



# Industry Focus and Indicator Update

แนวโน้มอุตสาหกรรมไทยหลัก 33 อุตสาหกรรม จัดทำโดยทีมวิจัยธุรกิจ ธนาคาร แลนด์ แอนด์ เฮ้าส์ จำกัด (มหาชน)

1. Automobile 2. Auto Parts 3. Electrical Appliances 4. HDD 5. Integrated Circuits 6. Frozen & Processed Chicken 7. Frozen Seafood 8. Cassava Product 9. Oil Palm 10. Rice 11. Rubber 12. Sugar 13. Cement 14. Construction Contractor 15. Condominium in BMR 16. Low-rise Housing in BMR 17. Office Building in BMR 18. Retail Space in BMR 19. Industrial Estate 20. Credit Card 21. Auto Hire-Purchase 22. Personal Loan 23. Hot & Cold Rolled Steel Sheet 24. Long Product Steel 25. Private Hospitals 26. Tourist Accommodation 27. Modern Trade 28. Motorcycle 29. Petrochemicals 30. Power Generation 31. Refinery 32. Oil Service Station 33. Banking



February 2023

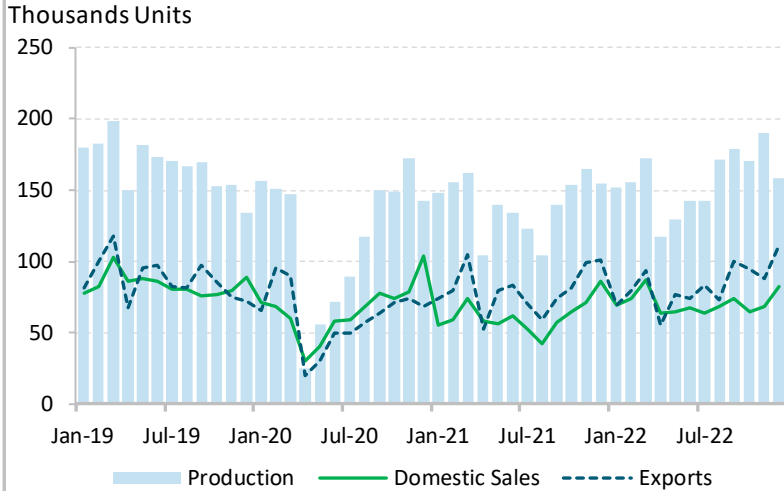
ผู้วิเคราะห์: BR Team

Business Research

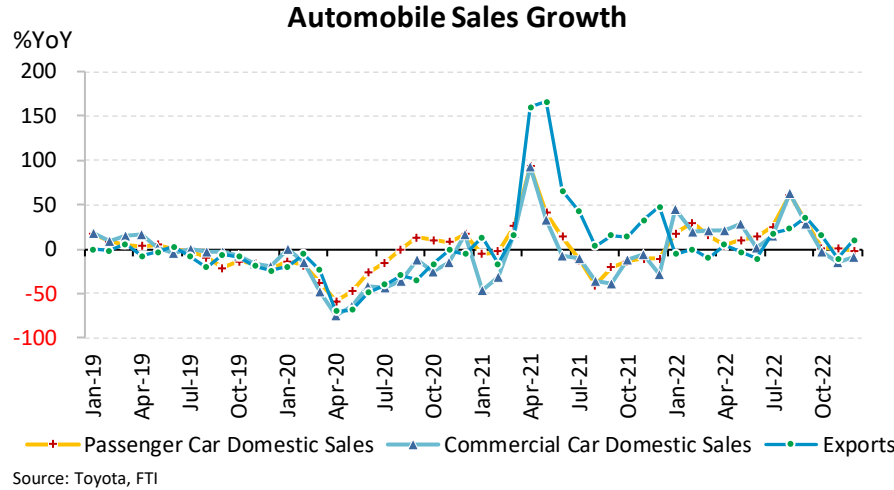


# Automobile (รถยนต์)

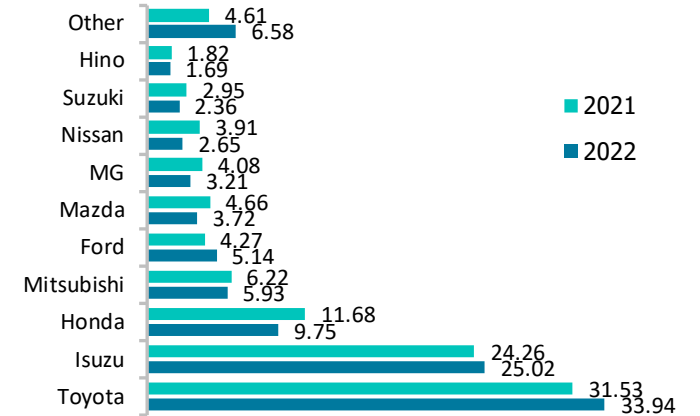
### Production and Sales



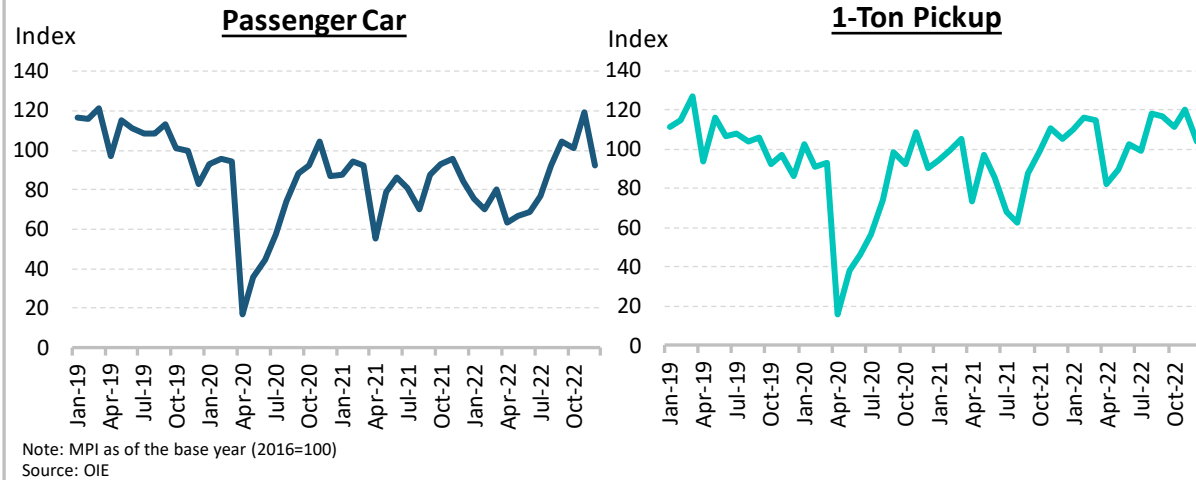
### Domestic Sales



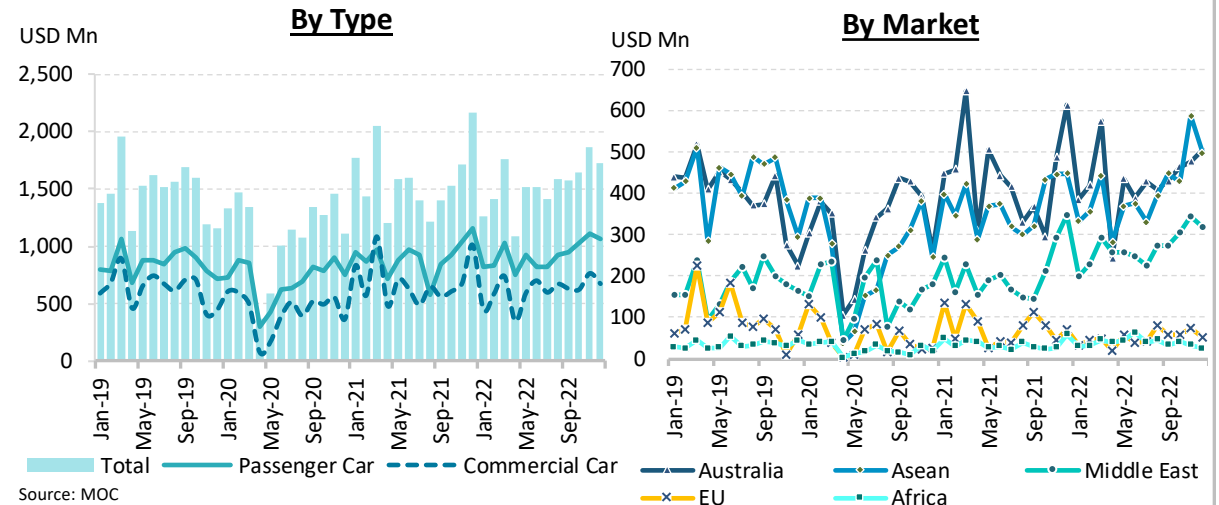
### Domestic Share by Automaker (%)



