

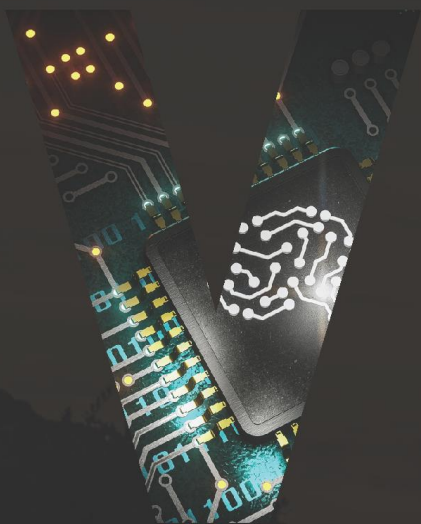


Thailand Focus 2022: The New Hope

"Strengthen Thailand Investment Opportunities in Strategic Industries"

Wiwat Hemmondharop
Vice Chairman of
The Federation of Thai Industries

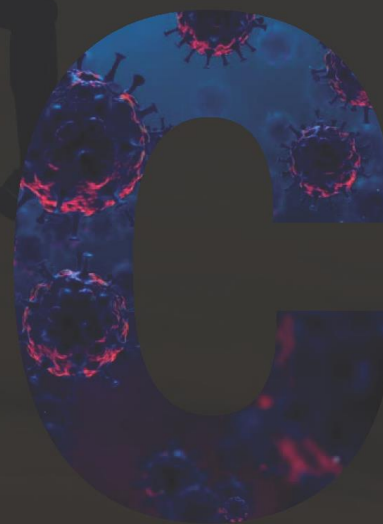
On 24 August 2565, Time 10.10-11.10
at Grand Hyatt Erawan Bangkok



Volatility



Uncertainty



Complexity



Ambiguity



Global Challenges

**Climate
Change**

Recession

**Russia –
Ukraine**

COVID-19

**Trade
War**

**Digital
Disruption**

US – China - Taiwan Crisis



Pelosi represents the US to Taiwan in 25 years

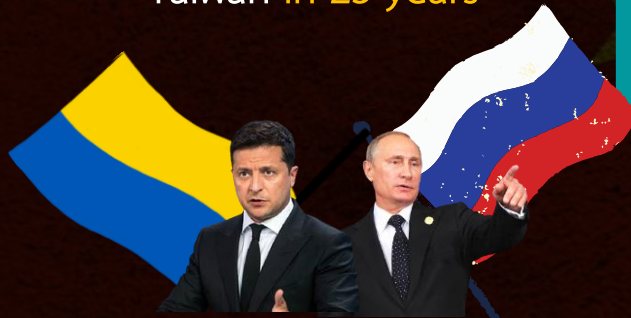
China sanctioned Taiwan trade.

China has banned food and agricultural products more than 2,000 lists from Taiwan after Pelosi's visit to the country.

China has suspended exports of 'Sand' to Taiwan, which is the raw material for Silicon Wafer, a component in semiconductor manufacturing.



China issued trade measures for responding to Pelosi's visit to Taiwan and maneuvers around the island.



The Russia-Ukraine war has left a shortage of chips and semiconductors because Ukraine is the world's 30-40% exporter of neon gas used in chip manufacturing.



The world's shortage of chips and semiconductors.

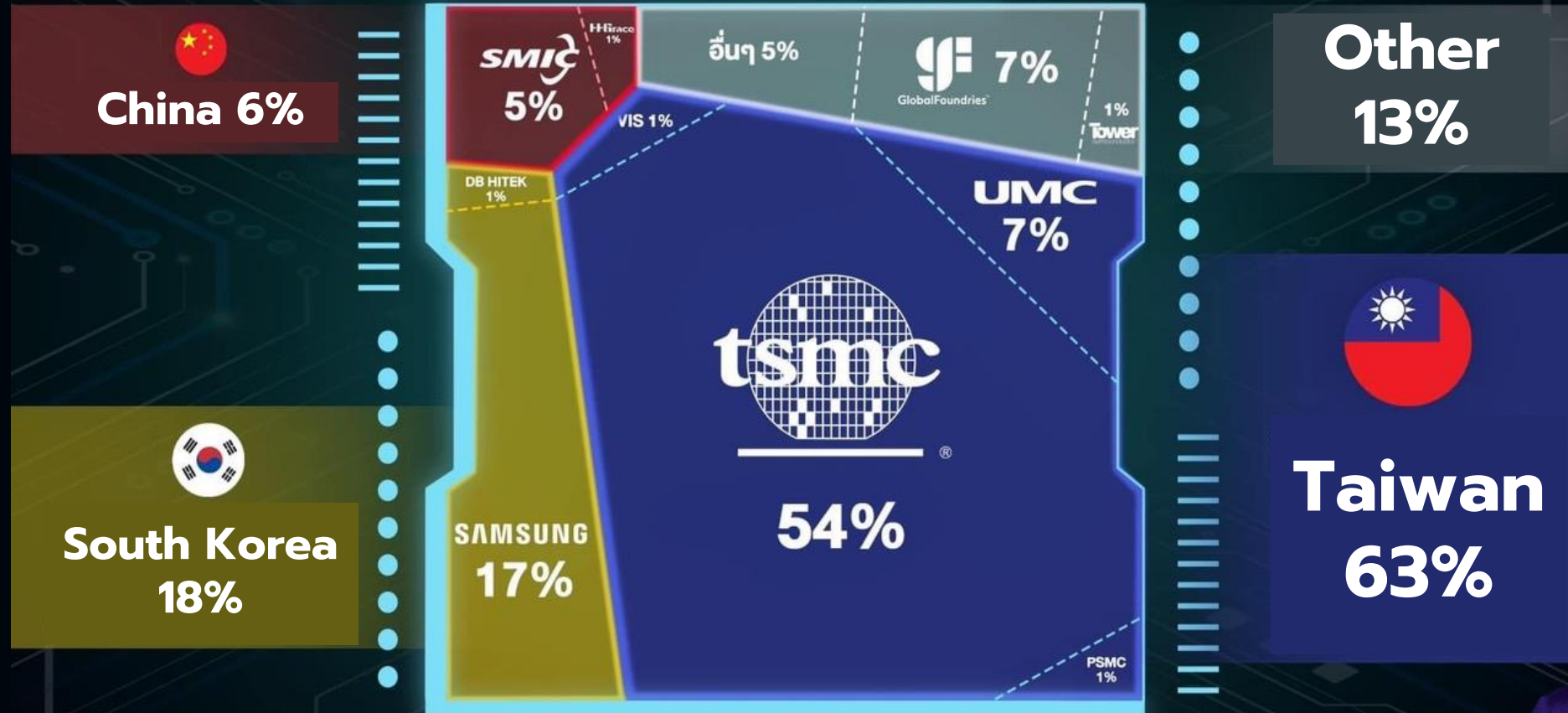


Risks to Thai industry.

If China's sanctions on Taiwan are extended as in the case of Russia-Ukraine, the impact will be very severe because semiconductors are a key component in manufacturing products in many industries, including automobiles, electrical appliances, and electronics.

