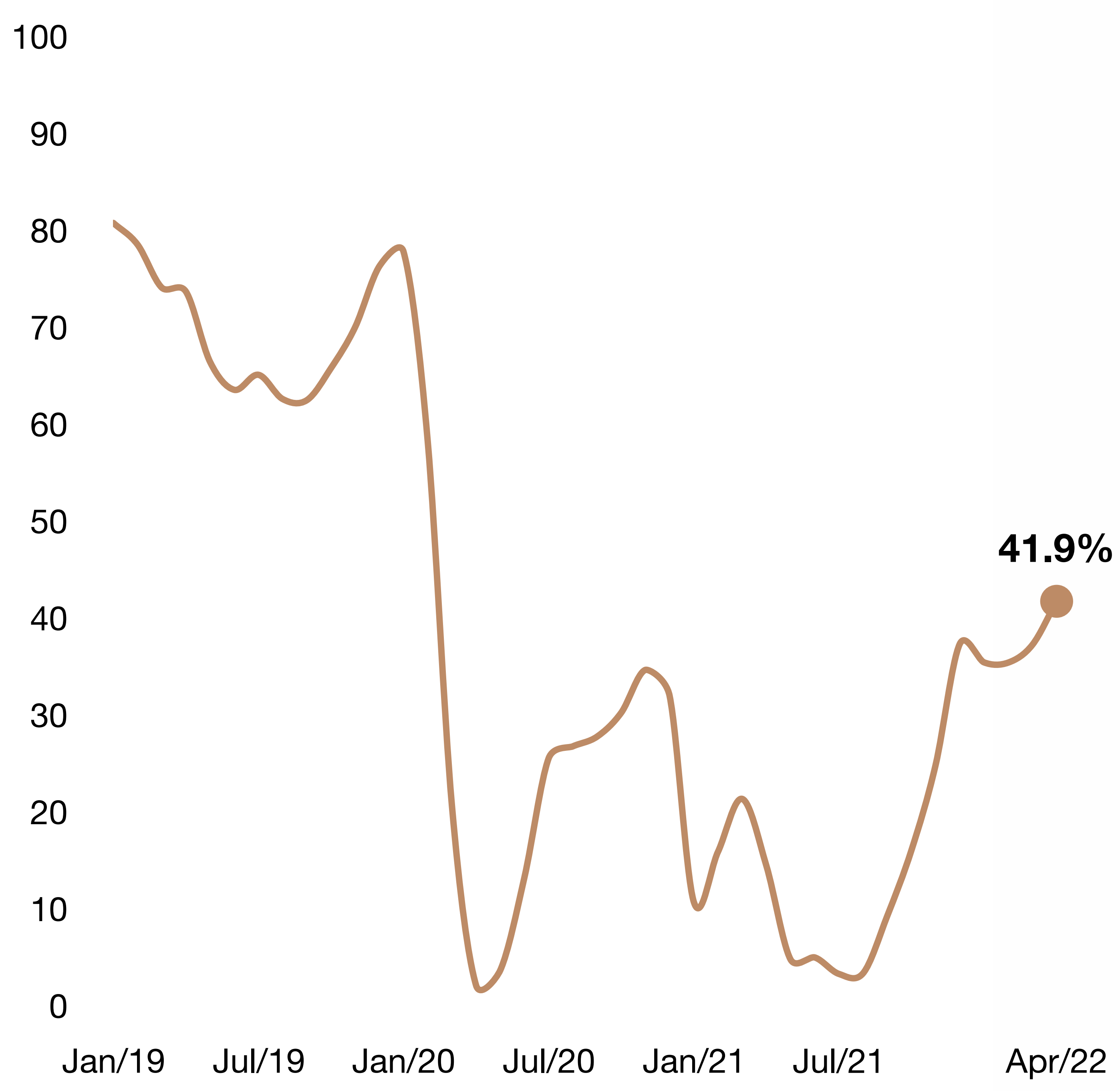


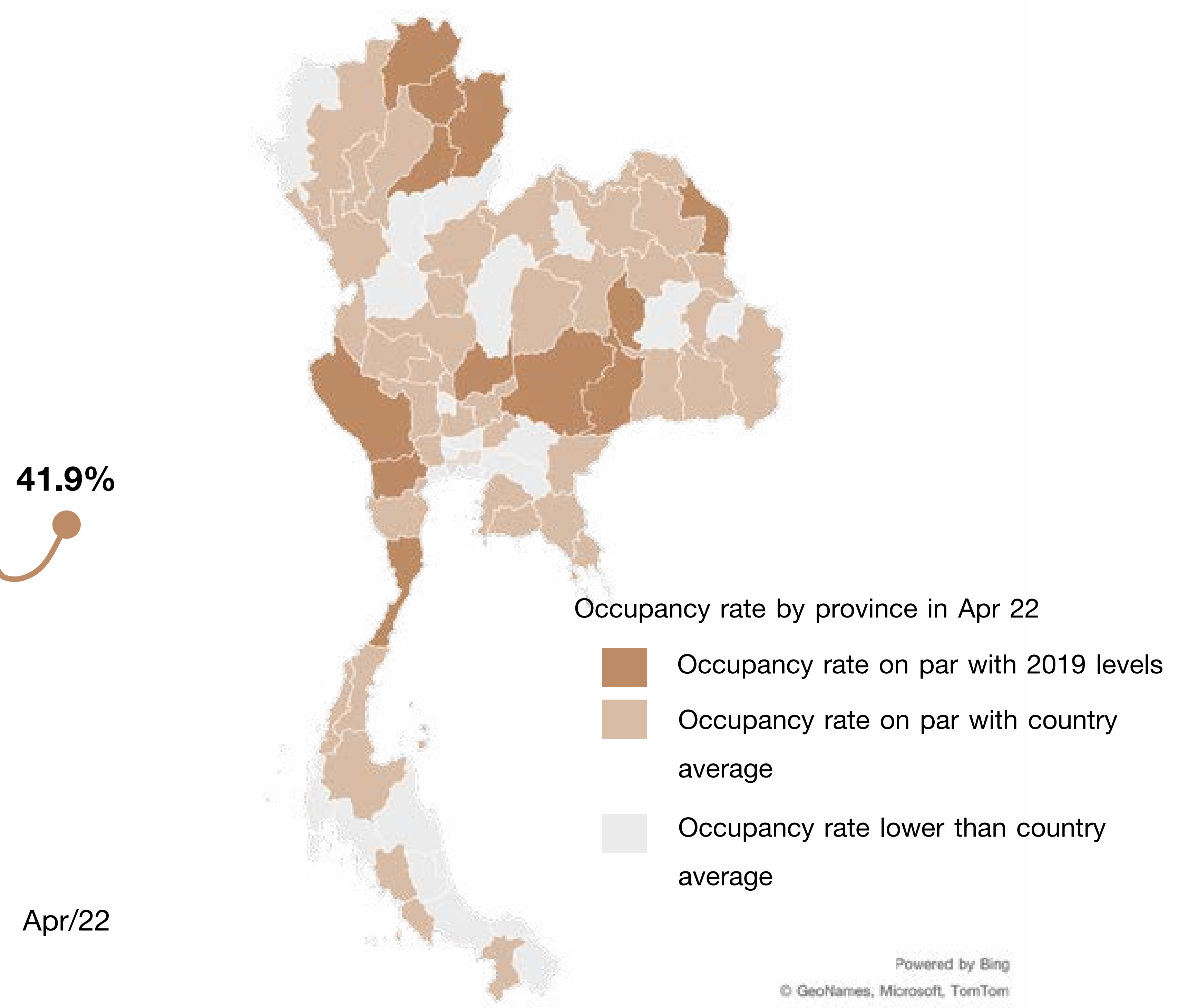
Year	2019	2020	2021	Jan – Apr 2022
Number of guests (Million persons)	169.1	73.9	33.9	30.2
Total visitors (Million persons)	306.0	137.0	73.0	64.8

Occupancy rate

Unit: % of total room supply

Year	2019	2020	2021	2022F
Country-wide occupancy rate	70%	30%	14%	42%





Source: EIC analysis based on data from the Ministry of Tourism and Sports

The growing number of foreign tourists in 2022 should strongly benefit businesses that are highly reliant on foreign tourist income.

Proportion of foreign tourist-dependent income and impact from foreign tourists visiting Thailand in 2022

Proportion of foreign tourist dependent income	Some benefit	Moderate benefit	High benefit
>40%		• Travel agent	• Hotels • Air passenger transport
20%-39%		• Tour bus operators	• Tourist attraction, such as zoos, amusement parks, theme parks • MICE • Restaurants • Wholesale/ retail • Food and beverages • Spa and wellness
<20%	• Hospitals • Oil • Real estate • Telecommunications • Electrical appliance manufacturers • Road merchandise transport		

Impact on businesses from foreign tourist arrivals in 2022

The business sectors that will benefit from the arrival of foreign tourists are those that are highly dependent on foreign tourist income, such as:

- Hotels
- Air passenger transport
- Tourist attractions
- Restaurants located in tourist spots
- Food and beverages

However, some sectors that are highly dependent on foreign tourist income may not benefit from growing tourist arrivals as expected, such as:

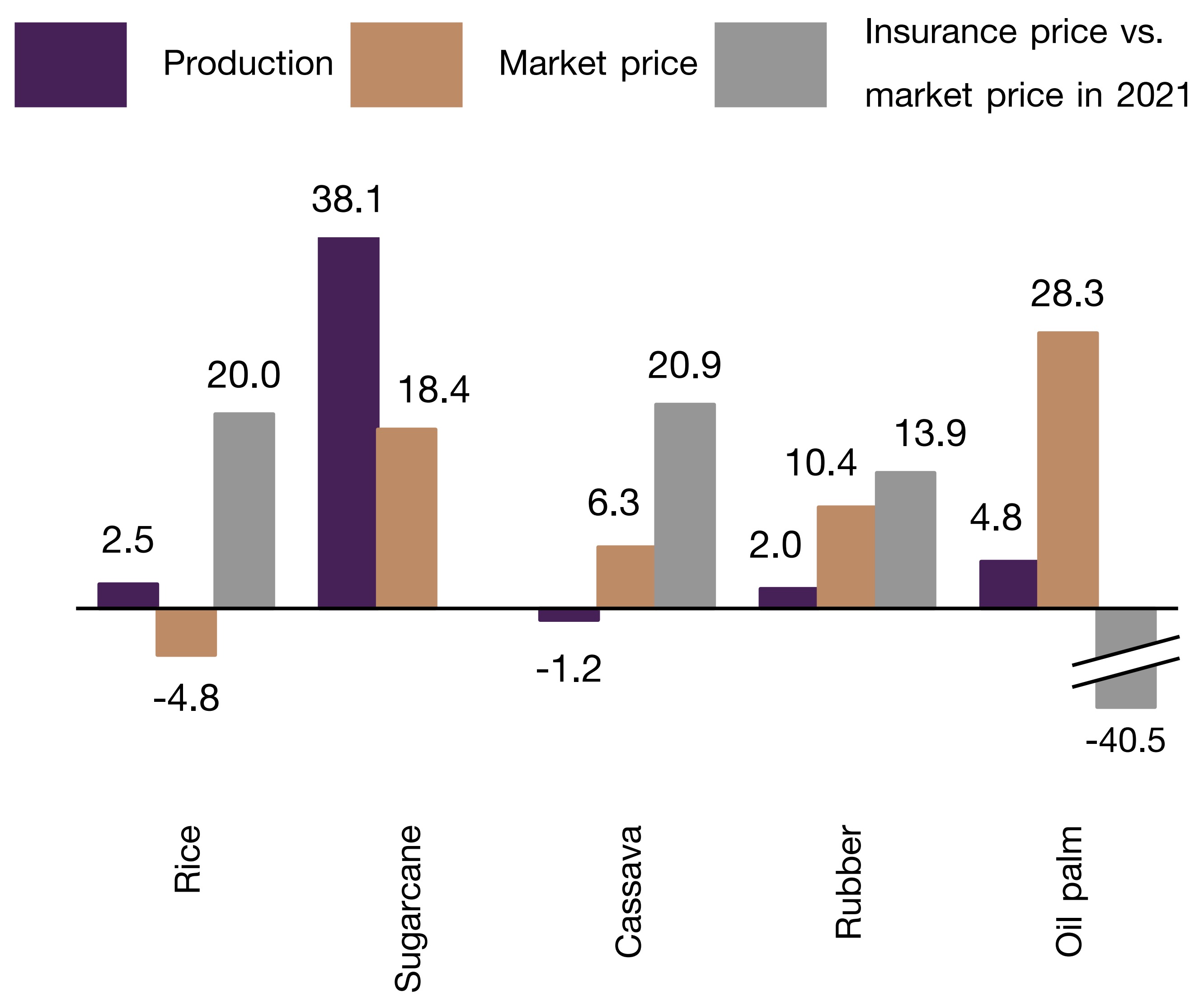
- Businesses that rely on Chinese tourists, as Chinese tourists are not expected in 2022
- Changing foreign tourists traveling behavior, such as declining group travel demand

Source: EIC analysis

Nevertheless, the agriculture sector will play a vital role in driving economic growth from production, volume, and price aspects. Businesses related to living fundamentals will strongly benefit.

Forecast of agricultural production, price, and income in 2022

Unit: %YOY



Forecasts	2021	2022F	4M2022
1) Income Index	2.7	9.5	10.2
2) Price Index	2.9	7.6	6.0
3) Production Index	0.9	1.8	4.3

Factors that increase production

- **Last year's rainfall amount was on par with the 30-year average level,** sufficient for crop growth and causing sugarcane, rice, rubber, and oil palm production to increase.
- **Water levels in dams were higher than last year,** causing the production of crops planted during the dry season to increase, particularly off-season rice.

Factors that increase price

- **The global economic recovery increased** the prices of agricultural products that were indexed to global consumption demand, such as rubber, cassava, and sugarcane.
- **Oil prices should increase following war tensions,** thereby increasing the prices of rubber and sugarcane accordingly.

- **The price of rice should remain low** due to the high world rice inventory.
- **However, the crop insurance policy should support farm income.** In 2021/2022, the government already paid over THB 85 billion in compensation to farmers.

Products that will benefit from rising farm income*

Most farmers are low-income earners. When the group's income increases, spending will drastically increase in comparison to high-income households.

Food and beverages, such as meat, snacks, alcoholic beverages

Clothing and apparel, such as bags

Travel-related and vehicles, such as batteries and motorcycles

Housing-related, such as kitchen utensils and mattresses

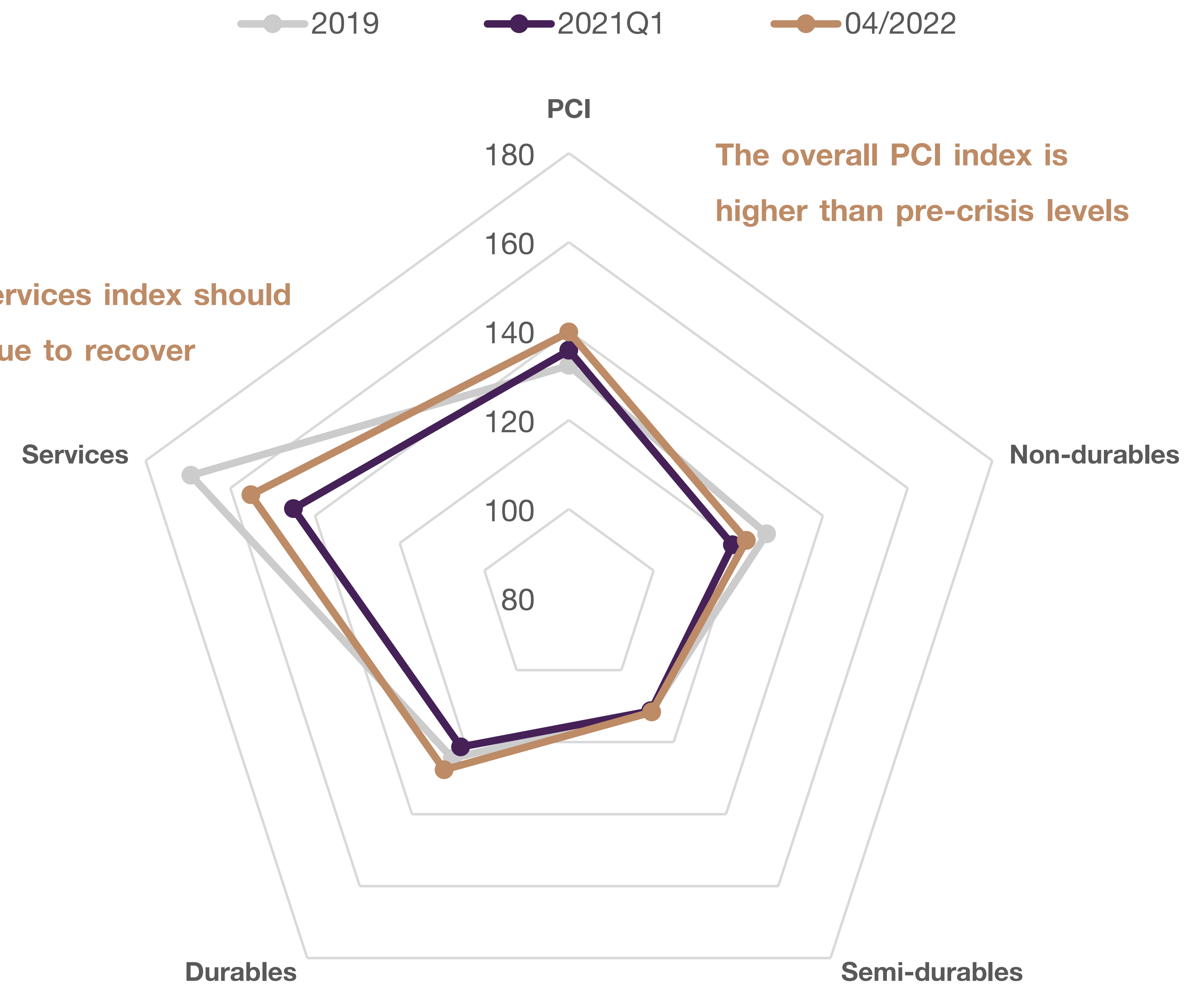
Raw material inputs, parts, or components for production of goods or packaging, such as
- Corrugated boxes
- Bottles (glass)
- Plastic bags

Note: *Study based on the relationship between farm income index and domestic sales index during Jan 2016 to Apr 2022 and Global Trade Analysis Project (GTAP)
Source: EIC analysis based on data from the Office of Agricultural Economics and Office of Industrial Economics, forecasts as of May 2022

Private consumption should continue to expand by 3%, exceeding the previous forecast of 2.9%, due to the resumption of economic activities as reflected by better-than-expected GDP in Q1/22, strong farm income growth, and pent-up demand from high-income groups.

