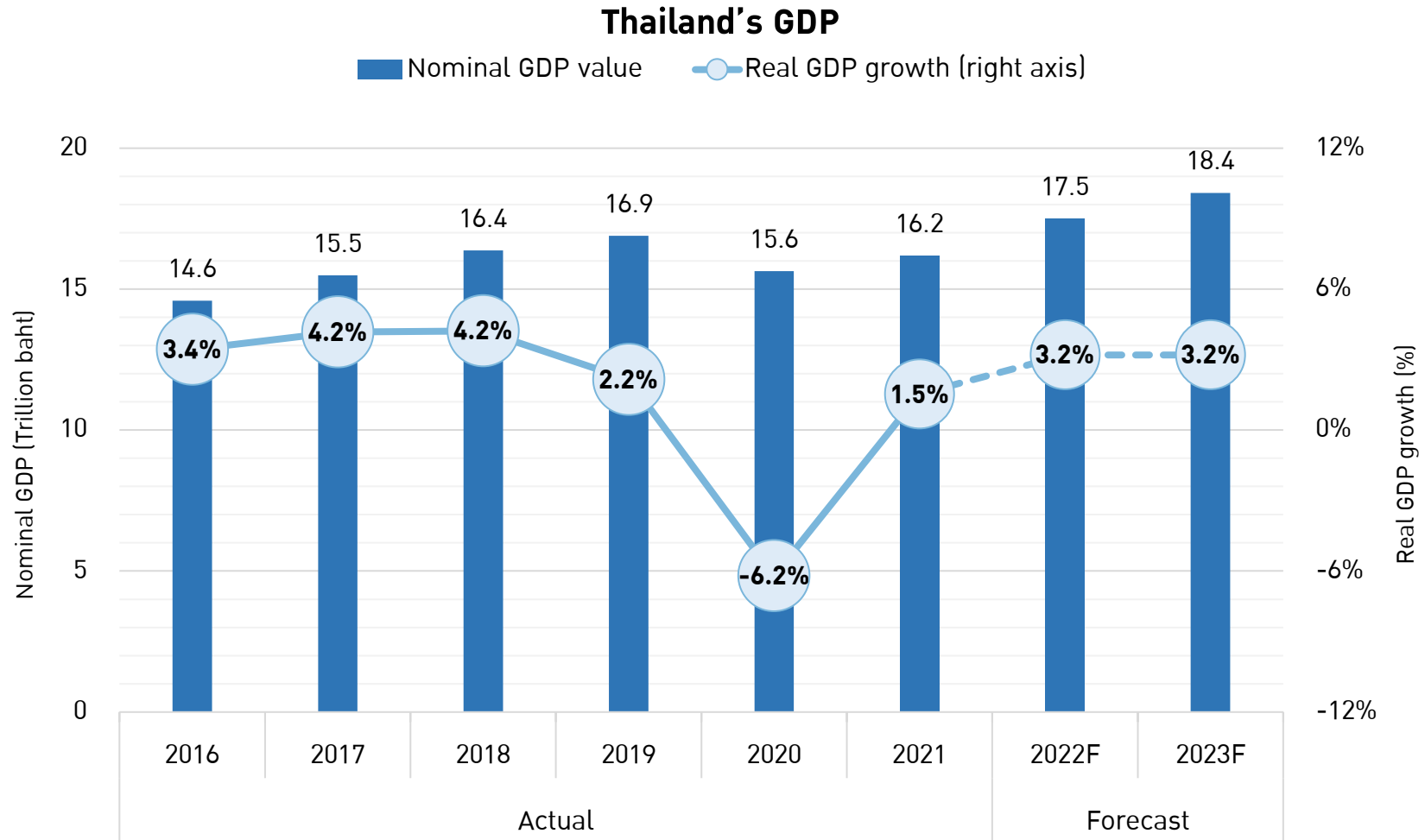

THAILAND OUTLOOK: RISKS & OPPORTUNITIES

KIRIDA

BHAOPICHITR

22 NOV 2022

THAI NOMINAL GDP RETURNED TO ITS PRE-COVID LEVEL IN 2022 BUT NOT REAL GDP

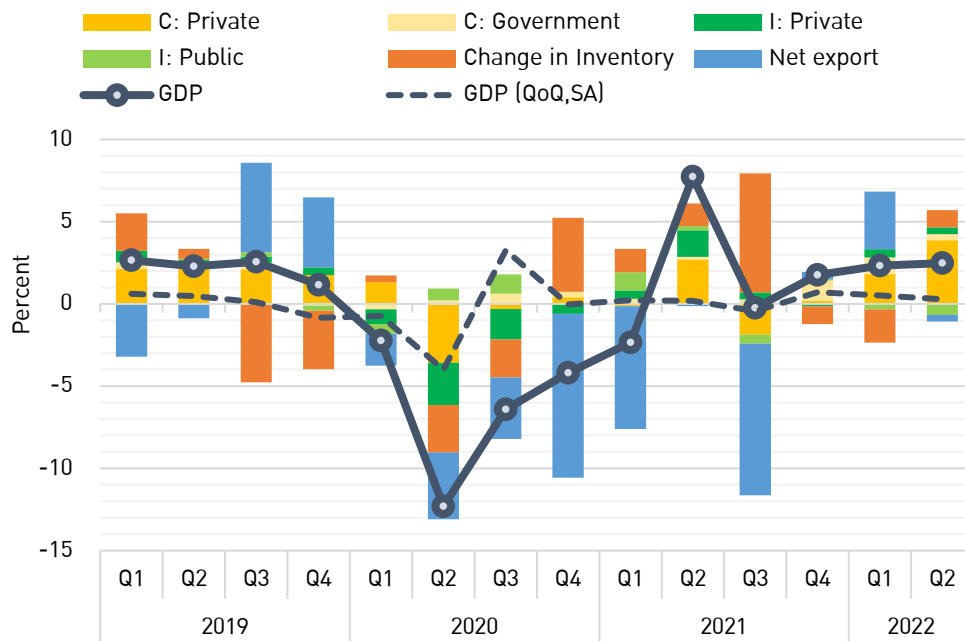


Source: National Economic and Social Development Council (NESDC) with TDRI calculation

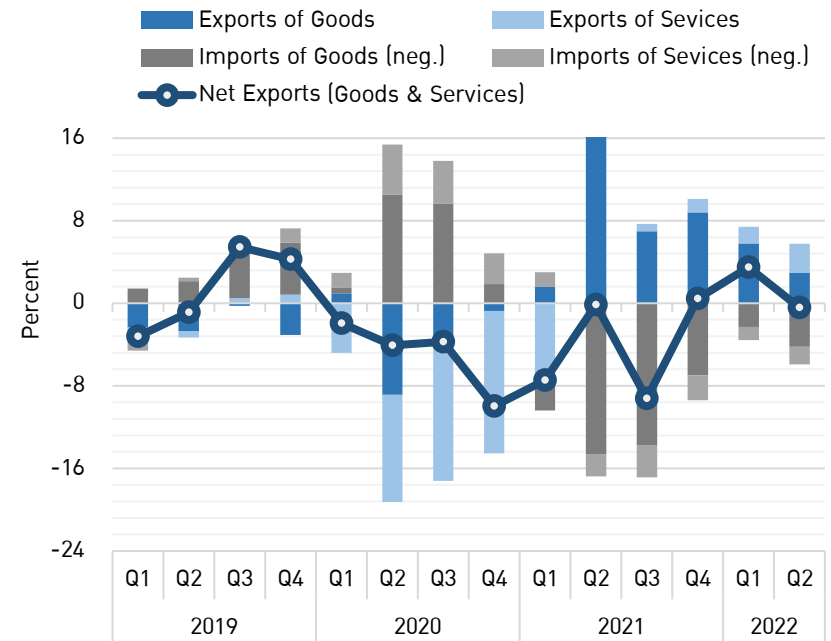
THAILAND'S GDP GROWTH COULD REACH 3.2% THIS YEAR AND NEXT

- The Thai economy could grow by 3% this year and next after expanding by only 1.6% last year and contracting by 6.2% in 2019. Hence, on next year will Thailand's GDP will recover to its 2019 level.
- Growth this year and next will be supported by the recovery in household consumption, exports, tourism, and private investments. Import volume will continue to rise with recovery in private investments.
- Policy rate rise will continue to be accommodative, rising by an additional 0.25% this November and by another 0.5% next year.

GDP growth contribution (%YoY)



Growth contributions of net exports (%YoY)



Source: NESDC and with TDRI Calculation

POLICY RATE LIKELY BE 1.25% THIS YEAR AND UP TO 2% NEXT YEAR

- Given the persistent high inflation into 2022H2 and the rapidly widening gap between the US FED rates and Thai policy rates, the MPC raised policy rate by 0.25% each in August and September, raising the policy rate to 1.00%.
- The policy rate will likely be raise by another 0.25% in November and another 0.75% next year.
- However, commercial banks may raise their MLR by 0.15% with each 0.25% policy rate hike, given the current ample liquidity, slower economic growth, and questionable quality of existing loans.