The conflict between China and Taiwan has exacerbated the shortage of semiconductor chips leading to **Supply Chain Shortage**

Global Semiconductor Market Share



A 3D illustration of a man in a blue suit standing on a grey platform, holding a large red cube with both hands. The cube has horizontal stripes. The background is dark blue with several large, light blue, oval-shaped objects floating in the air.

1. Global Economic and Thai Economic Outlook

ASEAN Economic Growth 2020-2023



Country	2020	2021	2022f	2023f
Brunei	1.1%	↓ -0.7%	↑ 5.8%	↓ 2.6%
Cambodia	-3.1%	↑ 2.2%	↑ 5.1%	↑ 5.9%
Indonesia	-2.1%	↑ 3.7%	↑ 5.4%	↑ 6.0%
Laos	-0.5%	↑ 2.1%	↑ 3.2%	↑ 3.5%
Malaysia	-5.6%	↑ 3.1%	↑ 5.6%	↓ 5.5%
Myanmar	3.2%	↓ -17.9%	↑ 1.6%	↑ 3.0%
Phillippine	-9.6%	↑ 5.6%	↑ 6.5%	↓ 6.3%
Singapore	-4.1%	↑ 7.6%	↓ 4.0%	↓ 2.9%
Thai	-6.2%	↑ 1.6%	↑ 3.3%	↑ 4.3%
Vietnam	2.9%	↓ 2.6%	↑ 6.0%	↑ 7.2%
ASEAN	-2.3%	↑ 1.0%	↑ 4.7%	→ 4.7%

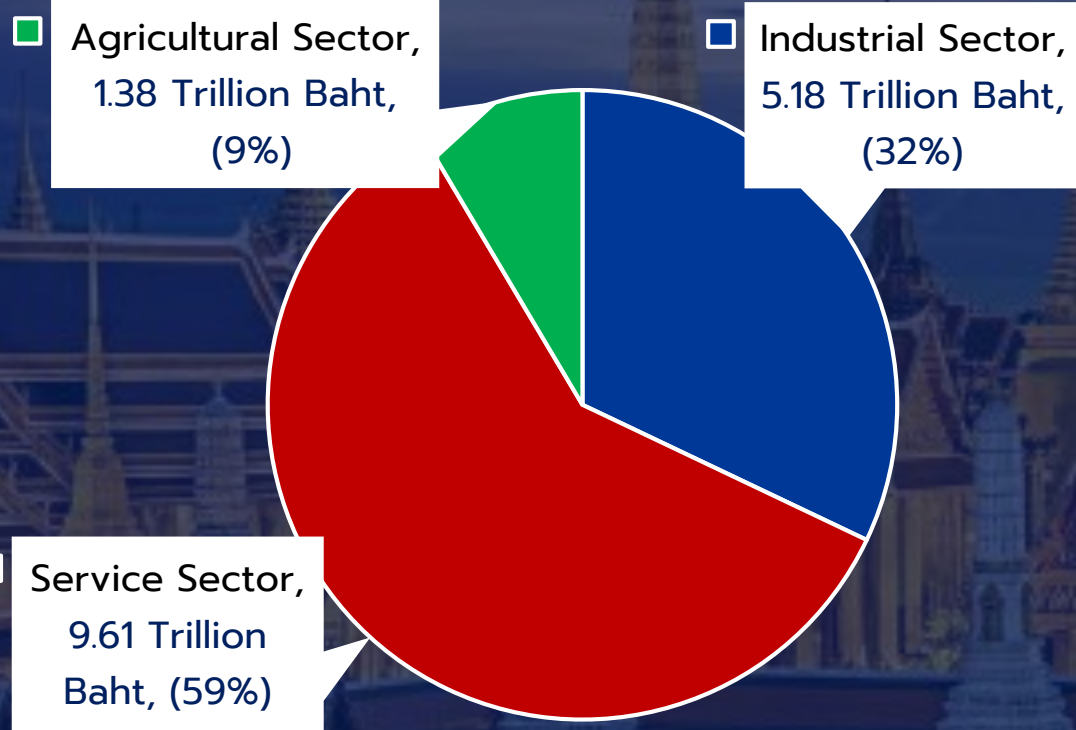
GDP quarter 2/2022 2.5%



Source : Office of the National Economic and Social Development Council on NESDC

GDP of Thailand 2021 (Million Baht)

Be classified according to sectors



Contribution to GDP growth

Real GDP Growth of Thailand 2019-2022Q2

Year	2019	2020	2021	2022 Q1	2022 Q2
Real GDP Growth of Thailand	2.2	-6.2	1.5	2.3	2.5
% Contribution (YoY)					
- Industrial Sector, GDP	0.7	-1.9	0.5	0.7	0.8
- Service Sector, GDP	1.3	-3.8	0.9	1.3	1.4
- Agricultural Sector, GDP	0.2	-0.5	0.1	0.2	0.2



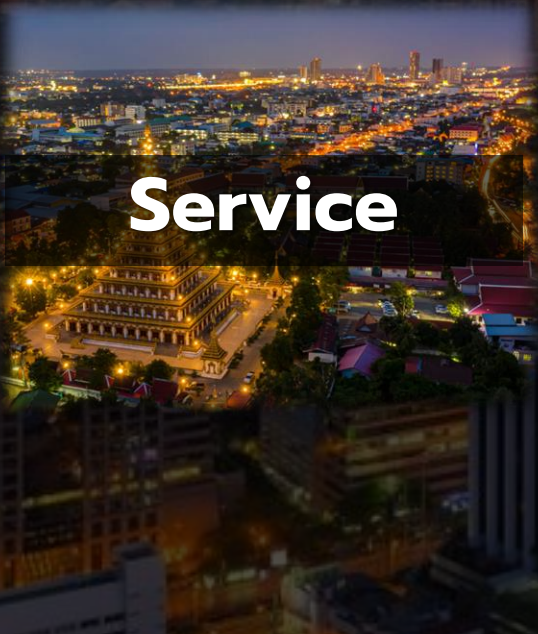
Compare the proportion of goods exports to Thailand GDP 2019-2022H1 (Million Baht)

Year	2019	2020	2021	2022H1
GDP	16,892,411	15,636,891	16,178,719	8,535,717
Total Exports	7,628,400	7,183,568	8,568,940	4,945,248
% Share of Total Export to GDP	45.16	45.94	52.96	57.94
<i>Principle manufacturing products</i>	6,095,158	5,763,807	6,811,264	3,855,864
% Share of Principle manufacturing to GDP	36.08	36.86	42.10	45.17
<i>Agro-industrial products</i>	581,233	561,015	609,217	398,023
% Share of Agro-industrial to GDP	3.44	3.59	3.77	4.66
<i>Agricultural products</i>	675,198	656,175	823,058	476,071
% Share of Agricultural to GDP	4.00	4.20	5.09	5.58
<i>Mining and fuel products</i>	276,812	202,570	325,398	215,290
% Share of Mining and fuel to GDP	1.64	1.30	2.01	2.52
***Top 10 Export Products	3,566,481	3,355,600	4,050,320	2,299,155
% Share of Top 10 Export Products to GDP	21.11	21.46	25.03	26.94

Source: NESDC, Ministry of Commerce

***Reference by Top 10 Export Products of Total Exports as Automatic data processing machines and parts, Motor cars and parts, Rubber products, Precious stones and jewellery, Refine fuels, Polymers of ethylene, Fresh frozen and dried fruit, Chemical products, Electronic integrated circuits, Machinery and parts.