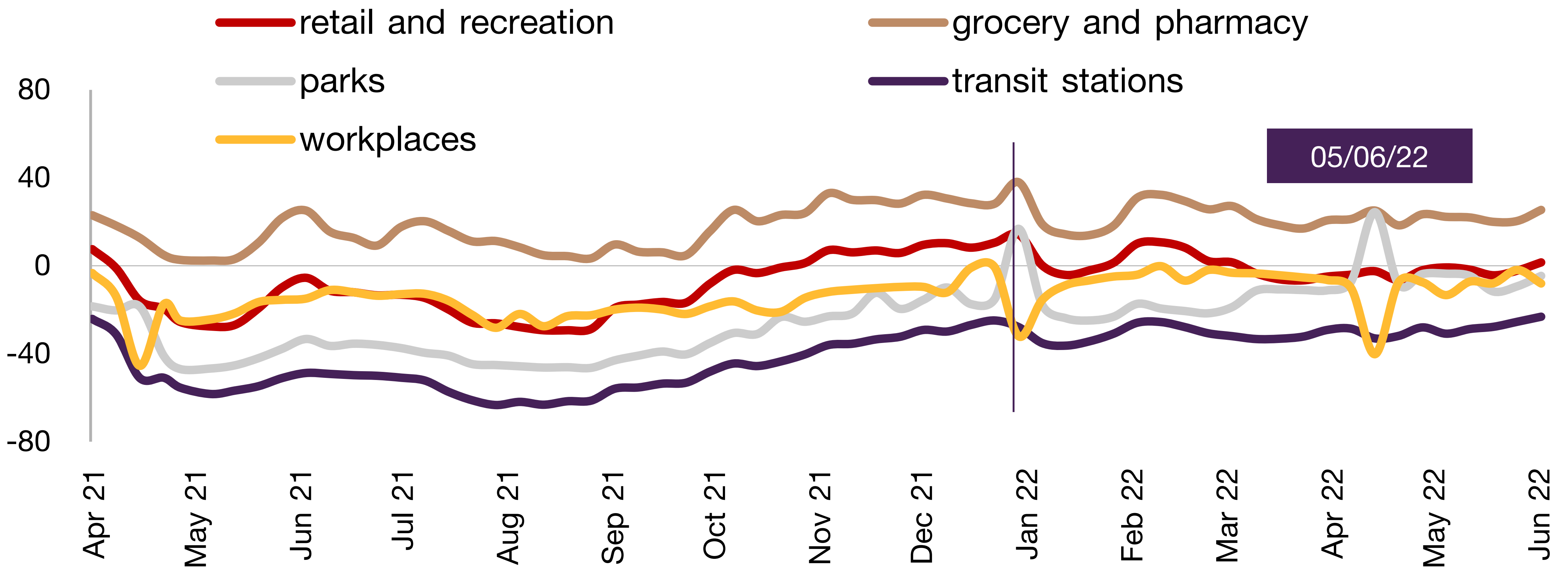
Private Consumption Index

Unit: (2010=100), seasonally adjusted



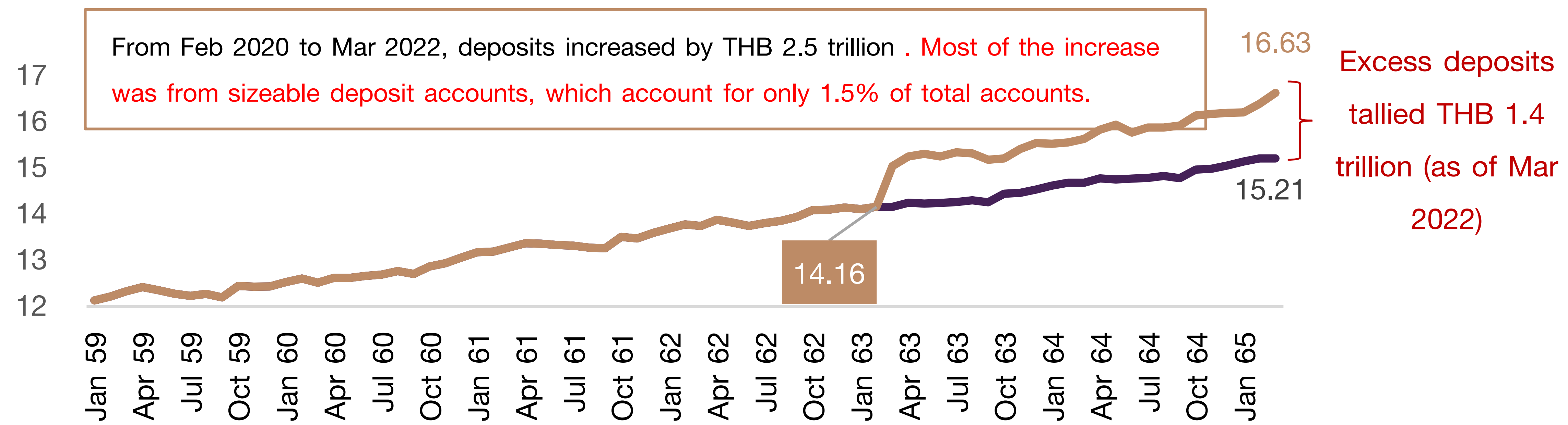
Google mobility index

Unit: % change compared to base case (Jan – Feb 2020 average), 1-week average



Total deposit volume vs. 5-year trend

Unit: THB trillion



Source: EIC analysis based on data from the Ministry of Commerce, Google, and Bank of Thailand

Inflation and economic volatilities will undermine business and household recovery.
The government will continue to play a vital role in supporting economic growth in 2022.

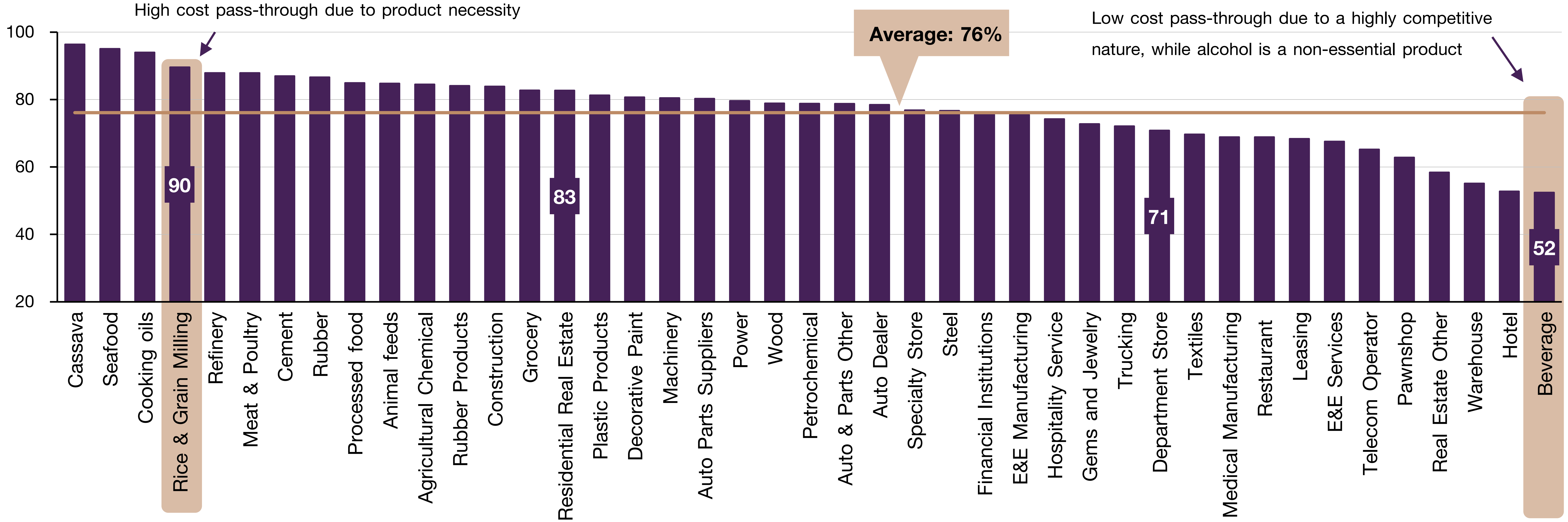
The price of energy products and commodities should remain high throughout the year. Together with gradual reductions in government cost of living subsidies, these factors will undermine domestic purchasing power and consumption, as well as business investment. As such, various businesses and sectors may recover more slowly than anticipated.

On average, Thai businesses pass on 76% of cost increments to consumers. The ability to pass on costs for each business varies according to the nature of the business and economic conditions.

A case study of Thai businesses' ability to pass-through costs

EIC assessed indicators that reflected Thai businesses' ability to pass on costs during 2005 – 2020 based on **data samples from 748,695 companies.** During 2005 – 2020, **Thai GDP expanded by an average of 2.9%.** Furthermore, EIC evaluated such indicators for 2 other periods, including 1) periods with **high Thai GDP growth (4.9%)** from 2005-2007 based on data samples **from 99,826 companies** and 2) periods with **low Thai GDP growth (0.1%)** from 2018-2020 based on data samples from 99,826 companies.

Results of cost transmission ability evaluation by business (Unit %) **displaying results only from certain businesses**



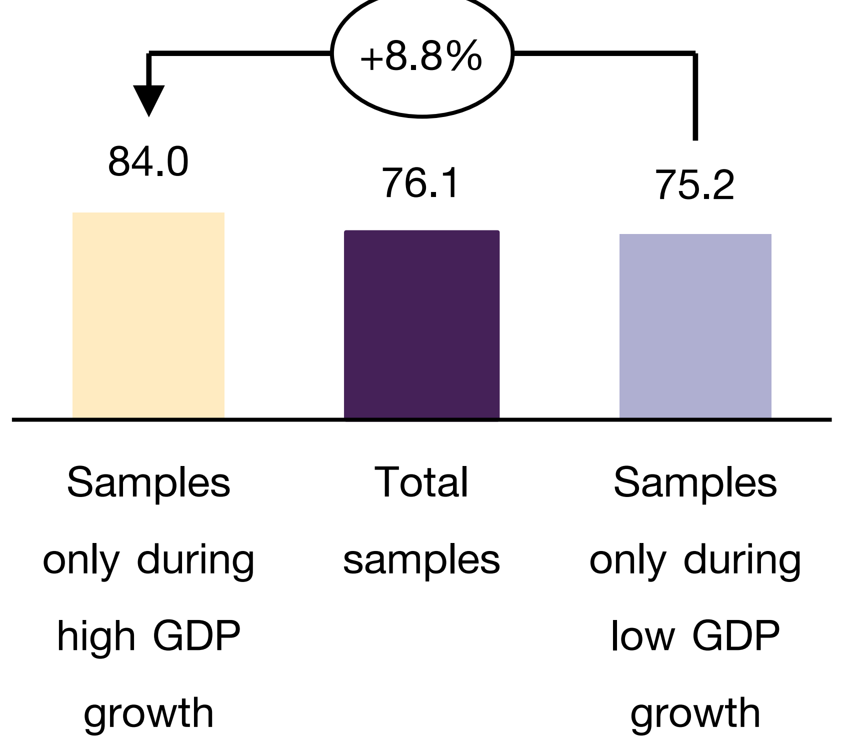
Readings: Values closer to 100 signal higher ability to pass-through costs over a 1-year period

Limitations: Results may be inaccurate for products with drastic demand changes once price changes, as estimation takes volume impact into account (revenue = price*quantity)

Results of cost transmission ability evaluation for all businesses

Unit: %

Businesses have high cost-pass-through ability during high economic growth environments but low ability during sluggish environments

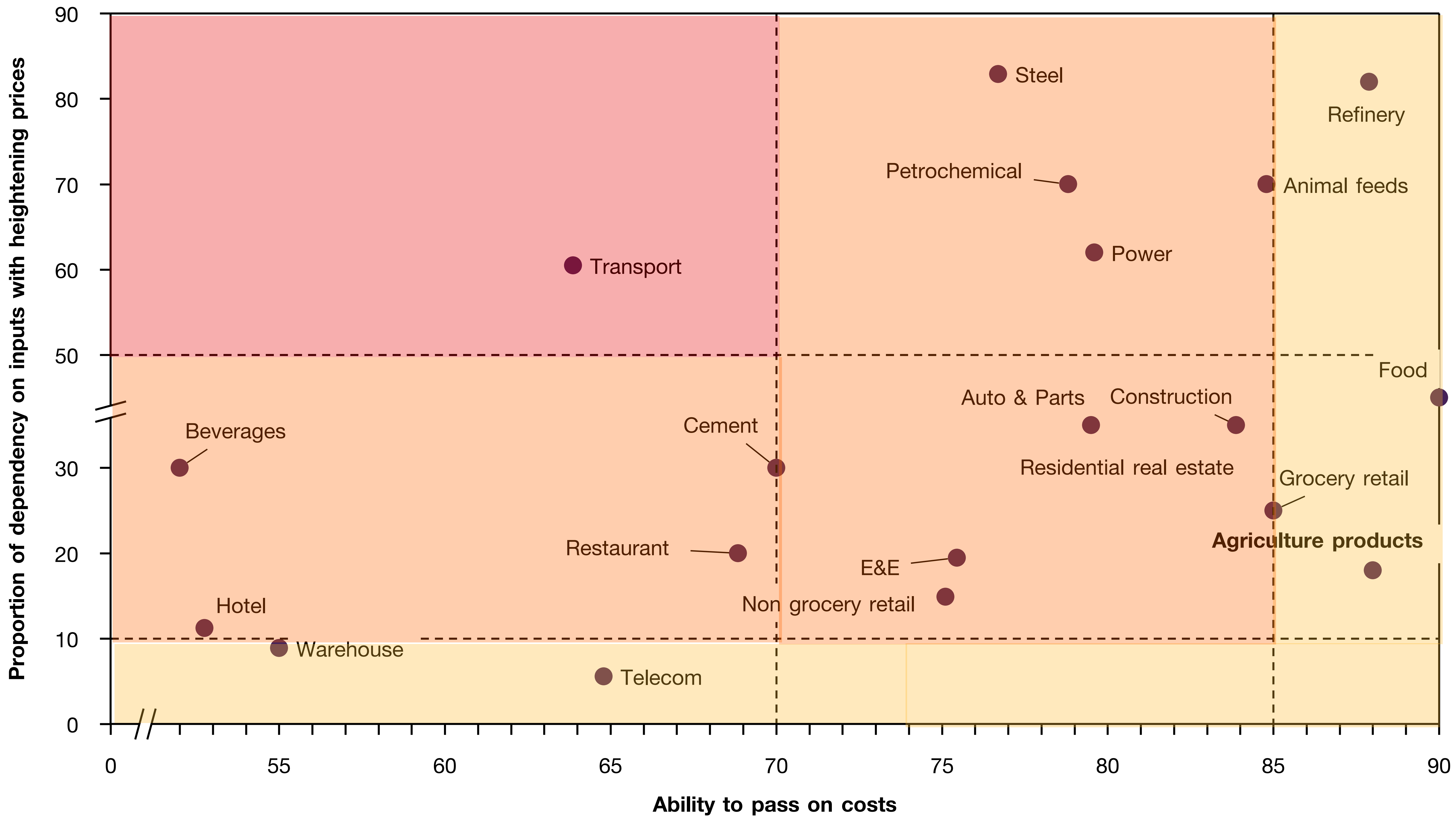


Source: EIC analysis based on data from the Department of Business Development

Going forward, the price of raw material inputs should continue to increase, prompting uneven business recovery. Businesses significantly impacted by inflation include passenger transport, and road and air merchandise transport.

Proportion of dependency on inputs with heightening prices* and ability to pass on costs

Unit: %



Business impact

High impact : margins should significantly drop

Dependent on inputs with soaring prices with low ability to pass on costs

- Passenger transport
- Road and air merchandise transport

Moderate impact: margins drop moderately

Dependent on inputs with moderate to high price increments with moderate ability to pass on costs. Such businesses may also face slowing demand and supply chain volatilities.

- Building materials
- Construction
- Petrochemicals
- Animal feed
- Beverages
- Retail non-grocery
- Restaurants
- Electronics
- Automotive
- Real estate
- Hotels

Limited impact: maintain margins or a slight decrease, though may face other issues

Slowing demand, supply chain volatilities, or government intervention

- Agricultural products
- Food
- Retail grocery
- Telecom
- Refinery
- Warehouse

Note: *Calculated based on inputs with increasing prices in 3 categories, including 1. energy 2. building materials 3. agriculture products

Source: EIC analysis based on data from the Office of the National Economic and Social Development Council and the Department of Business Development

Uneven recovery among business sectors. Some businesses saw a quick recovery, though they will face challenges from global volatilities, including commodity prices and slowing global economic conditions. Whereas some businesses such as services saw a slow recovery, though they will be supported by country re-openings.

Overview of impacts from various factors and business sector recovery outlooks

Net impact of key factors*

Undermining factors
- Inflation
- Slowing global economy and exports

Supporting factors
- Service sector recovery
- Farm income recovery

Businesses with recovered income, but with high risks

High impact (2021–2022)
- Steel
- Petrochemical
- Plastic products
- Electronic components
- Trucking

Moderate impact (2021–2022)
- Food
- Public construction
- Home appliances
- Maritime
- Non-alcoholic beverages
- Cement
- Oil retail & marketing

Moderate impact (2023)
- Alcoholic beverages
- Hotel (domestic tourists)

Businesses with slow income recovery and high risks

Moderate impact (2024)
- Residential : real estate (low-rise)
- Private construction
- Passenger transport
- Hospitality services
- Auto (Export)
- Auto part suppliers

Moderate impact (2025+)
- Air transport
- Residential real estate (Condo)
- Commercial Real estate
- Auto (Domestic)
- Auto dealer

Businesses with slow income recovery, but with supporting factors

Low impact (2021–2022)
- Agricultural products
- Fruits & vegetables
- Warehouse
- Private hospital
- Telecom operator
- Refinery

Low impact (2023)
- W&R (grocery)
- Restaurant (Domestic)
- Industrial estate

Low impact (2024)
- W&R (non-grocery)

Low impact (2025+)
- Hotel (international tourists)
- Restaurant (Foreign)

2021 | 2022 | 2023 | 2024 | 2025+

Year that revenue earned will recover to pre-COVID-19 levels

Note: *The magnitude of impact was ranked based on a net impact assessment of the aforementioned supporting and undermining factors that impacted income recovery and the ability to make profit. The impact of other factors, both economic and specific factors, were also included.

Source: EIC analysis

3 strategic business transformation themes that the government should support.

Maintain Viability & Risk management

- **Reduce unnecessary operating costs**
- **Focus on improving energy efficiency and managing raw materials,** including choosing suitable suppliers or finding raw material substitutes
- **Increase business flexibility** to be able to rapidly transform
- **Manage balance sheets** by reducing inventories and debt, and adequately manage cash liquidity
- **Comprehensive risk management**
  - Hedging: to reduce price volatility risks
  - Workforce: employee welfare and safety
  - Secure supply chains: build resilient supply chains via partner risk management and inventory management

Customer Centric

- **Focus on the best value for money solutions** to offer alternatives for customers during sluggish economic conditions and build brand & customer loyalty
- **Monitor consumer behavior changes and new normal trends**
- **Use data analytics to understand customer needs** and offer solutions that answer such needs
- **Present products and services to consumers in new ways in accordance with economic conditions and consumer behavior,** such as subscription model, Pay-per-use
- **Create a customer journey** that helps customers be more digitally adept while considering new normal needs

Business transformation, Diversification and Invest in the future

- **Adjust business models to align with changing consumer behavior and market conditions. Diversify operations into other fields to reduce dependency on a single stream of revenue.**
- **Invest in suitable technologies to improve production efficiency, management, and workflow** (digital channel, AI, automation, etc.)
- **Invest in energy efficiency solutions** to tackle future energy crises in the long run
- **Establish plans to retrain and reskill employees** to keep up with new technologies and trends
- **Look for partnership opportunities** to increase technology potential and answer customer needs
- **Look for merger opportunities** to optimize business portfolio

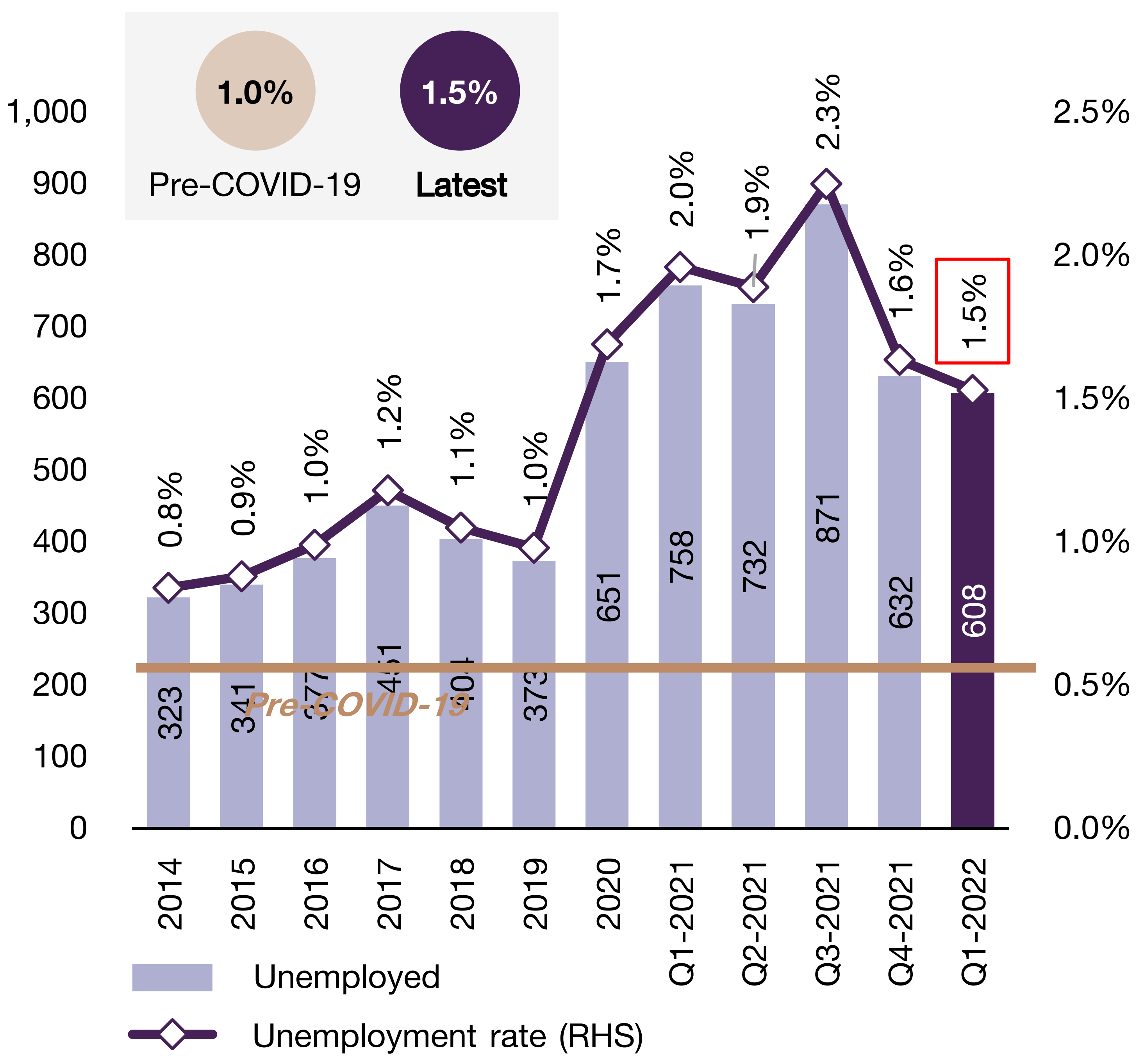
Source: EIC analysis

The Thai labor market remained subdued in Q1/22. The unemployment rate slightly improved but has yet to regain its pre-pandemic level. Work hours were low, and Thai workers continued to flock to low-paying agricultural jobs. Overall, data suggested that Thai households are still grappling with stagnant incomes.