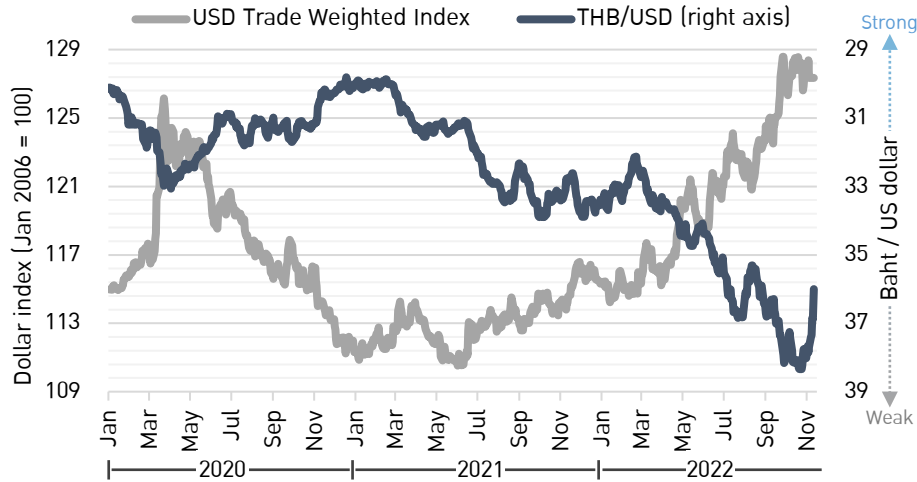
Different periods of policy rate hikes

	(1) Feb 05 – Jul 06	(2) May 08 – Sep 08	(3) Jun 10 – Sep 11	(4) Nov 18 – Jan 19	(5) Jan 22 – Oct 22
Policy rate (bp change)	300	50	225	25	50
MLR bp change	200	37	138	0	25
MLR change per 25 bp change in policy rate	16.67	18.50	15.33	0	12.5
CPI YoY	5.3%	8.1%	3.5%	0.4%	6.2%
GDP YoY growth	4.6%	2.8%	3.5%	3.6%	2.4% (1H2022)
Loan to deposit ratio	82.7%	90.3%	88.0%	85.8%	93.6%
NPL to total loan	9.0%	6.2%	3.4%	2.9% (2.4% SM)	2.9% (1H2022)

Source: Bank of Thailand, BIS, and TDR calculation

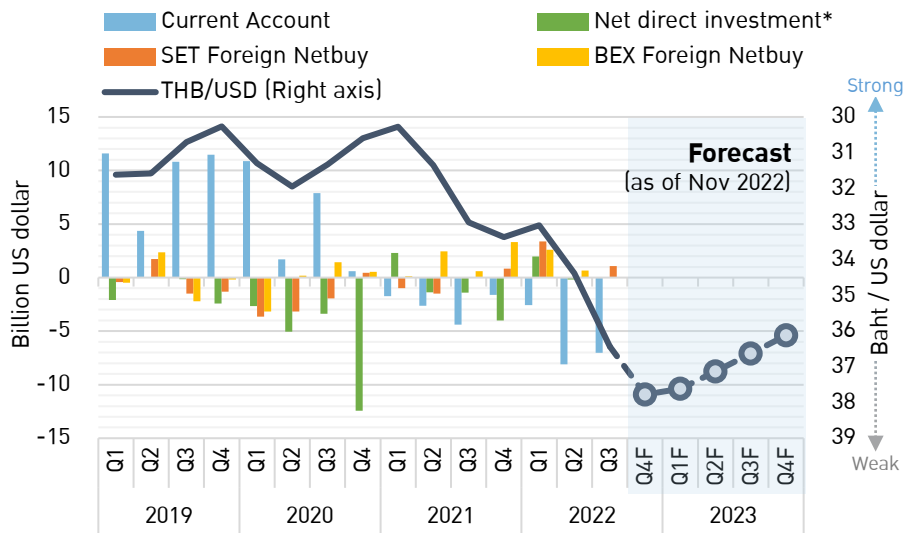
BAHT IS PROJECTED TO BE 37.77/USD BY END-2022 AND 36.87/USD NEXT YEAR

Dollar index & Thai baht



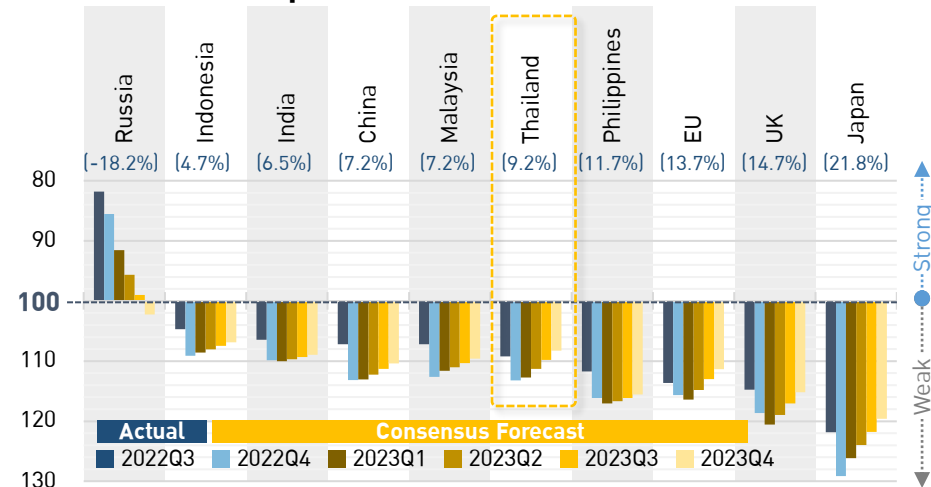
- Baht weakened to 38/USD in September (12% depreciation yoy) as the US dollar sharply strengthened and current account deficits were high.
- Baht is projected to strengthen to 37.77/USD in 2022Q4 and average at 35.36/USD this year.
- Next year, the Baht is projected at 36.87/USD as current account strengthens from tourism receipts and lower growth in import bills.

Thai Baht Movement Drivers



Note: *Data for 2022Q3 are not yet released

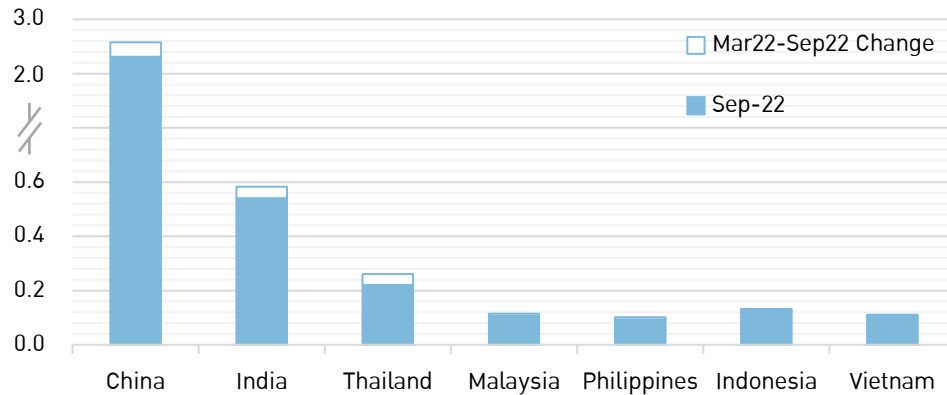
Index of Local Currencies to US dollar, compared to 2021Q4 (2021Q4 = 100)



Note: Number in brackets are %changes in exchange rate in 2022Q3 from 2020Q4

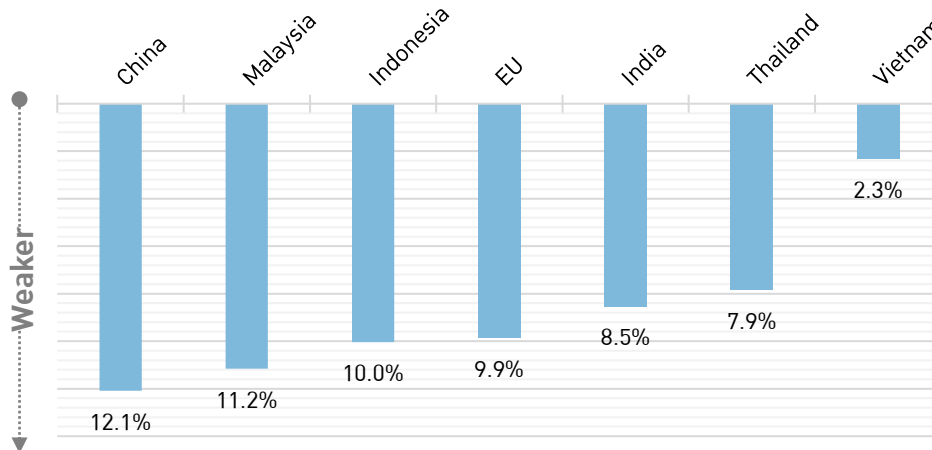
SIMILAR TO EMERGING E. ASIA THAILAND HAS BEEN CUSHIONED BY LARGE RESERVES

Foreign Exchange Reserves (Trillion USD)



- For East Asian emerging economies including Thailand, high levels of foreign reserves have been able to cushion them from a balance of payments crisis, while allowing for their currencies to depreciate.