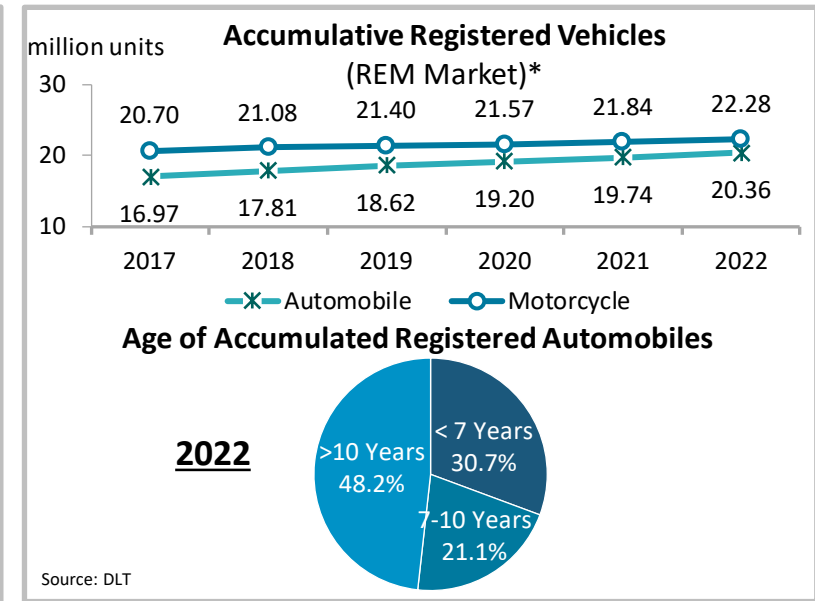
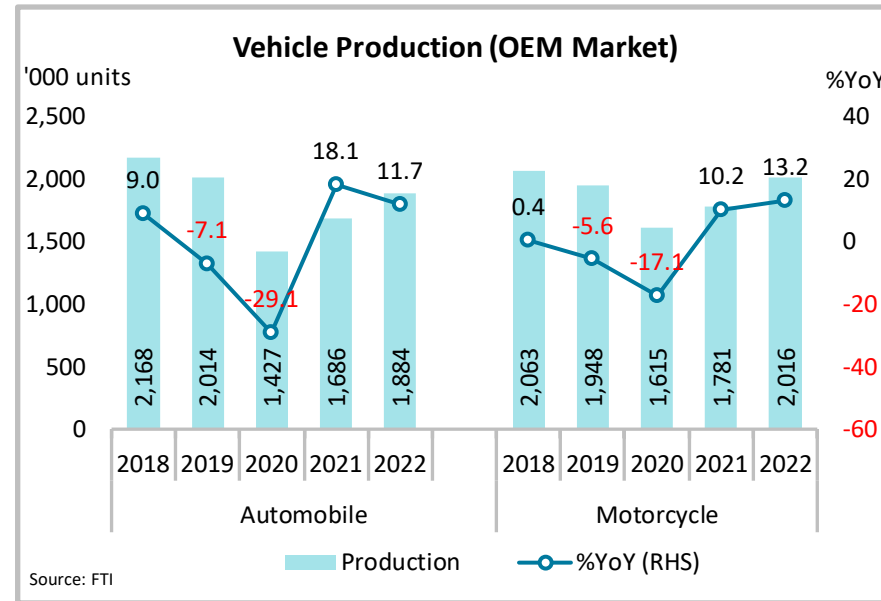
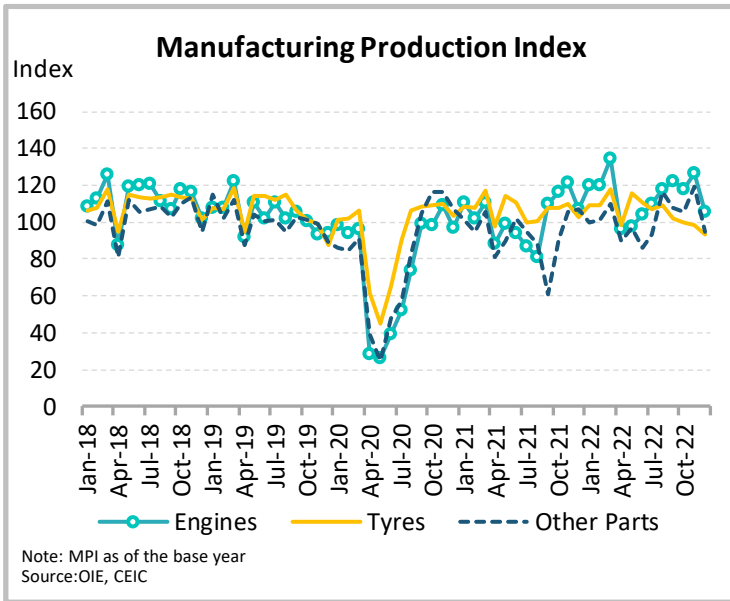
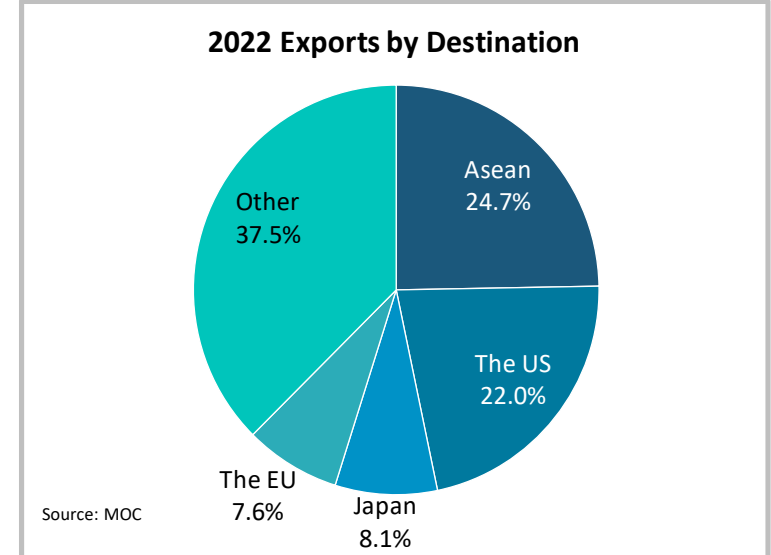
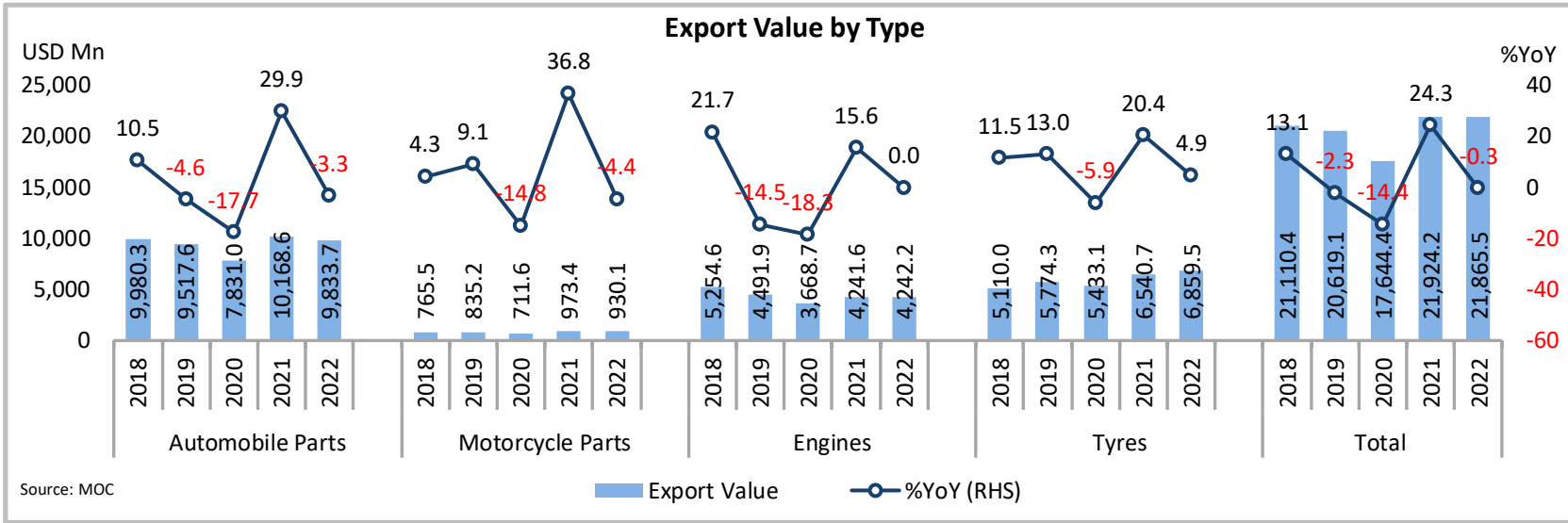
### Manufacturing Production Index (MPI)



### Export Value

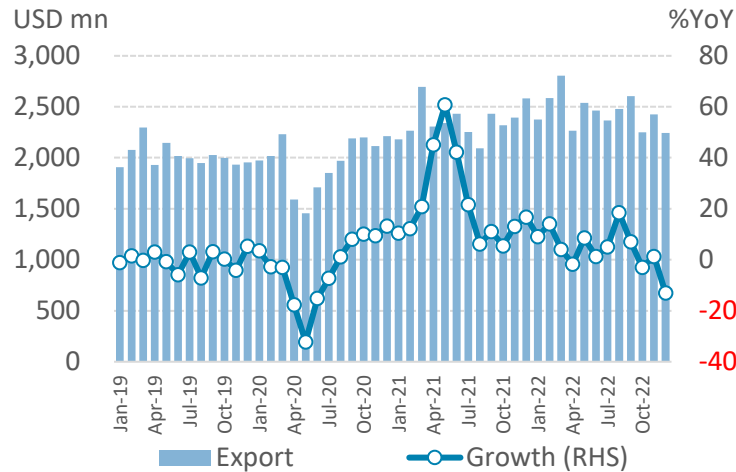


# Auto Parts (ชิ้นส่วนยานยนต์)



# Electrical Appliances (เครื่องใช้ไฟฟ้า)

### Electrical Appliance Export Value



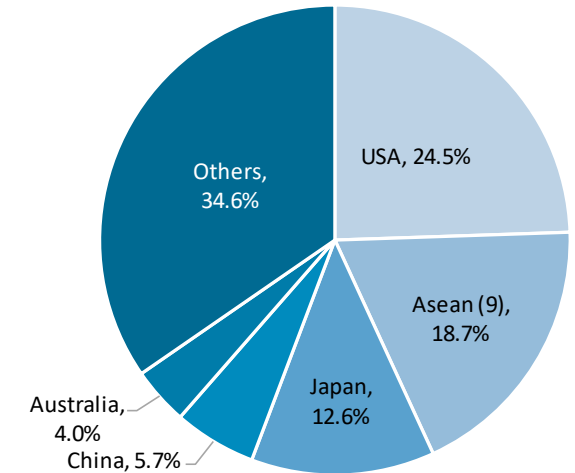
### Electrical Appliance Export

#### Electrical Appliance Export by Product

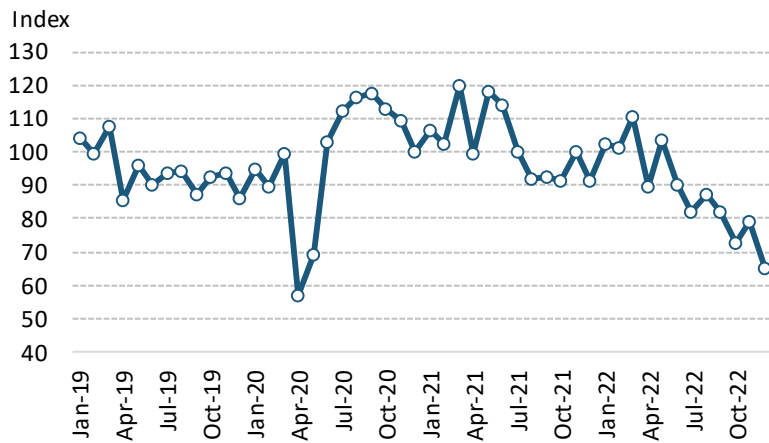
Unit: USD mn

	2018	2019	2020	2021	2022	%YoY	Share (%)
Air conditioner	5,366	5,496	5,253	6,486	7,044	8.6	24.0
Television receiver	2,899	3,041	2,412	2,862	2,795	-2.3	9.5
Refrigerator	1,856	1,977	2,098	2,393	2,222	-7.1	7.6
Washing machine	1,469	1,286	1,226	1,343	1,190	-11.4	4.1
Microwave Oven	843	765	950	1,239	1,403	13.2	4.8
Compressor	878	827	698	903	919	1.7	3.1
Video recording	527	450	349	602	508	-15.7	1.7
Others	10,476	10,381	10,521	12,444	13,306	6.9	45.3
<b>Total</b>	<b>24,313</b>	<b>24,224</b>	<b>23,506</b>	<b>28,273</b>	<b>29,387</b>	<b>3.9</b>	<b>100.0</b>

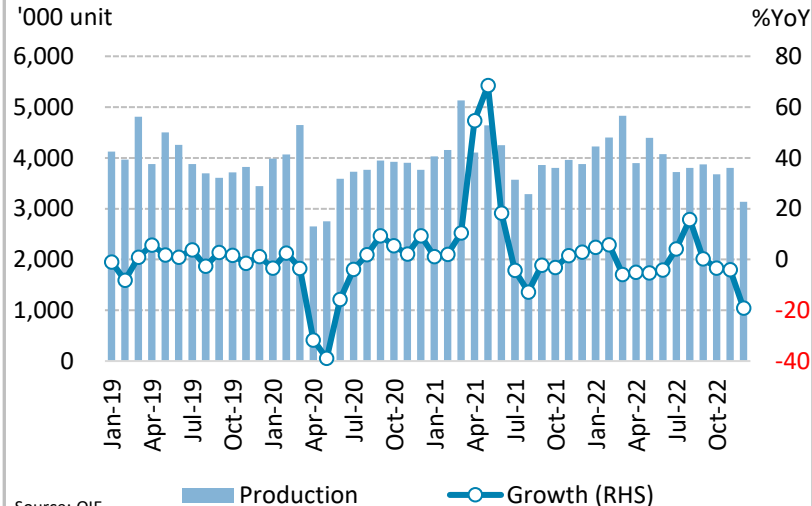
### Export Market Share (2022)