The Q1/22 unemployment rate improved but remained higher than the pre-pandemic level.

Number of unemployed and unemployment rate

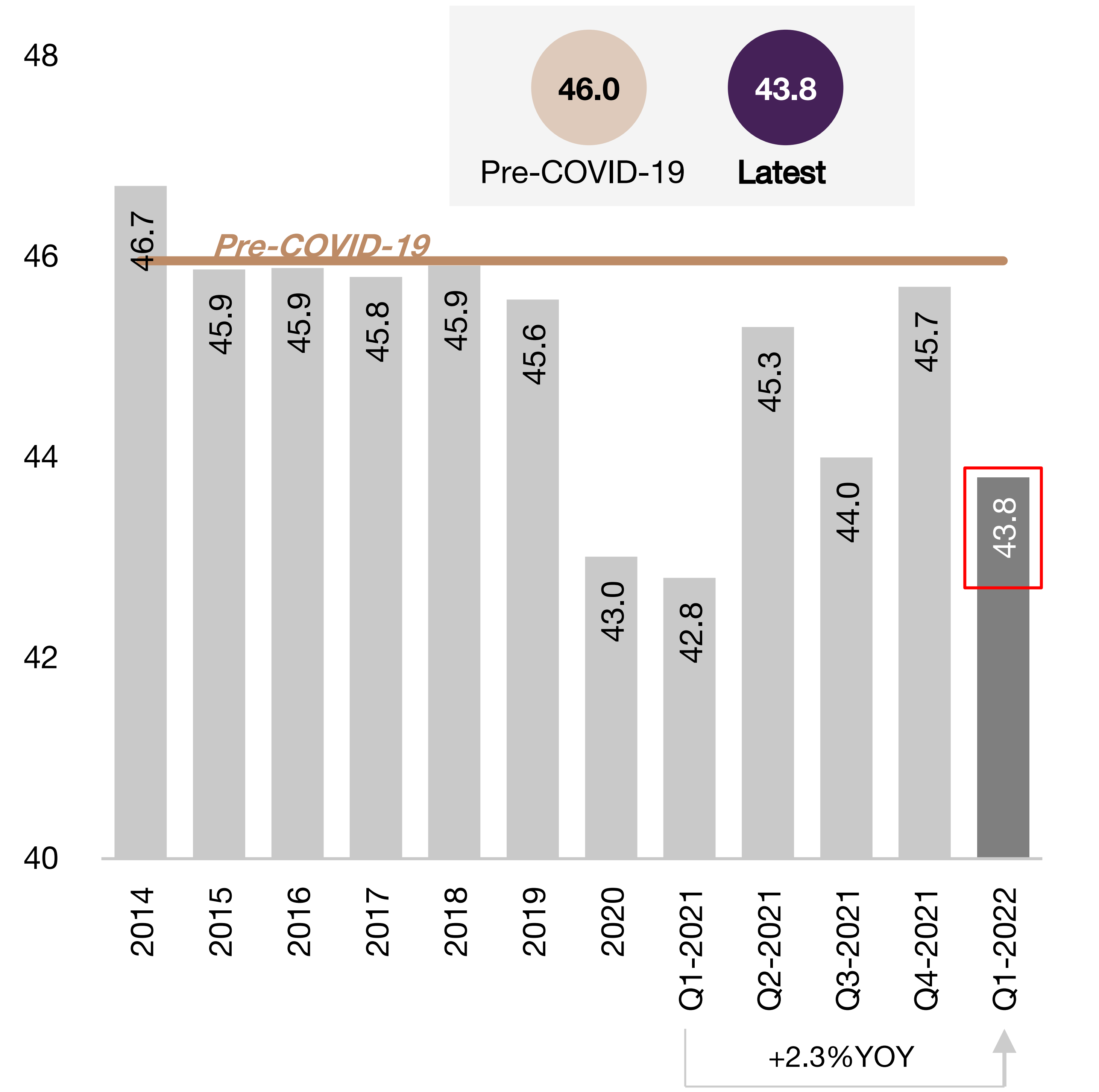
Unit: thousand persons | Unit: % of labor force



Work hours still lingered low.

Average work hours for private employees

Unit: hour/ week

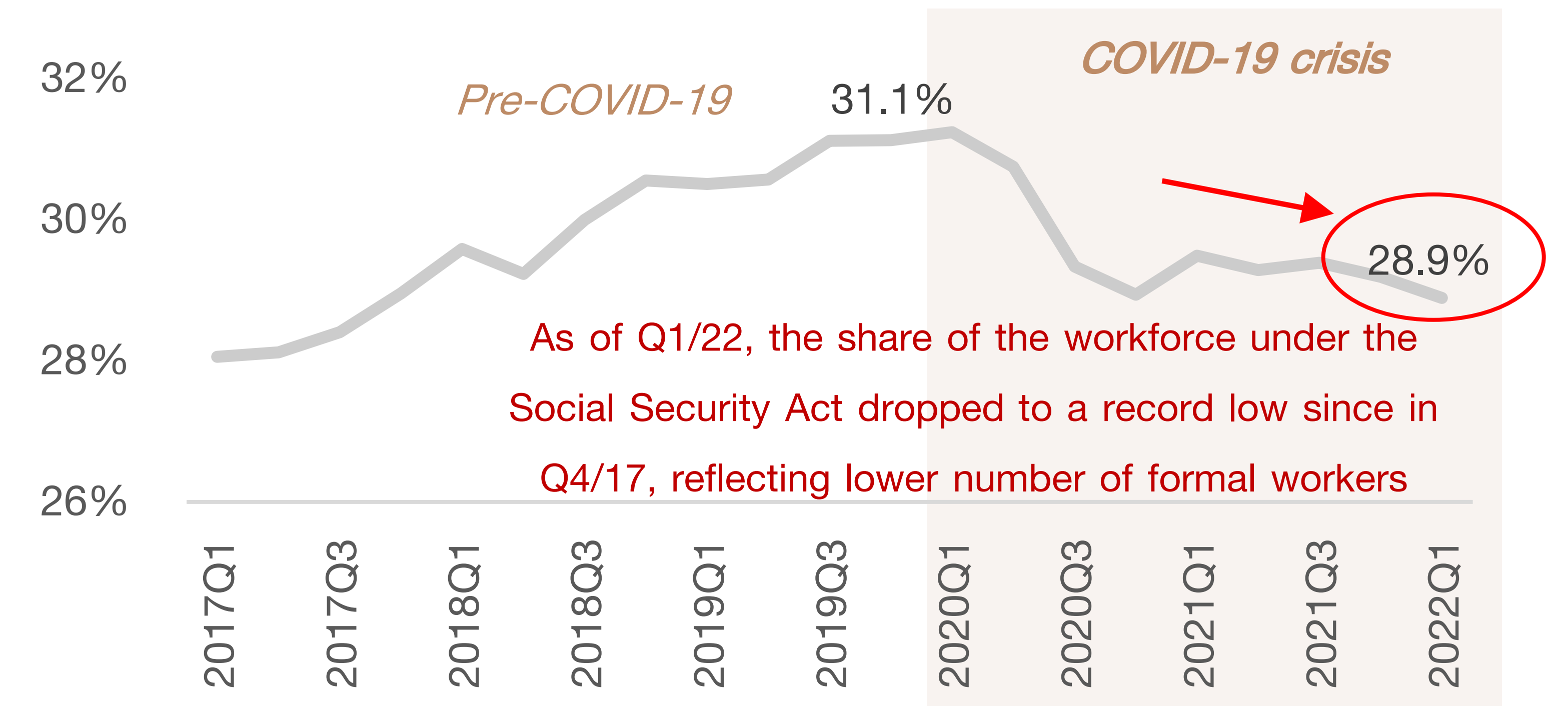


Thai labor has been shifting to the low-paying agricultural sector (Farm income: THB 6,375 vs. Non-farm income: THB 15,525).

Employment (Unit: million persons)	Q1/21	Q1/22	Changes
Total	38.66	38.72	+60 thousand
- Agriculture	11.13	11.41	+208 thousand
- Manufacturing	9.15	8.89	-260 thousand
- Service	18.38	18.42	+40 thousand

Share of workers covered by Social Security Act Section 33

Unit: % of total employed workers

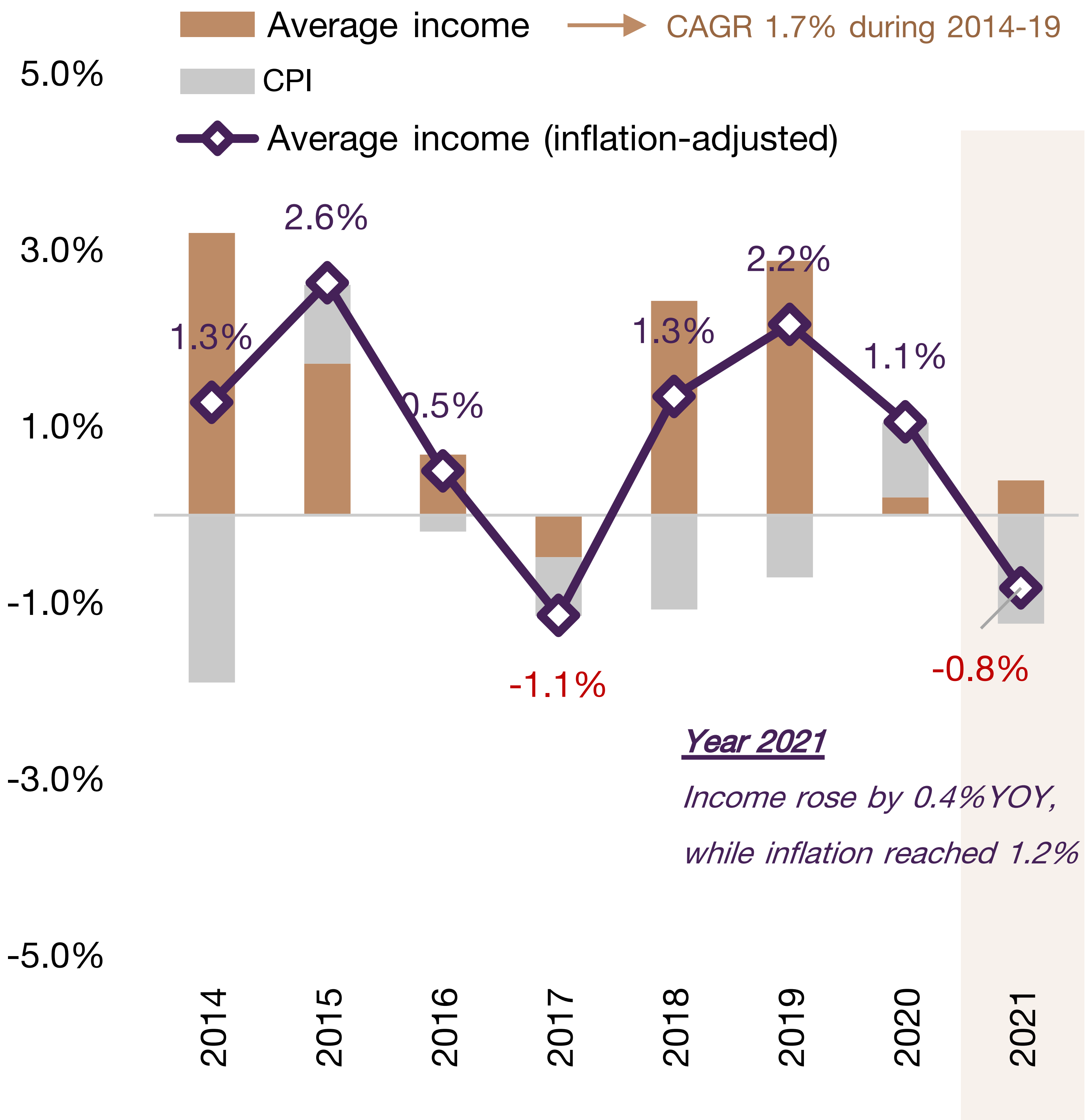


Source: EIC analysis based on data from the National Statistical Office of Thailand and Social Security Office

Private employee's real income shrank by 0.8%YOY in 2021. The decline was evident in most industries, thus weighing down household expenditure. EIC expects a slump in real income will continue into 2022 as inflation outstrips average earnings growth.

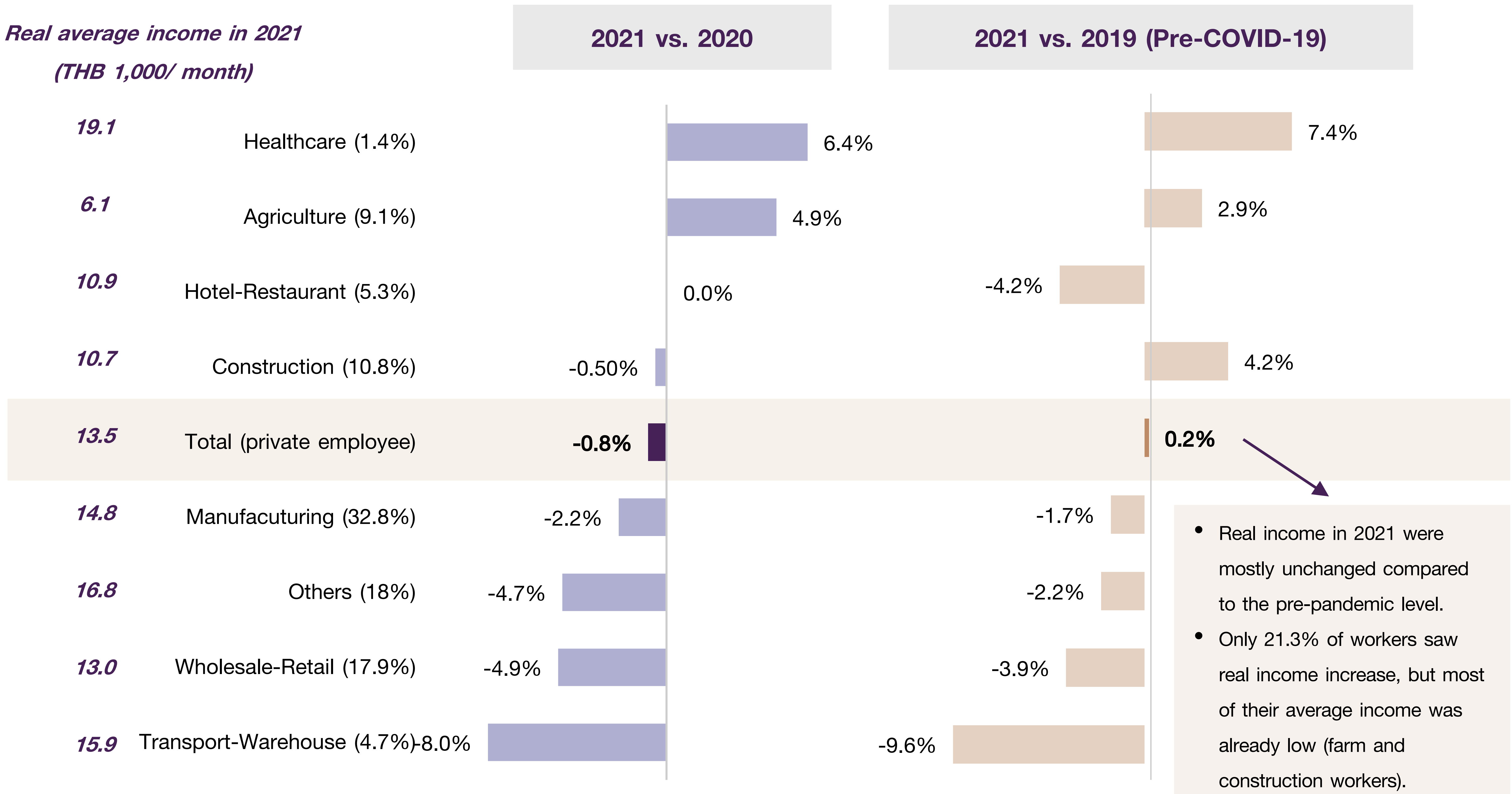
Change in average income of private employees

Unit: %YOY



Change in real income of private employees, by sector

Unit: %YOY, in () shows the share of employment to total employment in each sector



- Real income in 2021 were mostly unchanged compared to the pre-pandemic level.
- Only 21.3% of workers saw real income increase, but most of their average income was already low (farm and construction workers).

Source: EIC analysis based on data from the National Statistical Office of Thailand

The period of "Steep Living Costs, Low Income"—where prices and income see a widening gap—will take a heavy toll on households, particularly those with financial fragility. A somber household condition would also impair the overall economy.

Difficulties for Thai households in 2022

- Higher living costs
- Stagnant income growth
- Existing financial fragility

Expected changes in household behavior

- Cut down/ hold up spending
- Draw out existing liquidity to cover higher spending
- Opt for new borrowing or struggle with the current debt burden

Macroeconomic Impacts

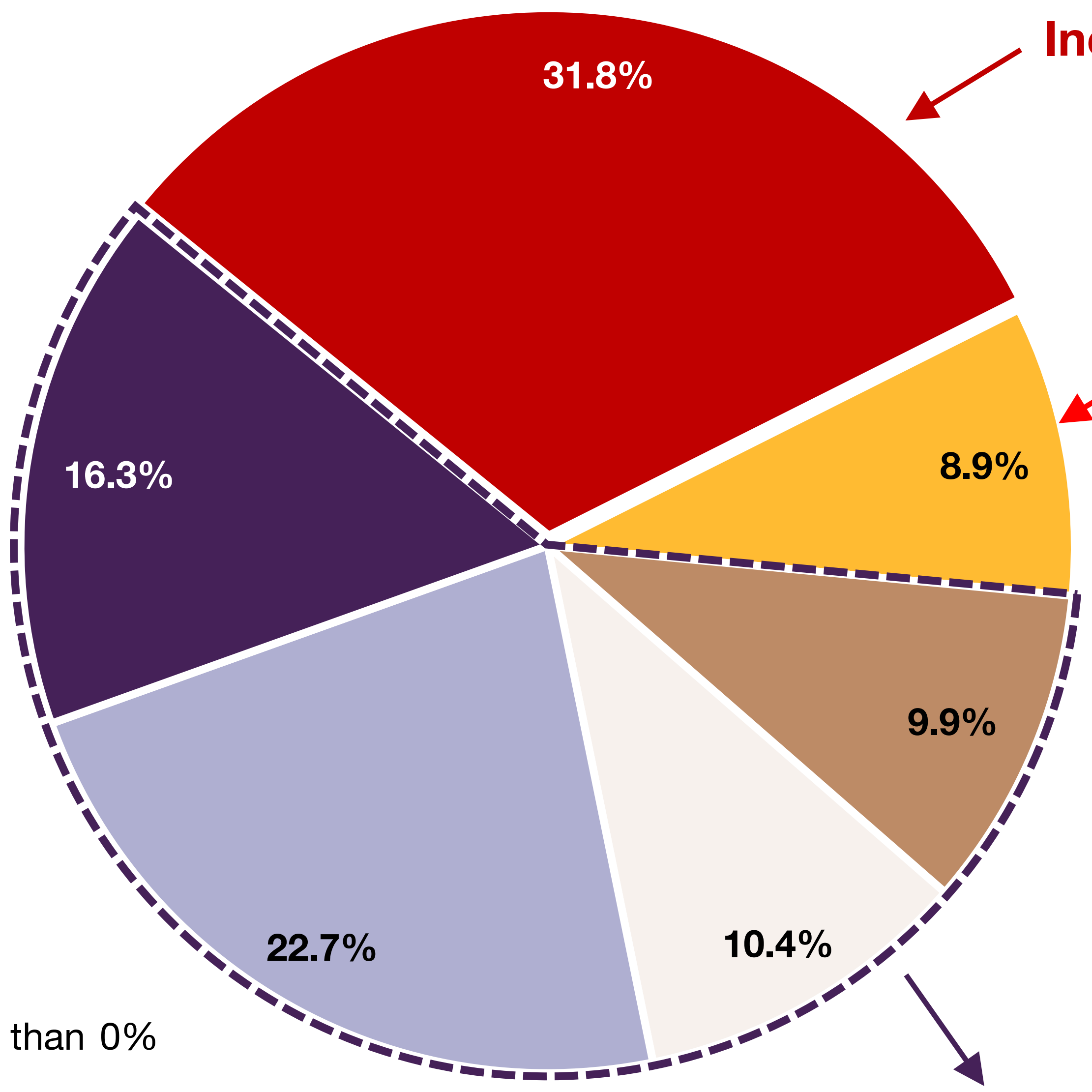
- Lower real private consumption than expected
- Worsened and more fragile household balance sheets
- Swelling household debt and higher risks of debt default

Source: EIC analysis

31.8% of Thai households saw expenditure outweighing income. These are households with already-high economic fragility and at risk of being left more disadvantaged, given high inflation and stagnant income amidst a subdued labor market.