% Change of exchange rate on 11 Nov 2022, compared to end-2021



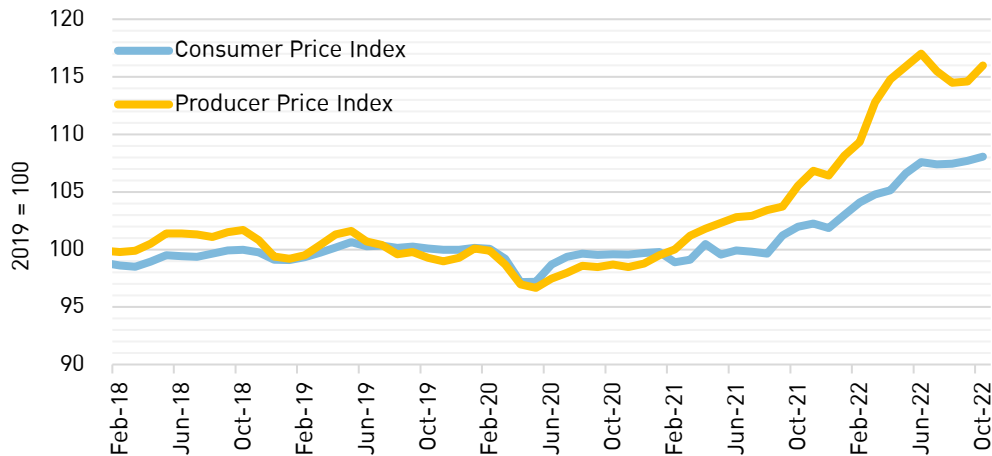
- Most E. Asian emerging currencies have depreciated by more than 10% over the past 10 months with the Thai baht depreciating most at 7.9%; this has raised imported inflation.

Source: IMF, CEIC data, and World Bank

INFLATION IS DECELERATING, BUT PRICES WILL REMAIN HIGH

- Headline inflation peaked at 7.9% in August and is expected to decelerate as energy prices ease. It could average at 6% in 2022Q4 and is projected to slow down next year and average at 2.5% as
 - rise in producer costs are starting to be partially passed on to consumers
 - 5% rise in the minimum wage is estimated to raise inflation by around 0.25% this year due to its marginal effect on domestic demand and rising production costs.
 - weaker Baht next year raises imported inflation.
 - diesel price will not fall from its current subsidized level.

Producer and Consumer Price Indices



Consumer price index (%YoY)

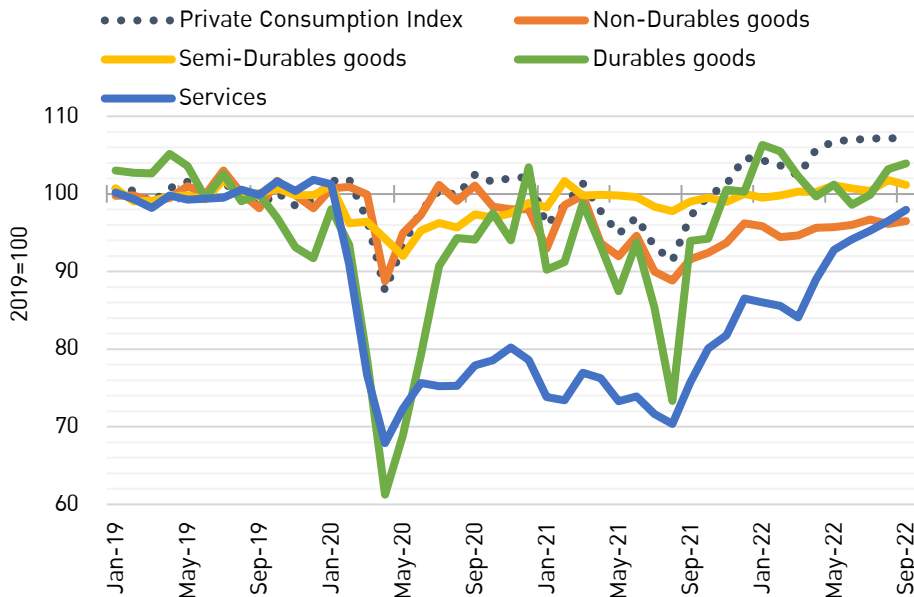
Consumer price	Aug-22	Sep-22	Oct-22	Weight
Headline inflation	7.86% (0.05%)	6.41% (0.22%)	5.98% (0.33%)	100.0%
Raw Food	10.32% (1.84%)	10.97% (1.01%)	10.48% (1.38%)	20.6%
Energy	30.50% (-2.67%)	16.10% (-0.57%)	13.07% (0.14%)	12.4%
Core inflation	3.15% (0.09%)	3.12% (0.14%)	3.17% (0.05%)	67.1%
Shelter	0.18% (0.01%)	0.20% (0.02%)	0.22% (0.03%)	15.5%
Fuel & repair of vehicles	12.04% (-2.40%)	8.93% (-2.09%)	6.59% (0.12%)	15.2%
Meats, Poultry & Fish	15.15% (0.50%)	15.24% (0.13%)	15.02% (-0.14%)	8.9%
Prepared Food: at Home	8.91% (0.19%)	9.33% (0.38%)	9.51% (0.15%)	8.7%
Prepared Food: not at Home	8.50% (0.06%)	8.83% (0.37%)	8.78% (0.05%)	6.7%
Medical & Personal Care	1.49% (0.37%)	1.51% (0.18%)	1.64% (0.13%)	5.7%
Electricity, Fuel, Water Supply	43.89% (0.29%)	13.18% (4.90%)	13.21% (0.03%)	5.5%
Vegetables and Fruits	11.81% (5.27%)	12.43% (2.93%)	7.99% (4.73%)	5.5%
Recreation	1.14% (0.02%)	1.21% (0.02%)	1.30% (0.07%)	4.5%

Source: Minister of Commerce, Bank of Thailand, and TDRI's calculation
 Note: Number in bracket are MoM growth

CONSUMPTION HAS RECOVERED BUT GROWTH WILL SLOWDOWN NEXT YEAR

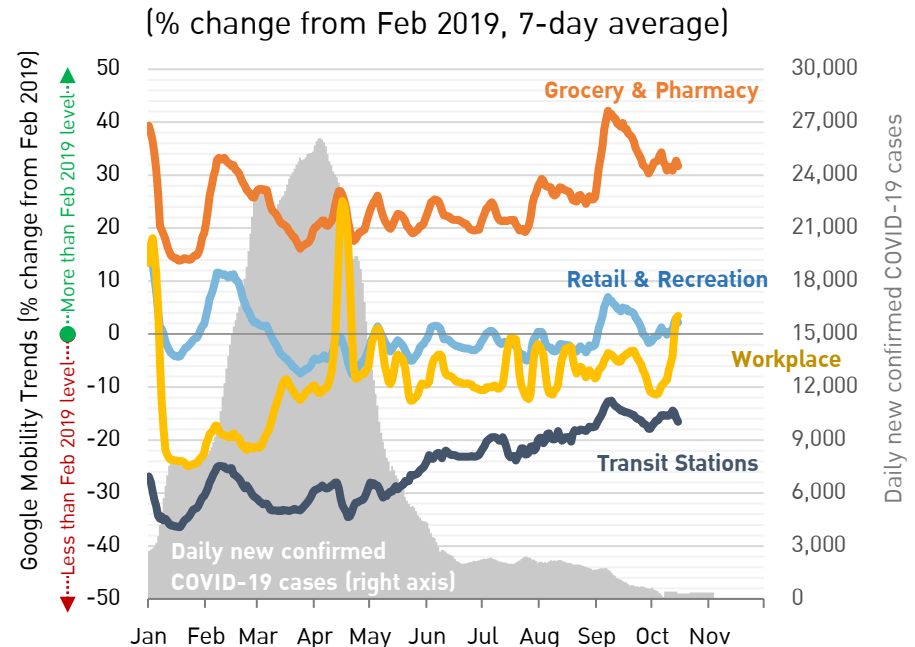
- Household consumption, particularly of durable goods and semi-durables goods, continued to recover since Apr-May 2022, while service shows signs of recovery near pre-COVID levels as domestic tourism recovers.
- However high prices, rise in interest rates, and high household debt levels would likely constrain consumption growth next year, especially of durable goods.