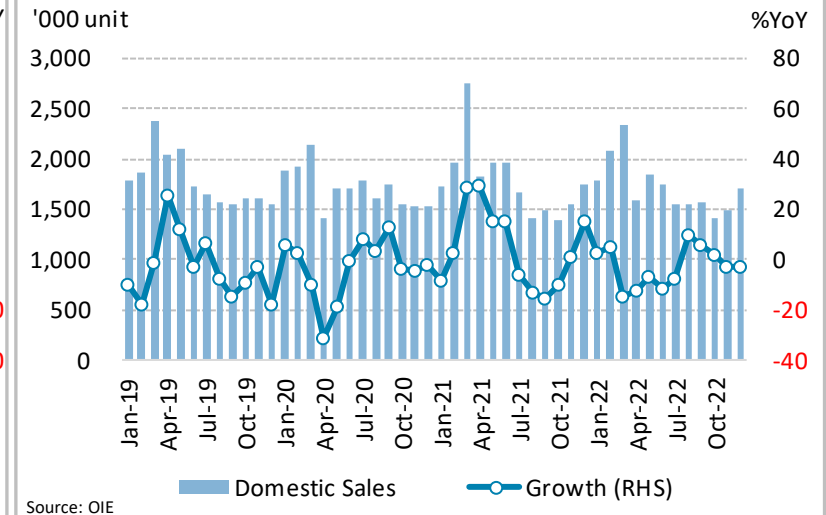
### Manufacturing Production Index (MPI)



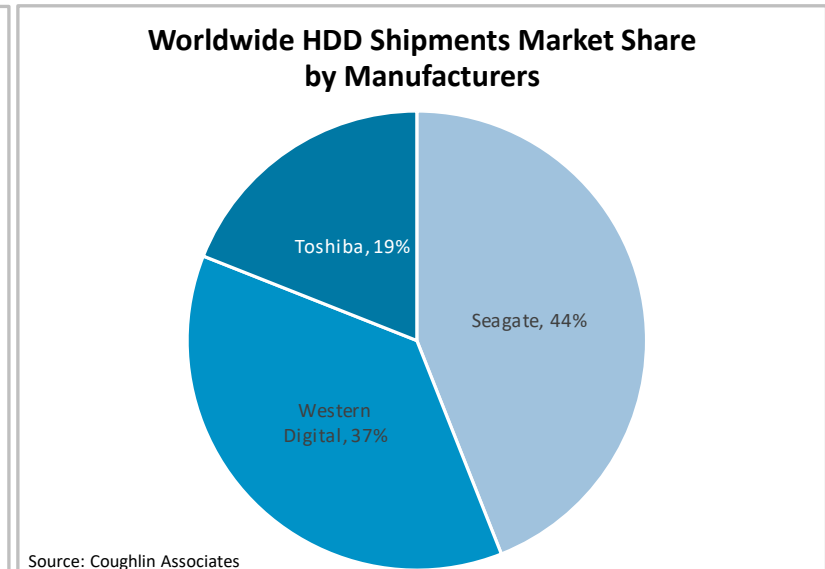
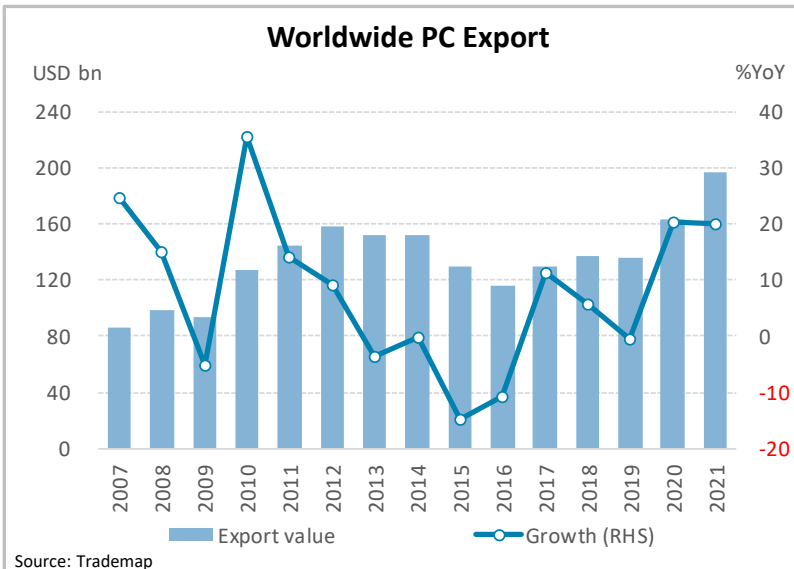
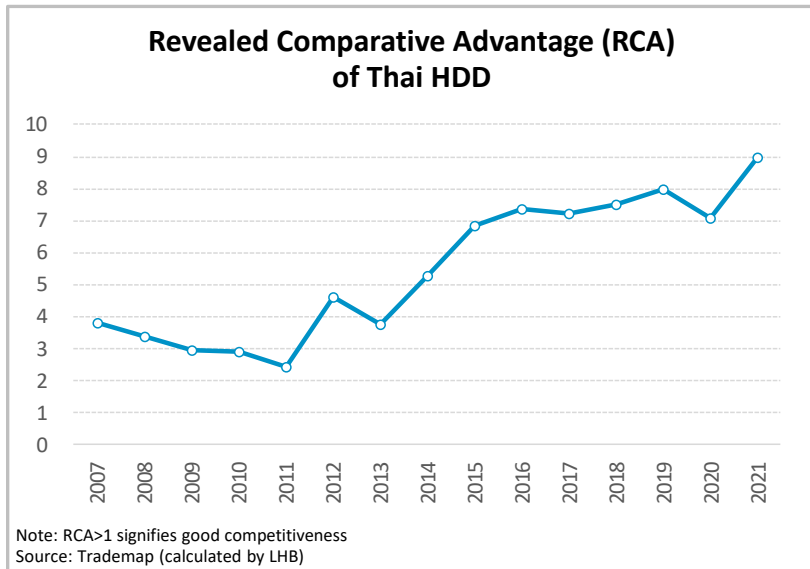
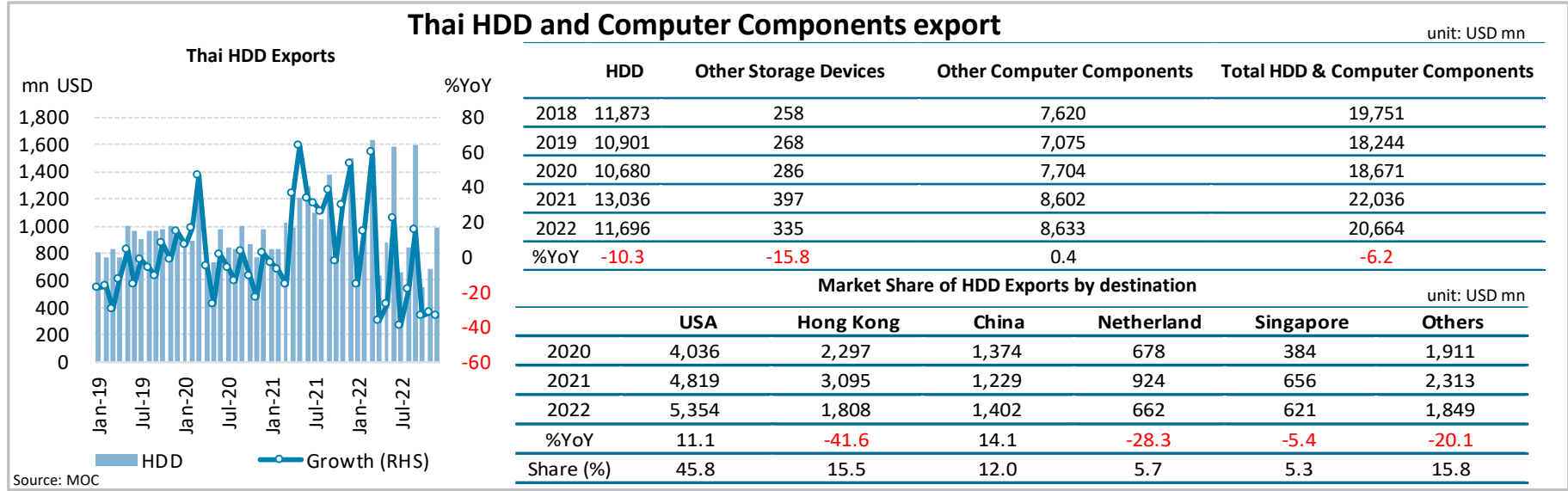
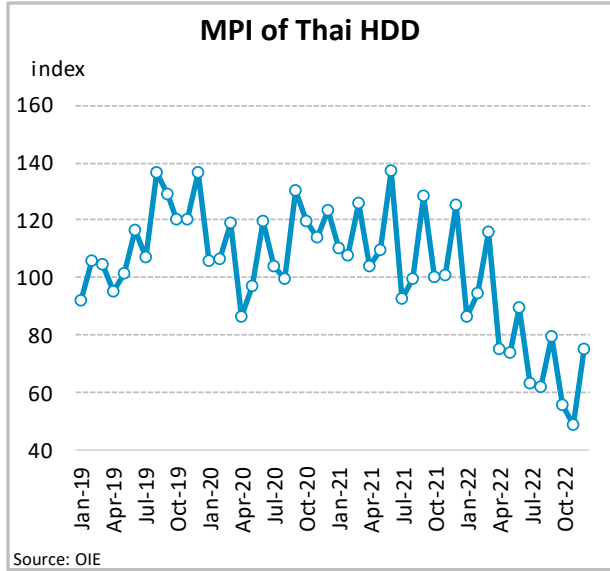
### Electrical Appliance Production