GDP Value and Structure in Thailand classified by Sector, 2021



	Value of GDP (Million Baht)	Structure (%)
Agricultural Sector, GDP	1,380,331	8.5
Industrial Sector, GDP	5,187,570	32.1
Mining and Quarrying	351,571	6.8
Manufacturing	4,369,679	84.2
Electricity, gas, steam and air conditioning supply	396,607	7.6
Water supply: Sewerage, waste management and remediation activities	69,713	1.3
Service Sector, GDP	9,610,818	59.4
Construction	439,169	4.6
Wholesale and retail trade; repair of motor vehicles and motorcycles	2,703,123	28.1
Transportation and storage	736,791	7.7
Accommodation and food service activities	514,561	5.4
Information and communication	456,101	4.7
Financial and insurance activities	1,339,185	13.9
Real estate activities	436,922	4.5
Professional, scientific, and technical activities	271,232	2.8
Administrative and support service activities	203,737	2.1
Public administration and defense; compulsory social security	1,055,109	11.0
Education	705,605	7.3
Human health and social work activities	409,592	4.3
Arts, entertainment and recreation	108,280	1.1
Other service activities	202,671	2.1
Private Household with Employed Persons	28,740	0.3
Total	16,178,719	100.0

Source: NESDC by using database and GDP structure 2021 for calculation.









Thai International Trade of 2019 -2022

Unit (Million USD)	2019	2020	2021	June 2022	Jan-June 2022
Export value	246,244.5 -2.65%	231,468.44 -6.01%	271,173.5 +17.1%	26,553.1 +11.9%	149,184.8 +12.9%
Import value	236,639.9 -4.66%	206,991.89 -12.39%	267,603.3 +29.8%	28,082.3 +24.5%	155,440.7 +20.2%
Trade Balance	+10,008.9	+25,477.7	+3,573.2	-1,529.2	-6,255.9

Source: Ministry of Commerce

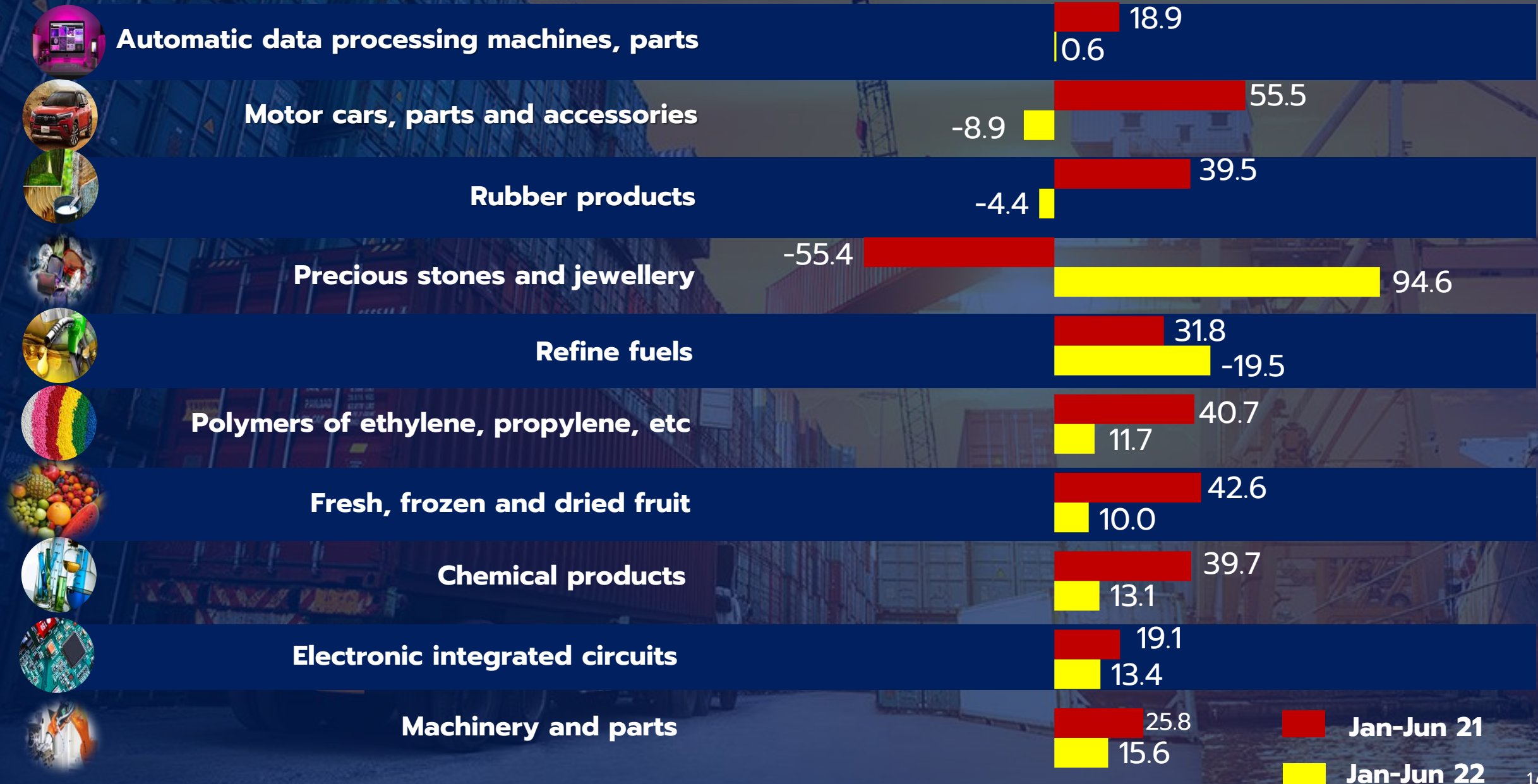
Value of Thai exports compared with 7 exporting countries

Million USD

Country	2018		2019		2020		2021		2022-Q1	
	Export Value	YoY%	Export Value	YoY%	Export Value	YoY%	Export Value	YoY%	Export Value	YoY%
China 	2,494,230	9.79%	2,498,569	0.17%	2,590,607	3.68%	3,026,233	16.82%	820,733	15.80%
Japan 	738,164	5.75%	705,842	-4.38%	640,953	-9.19%	757,460	18.18%	188,881	4.44%
Korea 	605,169	5.48%	542,333	-10.38%	512,788	-5.45%	644,438	25.67%	173,246	18.33%
Singapore 	412,077	10.46%	390,386	-5.26%	373,909	-4.22%	457,749	22.42%	125,688	16.61%
Taipei 	334,244	5.86%	329,512	-1.42%	346,633	5.20%	447,565	29.12%	120,527	21.90%
Vietnam 	243,698	13.29%	264,610	8.58%	281,441	6.36%	406,755	44.53%	n/a	n/a
Thailand 	249,921	5.96%	245,380	-1.82%	229,277	-6.56%	267,492	16.67%	95,979	12.49%
Indonesia 	180,215	6.76%	167,683	-6.95%	163,306	-2.61%	228,231	39.76%	66,144	37.18%