Private Consumption Index (Seasonally Adjusted)



Source: Bank of Thailand

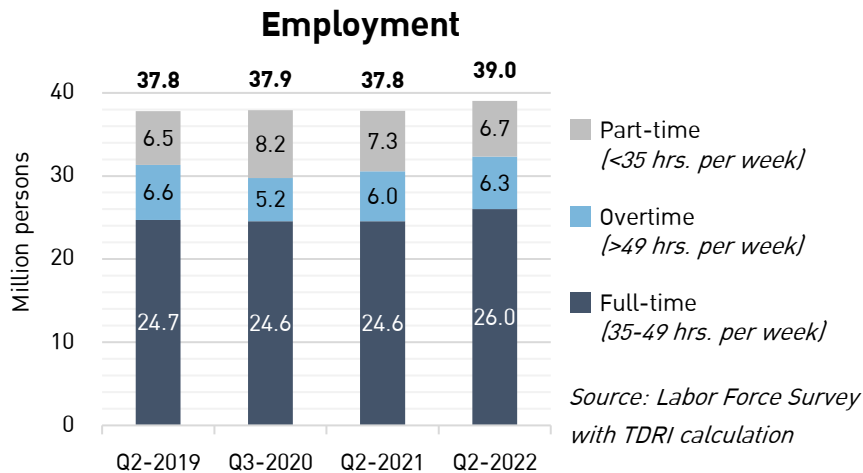
Google Mobility Trends



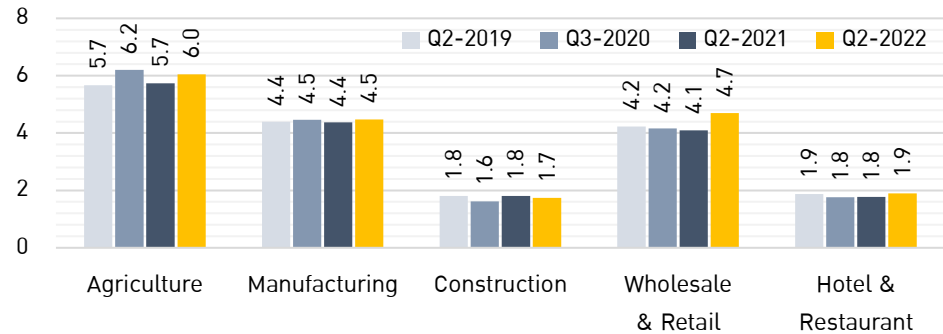
Source: Google COVID-19 Community Mobility, Our World in Data

RISE WORKING HOURS HAVE SUPPORTED HIGHER INCOMES AND CONSUMPTION

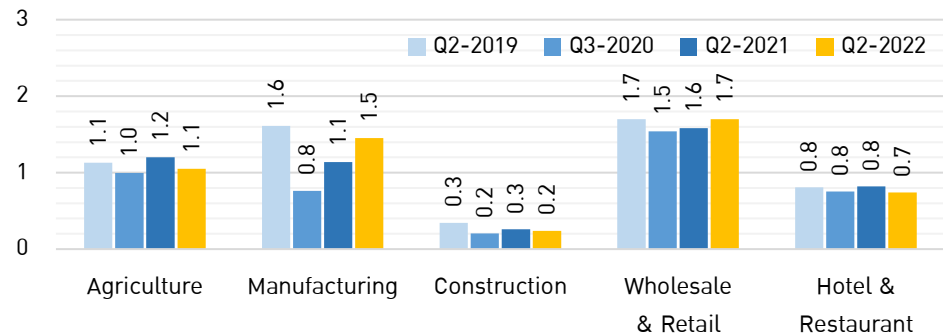
- Work hours in 2022Q2 rose compared to 2021Q2 as the number of employment and full-time workers rose, while number of part-time workers fell.
- The number of full-time workers rose in almost all sectors especially in trading, agriculture, hotel & restaurant, and manufacturing sectors.
- Part-time workers decreased in almost all sectors except trading sectors.
- Number of overtime workers in 2022Q2 are still lower than that in 2019Q2.



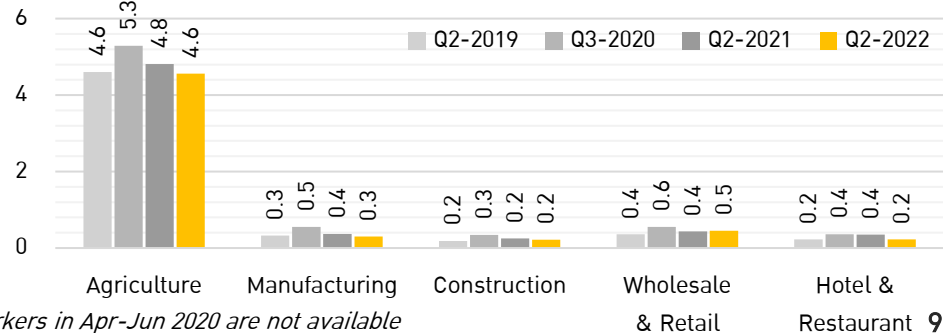
Number of full-time workers by industry (mill. persons)



Number of overtime workers by industry (mill. persons)



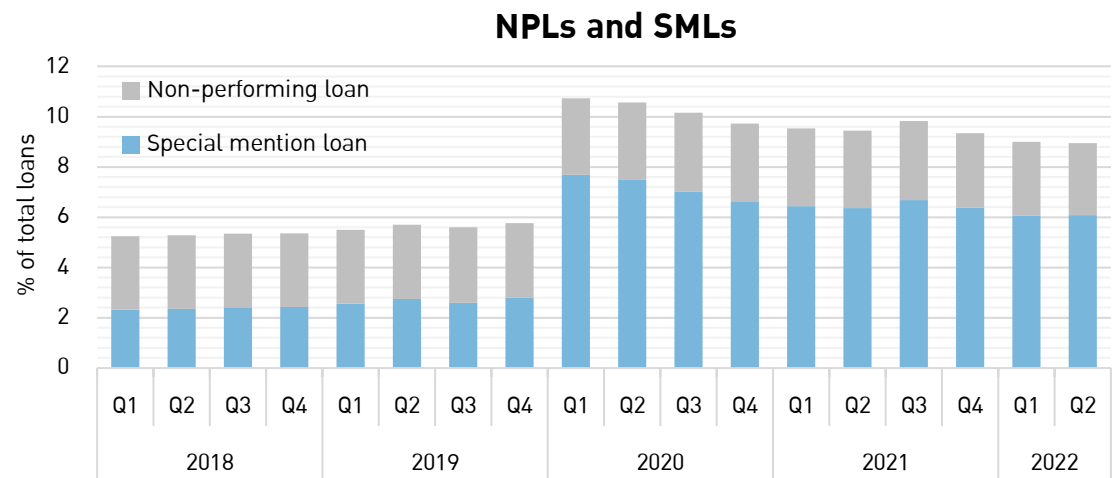
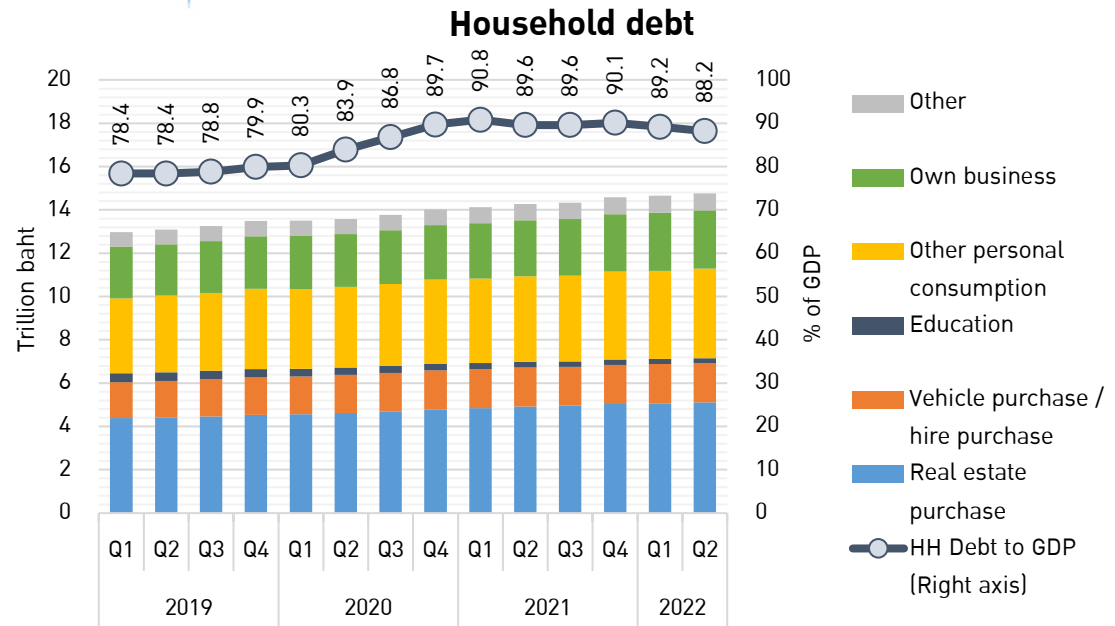
Number of part-time workers by industry (mill. persons)



Note: Data of working-hour workers in Apr-Jun 2020 are not available

HIGH HOUSEHOLD DEBT AND SPECIAL MENTION LOANS WILL LIMIT CONSUMPTION

- In 2022Q2, formal household debt stood at 88% of GDP, 8.7 percentage points higher than that in 2020Q2.
- The highest increase in household debt from 2020Q2 to 2022Q2 was for real estate purchase (10.7% growth), followed by for own business (10.1%) and personal consumption (11.1%), while education debt declined (-31.5%)
- Since 2020, special mentioned loans (loans that have delayed repayment for over 1 month) have doubled to 6%, indicating difficulties of firms in repaying debt on time.