Share of households by savings rate (income vs. expenditure*)

Unit: % of total household (in 2021)



Income-insufficient

Low savings:

savings balance below 5% of monthly income, at risk of falling into the income-insufficient group as inflation will likely hit 5% in 2022

- Savings rate: less than 0%
- Savings rate: 0% to less than 5%
- Savings rate: 5% to less than 10%
- Savings rate: 10% to less than 15%
- Savings rate: 15% to less than 30%
- Savings rate: Over 30%

Medium-High savings:

59.3% of Thai households had **enough unspent income to cover higher living costs**. In particular, households with amassed savings would add significant impetus to domestic spending.

Aside from insufficient income, these households also exhibited relative economic weaknesses.

Thai Household Socio-Economic Survey (SES) data in 2021	Insufficient income	Low excess income for savings	Others (the rest)
Average income per month (THB per household)	18,993	22,043	32,625
Debt to income ratio** (% of total annual income)	166.7%	108.1%	78.5%
Debt to asset ratio** (% of total asset)	22.4%	21.1%	17.2%
Debt service ratio (DSR)** (% of monthly income)	35.0%	20.4%	15.8%
Liquidity (financial asset vs. expenditure) (Months of spending)	4.8	5.6	9.4
Share of households with informal loans (% of total households in each income group)	5.1%	4.0%	3.9%
Share of households struggling to pay utility bills (% of households in each income group)	15.0%	12.6%	9.3%

Note: **Only indebted households

Note: *household's expenditure and debt repayment, namely mortgage and business loan. In this context, we exclude consumption loan (for consumption) to avoid redundancies with consumption expenditure.

Source: EIC analysis based on data from the National Statistical Office of Thailand

In the period of "Steep Living Costs, Low Income," Thai households will see their savings shrink. The share of the income-insufficient group is expected to rise further, thus exacerbating Thai household fragility.

A Closer Look into the "Steep Living Costs, Low Income" state

For our analysis, we retrieved the data from Thailand's 2021 Household Socio-Economic Survey (SES) and adjusted each household's income and spending growth based on the EIC's latest forecasts of relevant factors in 2022. These include economic growth, wages, farm and non-farm business costs, and inflation. The estimation is divided into two scenarios:

1. **Base-case:** The primary assumption embraces real GDP growth at 2.9% in 2022, inflation at 5.9% (food and energy inflation at 4.8% and 30.1%, respectively, and core inflation at 2.1%), and wage growth at 1.8%—close to the 5-year average before the pandemic.
2. **Worse-case:** The primary assumption embraces real GDP growth at 1.6% in 2022, inflation at 7.4% (food and energy inflation at 6.0% and 35.9%, respectively, and core inflation at 2.6%), and wage growth at 1.0%—below the 5-year average before the pandemic.

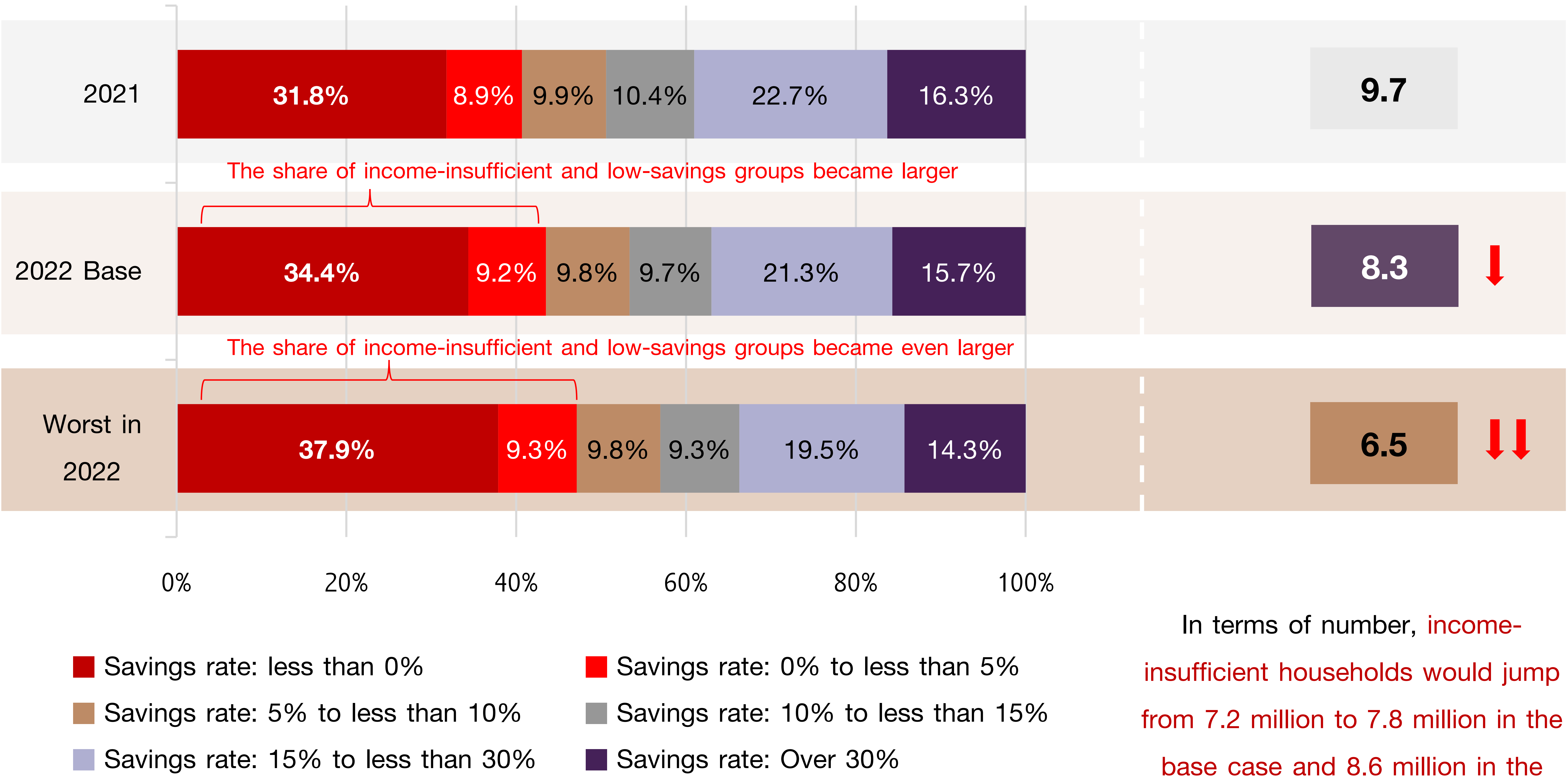
After adjusting for other economic data, the outcome can be analyzed based on each household group to derive household risk levels in various dimensions amidst living cost spikes in 2022.

Share of households by savings rate (income vs. expenditure*)

Unit: % of total households

Savings rate of Thai households

Unit: % of income, median



In terms of number, income-insufficient households would jump from 7.2 million to 7.8 million in the base case and 8.6 million in the worse case.

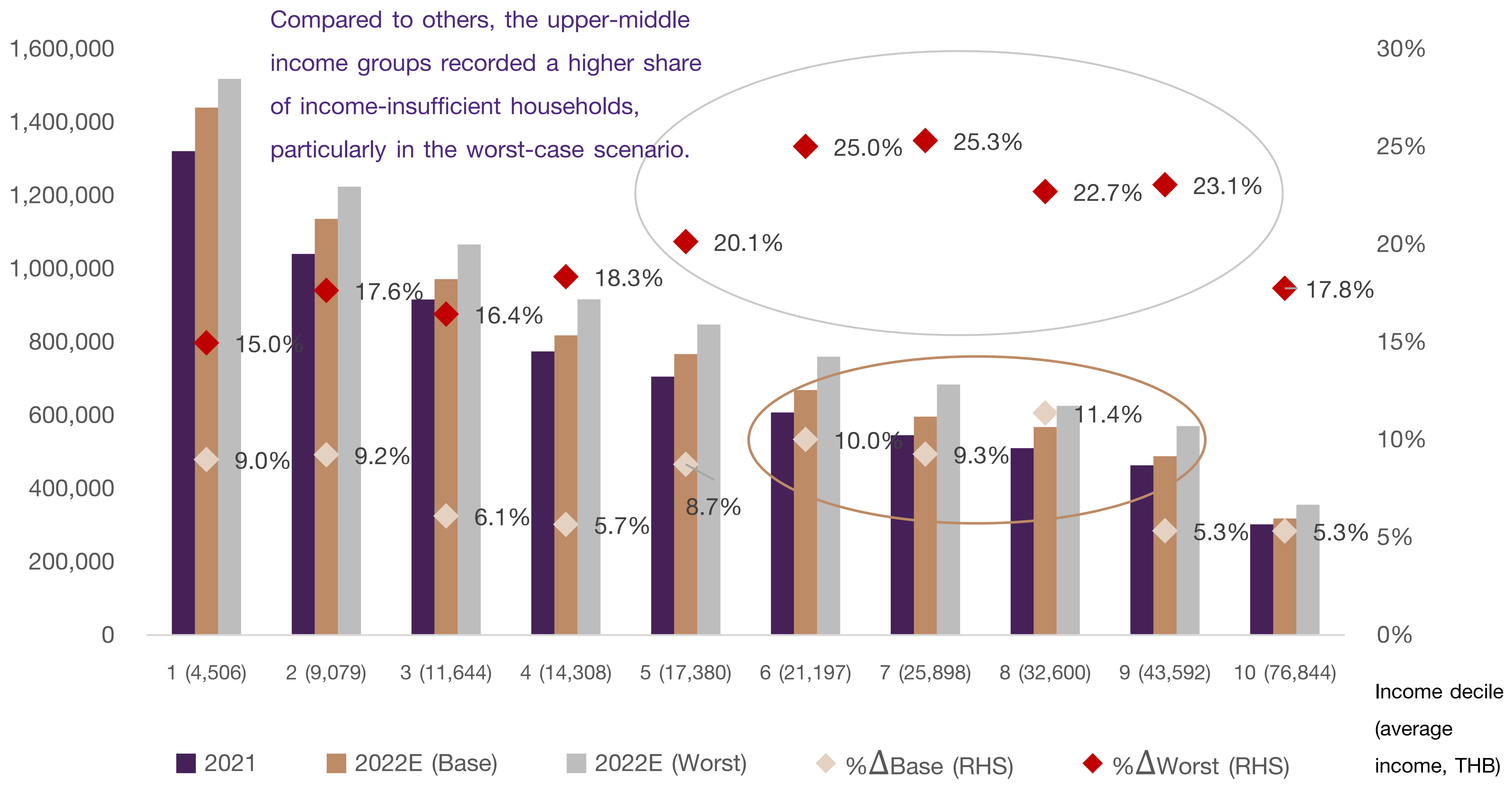
Note: *household's expenditure and debt repayment, namely mortgage and business loan. In this context, we exclude consumption loan (for consumption) to avoid redundancies with consumption expenditure.

Source: EIC analysis based on data from the National Statistical Office of Thailand

Rising costs of living affect households at every income level, albeit to a greater extent for the low-income group. Nonetheless, we found that the middle-income households will witness larger impacts in terms of percentage change. But such impacts could be offset by accumulated savings.

Number and changes in income-insufficient households by decile in each scenario

Unit: Total number of households (LHS), % changes in number compared to 2021 in each scenario (RHS)



What we found:

- Households that will see a sharp drop in savings primarily rely on non-farm income, such as manufacturing or service sectors that recorded slower income growth. These mainly comprise middle-income households, especially those with large shares of food and fuel consumption—thus ensuing higher monthly bills than usual.
- In contrast, households relying on farm income would partially benefit from price increases. Rising commodity prices will translate to higher earnings that will help offset higher living costs. Nonetheless, agricultural households still face risks ahead since new crop production costs remain high.

Changes in average savings rate (%) by main source of income

	Farm	Non-Farm
Base	2.7%	-1.4%
Worst	-0.8%	-3.4%

Changes in average saving rate (%) by ratio of food and fuel consumption to income (5 quintiles, from low to high)

	Q1	Q2	Q3	Q4	Q5
Base	-0.6%	-1.0%	-1.4%	-1.7%	-2.3%
Worst	-2.2%	-2.9%	-3.2%	-3.6%	-5.1%

Low food and energy consumption, relative to income → *High food and energy consumption, relative to income*

Source: EIC analysis based on data from the National Statistical Office of Thailand

Income-insufficient households, who carried almost half of total household debt, will face more credit quality risks as they grapple with higher living costs.

2022E Base	Sufficient income (65.6%)		Insufficient income (34.4%)		
Risk Level	Low-Medium	Relatively High	High	Extremely High	Highest
Economic status of household	Sufficient income to cover living expenses	Sufficient income to cover living expenses, low savings (up to 5% of income)	Insufficient income, enough financial asset to help cover living expenses	Insufficient income and financial asset, low debt burden	Insufficient income and financial asset, high debt burden
Number of households (thousands) (% of total households))	**12,781** (56.5%)	**2,071** (9.2%)	**3,484** (15.4%)	**3,436** (15.2%)	**853** (3.8%)

Unit : THB billion

	Formal Debt	Informal Debt
Mortgage	784.2	4.9
Consumption loan (incl. auto)	1,126.8	26.0
Business loan (incl. agriculture)	511.6	17.0
Other loans	67.0	2.8
Total	2,489.6	50.7

Unit : THB billion

	Formal Debt	Informal Debt
Mortgage	874.2	6.5
Consumption loans (incl. auto)	604.0	12.5
Business loans (incl. agriculture)	581.3	10.5
Other loans	22.7	1.3
Total	2,082.3	30.9

The figures show that income-insufficient households were smaller in number, but their combined debt was as high as those of income-sufficient groups. This reflects acute risks to financial institutions, particularly mortgages—for which income-insufficient debtors account for more than half of the share.

Source: EIC analysis based on data from the National Statistical Office of Thailand

Different risks faced by each household group in the period of “Steep Living Costs, Low Income” and policy recommendations

2022E Base

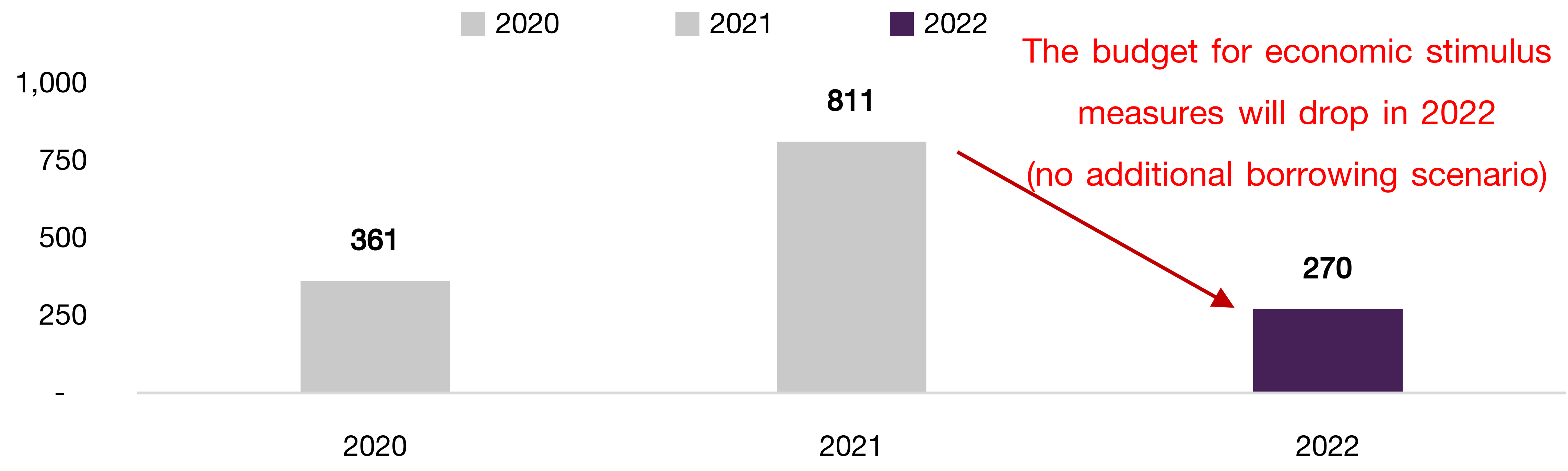
	Sufficient income level (65.6%)		Insufficient income level (34.4%)		
Risk Level	**Low-Medium**	**Relatively High**	**High**	**Extremely High**	**Highest**
Economic status of household	Sufficient income to cover living expenses	Sufficient income to cover living expenses, low savings (up to 5% of income)	Insufficient income, enough financial asset to help cover living expenses	Insufficient income and financial asset, low debt burden	Insufficient income and financial asset, high debt burden
Number of households (thousands) (% of total household)	**12,781** (56.5%)	**2,071** (9.2%)	**3,484** (15.4%)	**3,436** (15.2%)	**853** (3.8%)
Recommended policy measures	1) Cost of living cutting measures targeting low-income earners, (2) Measures to attract spending from households with high buying power to stimulate the economy with a primary focus on small domestic enterprises	(1) Cost of living cutting measures targeting necessary goods and services, in tandem with (2) Measures to enhance earning potential	(1) Cost of living cutting measures targeting necessary goods and services, (2) Supports in the form of financial transfers or welfare, (3) Measures to enhance earning potential	(1) Liquidity support such as low-interest loans with installment terms that cater to household income status, (2) Measures to enhance earning potential, (3) Cost of living cutting measures, (4) Financial transfers to support income	With balance sheets in grave condition, this group needs urgent and targeted policy measures such as debt relief, financial aid, extra welfare, and measures to enhance earning potential. One-fourth of this group also heavily relied on financial assistance from the government or relatives, thus implying household fragility and critical demand for policy support.

Source: EIC analysis based on data from the National Statistical Office of Thailand

In 2022, the government will still play a vital role in supporting economic growth, despite reduced stimulus budget. The government may reduce allocations for programs that stimulate purchasing power and turn to those that control the cost of living.