Source : <https://www.trademap.org/>

Top 10 export products of Thailand from Jan 2022 to Jun 2022 (%YOY)



Million USD

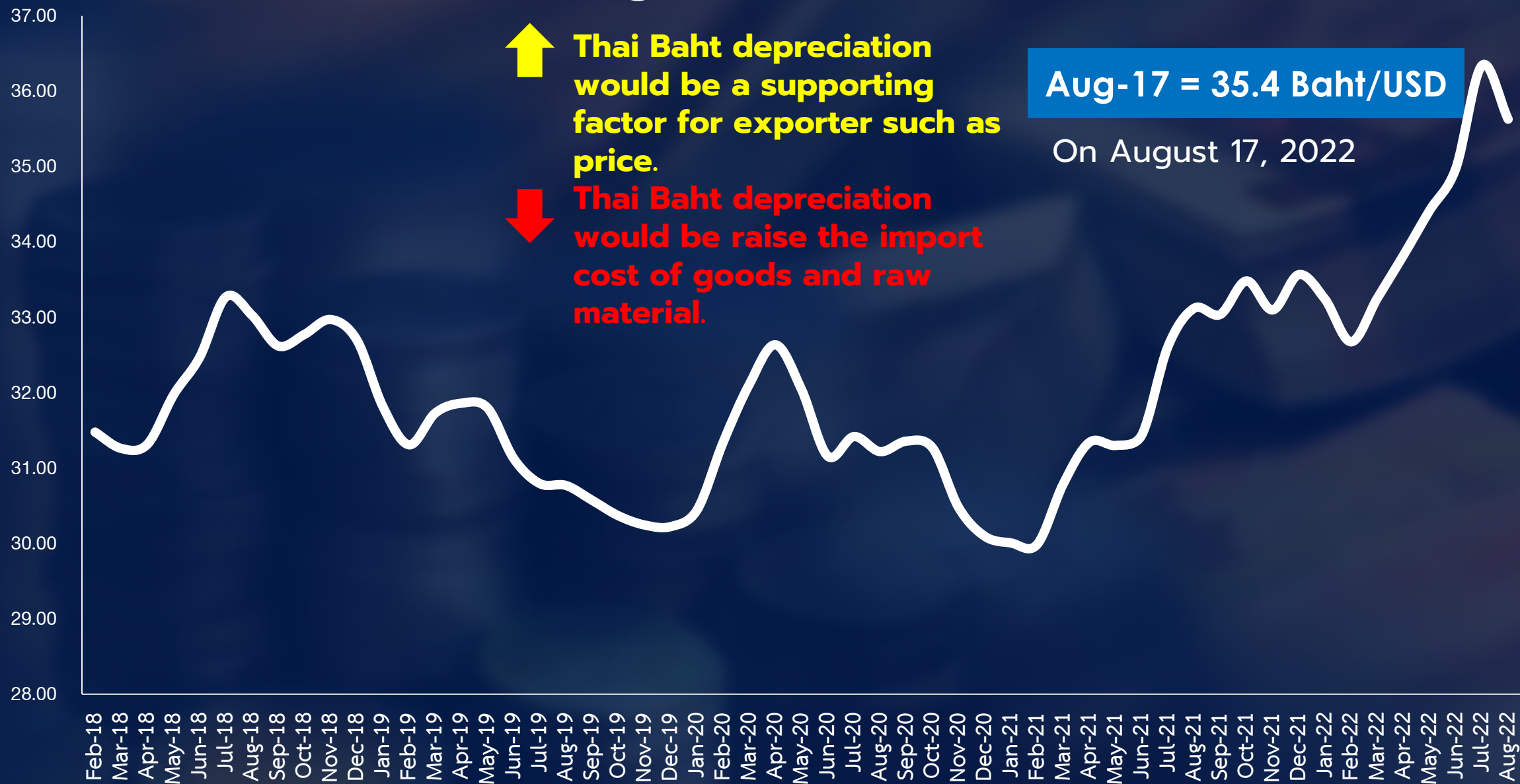
Top 10 Export Market of Thailand 2018-2022 (Jan-June)



Country	2018		2019		2020		2021		2022 (Jan-June)	
	Exported Value	%YoY	Exported Value	%YoY	Exported Value	%YoY	Exported Value	%YoY	Exported Value	%YoY
USA	28,040	5.53	31,348	11.80	34,381	9.67	41,912	21.90	24,004	20.47
China	30,316	2.75	29,169	-3.78	29,813	2.21	37,265	25.00	18,454	0.78
Japan	24,936	13.01	24,523	-1.66	22,808	-6.99	24,994	9.59	12,715	1.39
Vietnam	12,961	11.87	12,114	-6.53	11,167	-7.82	12,539	12.29	6,708	0.12
Malaysia	11,644	12.58	10,359	-11.04	8,734	-15.69	12,076	38.26	6,436	9.76
Singapore	9,302	12.24	8,872	-4.62	9,512	7.21	9,059	-4.76	5,713	41.04
India	7,628	17.77	7,340	-3.77	5,504	-25.02	8,588	56.04	5,607	46.55
Hong Kong	12,526	1.85	11,715	-6.47	11,291	-3.62	11,591	2.65	5,547	-1.91
Indonesia	10,248	15.89	9,105	-11.15	7,628	-16.22	8,918	16.91	5,623	38.2
Australia	10,775	2.58	10,229	-5.07	9,830	-3.90	10,960	11.49	5,439	-2.82
Other	94,575	4.91	91,489	-3.26	80,962	-11.51	94,100	16.23	52,939	15.55
Total	252,956	6.90	246,268	-2.64	231,634	-5.94	272,006	17.43	149,185	12.72

MILLION USD

Exchange Rate (Baht : USD)