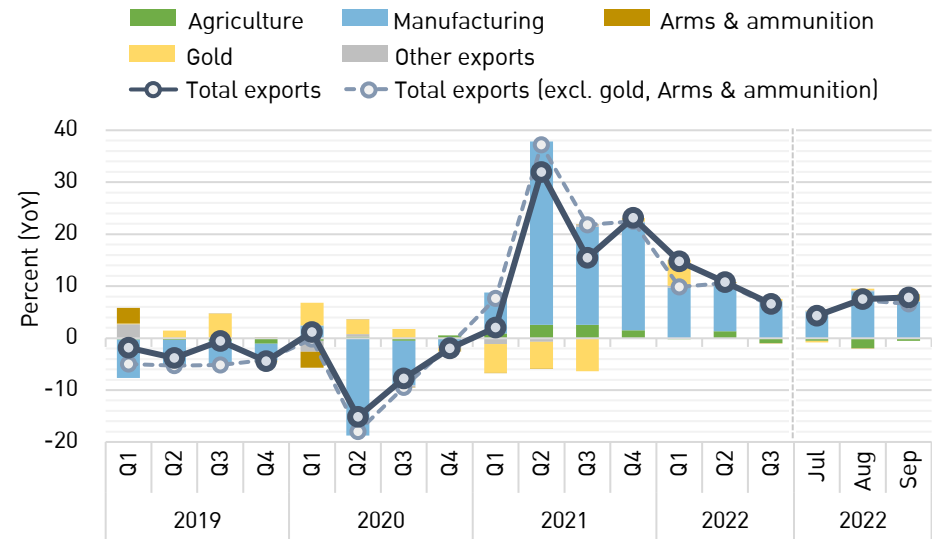


Source: Bank of Thailand

EXPORT VALUE COULD GROW BY 8% THIS YEAR AND 1-2% NEXT YEAR

- In 9M2022, exports expanded by 11% yoy, mostly from manufacturing exports.
- Exports could grow this year by 8% from the slowdown in major markets, particularly China, and a high base of 17% growth last year.
- Next year, exports will expand slowly as major markets slow down while China recovers in 2023H2.

Growth of Thai export value (in USD) by Major Products



Destination	%YoY Growth of Thai export value in USD										%Share 2022YTD
	Q3-21	Q4-21	Q1-22	Q2-22	Jul-22	Aug-22	Sep-22	2020	2021	2022YTD	
Japan	15.2	-0.2	1.2	1.6	-4.7	6.6	-1.7	-7.0	9.6	0.9	8.5
EU 28	13.9	20.3	7.5	4.5	9.3	20.7	22.2	-12.0	21.3	9.7	9.2
ASEAN	18.6	30.0	17.0	19.1	22.6	19.0	16.1	-11.8	17.5	18.5	25.3
ASEAN-5	27.1	44.1	26.9	23.1	21.3	5.8	9.0	-12.2	19.9	20.3	14.4
CLMV	7.9	13.6	5.5	14.1	24.2	41.1	26.3	-11.1	14.5	16.0	10.9
USA	19.6	25.2	23.3	17.8	4.7	16.3	26.1	9.7	21.9	18.8	16.5
Middle East	22.0	36.4	16.4	29.0	22.1	38.2	35.8	-13.0	20.5	25.7	3.6
Australia	-12.6	16.9	-2.4	-3.3	19.9	21.3	12.7	-3.9	11.5	3.5	3.8
China	32.2	17.8	4.2	-1.9	-20.6	-20.1	-13.2	2.2	25.0	-5.9	12.0
Total exports	15.4	23.1	14.8	10.8	4.3	7.5	7.8	-5.9	17.4	10.6	100.0
Total Export excl. Gold, Arm	23.8	22.7	9.9	10.8	4.8	7.4	6.7	-7.6	22.9	9.0	9.0

Source: Bank of Thailand with TDRI calculation

MOST EXPORT PRODUCTS HAVE EXCEEDED THEIR PRE-COVID VALUES

- In 9M2022, export values of over 80% of products were higher than their pre-COVID levels (9M2019); they include chemicals products, computer parts, vehicle parts, food products, sugar, rubber and rubber products.

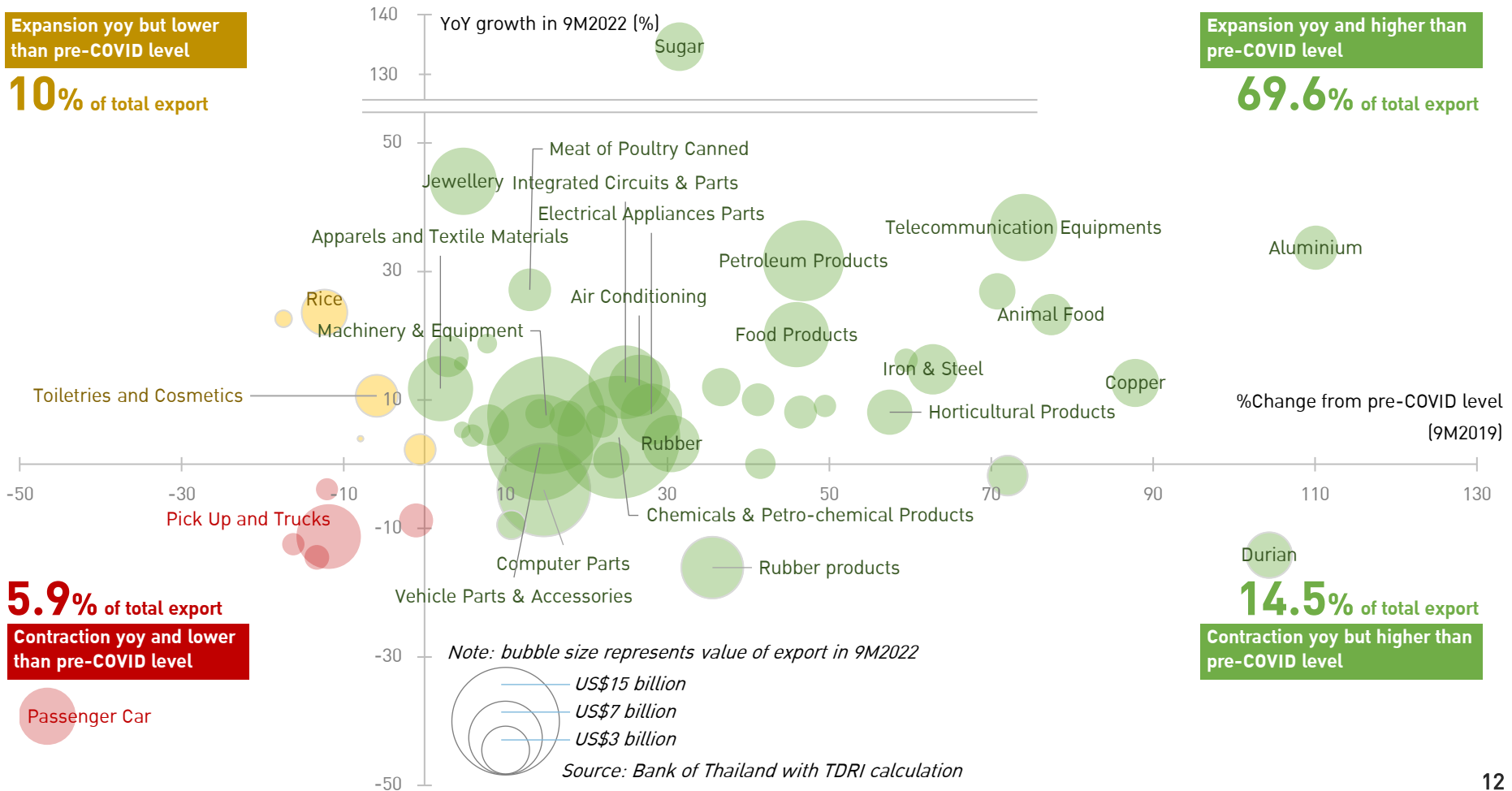
Growth of export products in 9M2022 (YoY)