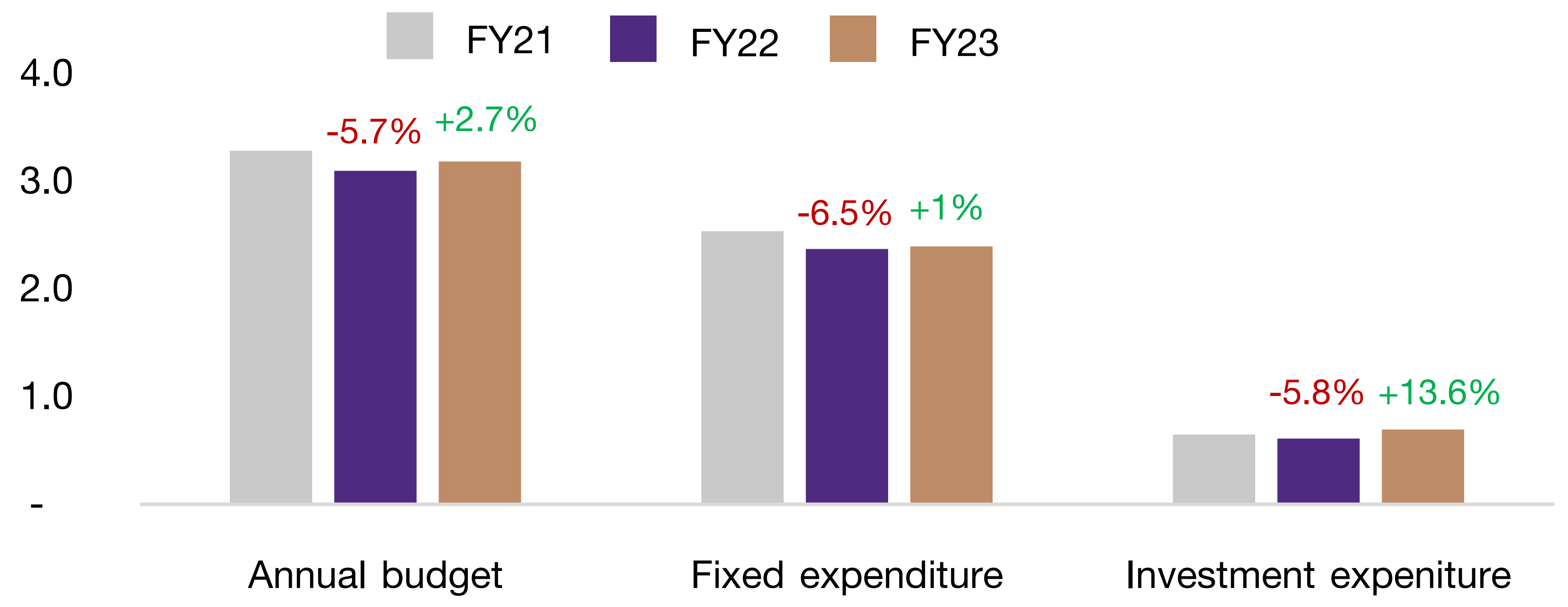
Government to fund additional stimulus (off budget)

Unit: THB billion/ calendar year



Annual budget (not yet approved by budget committee)

Unit: THB trillion



- **At present, the cabinet has approved the use of THB 426 billion budget from the THB 500 billion emergency decree.**
- Of the remaining THB 74 billion budget, THB 26 billion was allocated for pending activities, including THB 10 billion in loans for grassroot economies and THB 16 billion set aside for COVID-19 medical expenses to NHSO.
- **THB 48 billion remaining for new project development.**
- If the government wants to borrow money under the THB 500 billion emergency decree, signings or debt issuance must be made by 30 September 2022.
- Nevertheless, if there is an urgent need for more budget to support the economy, the government could use the funding from 2022 and 2023 fiscal year's *central budget for emergency* or necessary expenses. However, it should set aside a portion of the funds to cover casualties from other potential disasters.)

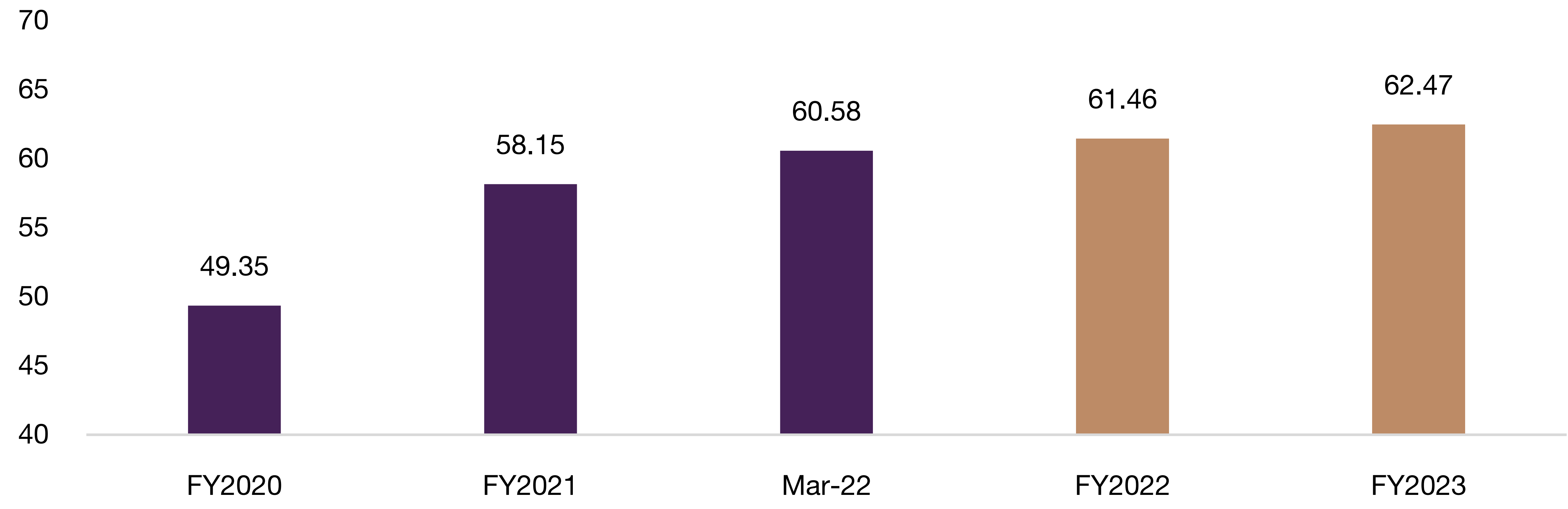
- **The fixed expenditure budget for the 2023 fiscal year is THB 3.185 trillion.** However, the committee may reduce the allocation, particularly the defense budget, by THB 15,000-20,000 million.
- The budget for 2022 was set according to the assumption that the Thai economy will grow by 3.2-4.2% with inflation at 0.5-1.5%. Such assumptions were inconsistent with current conditions, in which EIC estimates that the economy will expand by 2.9% with inflation at 5.9%. As such, investments in many projects could be more costly than expected or may not be achieved.
- Despite the current year's revenue adjustment to THB 2.7 trillion, the government still expects to receive revenue of THB 2.49 trillion in 2023, increasing from the plan in 2022 at THB 2.4 trillion.
- The government planned a budget deficit of THB 695,000 million in 2023, a value slightly lower than the plan in 2022 at THB 700,000 million. A smaller deficit could be expected if revenue collected in 2023 is as decent as in 2022 and global energy prices return to normal.

Source: EIC analysis based on data from the Ministry of Commerce, Bureau of Budget, the Office of the National Economic and Social Development Council, Royal Thai Government, and various press

Thailand's public debt to GDP ratio should gradually increase. Going forward, notable risks include energy price supports, new waves of outbreaks, and interest rate hikes.

Public debt to GDP ratio forecasted by the Public Debt Management Office

Unit: % of GDP



- **As of the end of Q1/22, Thailand's public debt stood at 60.58% of GDP,** leaving room for additional borrowing of over THB 1 trillion.
- The Public Debt Management Office forecasted that the figure should increase to 61.46% and 62.47% by the end of the 2022 and 2023 fiscal years, respectively.
- **If the government incurs new debt amid similar levels of budget deficit, public debt levels will hit the 70% ceiling by around the fiscal year 2031.**
- **Apart from public debt,** the government also has debt obligations owed to agencies operating in accordance with government policies, such as the Bank for Agriculture and Agricultural Cooperatives and the Government Savings Bank, worth approximately THB 1 trillion.

Fiscal risks in the periods ahead

Sustainingly high global energy prices for prolonged periods prompted the government to use additional budget to support citizens' cost of living, both in the form of income loss (tax reduction) and increasing expenditures.

A new wave of severe Covid outbreaks forced the government to reintroduce virus containment and economic alleviation measures. Furthermore, tax collection revenue should be below the target set due to the economic slowdown.

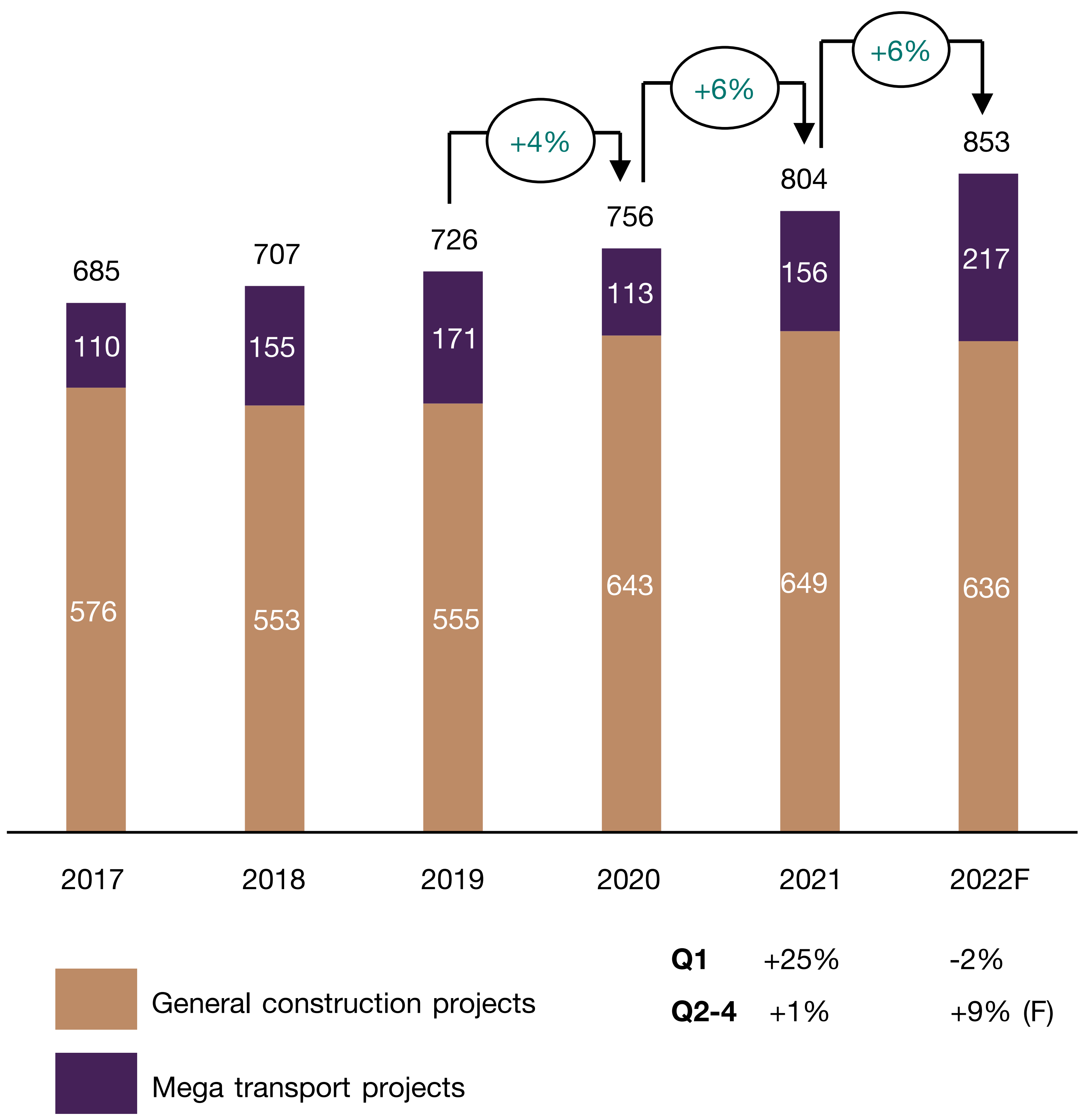
Although high inflation environments reduced the government's real debt, abrupt or higher-than-expected interest rate hikes could increase the government's borrowing costs.

Source: EIC analysis based on data from the Ministry of Commerce, Bureau of Budget, the Office of the National Economic and Social Development Council, Royal Thai Government, and various press

Government construction should expand by 6%YOY in 2022 due to the progress of mega-projects.

Value of government construction*

Unit: THB Billion



2022 Outlooks

Mega-projects

- **Ongoing construction projects showing progress** include the MRT Orange Line East Section, Pink Line, Yellow Line, Double-track Railway Phase 1, Bang Yai-Kanchanaburi Motorway, Suvarnabhumi Airport Runway 3, Contract 1 and 3 of Rama 3 - Dao Khanong Expressway
- **Bidding and construction for new projects,** such as the South Purple Line, West Orange Line, Northern and Isan Double-track Railway, and other motorways/ expressways projects

THB 500 Billion Emergency Decree

- Approximately THB 10-30 billion budget expected for government construction in 2022.

General construction projects

- The investment expenditure budget for fiscal year 2022 decreased by THB 27 billion (-6%YOY). The main agencies with construction investment budget in the fiscal year 2022 include the Department of Highways and the Department of Rural Roads, though investments will decrease according to overall investment budget.
- The disbursement rate of the investment expenditure budget in the fiscal year 2022 should be higher than fiscal year 2021, prompting a slight contraction in general construction project investments.

Note: *projects operated by government agencies, state owned enterprises, PPPs, and local administrations, such figures included the investment budget allocated from the THB 1 trillion and THB 500 billion emergency loan

Source: EIC analysis based on data from the Office of the National Economic and Social Development Council

Thailand’s financial conditions outlook for 2022

3 keys factor affecting Thailand's financial conditions for 2022

MPC is expected to hike its policy rate given better-than-expected economic growth and an inflation surge

EIC expects MPC to hike its policy rate to 0.75% in Q3/2022 because 1) the domestic economy is likely to gain traction, 2) inflation in Thailand will continue to rise more than expected, 3) real interest rates have declined and the baht weakened rapidly in the recent period, and 4) inflation expectations are starting to increase.

Thailand's financial conditions will likely tighten in line with global financial conditions but the recovering Thai economy will make it less tight.

Long-term Thai government bond yields will increase slightly in tandem with rising global yields, especially US treasury yields, and the outlook for Thai economic recovery in the second half of the year. Bank loans continued to expand, with growth mainly seen in large corporate credits, while mortgage loans grew at a slower pace.

The Thai baht will remain weak in the short term but will strengthen slightly toward the end of the year.

The baht will face weakening pressures in the short run driven driven by Fed's policy rate hike and risks from the war, where it is expected to be in the range of 34.5-35.5 baht/USD. **However, the baht will likely strengthen to a range of 33.5-34.5 baht/USD** toward the end of the year given strong economic recovery and an expected current account surplus thanks to the revival of foreign tourists and a slower increase in oil prices.

Summary of Thailand's financial conditions outlook for 2022

On monetary policy, EIC expects MPC to hike its policy rate to 0.75% in Q3/2022. The outcome of MPC meeting on June 8, 2022 reflected the Committee's assessment that the Thai economy will expand faster than expected and inflation will likely increase and remain elevated. The Committee also signaled a policy normalization going forward. EIC thus expects MPC to hike its policy rate 25 bps in Q3 in order to reduce the degree of ultra-easy monetary policy due to the following reasons:

1) **The domestic economy** will likely improve as seen from better-than-expected economic outturns in Q1 and private consumption that is expected to recover. Moreover, tourism will continue to expand following the relaxation of border controls. As a result, the Thai economy will recover faster than previously assessed.

2) **Thai Inflation** will continue to increase and could rise more than expected. Although the increase in inflation was mainly driven by supply-side factors, inflation will likely remain elevated for the rest of this year. Therefore, the cost passthrough may be larger and faster than expected, affecting household expenses. The policy rate hike will help ease demand-pull inflationary pressures going forward.

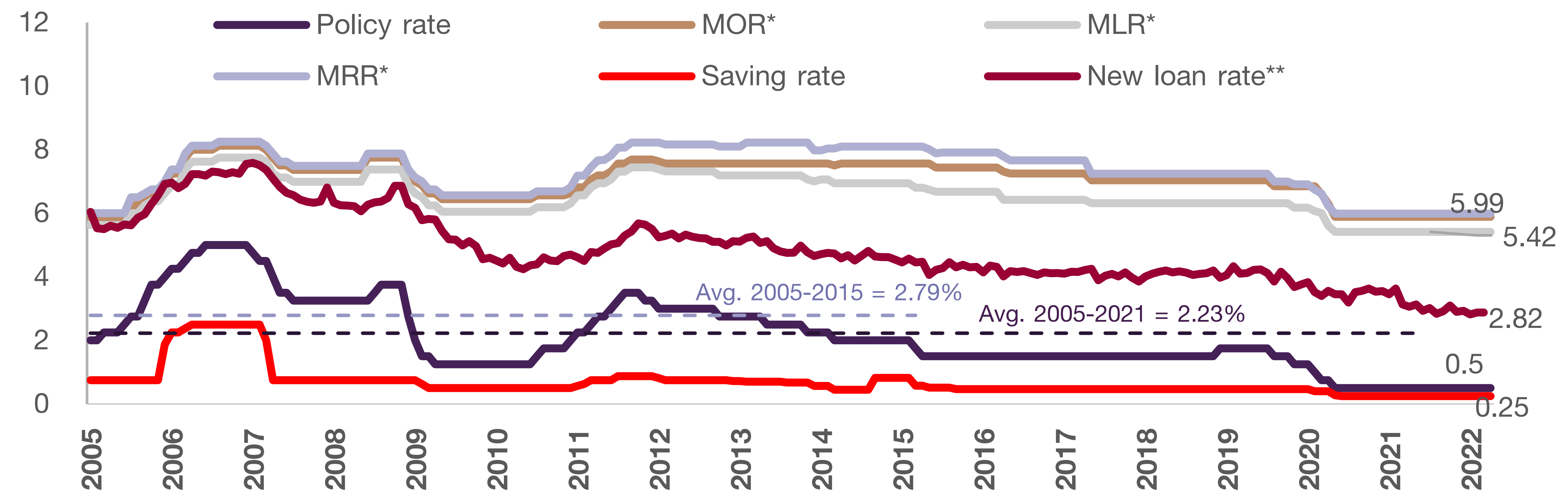
3) **The real interest rate** has declined, and the Thai baht has weakened rapidly in the recent period. Higher inflation has led to a decrease in the real interest rate (nominal interest rate less inflation). At present, Thailand's real interest rate is relatively lower than that of peers, potentially leading to capital outflows from Thailand and thus a weaker Thai baht. A policy rate hike will help slow capital outflows.

4) **Inflation expectations** have started to increase. Household short-term inflation expectations (1-year ahead) rose to 3.1% in May 2022. However, long-term inflation expectations remains anchored within the inflation target range of 1-3%, where 5-year ahead inflation expectations recorded 1.7% in the April 2022 survey.

EIC expects MPC to hike its policy rate to 0.75% in Q3 in order to reduce the degree of ultra-easy monetary policy, having assessed that the Thai economy will expand faster than expected while inflation pressures will rise

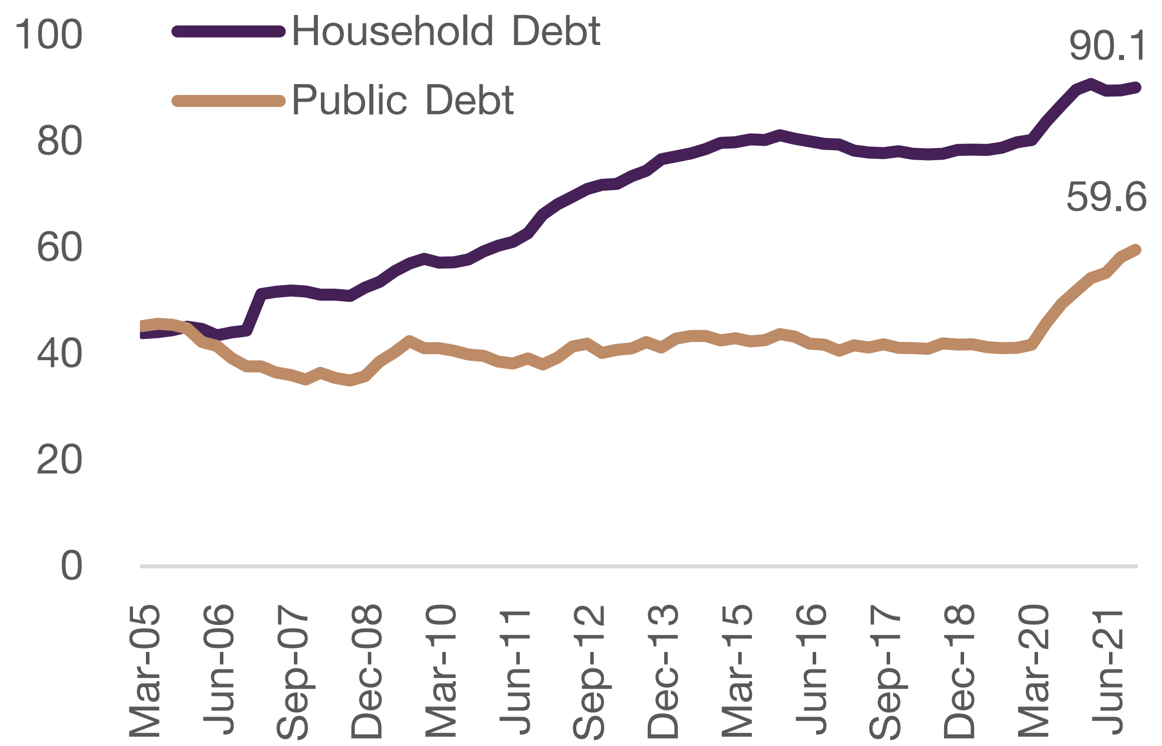
Funding costs in the Thai credit market

Unit: % (data as of 23 May 2022)



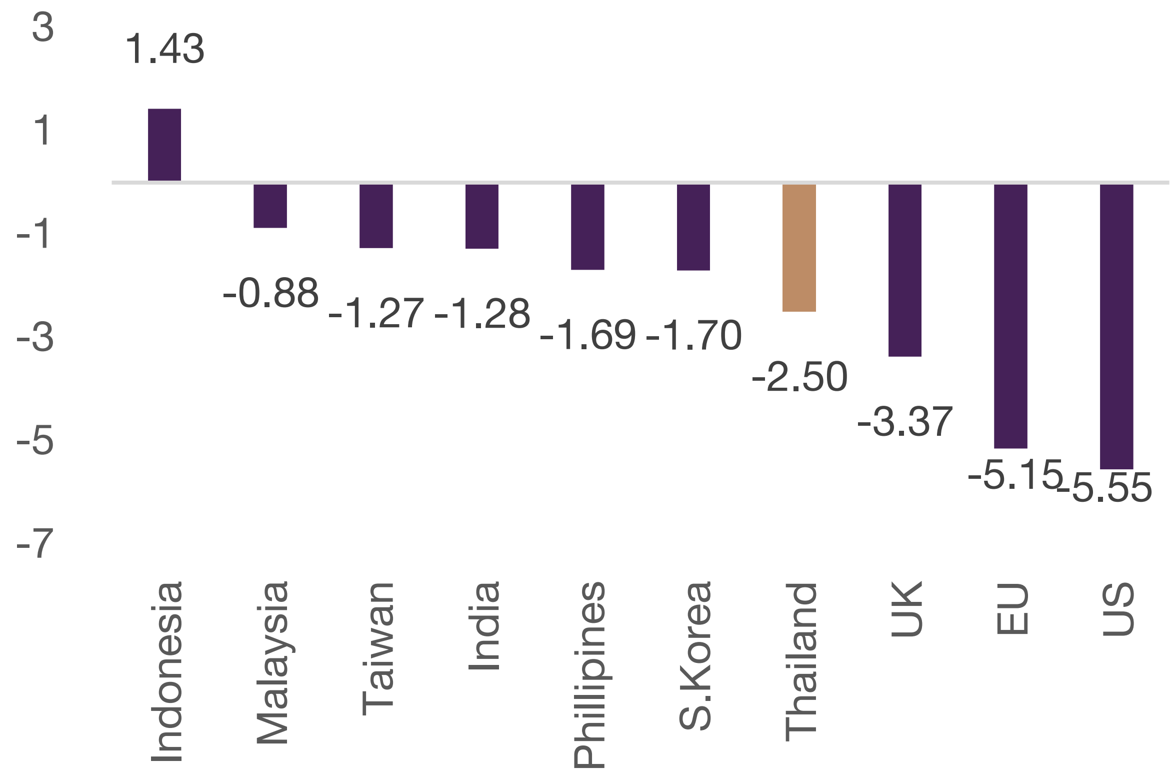
Household debt and public debt to GDP

Unit: %, data as of 2021Q4



Real interest rates

Unit: %, calculated using average inflation for the past 12 months



EIC expects MPC to hike its policy rate to 0.75% in Q3 due to the following reasons.