Source: Bank of Thailand

Foreign Direct Investment, Net Inflows 2016 - 2020

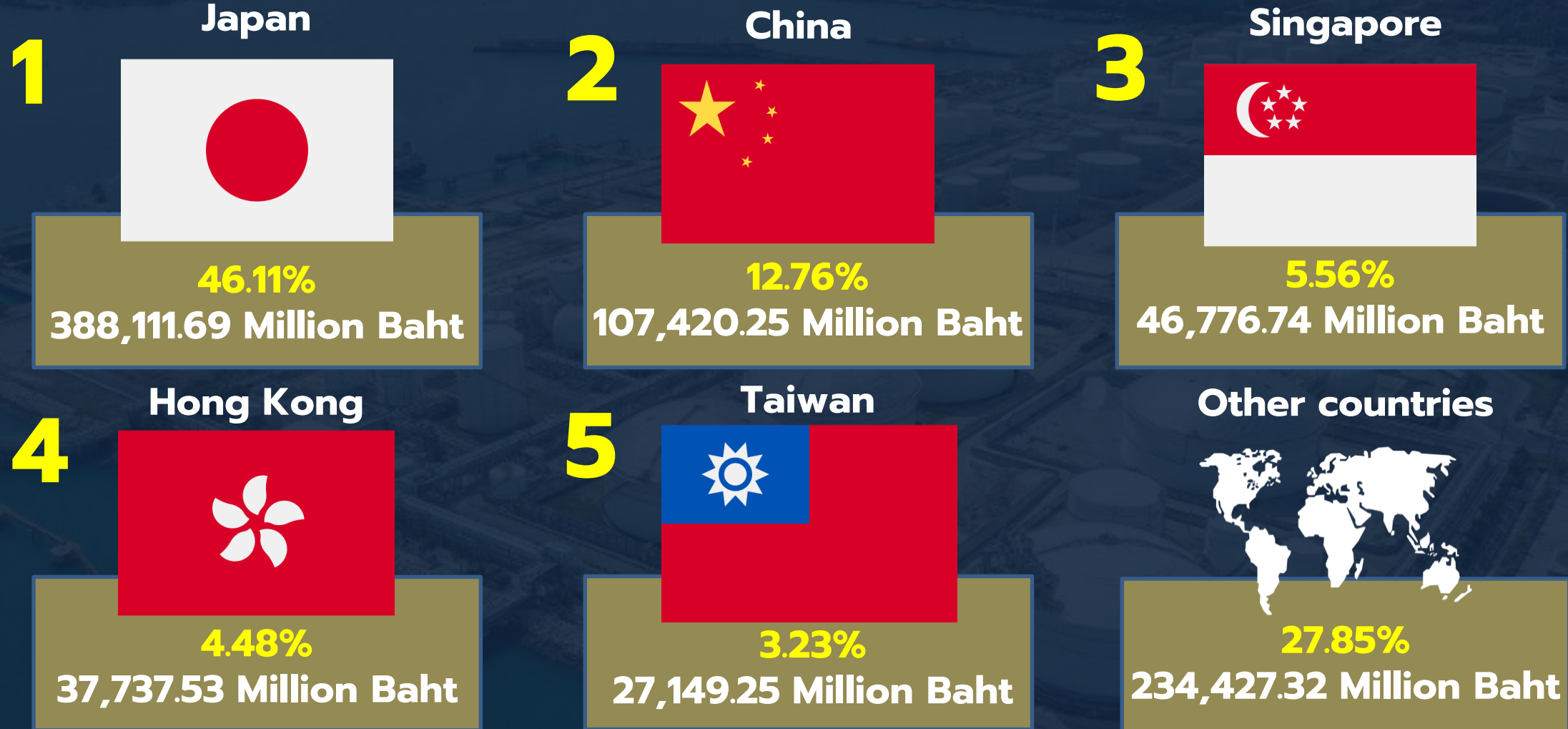
Country Name	2016		2017		2018		2019		2020	
	Value	%YoY	Value	%YoY	Value	%YoY	Value	%YoY	Value	%YoY
Singapore	65,363.1	-6.3%	99,210.3	51.8%	81,180.5	-18.2%	111,479.5	37.3%	74,750.5	-32.9%
Indonesia	4,541.7	-77.0%	20,510.3	351.6%	18,909.8	-7.8%	24,993.6	32.2%	19,175.1	-23.3%
Vietnam	12,600.0	6.8%	14,100.0	11.9%	15,500.0	9.9%	16,120.0	4.0%	15,800.0	-2.0%
Malaysia	13,470.1	36.7%	9,368.5	-30.4%	8,304.5	-11.4%	9,154.9	10.2%	4,313.0	-52.9%
Philippines	8,279.5	46.8%	10,256.4	23.9%	9,948.6	-3.0%	8,671.4	-12.8%	6,822.1	-21.3%
Thailand	3,486.2	-61.0%	8,285.2	137.7%	13,186.3	59.2%	4,790.4	-63.7%	-4,845.4	-201.1%
Cambodia	2,475.9	35.8%	2,788.1	12.6%	3,212.6	15.2%	3,663.0	14.0%	3,624.6	-1.0%
Myanmar	3,278.1	-19.7%	4,804.3	46.6%	1,768.2	-63.2%	1,735.6	-1.8%	1,834.2	5.7%
Lao PDR	935.3	-13.2%	1,693.1	81.0%	1,358.0	-19.8%	755.5	-44.4%	967.7	28.1%
Brunei	-150.6	-187.9%	467.9	410.8%	516.2	10.3%	373.3	-27.7%	565.5	51.5%

Million USD

Foreign Investment in Corporation Company Thailand

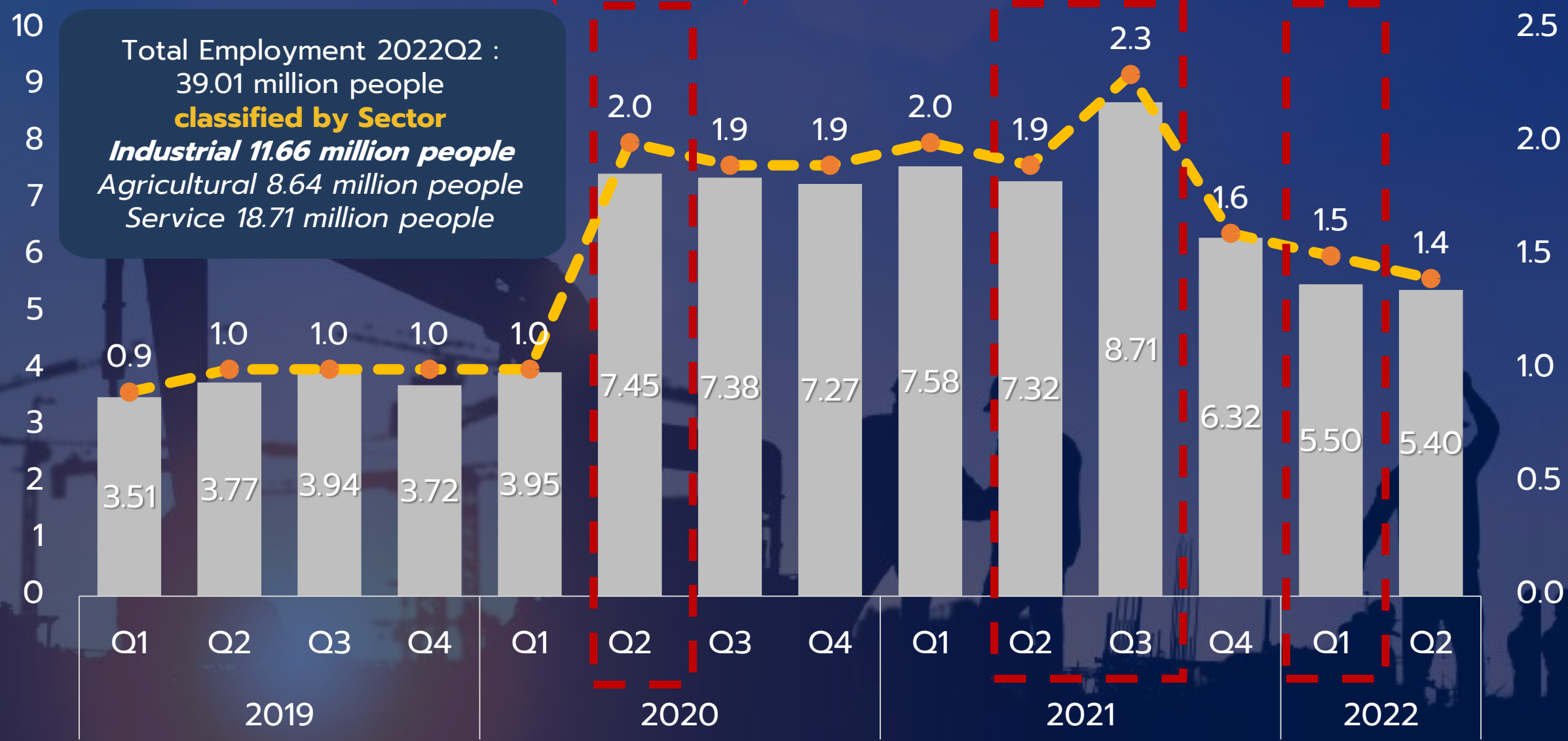
The total value is **841,622.79** million baht or **54.51%** of the total capital.