Expansion yoy but lower than pre-COVID level

10% of total export

Expansion yoy and higher than pre-COVID level

69.6% of total export

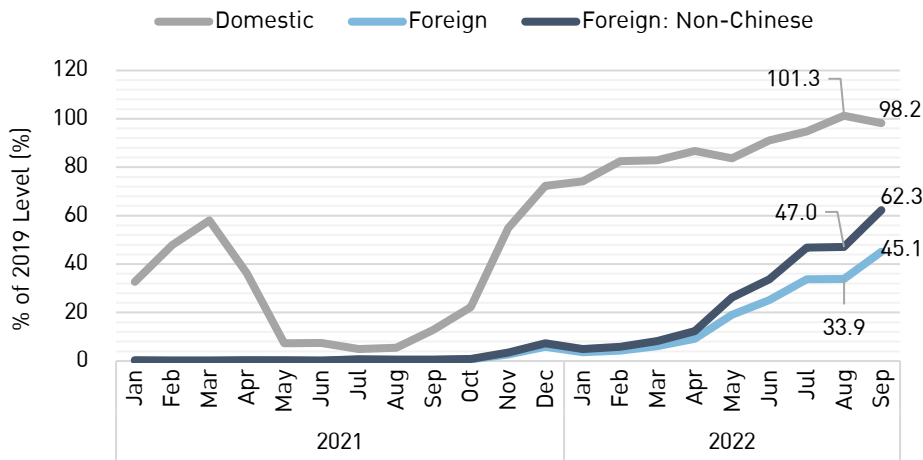


5.9% of total export
Contraction yoy and lower than pre-COVID level

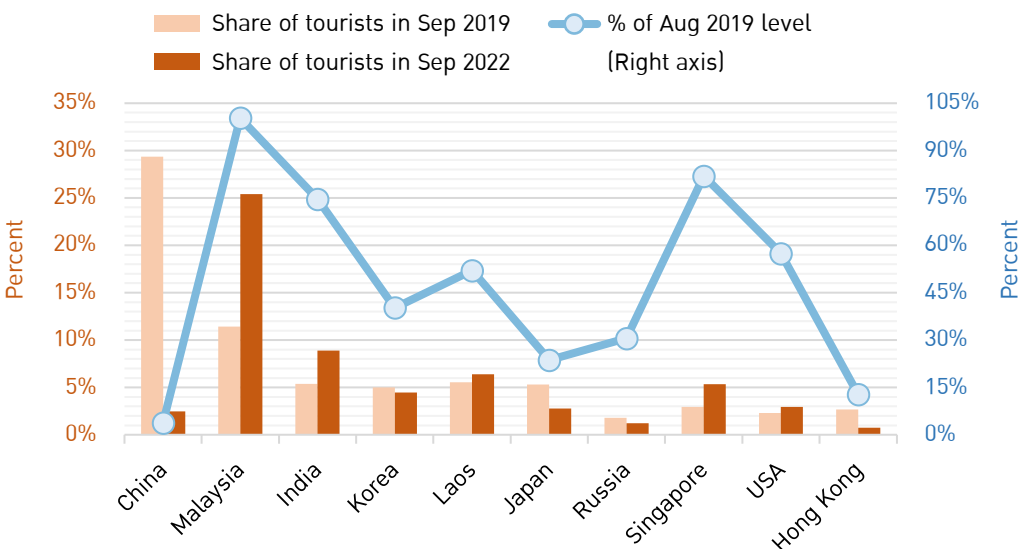
14.5% of total export
Contraction yoy but higher than pre-COVID level

DOMESTIC TOURISM HAVE RECOVERED, WHILE FOREIGN TOURISM SLOWLY RISES

%Number of tourists compare to 2019 level



Share foreign tourist & comparing to 2019 level



- Since July 2022, domestic tourism is close its pre-COVID level, mostly in the North where the number of Thai tourists increased by 50% from pre-COVID, despite the low season.
- In Sep, the number of foreign tourist arrivals is almost half of pre-COVID level (Sep 2022). Foreign tourists, excluding Chinese tourists, was over 60% that of the pre-Covid, mostly from ASEAN and Asia.
- The Bank of Thailand forecasts 9.5 million tourists this year and 21 million next year with the expectation of Chinese tourists only traveling in the second half of 2023.

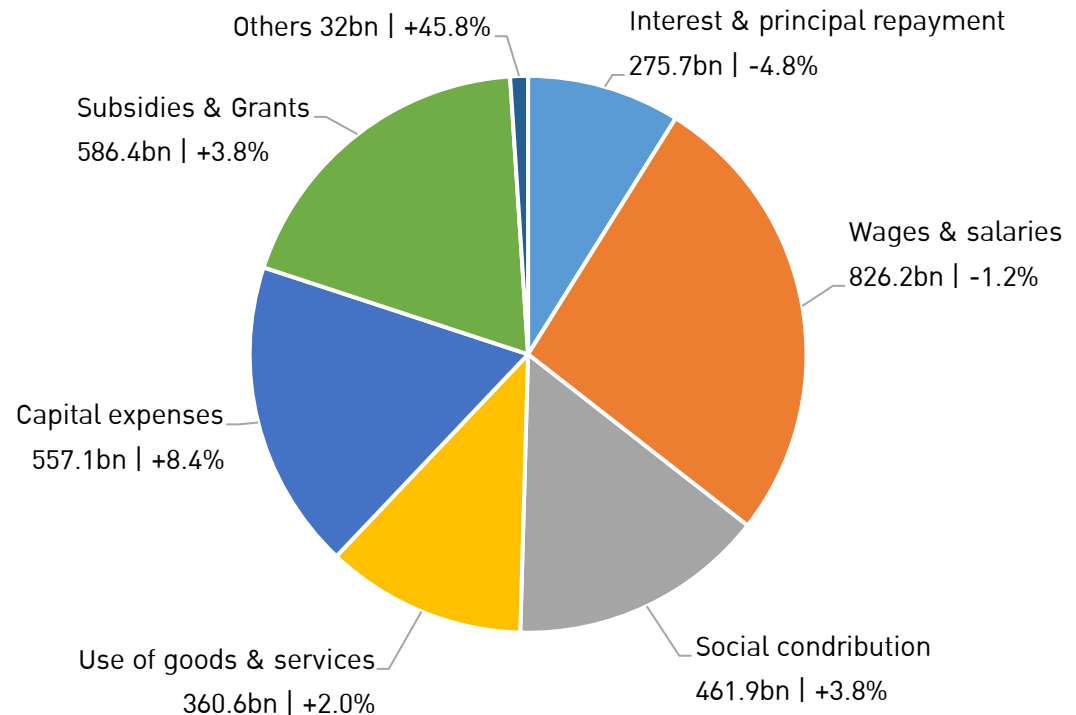
Source: Ministry of tourism and sports, Tourism Authority of Thailand

TDRI·EIS CENTRAL GOVERNMENT SPENDING IN FY2023 WILL BE ONLY 2.8% HIGHER THAN LAST YEAR'S

FY2023 Budget is set at Bt3.185 trillion of which

- Expenditures Bt3.185 trillion (+2.74%yoy)
- Revenues Bt2.49 trillion
- Domestic borrowings Bt695 billion (maximum legal domestic borrowing is Bt717 billion)

FY2023 Budget (baht)



Source: Budget Bureau

Note: Value | YoY growth

MOST TRANSFERS ARE FOR THE ELDERLY AND SOCIAL WELFARE CARD HOLDERS

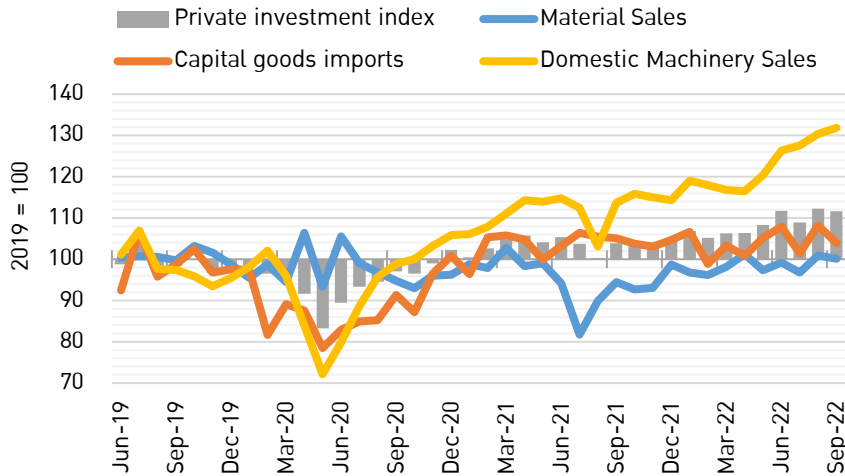
- Cabinet meeting on 5 July 2022 approved a special assistance for 10.9 million elderly people in the amount of Bt8.38 billion from the FY2022 Central Fund
- From the FY2023 Central Fund for economic emergency, the Government has allocated
 - Bt2 billion for reimbursement of emergency financial assistance to disasters victims
 - Bt92.4 billion contingency fund for emergencies or intermediate needs
 - Bt3 billion for alleviating, rectifying and remedying those affected by the outbreak of the Corona Virus 2019
- FY2023 Main grants for vulnerable groups:

The Budget Grants (Billion baht)	FY 2021	FY 2022	FY 2023
Child support grants	13.07	16.66	16.34
The state pension for old people	66.01	68.42	71.41
The state pension for disability	16.63	17.30	17.88
Subsidy for AIDS patients	0.48	0.48	0.48
State Welfare Card	49.50	30.00	35.52

Source: Budget Bureau

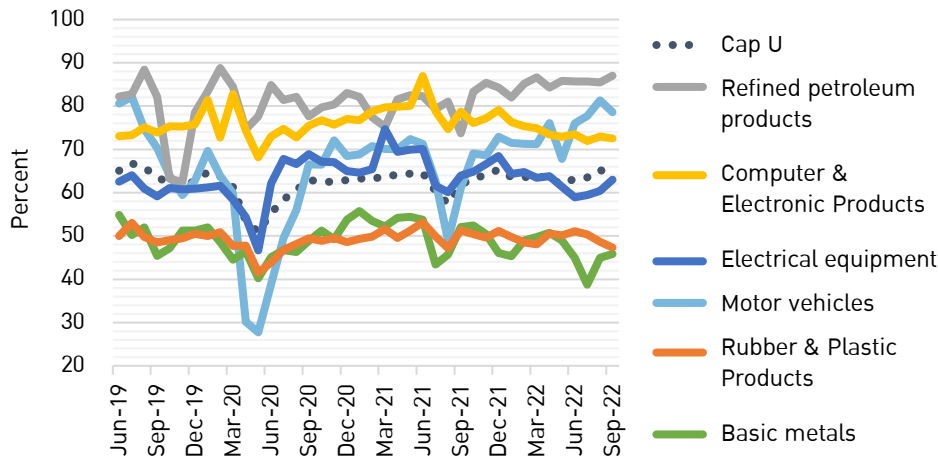
PRIVATE INVESTMENT STEADILY RECOVERING

Private investment index (Seasonal Adjusted)



Source: Bank of Thailand

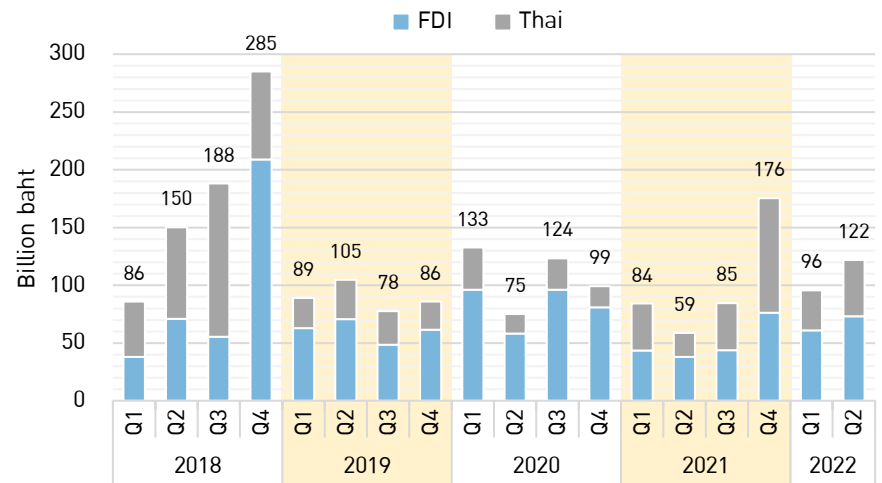
Capacity Utilization rate (Seasonal Adjusted)



Source: Office of Industrial Economics

- Private investment have surpassed its pre-COVID levels, as capacity utilization is high in several sectors e.g. automotive and refined petroleum products.
- In 2022H1, the value of BOI-issued certificates is higher than that in the first half of 2019, 2020, or 2021, a positive sign for a rise in investments in the next 12 months.

BOI Certificates issued

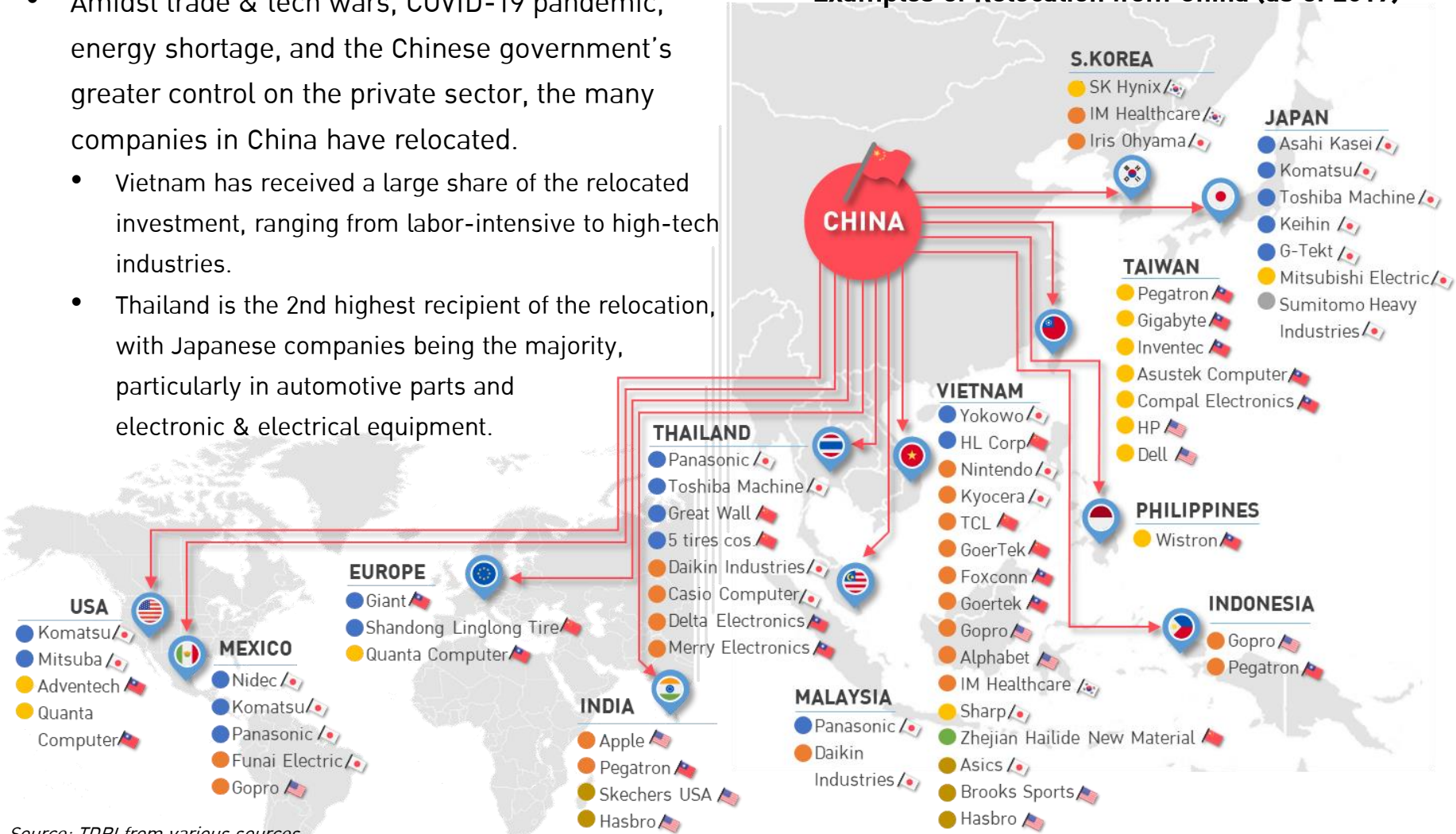


Source: Board of investment

RELOCATION FROM CHINA TO ASEAN IS RISING WITH GEO-POLITICAL TENSIONS

- Amidst trade & tech wars, COVID-19 pandemic, energy shortage, and the Chinese government's greater control on the private sector, the many companies in China have relocated.
- Vietnam has received a large share of the relocated investment, ranging from labor-intensive to high-tech industries.
- Thailand is the 2nd highest recipient of the relocation, with Japanese companies being the majority, particularly in automotive parts and electronic & electrical equipment.