### Domestic Electrical Appliance Sales

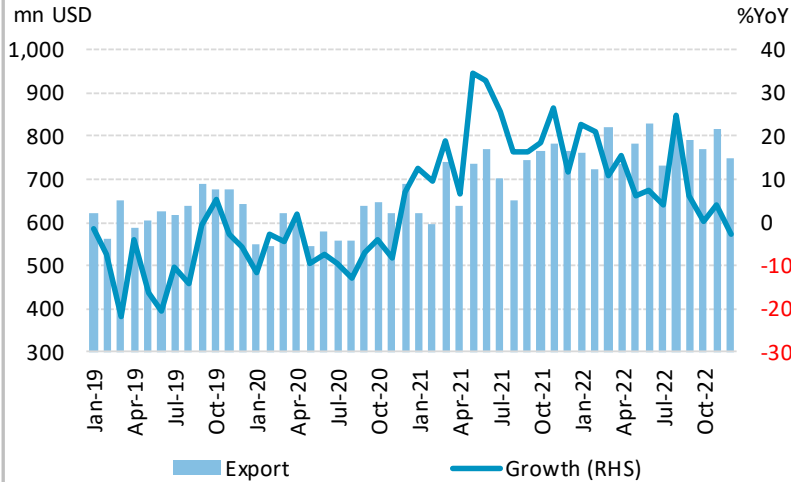


# Hard Disk Drive : HDD (ฮาร์ดดิสก์ไดรฟ์)



# Integrated Circuits: IC (แผงวงจรไฟฟ้า)

### Thai IC Export



Source: MOC

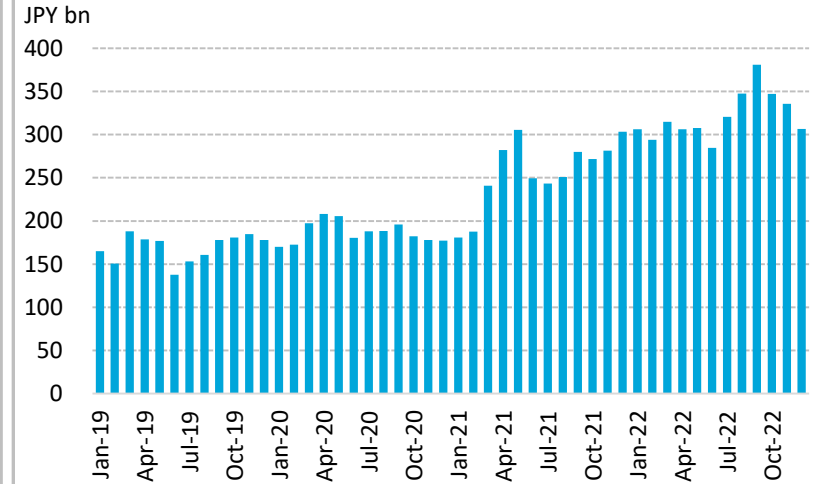
### Market Share of Thai IC Exports by Destination

Unit: USD mn

Country	2020	2021	2022	%YoY	Share (%)
USA	1,812.2	2,343.4	2,003.3	-14.5	21.5
China	819.8	986.9	1,280.6	29.8	13.7
Japan	702.5	719.5	747.3	3.9	8.0
Vietnam	458.3	564.6	741.1	31.3	8.0
Malaysia	423.3	601.4	691.6	15.0	7.4
Others	2,938.3	3,301.3	3,856.0	16.8	41.4
<b>Total</b>	<b>7,154.5</b>	<b>8,517.0</b>	<b>9,319.7</b>	<b>9.4</b>	<b>100.0</b>

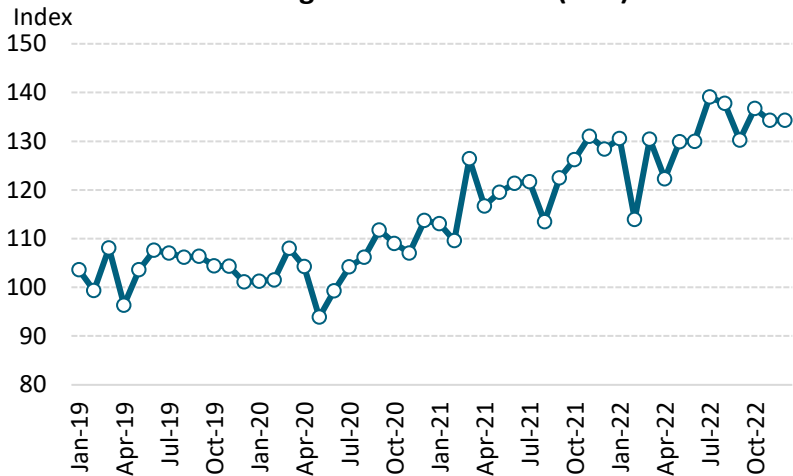
Source: MOC

### SEAJ Billing (three month avg)



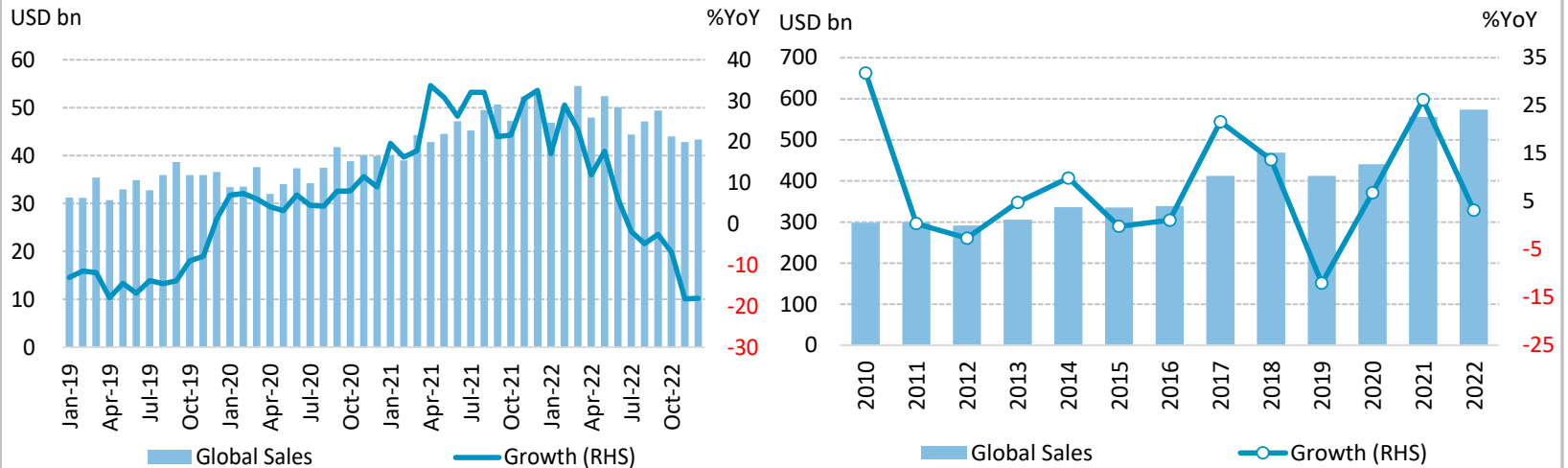
Source: Semiconductor Equipment Association of Japan (SEAJ)

### Manufacturing Production Index (MPI)



Source: OIE

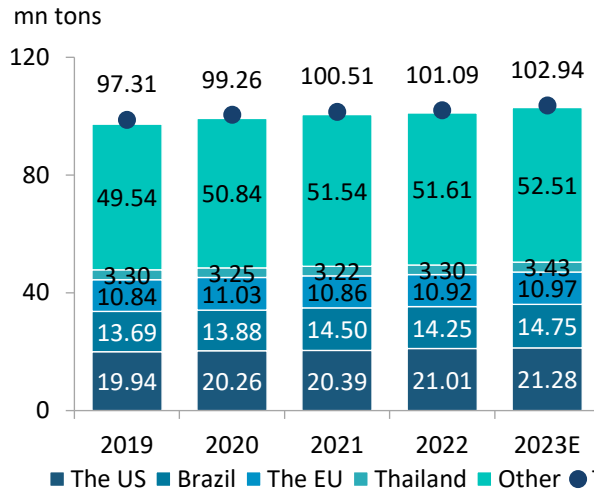
### Worldwide Sales of Semiconductors



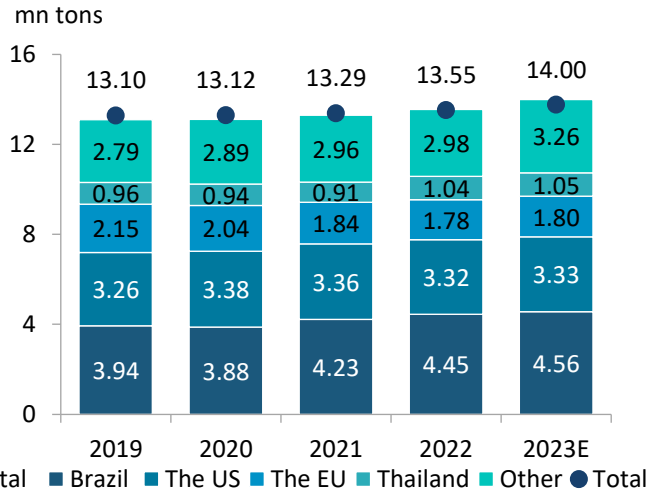
Source: World Semiconductor Trade Statistics