Top 5 values of foreign shareholding in a corporate company established in Thailand:



Amount and Unemployment rate 2019 – 2022Q2

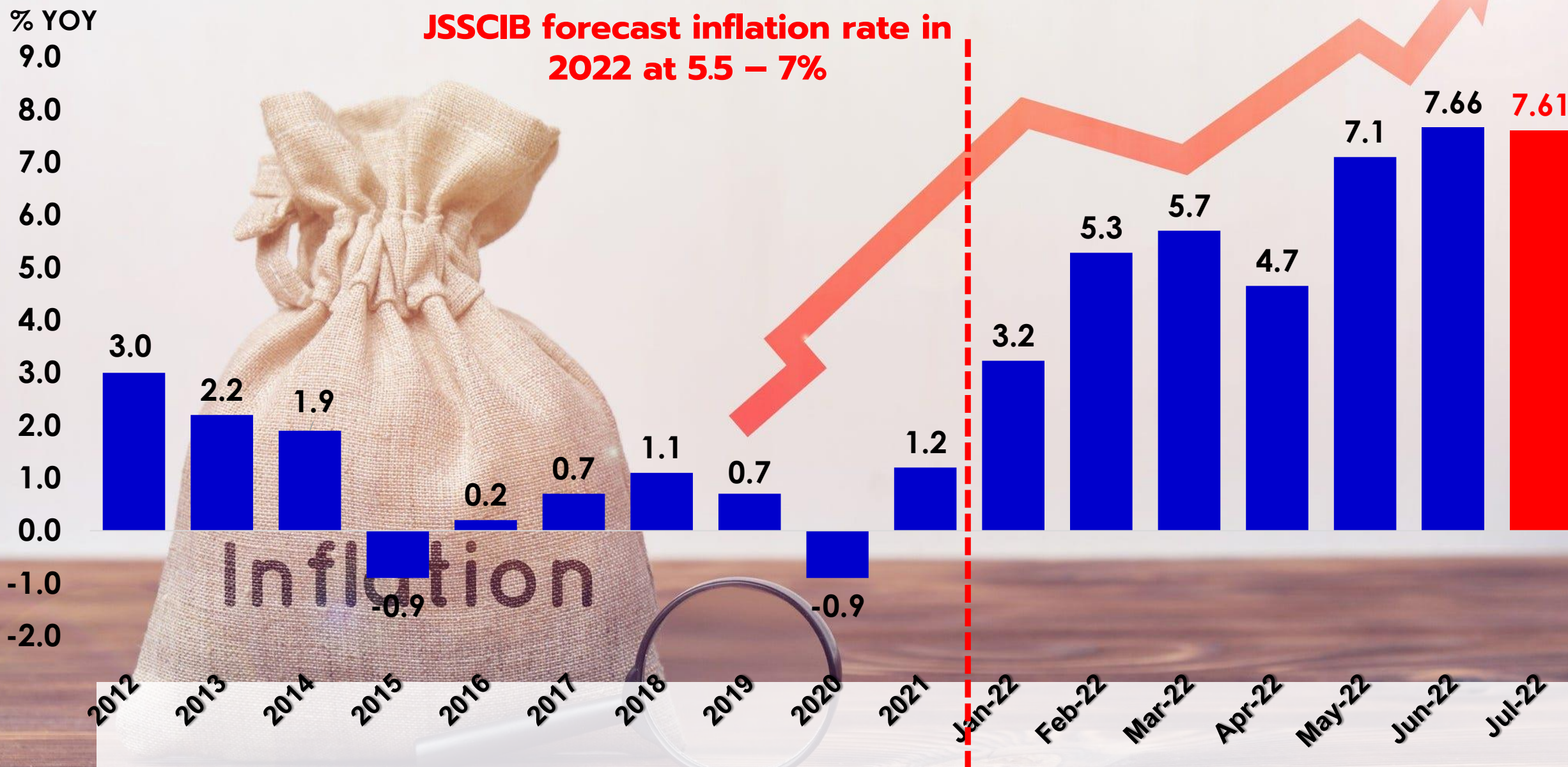
One hundred thousand



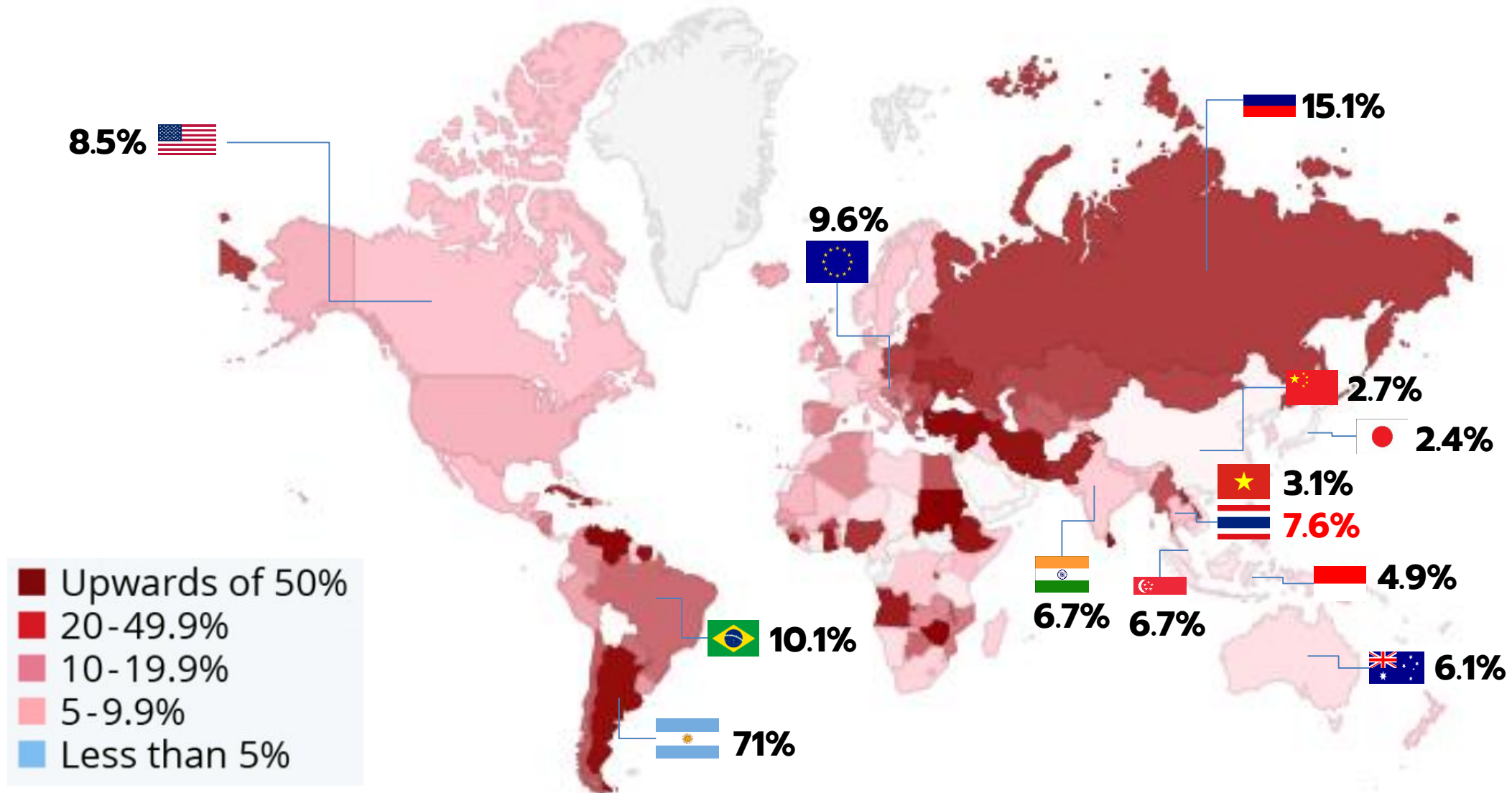
Source: National Statistical Office

■ Unemployment ● Unemployment rate (%)

Inflation rate in July 2022 at **7.61%** the highest in 13 years



Compare Global Inflation Rate



The background of the slide features a dark blue gradient with several large, light blue, oval-shaped patterns that resemble stylized clouds or smoke. In the lower-left quadrant, there is a 3D illustration of a person in a blue suit standing on a grey platform, reaching up to touch a large, red, rectangular block that is floating in the air. The block has a textured, wood-like surface.

2. Enhancing Industry Capacity Approaches

FIRST INDUSTRIES

- 45 Industries 11 Clusters
- 76 Provincial Federation of Industries
- (5 Regions/Province Industry Clusters)



NEXT-GEN INDUSTRIES

- S-Curves Industries
- BCG (Bio-Circular-Green Economy)
- Climate Change

First s-curve

Value Added

	1 Next-Generation Automotive
2 	Intelligent Electronics
	3 High-Value and Medical Toursim
4 	Advanced Agriculture and Biotechnology
	5 Food for the future


New S-curve

Value Shifted

	6 Automation and Robotics
7 	Aviation and Logistics
	8 Biofuel and Biochemical
9 	Digital
	10 Medical and Comprehensive Healthcare

S-Curves Industries

12 Targeted Industries

	11 Defense
	12 Education and Human Resource Development