Examples of Relocation from China (as of 2019)

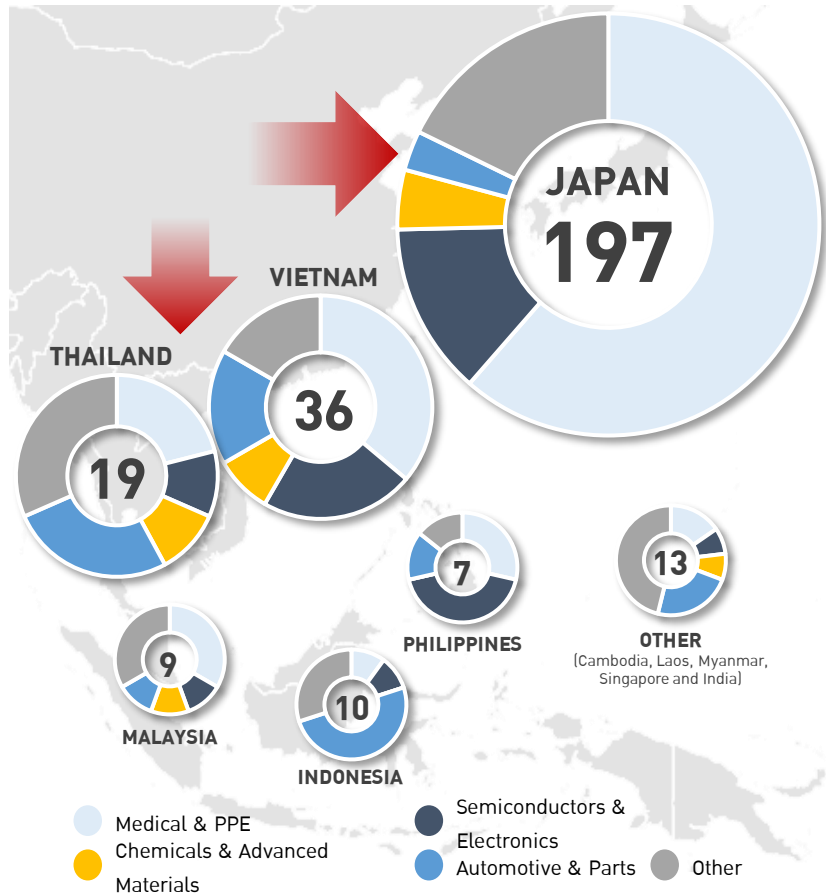


Source: TDRI from various sources

Note: ● Automotive & Parts ● Computer & Parts ● Electronics & Electrical Equipment ● Petro-chemical Products ● Footwear & Toys ● Machinery
 🇯🇵 🇺🇸 🇰🇷 🇨🇳 🇹🇼 are Japanese, American, South Korean, Chinese and Taiwanese companies, respectively

MANY JAPANESE COMPANIES WERE SUBSIDIZED TO RELOCATE FROM CHINA

Number of projects subsidized to re-shore and diversify supply chain by destination (May-Dec 2020)



- In 2020, Japanese Government launched its subsidy program to re-shore and relocate Japanese production where there is overdependence from China.
- Subsidies to support relocation have been awarded to more than 200 companies (from 2,100 applications received) for a total of \$US3.1 billion.
- Many high tech projects moved back to Japan due to tech war, while projects that relocate to Southeast Asia are especially automotive & parts.

Source: The Brookings Institution, METI and JETRO

Note: A total of 81 recipients to diversify to Southeast Asia over three rounds were announced in Jul, Nov and Dec 2020, with the fourth round opened in Mar 2021

THE K-RECOVERY WILL CONTINUE INTO NEXT YEAR

K-SHAPED RECOVERY

	<p>RECOVERY IN Jan-Sep 2022 Higher than pre-COVID level (Jan-Sep 2019)</p>	<ul style="list-style-type: none"> Wholesale & Retail Department Stores 	<ul style="list-style-type: none"> Computer, electronic and optical products Electrical equipment Machinery and equipment Furniture Information and Communication Financial and insurance activities Real estate activities 	<ul style="list-style-type: none"> E-commerce* Delivery services*
	<p>SOME SIGNS OF RECOVERY Higher than in Jan-Sep 2021 but less than pre-COVID level (Jan-Sep 2019)</p>	<ul style="list-style-type: none"> Agriculture Food production Construction Transportation and storage Accommodation and food service activities 	<ul style="list-style-type: none"> Beverages Textiles Wearing apparel Rubber and plastics products Motor vehicles, trailers and semi-trailers 	<ul style="list-style-type: none"> Leather & related products Coke & refined petroleum products Basic pharmaceutical products
	<p>NO SIGN OF RECOVERY Lower than in Jan-Sep 2021 and than pre-COVID level (Jan-Sep 2019)</p>		<ul style="list-style-type: none"> Paper and paper products Chemicals and chemical products Basic metal Fabricated metal products 	
		<p>>1 Million employees</p>	<p>100,000 – 1 Million employees</p>	<p><100,000 employees</p>

Source: TDRI EIS from various sources

Note: Employment is as of 2019Q3, * = No employment data

IMPACT ON EMPLOYMENT

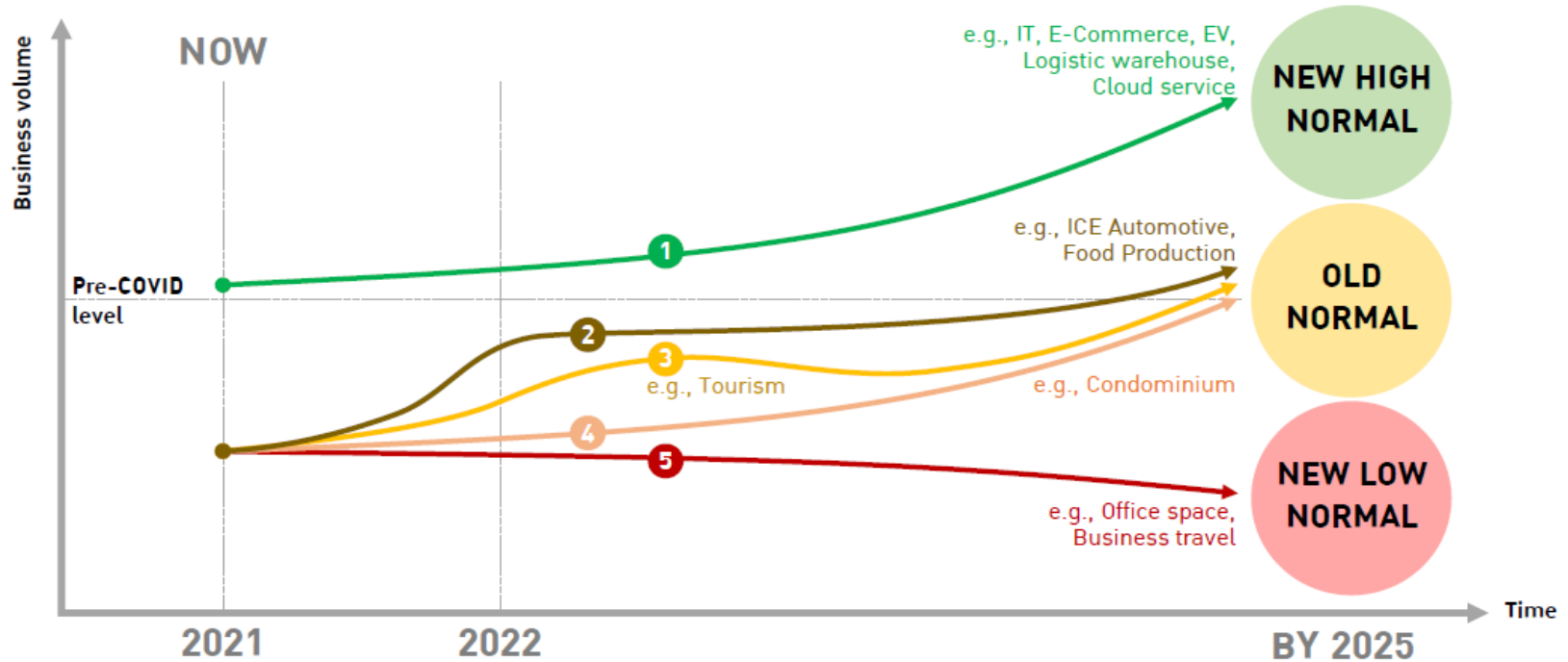
COVID ENDGAME PATHS OF BUSINESSES IN THAILAND

- **PATH 1:** Rise toward a new high normal due to structural change

■ **PATH 2:** Gradually recover and return to its old normal

■ **PATH 3:** Recover sharply in short-run before returning to its old normal
- **PATH 4:** Slowly recover and gradually returning to its old normal

■ **PATH 5:** Decline toward a new low normal due to structural change



SUMMARY: KEY RISKS AND OPPORTUNITIES FOR THAILAND

SUMMARY	
KEY RISKS	<ul style="list-style-type: none"> • Rise in geopolitical tensions disrupting supply chains and raising energy prices and inflation • More aggressive hikes of FED rates followed by a hard landing in the US, • Deeper-than-expected recession in the EU, a slower-than-expected recovery of China • New outbreaks of COVID-19 • Slow growth in domestic consumption in the future amid high household debt and aging population • Less labor force
OPPORTUNITIES	<ul style="list-style-type: none"> • Post-Covid recovery in exports, domestic consumption, tourism and foreign direct investments • Relocation of production from China to Thailand by international firms • Rising global demand for green and healthy products supporting production of EVS, bio-products in Thailand, and their supporting supply chains • Digitalization leading to opportunities for new businesses e.g, e-commerce, telemedicine, cyber-security, and data centers • Automation trend raises demand for robots and machineries • Global aging society raises opportunities for new products and services e.g. functional foods, digital healthcare, senior community and homes, senior-friendly products.

TDRI·EIS

THANK YOU