# Frozen and Processed Chicken (ไก่แช่แข็งและแปรรูป)

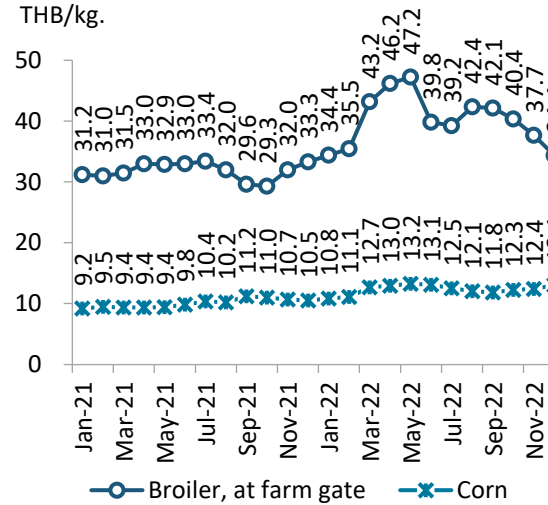
### World's Chicken Production



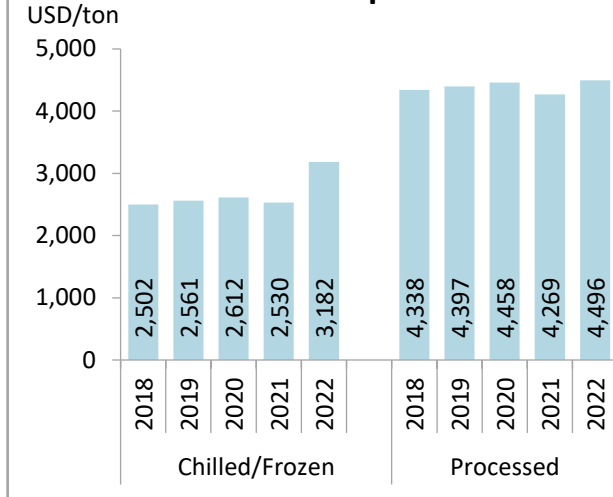
### World's Chicken Exports



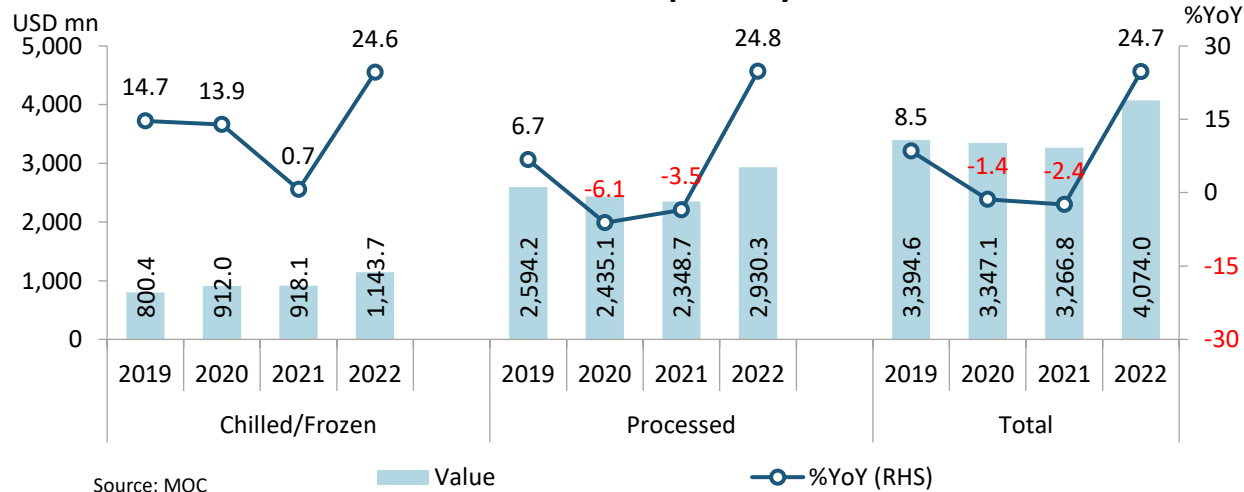
### Broiler and Corn Prices



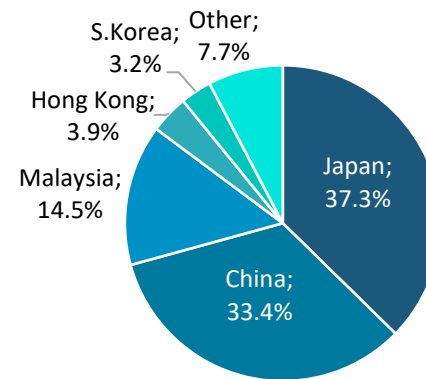
### Thai Chicken Export Prices



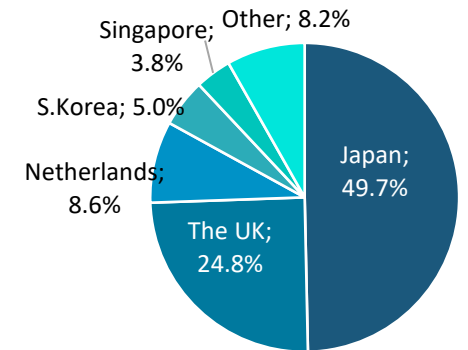
### Thai Chicken Exports by Product



### 2022 Chilled/Frozen Chicken by Destination

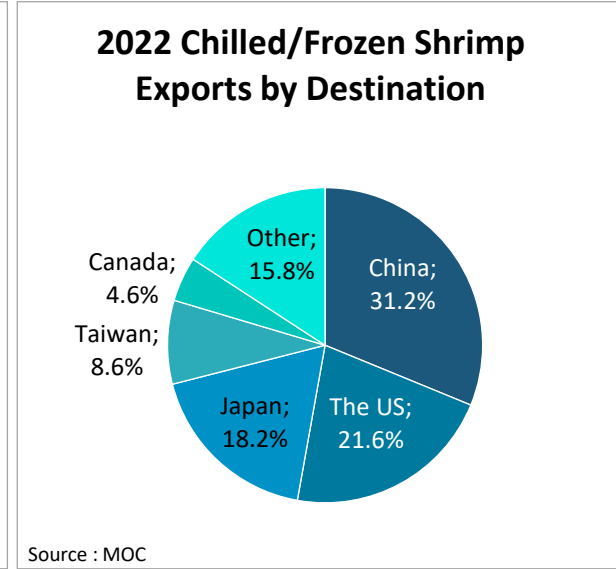
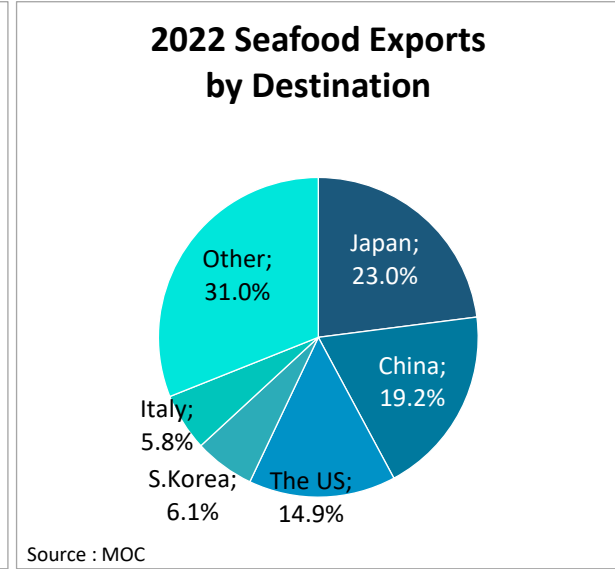
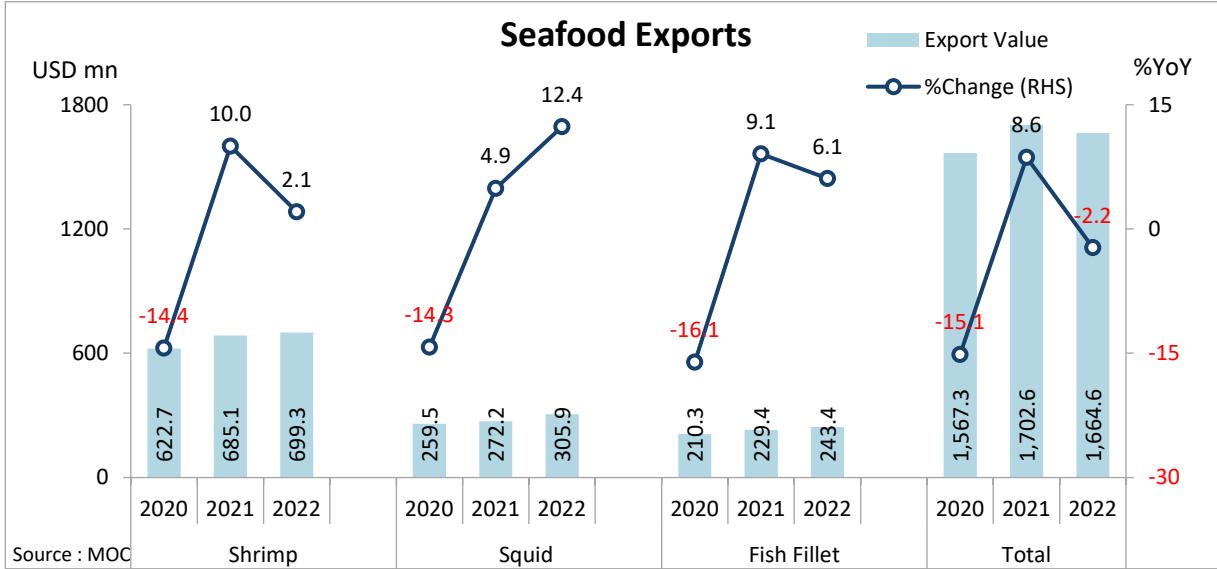
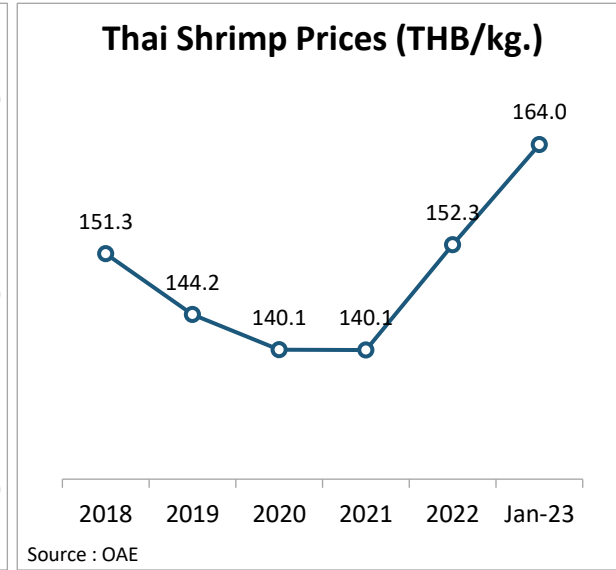
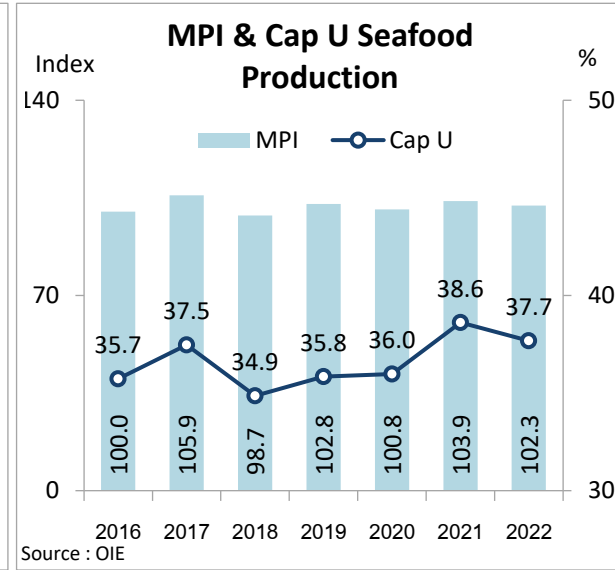
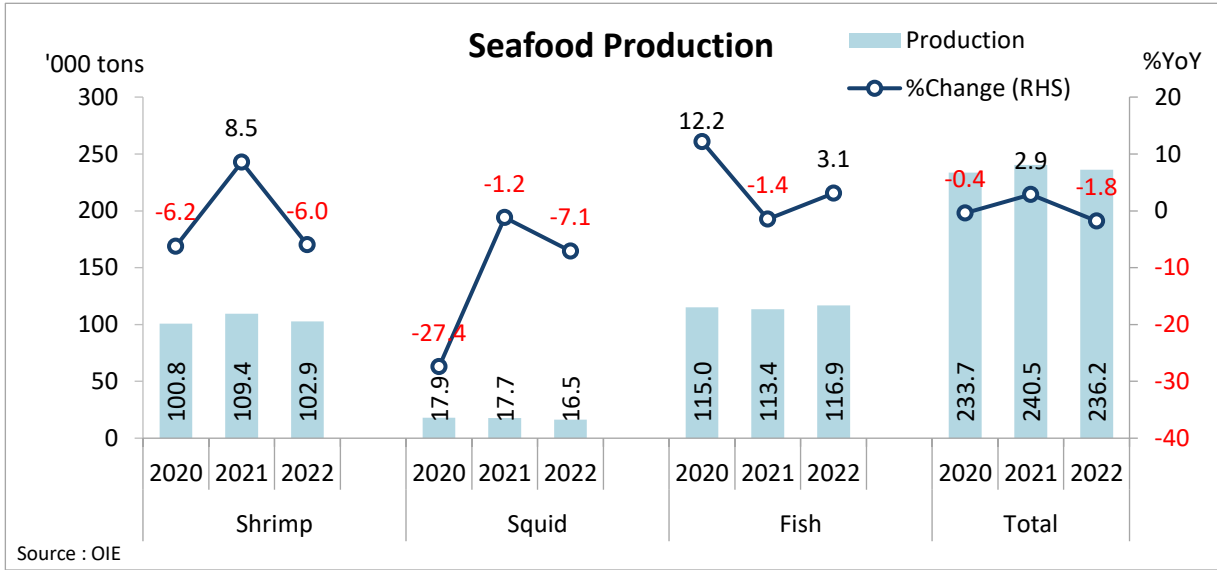