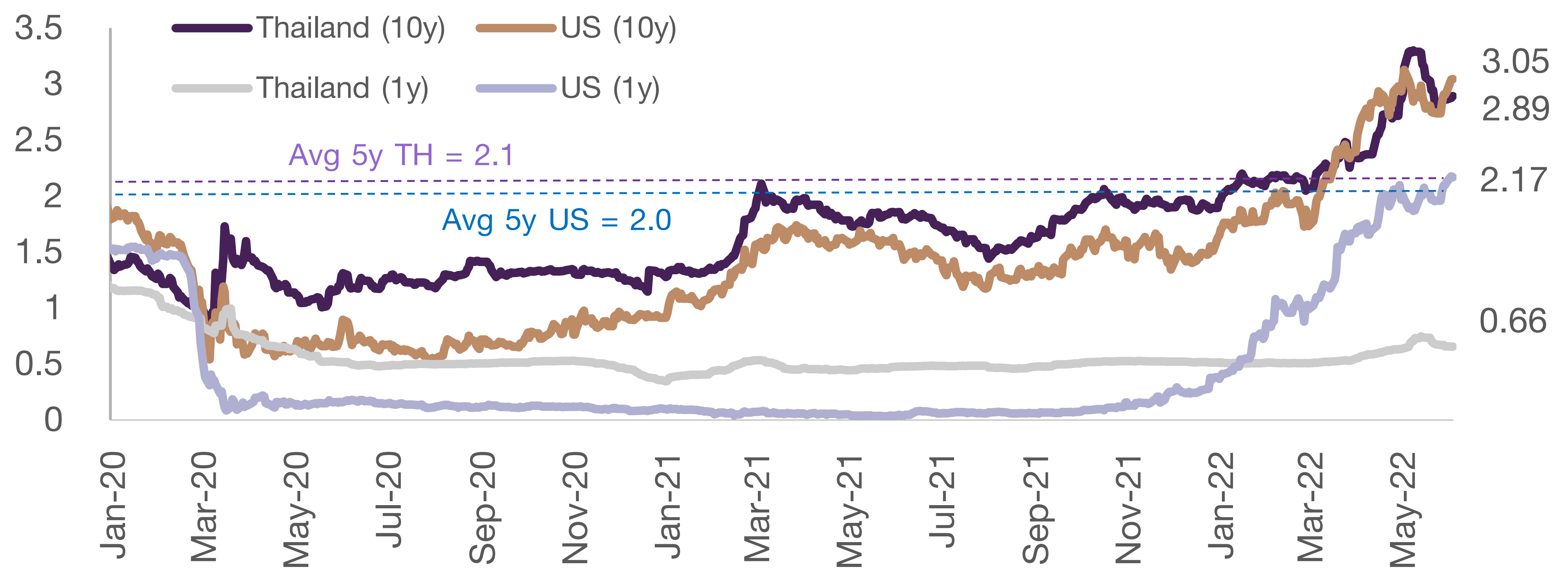
- **The domestic economy will likely improve** as seen from better-than-expected economic outturns in Q1 and private consumption expected to recover. Moreover, tourism will continue to expand following the relaxation of border controls.
- **Inflation in Thailand will continue to increase and could rise more than expected** and will likely remain elevated for the rest of this year. Therefore, the cost passthrough may be larger and faster than expected, affecting household expenses and private consumption.
- **Real interest rates have declined, and the Thai baht has weakened rapidly in the recent period.** Higher inflation has led to a decrease in real interest rates, potentially leading to capital outflows from Thailand and thus a weaker Thai baht. A policy rate hike will help slow capital outflows.
- **Inflation expectations have started to increase.** Short-term household inflation expectations (1-year ahead) rose from 2.5% in November 2021 to 3.1% in May 2022. However, long-term inflation expectations remains anchored within the inflation target range of 1-3%.

Source: EIC analysis based on data from Bank of Thailand

Long-term Thai government bond yields continue to rise in line with US treasury yields and are expected to increase slightly toward the end of the year on account of US policy rate outlook.

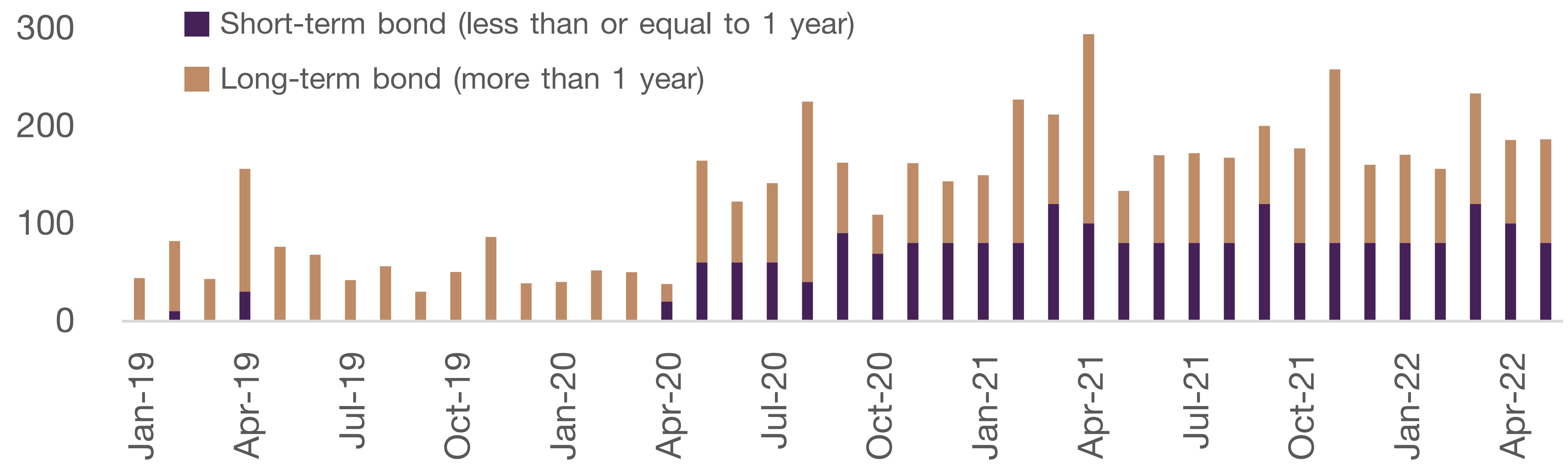
Thai and US government bond yields

Unit: % (data as of 7 June 2022)



Government bond supply

Unit: billion THB



Factors supporting the rise in long-term Thai government bond yields

EIC expects the 10-year Thai government bond yield to rise to the range of 3-3.1% at the end of 2022 driven by the following factors.

1. **Fed's accelerating rate hike and tapering will further give rise to US treasury yields.** EIC expects the 10-year US treasury yield to rise slightly at the end of 2022. Moreover, the conflict between Russia and Ukraine will put additional pressure on inflation, which may cause yields to rise in the short run.
2. **Yields in the global and Thai financial markets will likely increase following the policy rate hikes of many central banks, especially US.** Some 80% of changes in 10-year Thai government bond yields have been in line with those of US treasury yields.
3. **The outlook for Thai economic recovery in the second half of this year** is expected to improve thanks to domestic demand recovery and an increase in foreign tourists.

Factors slowing the pace of increases in Thai government bond yields

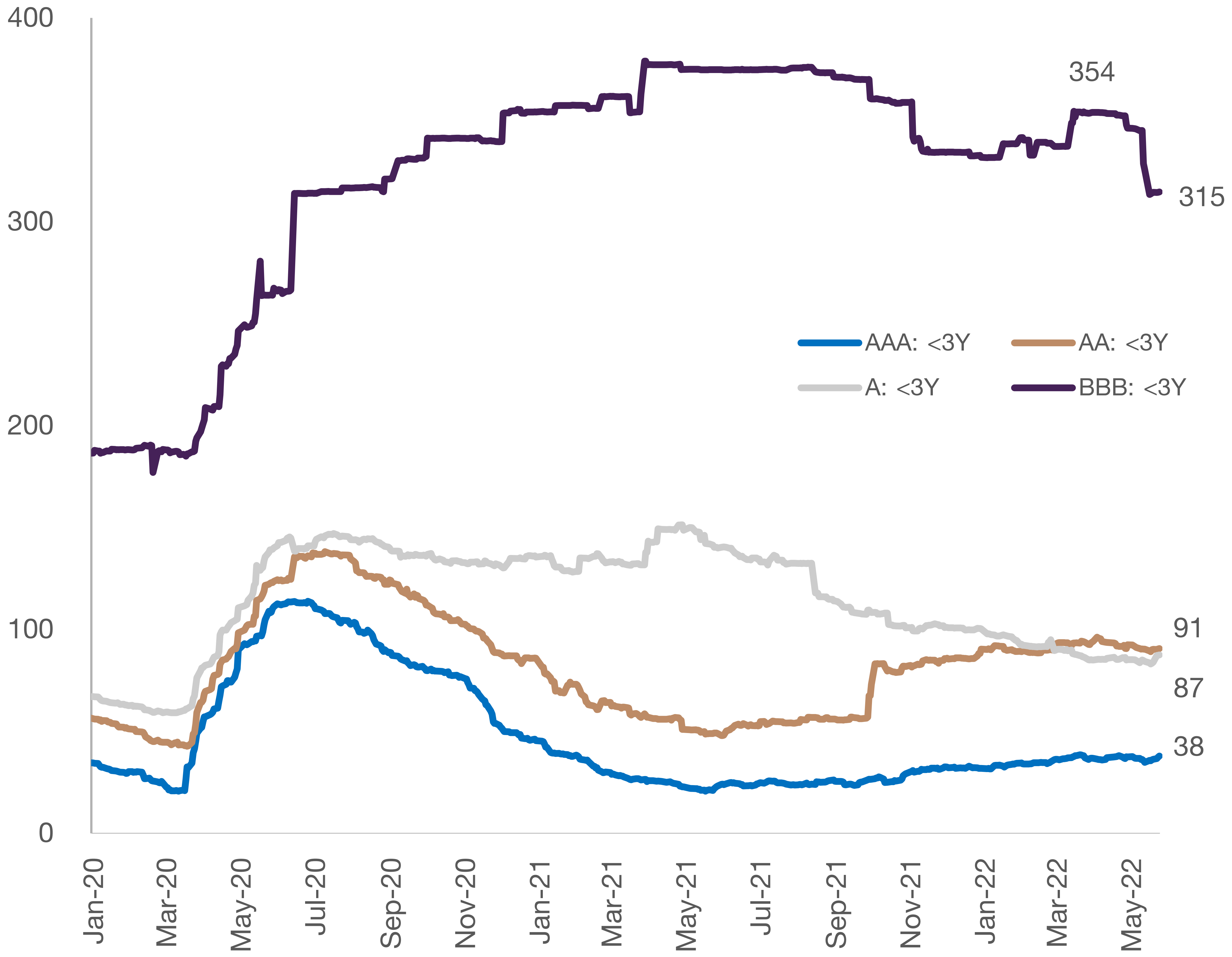
- **US inflation will likely decline** and US economy is expected to slow down, slowing the pace of increases in US treasury yields.
- **The supply of Thai government bonds is expected to decrease** in tandem with funding plans for fiscal year 2023, for which funding will be lower than the previous year.

Source: EIC analysis based on data from Bloomberg and ThaiBMA

Most corporate spreads are largely unchanged from the previous quarter, except that of BBB-rated bonds, which have declined in almost all sectors. This reflects a revival of investor confidence as risks to growth began to decrease.

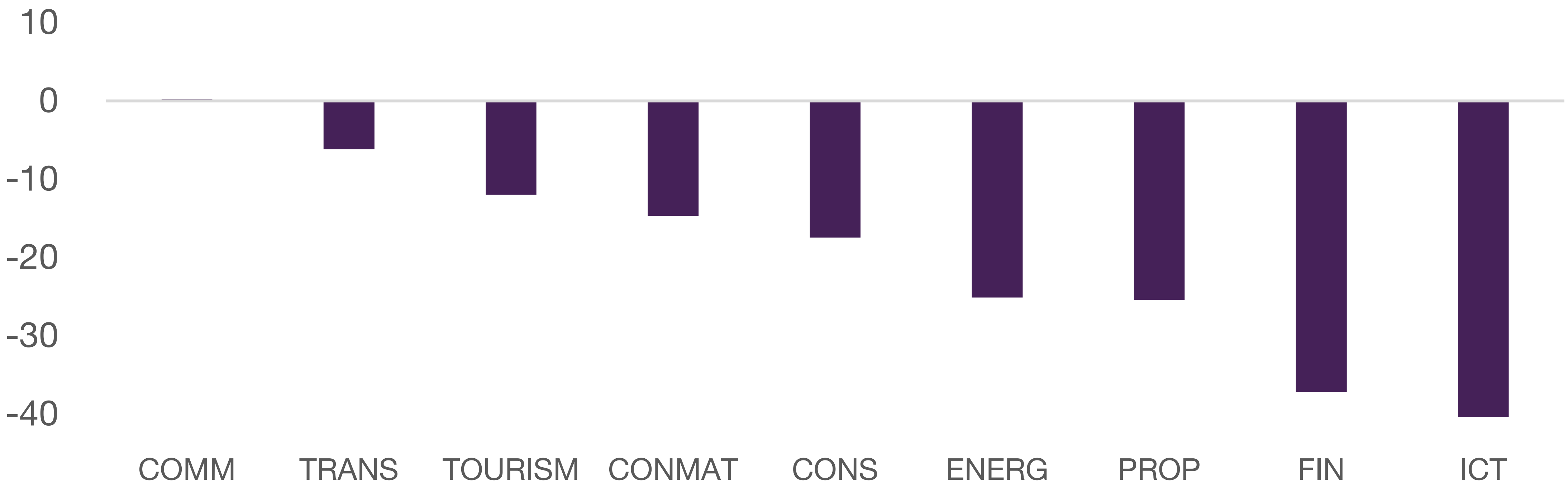
Corporate spreads by credit rating

Unit: bps (data as of 26 May 2022)



Changes in corporate spreads by sector (BBB rating and TTM <3y)

Unit: bps (YTD change)



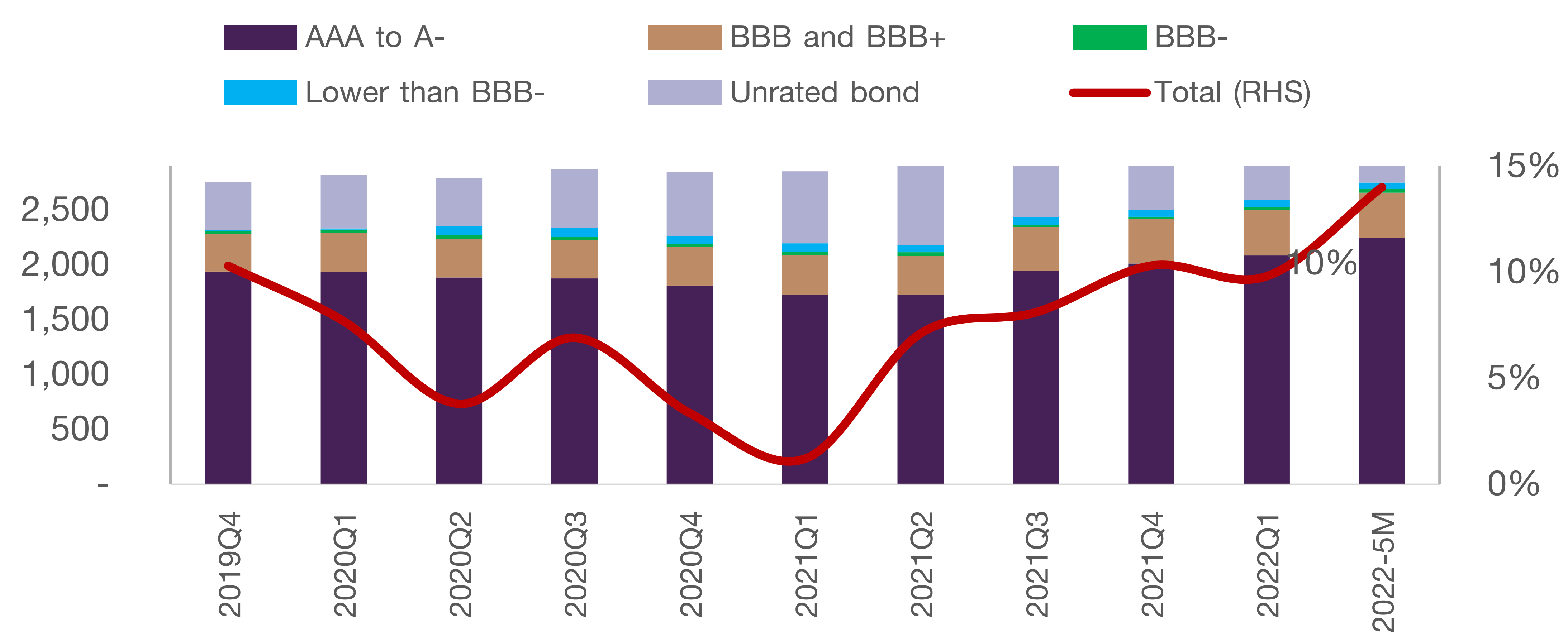
COMM	TRANS	TOURISM	CONMAT	CONS	ENERG	PROP	FIN	ICT
LOXLEY	TTA	DUSIT	TPIPL	UNIQ	PTG TPIPP SGP	SIRI, LPN, ANAN	MTC JMT PL	TRUE JMART TUC

The corporate spread of BBB-rated businesses declined significantly since the beginning of 2022. The decline was observed in almost all sectors, reflecting improvement in investor confidence as the Thai economy began to recover.