**Phase 1****(Now until 2022)**

The government will promote electric motorcycles and support the development of its infrastructure nationwide.

**Phase 2****(2023 to 2025)**

The aim is for EV industry to produce electric vehicles including the production of batteries.

225,000

EV cars and pick-ups

**360,000**

EV motorcycles

**18,000**

EV Buses and Trucks

**Phase 3****(2026 to 2030)**

The country will adopt a **“30/30 policy,”** working towards a target of producing electric vehicles which would constitute 30% of all auto production. This will also include the domestic manufacture of batteries.

**725,000**

EV cars and pick-ups

**675,000**

EV Buses and Trucks

**34,000**

EV motorcycles

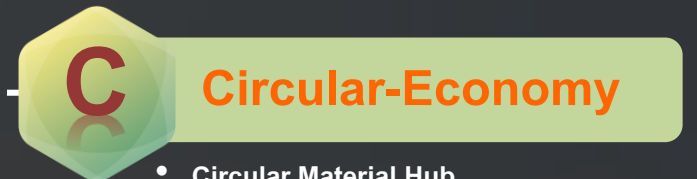


Other EVs

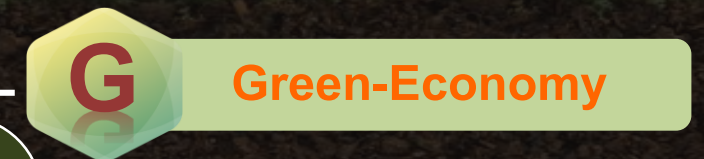
Driving FTI Framework through BCG model.



- Smart Agriculture Industry (SAI)
- Smart Farming
- Developing BCG Model of Thai industry's cluster



- Circular Material Hub
- EPR system for E-waste and packaging
- Bottle Color Standard
- AEPW Projects (Plastic Roads/Mega City)



- Eco Factory
- Eco Products
- Eco Industrial Town
- Thailand Carbon Credit Exchange Platform
- Increasing Green Area (Afforest)



The economic added value of targeted industries, follow BCG increase to 24% of GDP in 2027



Reduce using resources into 2/3 from the present.



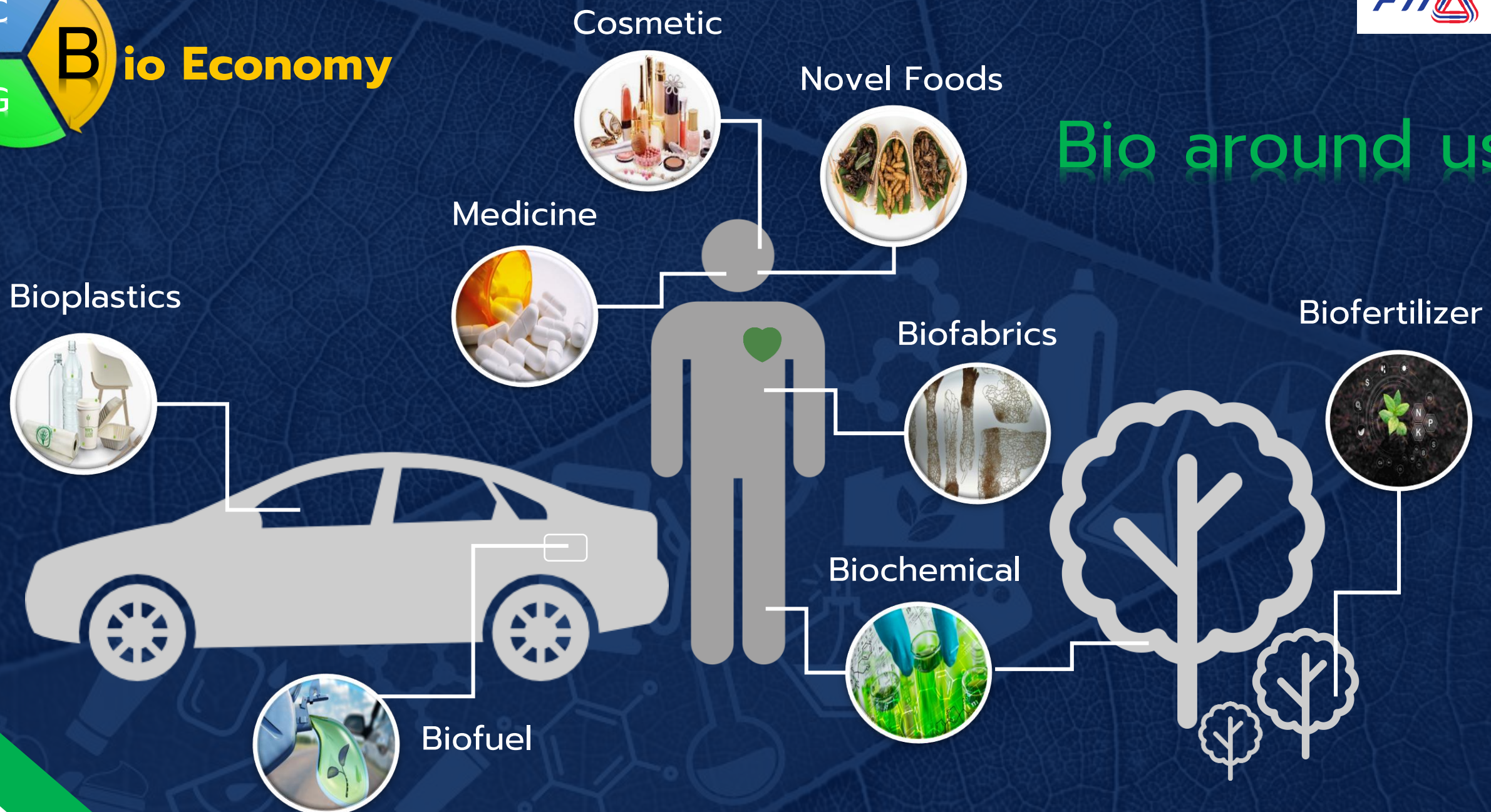
Aiming carbon neutrality within 2050 and reducing carbon emission to zero (Net Zero) within 2065