### 2022 Processed Chicken by Destination





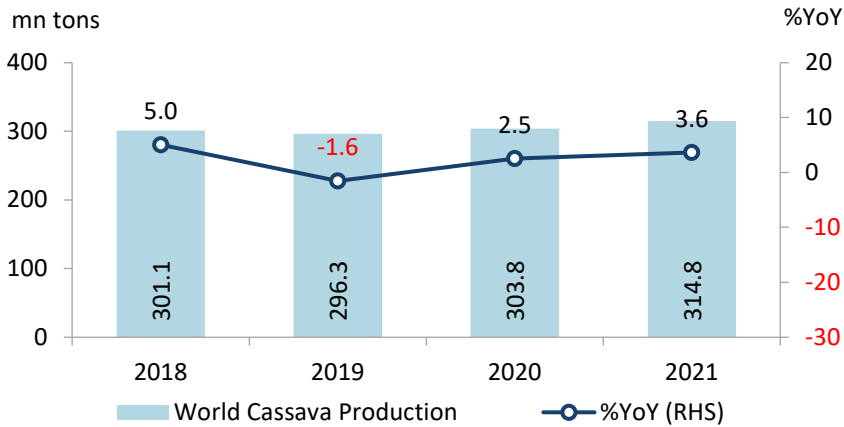
# Frozen Seafood (อาหารทะเลแช่แข็ง)



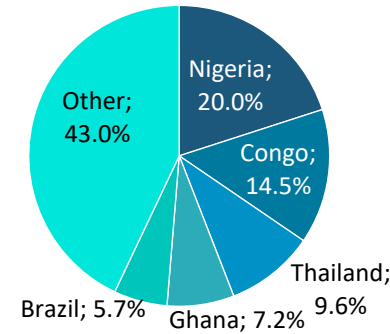


# Cassava Products (ผลิตภัณฑ์มันสำปะหลัง)

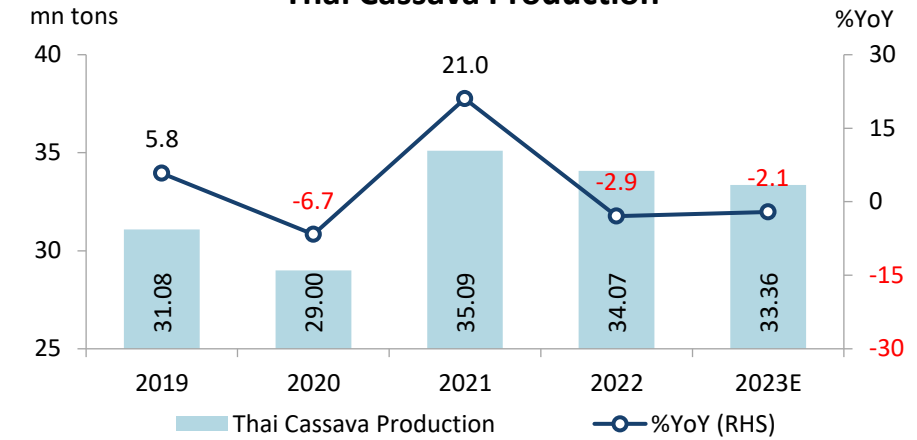
## World Cassava Production



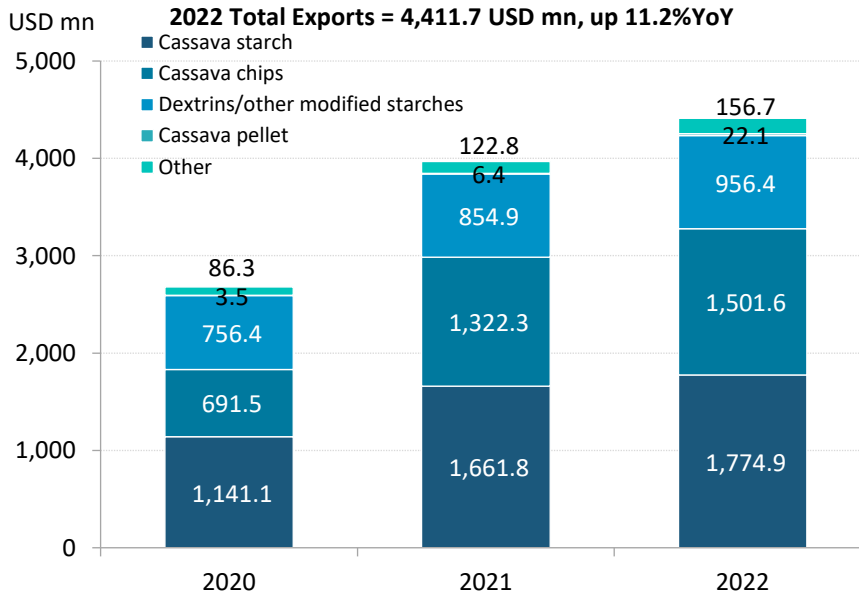
## 2020 World Cassava Production by Country



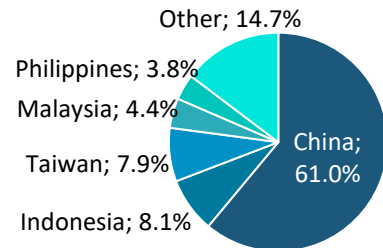
## Thai Cassava Production



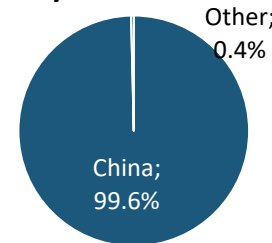
## Thai Cassava Products Exports



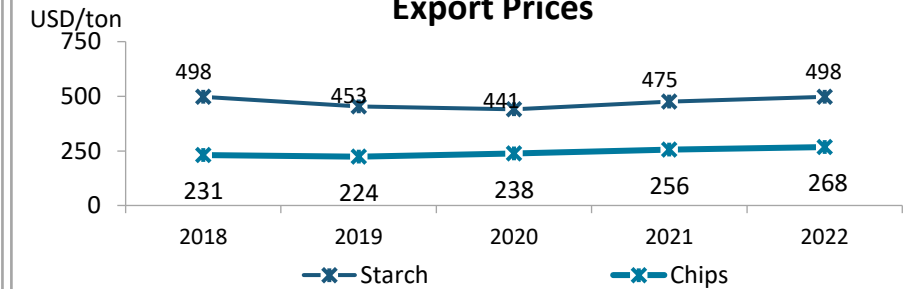
## 2022 Cassava Starch Exports by Destination



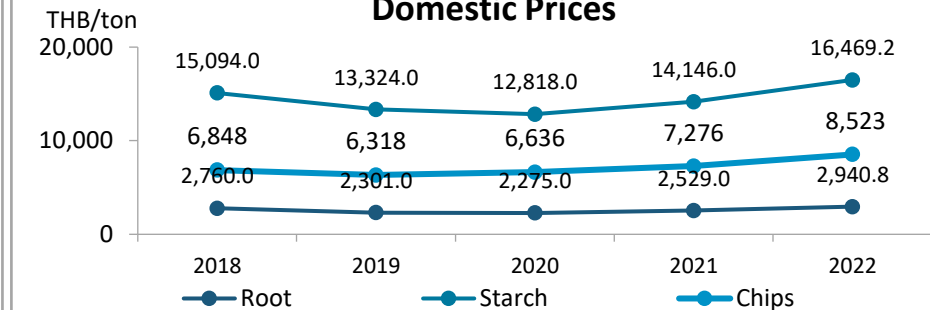
## 2022 Cassava Chip Exports by Destination