Source: EIC analysis based on data from the CEIC and ThaiBMA

Interest rates in the financial markets that remain low coupled with the Thai economic recovery outlook, causing Thai businesses to accelerate corporate bond issuance hoping to lock in lower funding costs as some businesses expect interest rates to rise in the second half of 2022

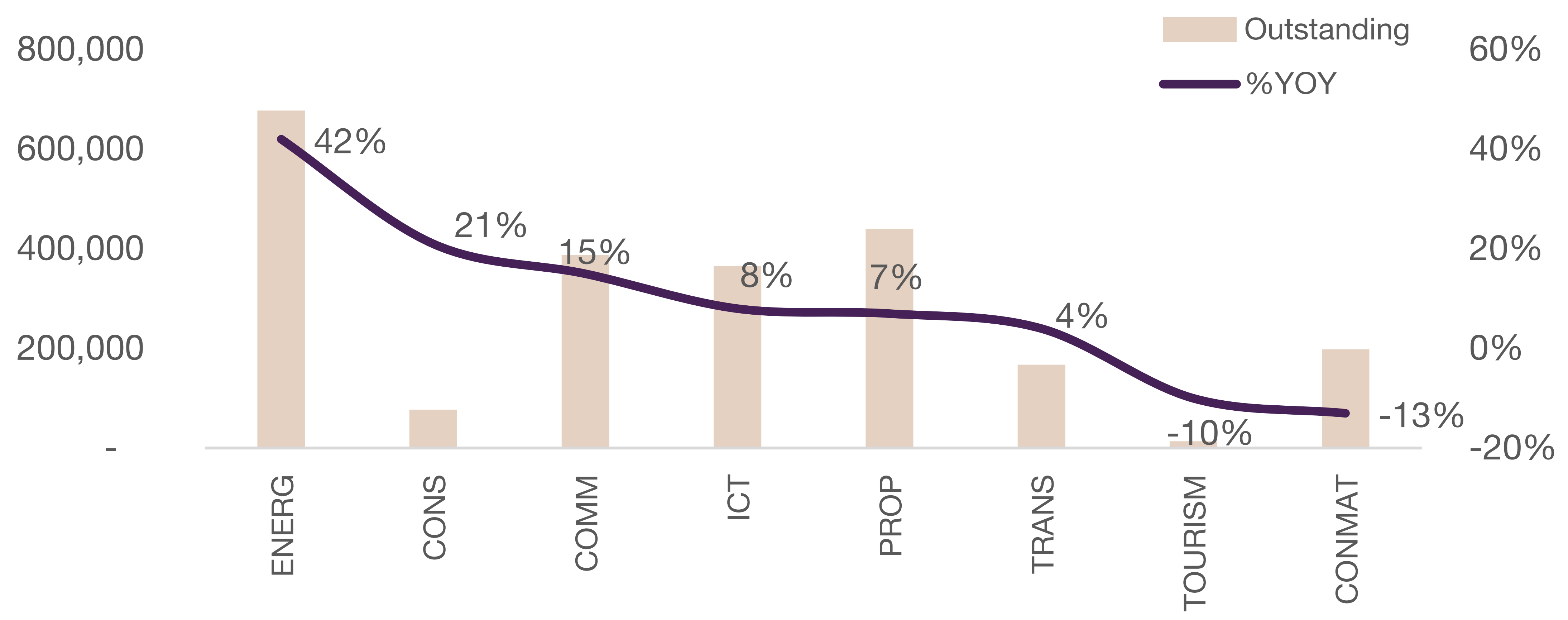
Outstanding corporate bonds (excluding financial sector) by ratings*



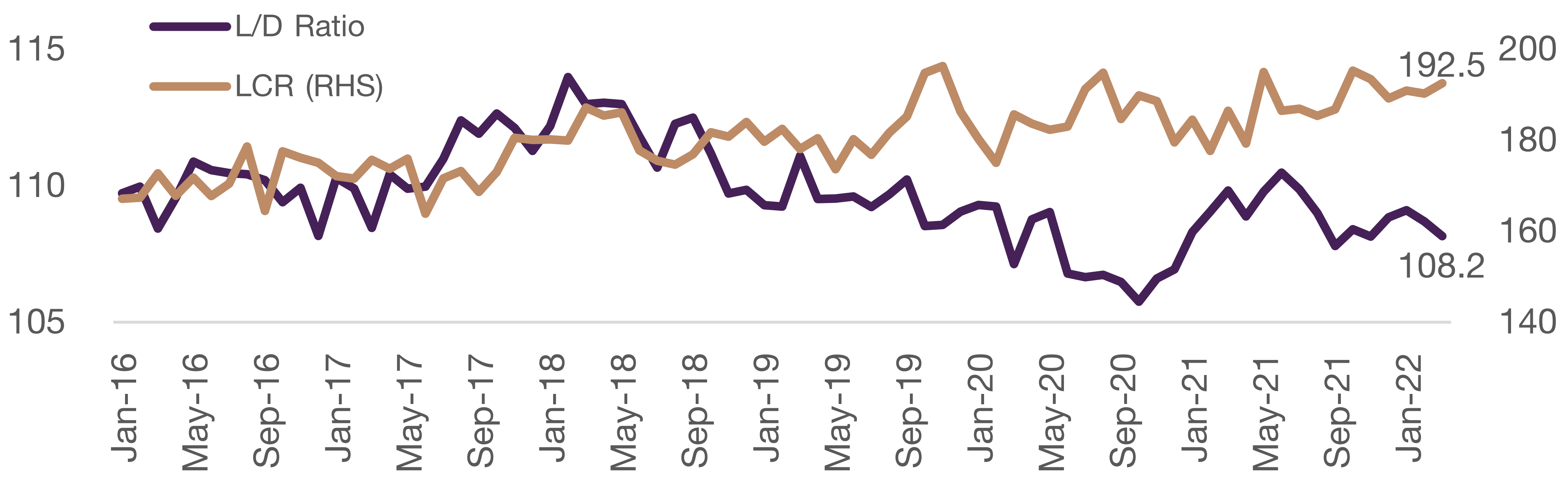
Note: *Includes short-term and long-term corporate bonds rated by Fitch and TRIS

- **Corporate bonds outstanding rose 14%YOY during January to May** as businesses accelerated financing in order to lock in lower funding costs, which will likely increase in the second half of this year in line with global interest rates and the possibility of a policy rate hike by BOT.
- **The largest corporate bond issuances were observed in energy businesses,** while the lowest were seen in the tourism sector.
- **Corporate bond issuances have contributed to larger liquidity of some businesses, causing bank deposits to rise and thereby pushing down the L/D ratio.**

Outstanding corporate bonds (excluding financial sector) by sector



L/D Ratio and LCR of commercial banking system

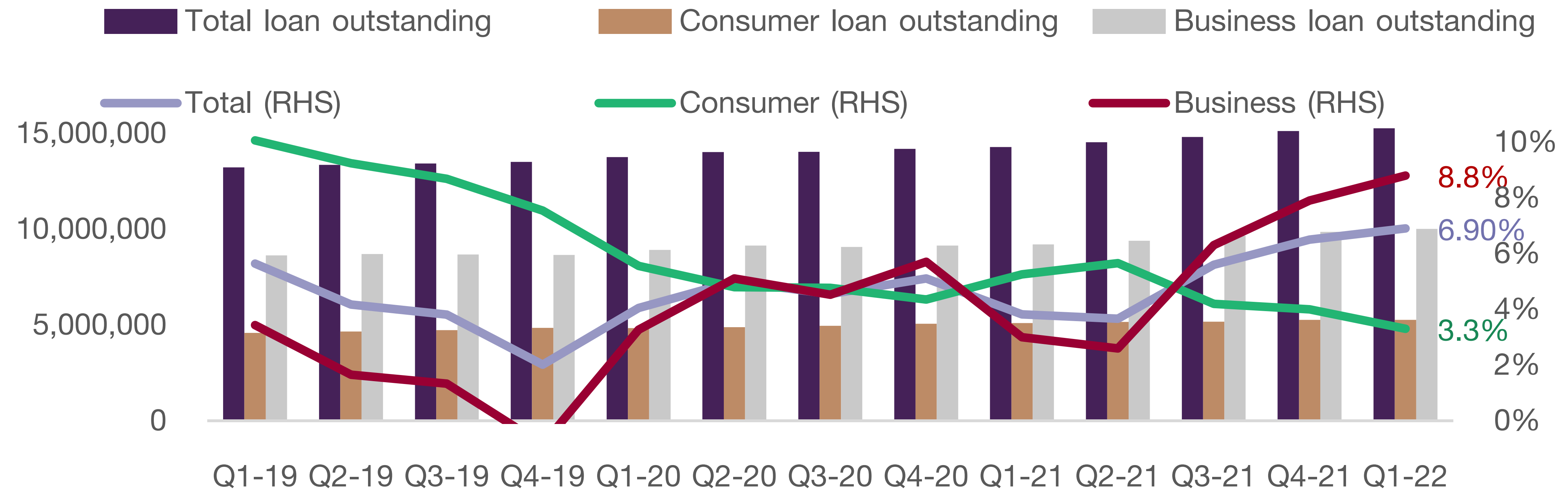


Source: EIC analysis based on data from the CEIC and ThaiBMA

Commercial bank loans continued to increase in Q1/2022, mainly from corporate loans. Meanwhile, consumer loans grew at a lower rate mainly due to mortgage loans.

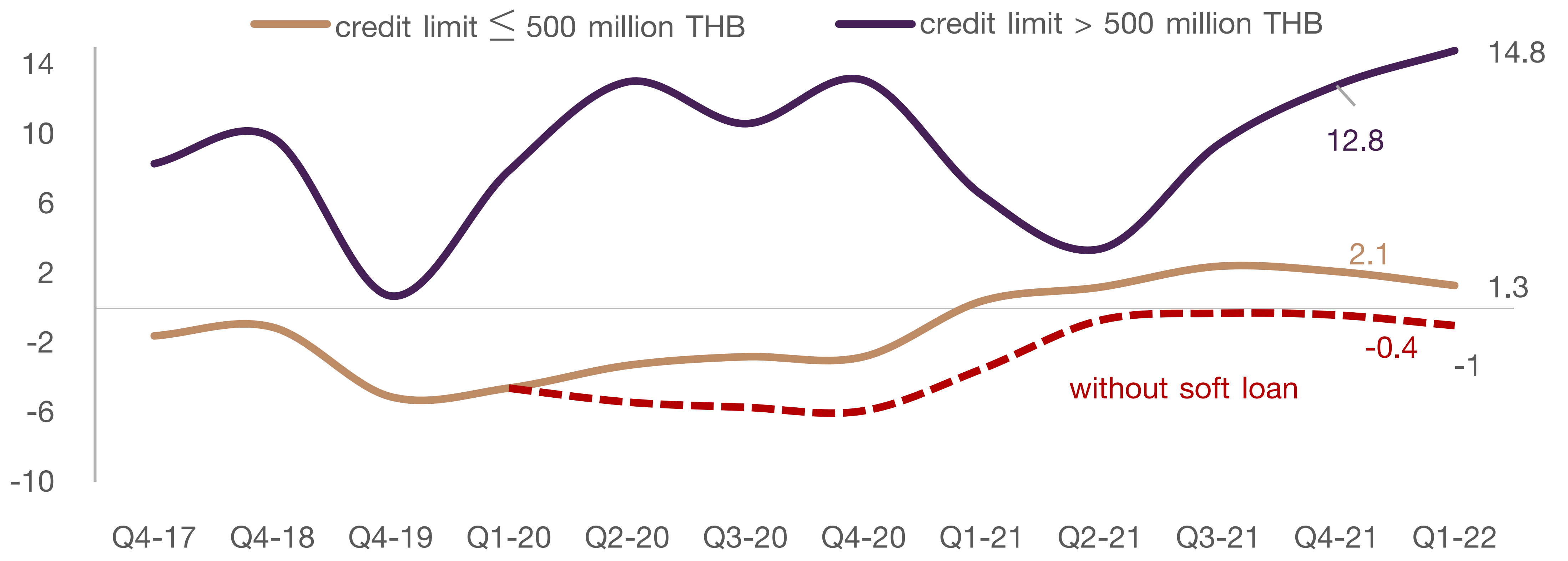
Total loan growth

Unit: million THB
Unit: %YOY



Business loan growth

Unit: %YOY



Consumer loan growth

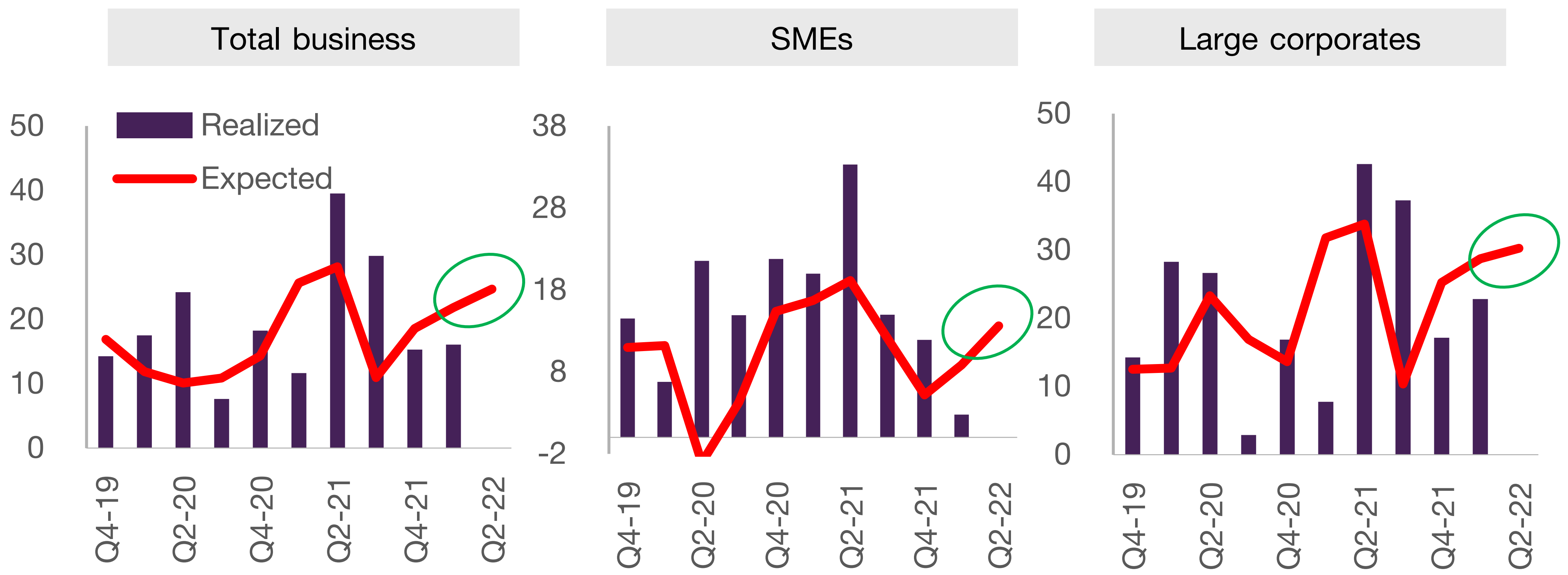
Unit: %YOY (as of 2022Q1)

Source: EIC analysis based on data from Bank of Thailand

Looking ahead, businesses will likely demand more loans, while financial institutions will remain cautious in extending loans to businesses. Demand for household credit will also increase given demand recovery in line with easing credit standards.

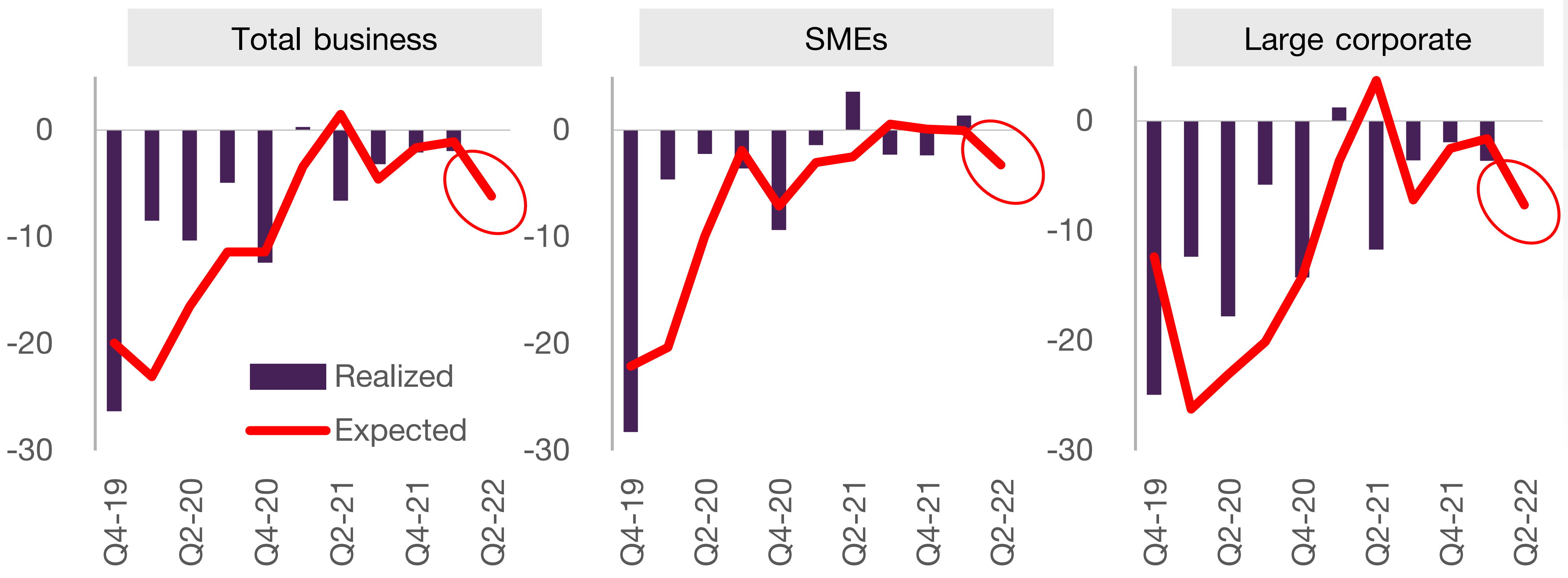
Demand for SME and corporate loans

Unit: Index (+ = increase in demand from the previous quarter)



Credit standards of business loans

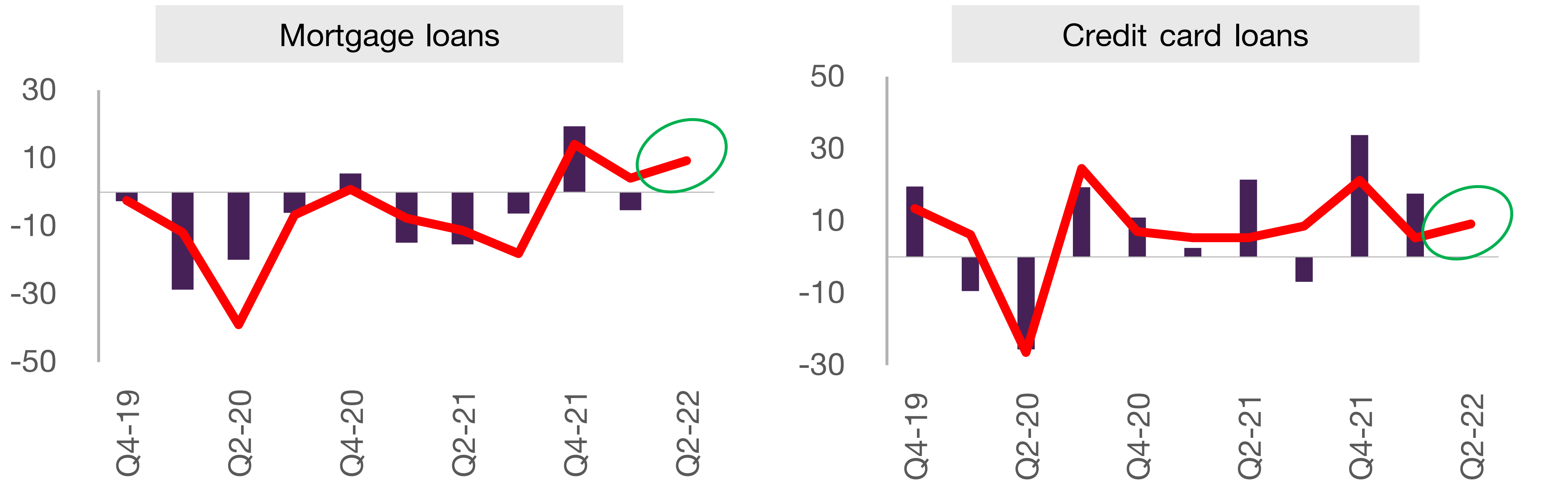
Unit: Index (- = tighter credit standards from the previous quarter)



Businesses will likely demand more loans, while financial institutions will remain cautious in extending loans as there remain risks to economic growth.