Reduce inequality by increasing the income of agriculturists and communities.

Bio Economy

Bio around us



Water Resources Management

- คลัสเตอร์วัสดุก่อสร้าง
- สถาบันน้ำและสิ่งแวดล้อมฯ

Product Processing

- คลัสเตอร์วิศวกรรมเครื่องจักรกลและงานโลหะ
- กลุ่มฯ การพิมพ์และบรรจุภัณฑ์
- กลุ่มฯ การจัดการเพื่อสิ่งแวดล้อม
- กลุ่มฯ ส่งออก

Agricultural Machinery

- กลุ่มฯ เครื่องจักรกลการเกษตร
- กลุ่มฯ ไฟฟ้า
- สถาบันอุตสาหกรรมเพื่อการเกษตร

Crops

- คลัสเตอร์สุขภาพและความงาม
- คลัสเตอร์อาหาร
- คลัสเตอร์พลังงานฯ
- กลุ่มฯ เทคโนโลยีชีวภาพ
- กลุ่มฯ เคมี
- กลุ่มฯ สุนัข

Cold Storage & Warehouse

- กลุ่มฯ เครื่องปรับอากาศและเครื่องทำความเย็น
- กลุ่มฯ ก๊าซ
- คลัสเตอร์วัสดุก่อสร้าง

Logistics & Packaging

- คลัสเตอร์การพิมพ์และบรรจุภัณฑ์
- Logistic
- กลุ่มฯ หัตถกรรมสร้างสรรค์
- สถาบัน GS1
- TIPMSE

Renewable Energy

- คลัสเตอร์พลังงานที่เป็นมิตรกับสิ่งแวดล้อม
- กลุ่มฯ พลังงานหมุนเวียน
- สถาบันพลังงานฯ

Smart Greenhouse

- คลัสเตอร์วัสดุก่อสร้าง
- กลุ่มฯ ไฟฟ้า อิเล็กทรอนิกส์และโทรคมนาคม
- กลุ่มฯ พลาสติก
- กลุ่มฯ เคมี
- กลุ่มฯ เทคโนโลยีชีวภาพ
- กลุ่มฯ สุนัข
- กลุ่มฯ ยา

Smart Agri-Tech

- กลุ่มฯ ไฟฟ้า
- กลุ่มฯ เครื่องจักรกลการเกษตร
- กลุ่มฯ ดิจิทัล
- สถาบัน ICTI

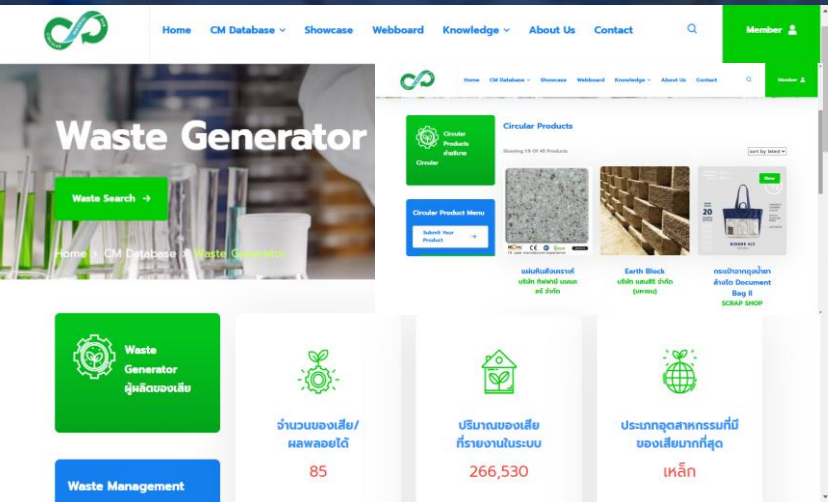
SMART AGRICULTURE INDUSTRY

Circular Economy

1. Circular Material Hub (CMH)



<https://www.circularmaterialhub.com>



In the case of bringing waste into the CMH system, 50% will create added value of CMH (Circular Material Hub) 9,040 million baht.

2. AEPW Projects



1. Plastic Road



2. Mega City Project
- used plastic handling model at khlong toei district
- Rayong Model



3. Upcycling





Eco Industrial Town
39 provinces
54 areas

Eco Factory amount 368 units

ECO = Ecology + Economy
(5 Dimensions)



Economy

- Decrease production cost of entrepreneurs.
- Increase potential of business competition.
- Create jobs and Increase native income **more than 10 million baht per year**

Social

- Healthy Safety and Life quality of employees and people in community better.
- Response to Eco Town developing

Environment

- Reduce the use of raw materials, energy, and resources
- Reduce Greenhouse gases emissions of **180,000 tons of CO2**
- Reduce the production of industrial waste
- Eco-friendly production process.

Climate Change

Target to achieve
Carbon Neutral
within 2050 and
Net Zero
within 2065

1 Establish a climate
change institute
(Carbon Credit
Institute)

2 Promote the use of
construction
materials such as
Hydraulic cement.

3 Develop Thailand
Carbon Credit
Exchange Platform



Enhancing Industrial Capacity Approaches



1. Aiming to BCG Model



2. Technology and innovation lead industry



3. Focusing on Supply chain security



4. Renewable energy has a role in industrial sector



5. Upskill, Reskill Labour skills



6. Law must encourage ease of doing business

THANK YOU