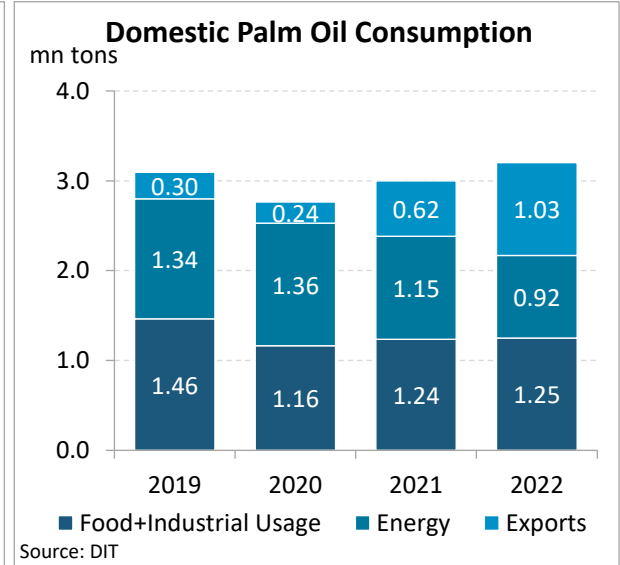
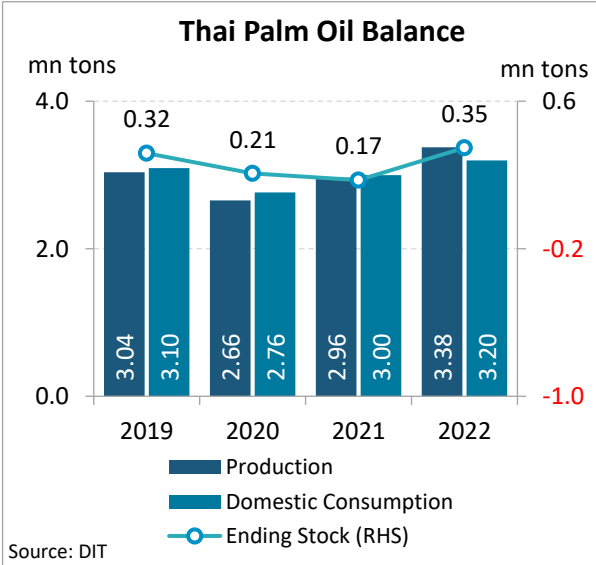
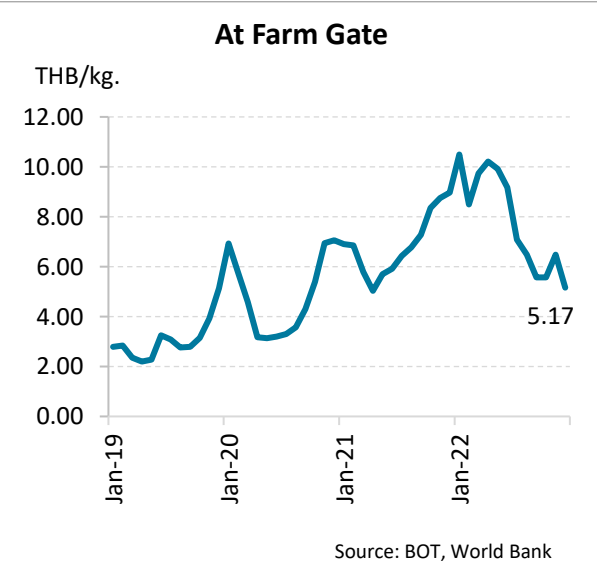
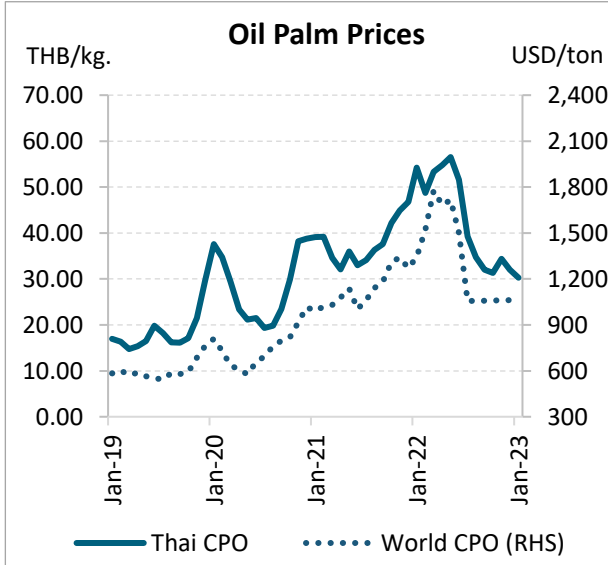
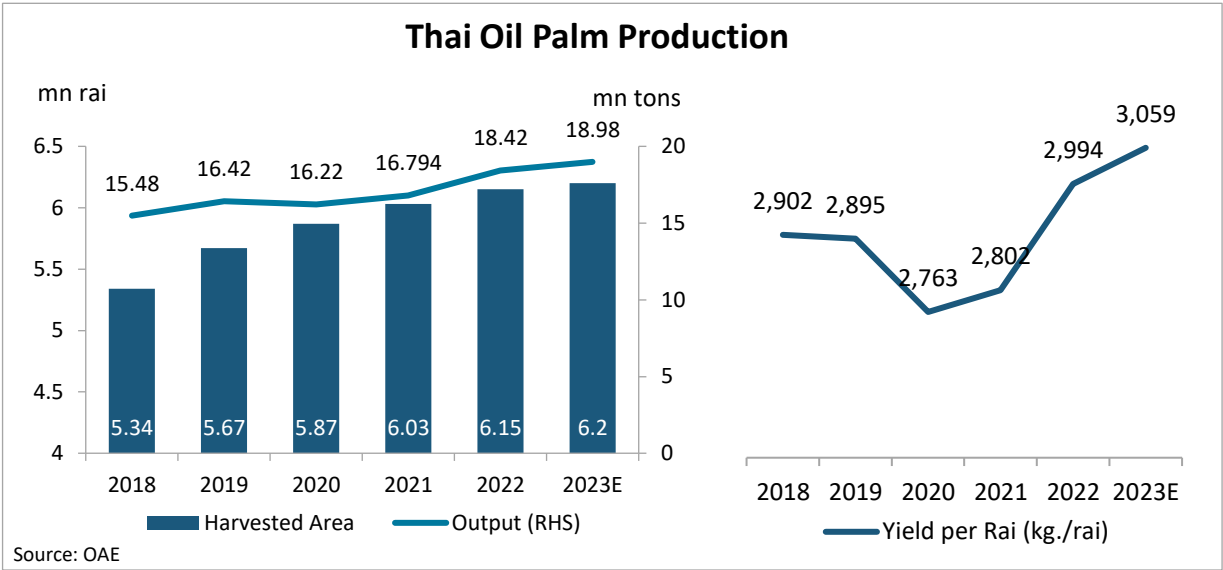
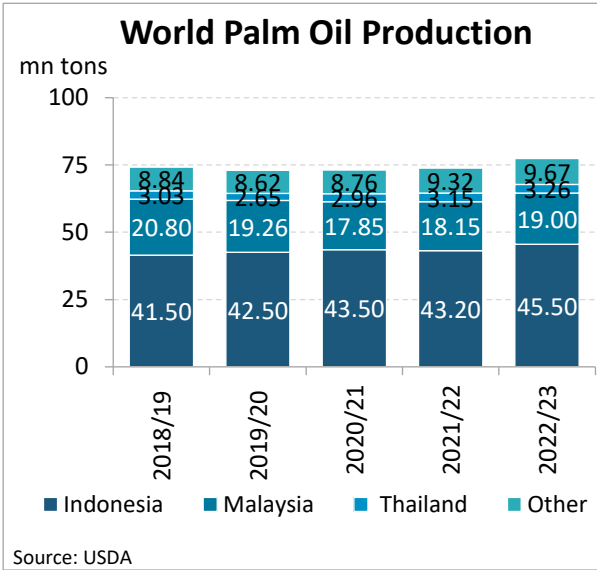
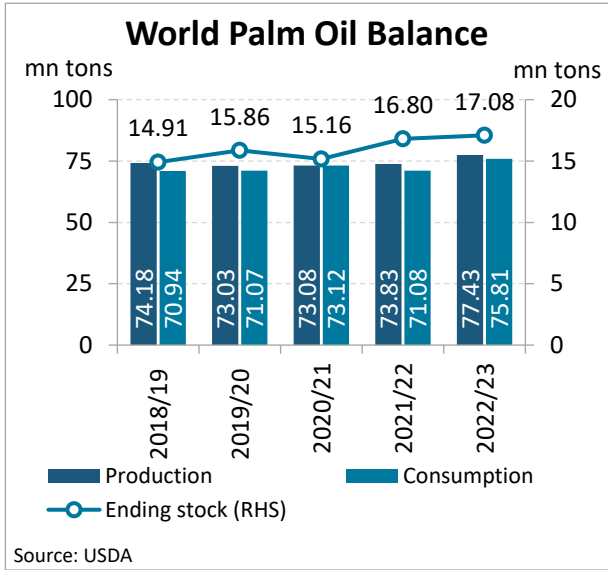
## Export Prices



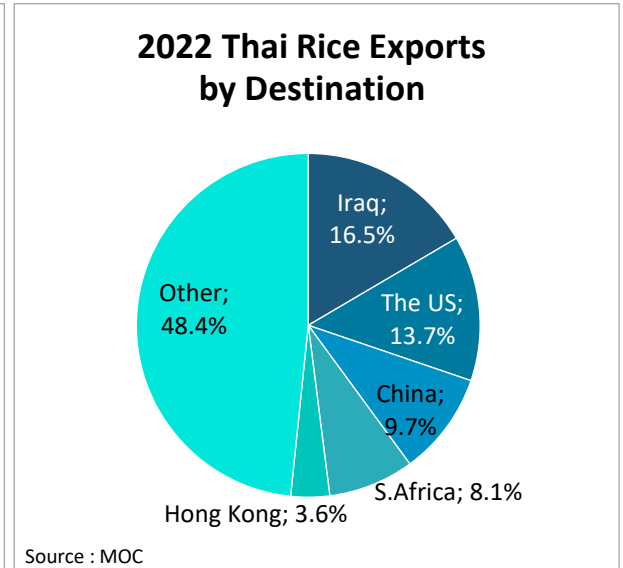
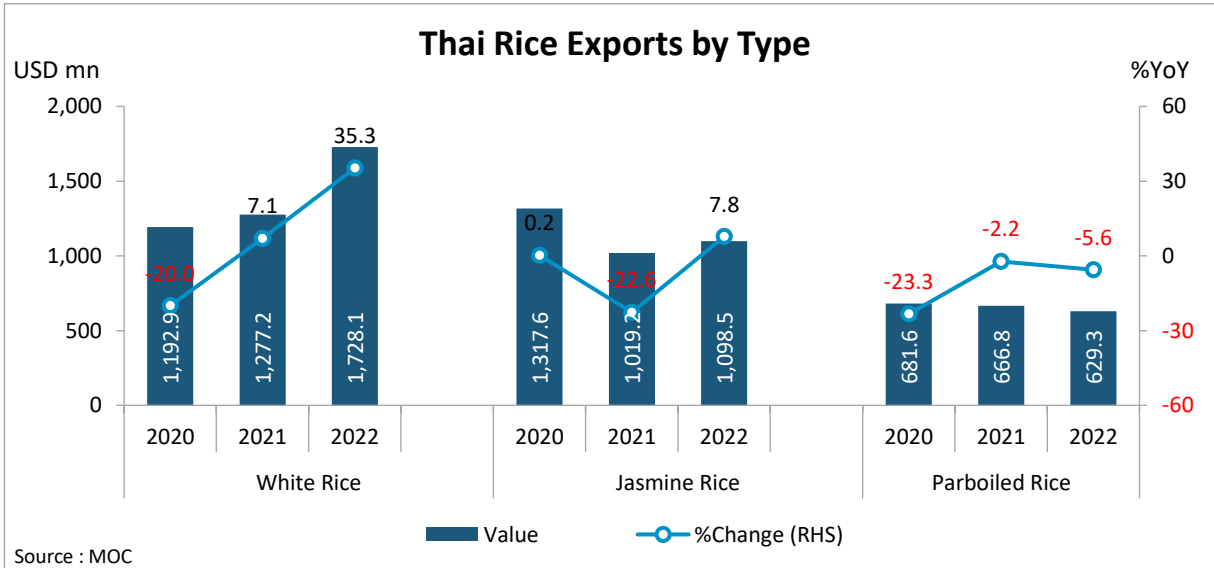
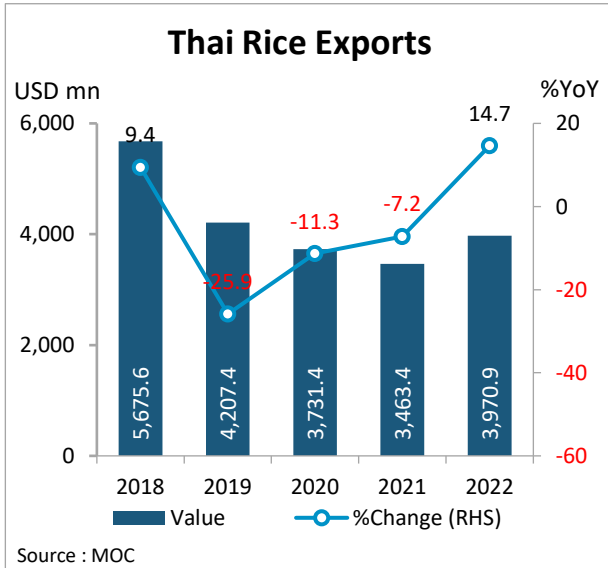
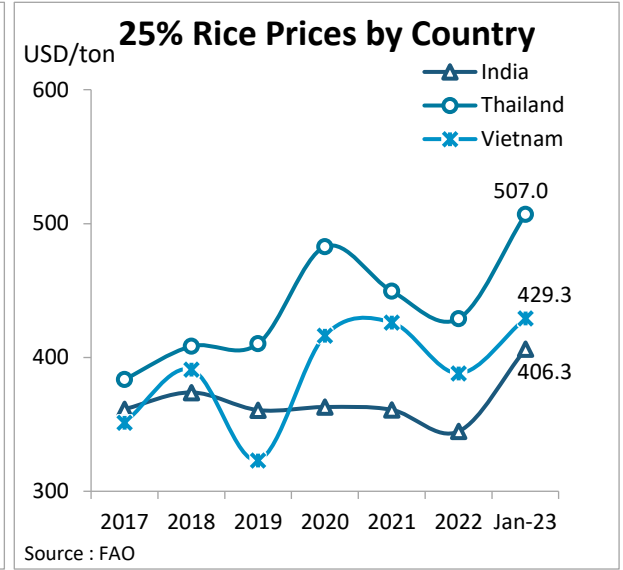
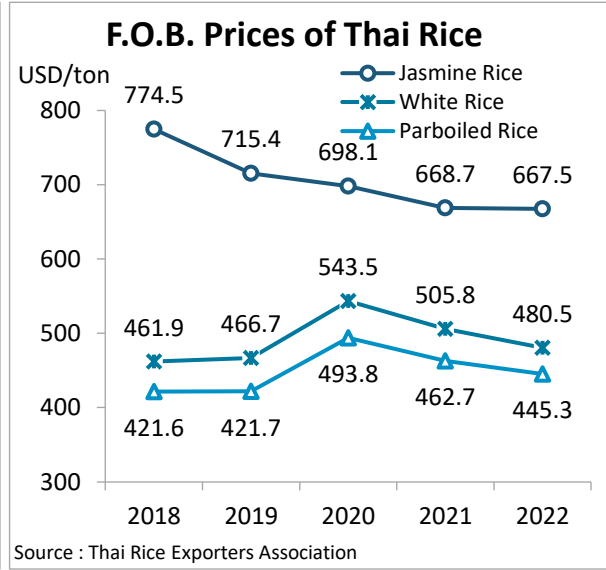
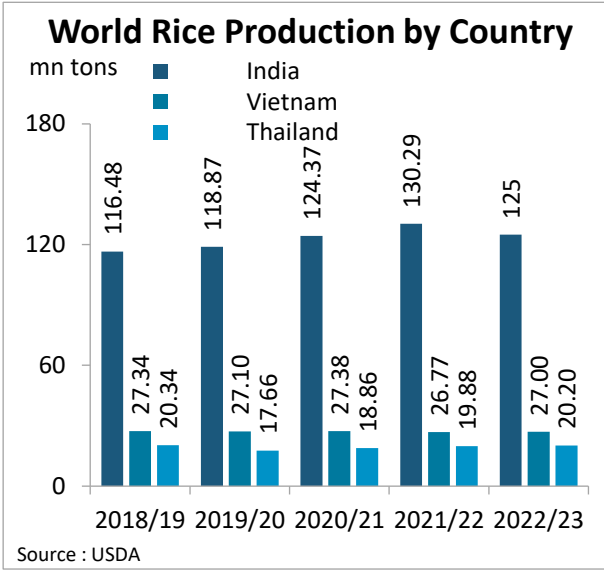
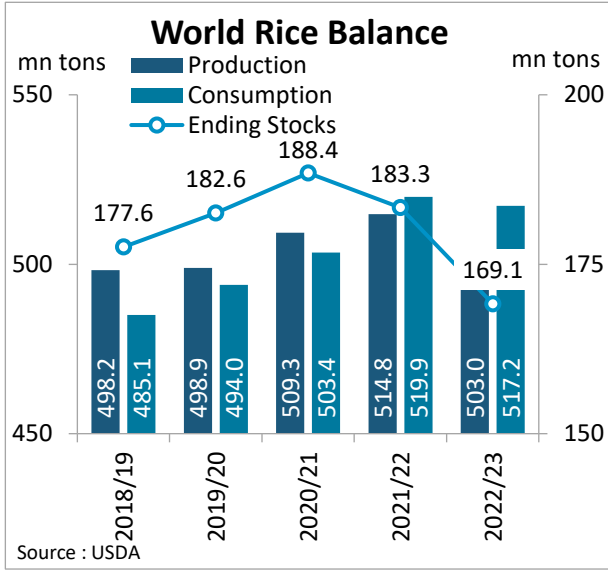
## Domestic Prices