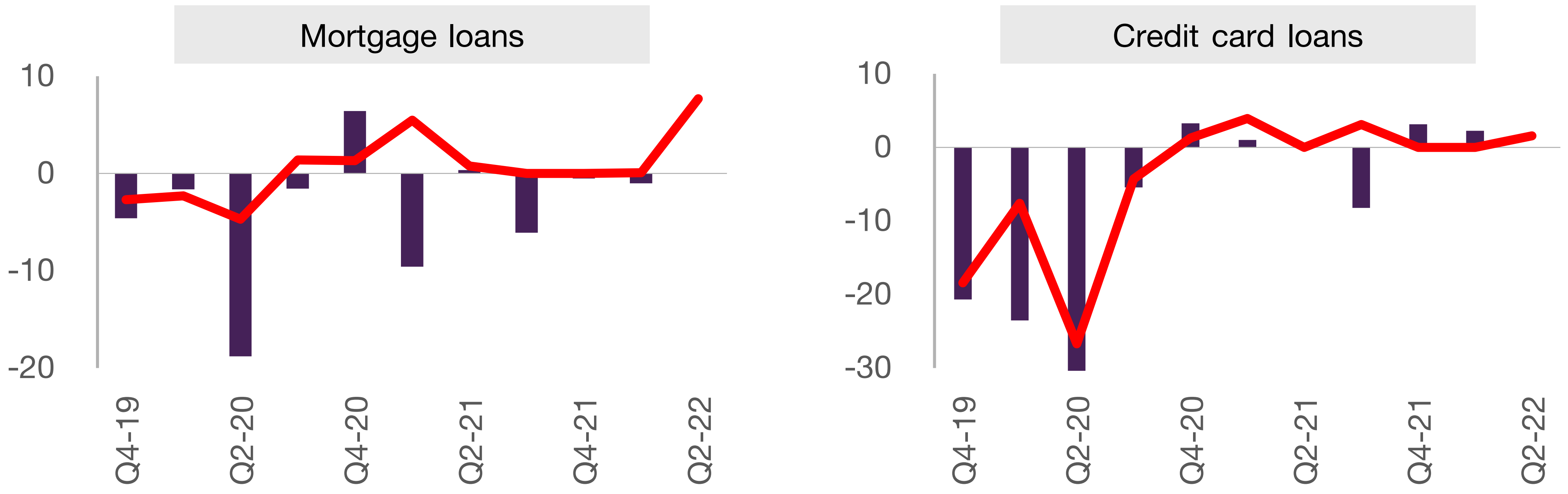
Demand for consumer loans

Unit: Index



Credit standards of consumer loans

Unit: Index (- = tighter credit standards from the previous quarter)



Demand for mortgage loans declined in the recent period, while financial institutions tightened their credit standards. Looking ahead, demand for loans will likely increase in line with demand following the city reopening.

Source: EIC analysis based on data from Bank of Thailand

Summary of Thailand’s financial conditions outlook for 2022

Regarding the Thai baht, EIC expects the baht to face weakening pressures in the short run due to Fed’s policy rate hike and risks from the war in Ukraine. However, the baht will likely strengthen slightly toward the end of the year thanks to strong economic recovery and improvement in the current account in line with the services balance. The baht has weakened around 3.6% since the beginning of 2022 to June 7, 2022. This depreciation was in the same direction and to a similar degree with other regional currencies, a result of deteriorated investor confidence given that the Thai economy was severely affected by its heavy reliance on tourism and a significant rise in oil prices. This has led to considerable capital outflows from Thai financial markets, especially from the government bond market. **For Q3/2022, the baht will still face weakening pressures** from Fed’s monetary policy tightening, war uncertainties, and a current account deficit due to high commodity prices. This will likely cause the baht to weaken to the range of 34.5-35.5 baht/USD. **However, the baht will likely strengthen slightly to a range of 33.5-34.5 baht/USD at the end of 2022** due to, 1) strong economic recovery, resulting in investors’ positive outlook for the Thai economy which will boost portfolio flows from foreign investors, 2) an expected current account surplus at the end of the year thanks to a recovery in the number of foreign tourists and falling freight costs. Nevertheless, EIC does not expect to see strong baht appreciation as US dollar will also strengthen due to the Fed’s monetary policy tightening, potential global economic slowdown, as well as uncertainties surrounding supply bottlenecks. This will incentivize investors to hold some safe assets, including US dollars.

EIC found that movements of the baht were related to 1) economic growth, 2) interest rate differentials, 3) inflation, 4) the current account, 5) the SET Index and, 6) government bond yields

Factors affecting baht movement

Relative productivity between Thailand and US - The baht will strengthen If Thailand's productivity (GDP per capita) increases more than that of US.

Thai-US interest rate differential – The baht will weaken if US interest rates increase more than Thai interest rates.

Relative inflation between Thailand and US – The baht will depreciate if the price level (inflation) in Thailand increases more than in US (PPP theory).

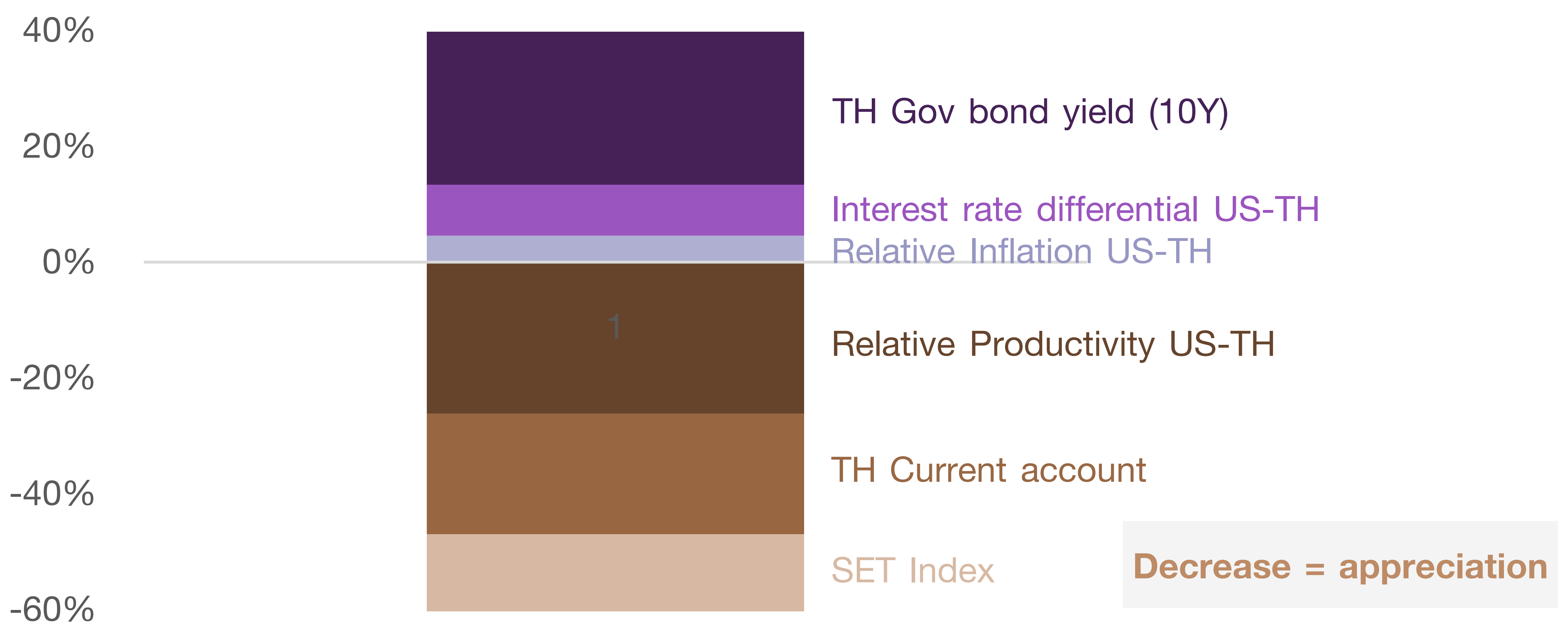
Thailand's Current account – The baht will strengthen on improvement in Thailand's current account.

SET Index – The baht will appreciate on a rise in the SET Index, reflecting improved confidence attracting inflows into the stock market.

10Y Thai government bond yield – The baht will weaken on an increase in bond yields, reflecting outflows from the bond market.

Factors affecting baht movement in Q1/2022

Unit: %



The baht in Q1/2022 was largely stable relative to the previous quarter due to the following factors:

- **Factors causing the baht to weaken** include, 1) capital outflows from the Thai government bond market, 2) an increase in Thai inflation, and 3) the US-TH interest rate differential
- **Factors causing the baht to strengthen** include, 1) US economic slowdown 2) improvement in Thailand's current account and 3) inflows into the stock market.

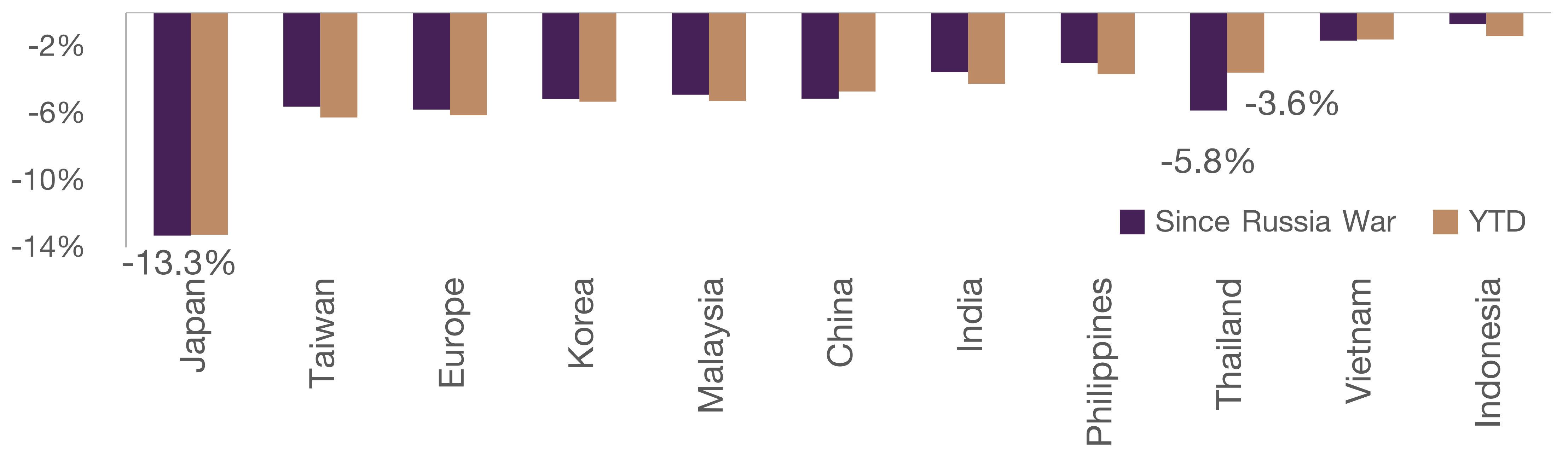
Looking ahead, Fed's policy rate hike will be key factor leading to baht depreciation. EIC expects the US-TH interest rate differential this year **to result in a roughly 4% baht depreciation.**

Source: EIC analysis based on data from Bloomberg

Looking ahead, although the baht will face weakening pressures from Fed's accelerating rate hike, the baht will strengthen in Q4/2022 given Thai economic recovery, which will likely lead to capital inflows and a current account surplus

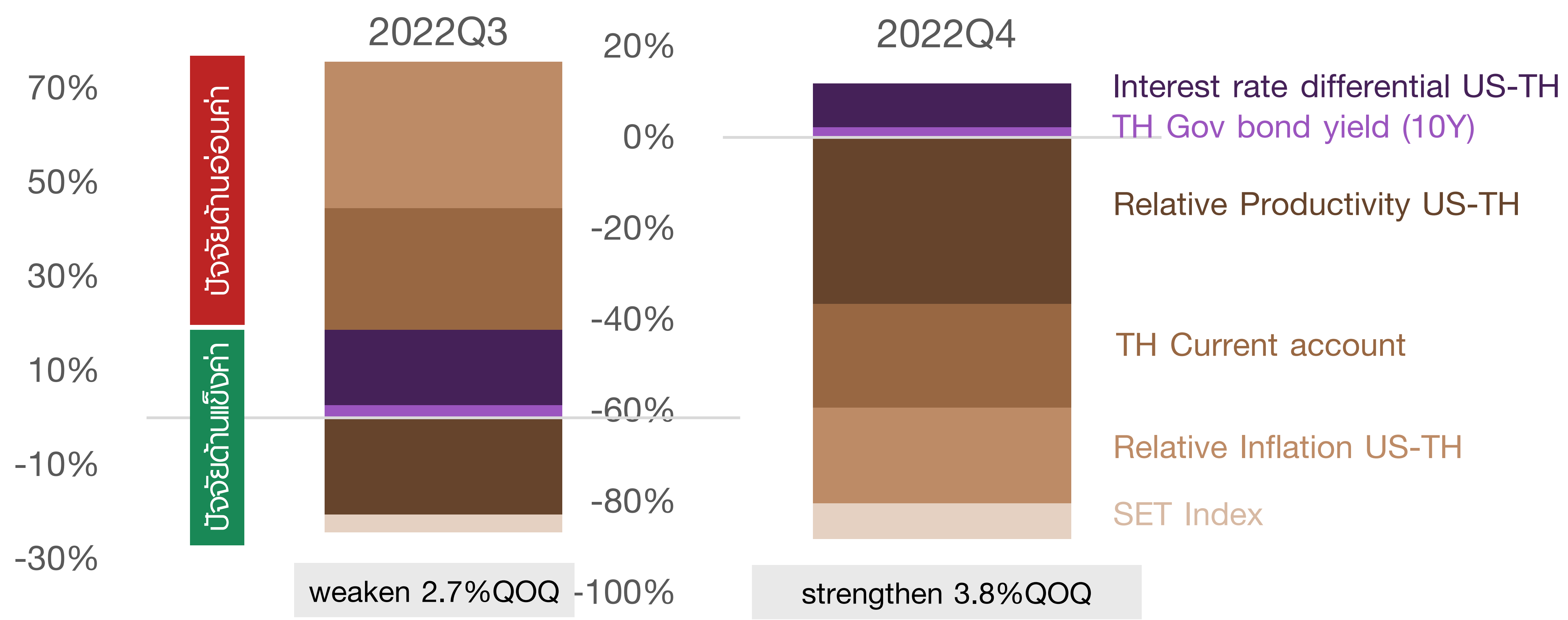
Change in currency value against USD

Unit: % (data as of 7 June 2022)



Factors affecting the baht in the period ahead

Unit: %, + = baht depreciation



EIC Thai baht outlook

In the short term, the baht will still face weakening pressures like other regional currencies. The baht is expected to be in the range of 34.5-35.5 baht/USD due to the following factors:

- **Fed's accelerating monetary policy tightening,** resulting in widening rate differential between interest rates of US and of other countries
- **Concerns over economic recession and tensions from the Russia-Ukraine war,** leading to risk-off sentiment and higher demand for safe assets
- **Thailand's current account deficit in the first half of 2022** given high energy prices, contributing to a rise in import values. Moreover, higher inflation while the Thai economy has yet to fully recover will be another pressure for the baht.

The baht is expected to strengthen in Q4 to a range of 33.5-34.5 baht/USD due to the following factors:

- **The Thai economy will likely gain traction in the second half of the year,** attracting portfolio inflows from foreign investors.
- **The current account is expected to register a surplus** due to an increase in foreign tourist figures and falling freight costs.

A BOT study suggests that an exchange rate passthrough from baht weakening to domestic prices for goods and services will still be low as the import content in Thailand's inflation basket only accounts for 17%. Thai inflation therefore has low sensitivity to import prices.

Source: EIC analysis based on data from Bloomberg

BULL-BEAR: Oil Prices

Oil Prices (USD/barrel) (Average)	2020	2021					2022F					
	Average	Q1	Q2	Q3	Q4	Average	Q1	Q2F	Q3F	Q4F	Average*	Price Range**
WTI	39	58	66	71	77	68	95	108	113	108	106	101-116
Brent	42	61	69	73	79	70	99	112	116	111	110	104-120

Remarks: * Average annual crude oil baseline estimated by EIC.

** Average crude oil price range baseline for 2022 estimated by 4 leading global houses (as of 8 June 2022).

Source: EIC analysis based on data from JP Morgan, Goldman Sachs, EIA, Bloomberg, and Capital Economics.

BULL-BEAR: Oil Prices

As a result of the Russia-Ukraine war, the European Union has announced a ban on the import of around 90% of Russian oil by the end of this year, amounting to around 3.4 million barrels per day, which has led to a significant tightening of the oil supply. Exceptions to the ban are imports through the southern Druzhba pipeline that delivers oil to Hungary, Slovakia, and Czech Republic, which constitute 10% of oil imports from Russia. Europe must now secure oil supplies from other sources, while Russia will increase oil exports to India and China. Ultimately, sanctions on Russian oil imports will cause a decline in Russian oil production and exports, which will greatly limit oil supply in the market.

China has eased lockdown measures in major cities following a reduction in the number of COVID-19 infections, which brought about higher demand for oil. China, the second largest consumer of oil globally, has eased lockdown measures in major cities such as Shanghai, home to around 25 million inhabitants. Prior to this, Shanghai had been under lockdown for two months (April - May 2022), and this had negatively impacted production and exports in the city and caused major supply disruption issues. Now, as lockdown measures are eased, economic activities including travel and transport will begin to normalize. The U.S. Energy Information Administration (EIA) therefore estimates that China's oil demand for Q3 of 2022 will be around 15.5 million barrels per day – a 3.2% YOY increase.

There has been a decrease in the volume of OECD and U.S. crude oil reserves, reflecting the fact that more reserves are being withdrawn to meet increasing oil demand. The EIA estimates that in Q3 of 2022, the volume of OECD and U.S. crude oil reserves will decrease to 2,708 million barrels (-3.1% YOY) and 1,181 million barrels (-5.5% YOY), respectively – reflecting an increase in demand for oil. Related to this, the U.S. will be entering its summer road trip season from the end of May to early August, which will greatly increase oil demand. The EIA thus estimates that U.S. oil demand in Q3 of 2022 will be 20.6 million barrels/day (2% YOY), which will contribute to a rise in oil prices.

BULL-BEAR: Oil Prices

Following an OPEC+ meeting on June 2nd, 2022, members agreed to increase monthly oil production output from 432,000 barrels per day to 648,000 barrels per day for July-August 2022. This is due to pressures from the U.S. and U.K. to increase oil production in response to the Russia-Ukraine war, which significantly raised oil prices. However, there remain concerns regarding the ability of OPEC+ members to produce outputs according to target. Given that OPEC+'s spare capacity remains at a relatively low level of 3 million barrels per day, increasing OPEC+'s production will be quite difficult. Furthermore, Russia, although an ally of OPEC+ who was also issued a production quota, will see their production capacity limited by international sanctions.

The U.S. plans to release 180 million barrels from its Strategic Petroleum Reserves over a 6-month period (April-September 2022) to bring down oil prices. This SPR release will be the highest in U.S. history. Prior to this, the U.S. had released 50 million barrels in November 2021 and 30 million barrels in March 2022, however these releases were unsuccessful in bringing down oil prices due to limited supply. In addition, a portion of the U.S. SPR release will be transported by tankers to Europe to replace the volume of oil that Europe would have imported from Russia.

SCB EIC's View
Q3/2022 (QOQ)

BULL

According to the EIC, average baseline prices of crude oil in Q3/2022 will increase due to supply tightening caused by the Russia-Ukraine war, and because there is now higher demand for oil to respond to greater economic activity following the relaxation of COVID-19 measures and countries reopening their borders.

The increase in baseline crude oil prices for Q3 of 2022 is due to limited supply stemming from the Russia-Ukraine war, where the European Union recently announced sanctions banning around 90% of oil imports from Russia by 2022. This will lead to a decrease in Russian oil production and exports of around 1-2 million barrels per day. And despite OPEC+ raising its monthly production output by 648,000 barrels per day in July and August 2022, and the U.S. releasing 180 million barrels from their SPR over the next six months, there will remain insufficient oil supply in the market to meet increased demand.

Meanwhile, oil demand is also expected to increase in response to more transport and logistics activities, as many countries have now relaxed their COVID-19 containment measures and begun reopening. China, which has a Zero COVID Policy, has eased lockdowns in major cities such as Shanghai, and this has contributed to a recovery in oil demand. Similarly, the U.S. is entering its road trip season, which will increase demand for oil, especially gasoline.

Finally, it is necessary to continue monitoring the easing of U.S. sanctions on Iran and Venezuela. Should an agreement be reached, this would allow Iran and Venezuela to export oil once again and help to increase the oil supply by around 1.5 - 2.5 million barrels per day, and by at least 400,000 barrels per day, respectively. In addition, new waves of COVID-19 infections that may limit travel and dampen oil demand could be a factor limiting oil price increases.

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