# Oil Palm (ปาล์มน้ำมัน)

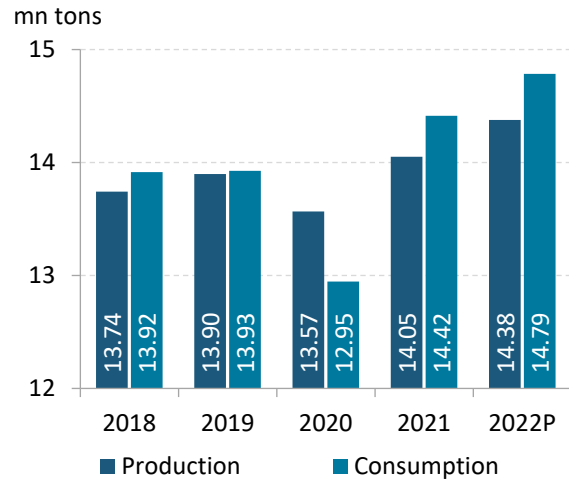


# Rice (ข้าว)



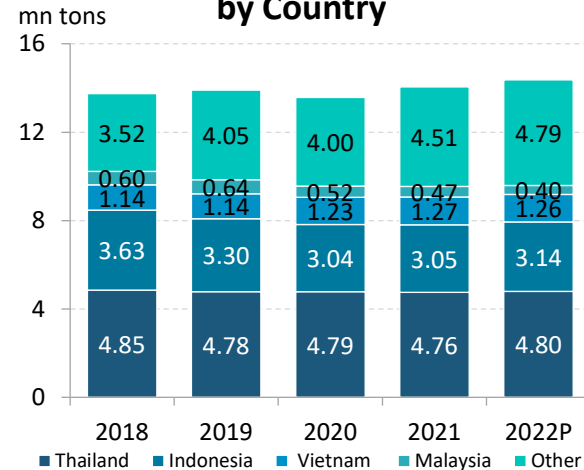
# Rubber (ยางพารา)

### World Natural Rubber Balance



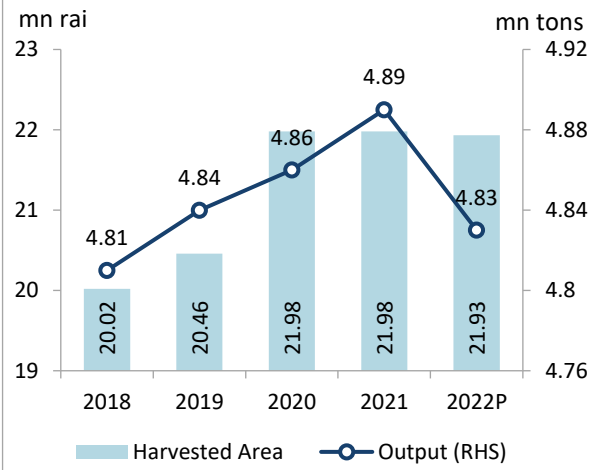
Source : OAE

### Natural Rubber Production by Country



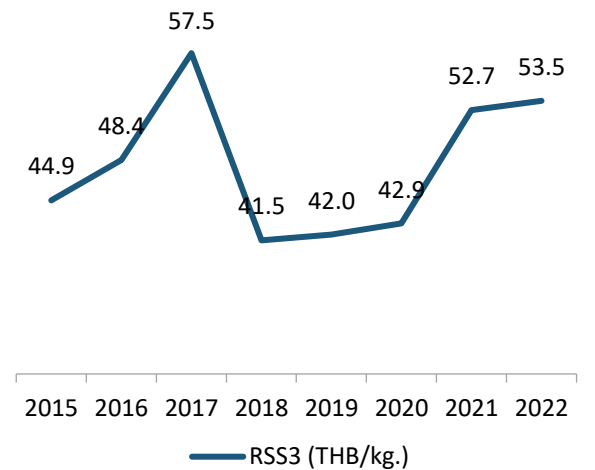
Source : OAE

### Thai Rubber Harvested Area



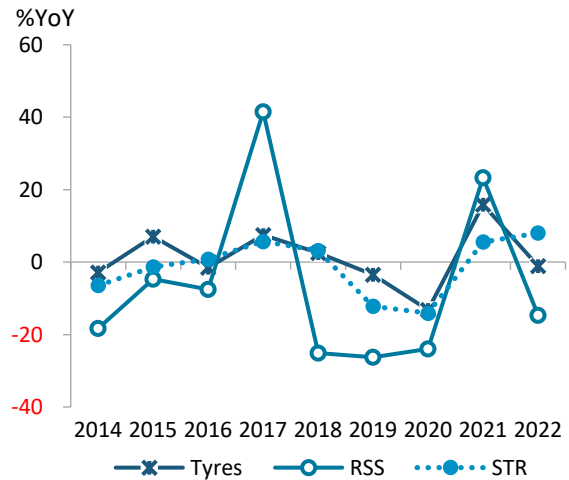
Source : OAE

### Thai Rubber Prices at Farm Gate



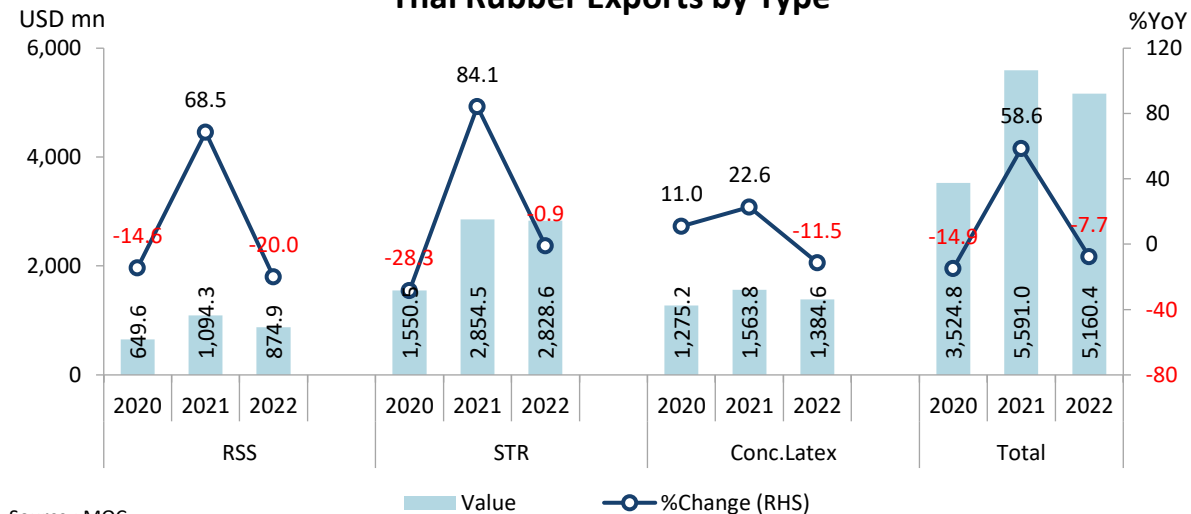
Source : OAE

### MPI of Thai Rubber Products



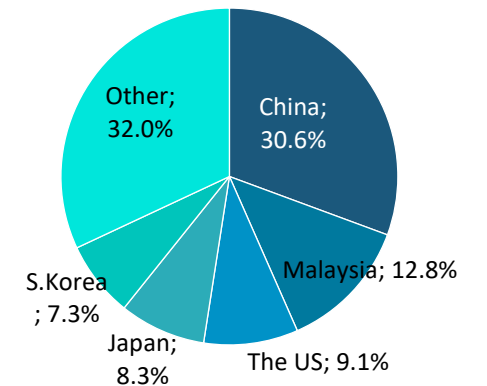
Source : OIE

### Thai Rubber Exports by Type



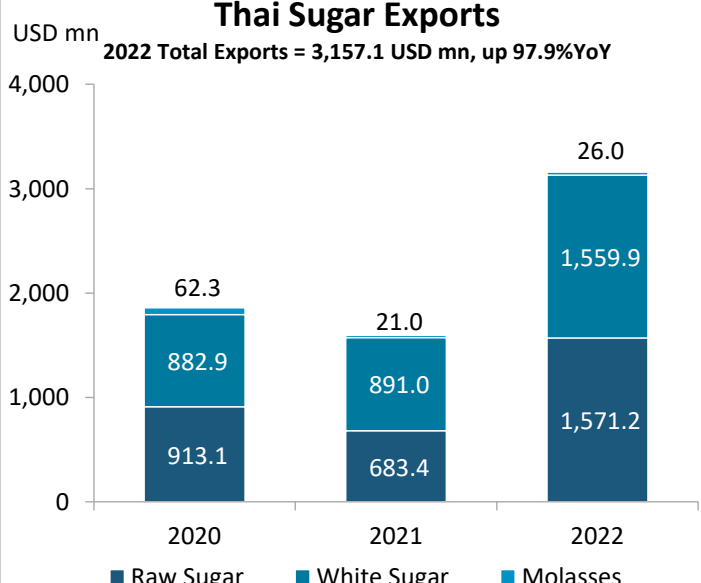
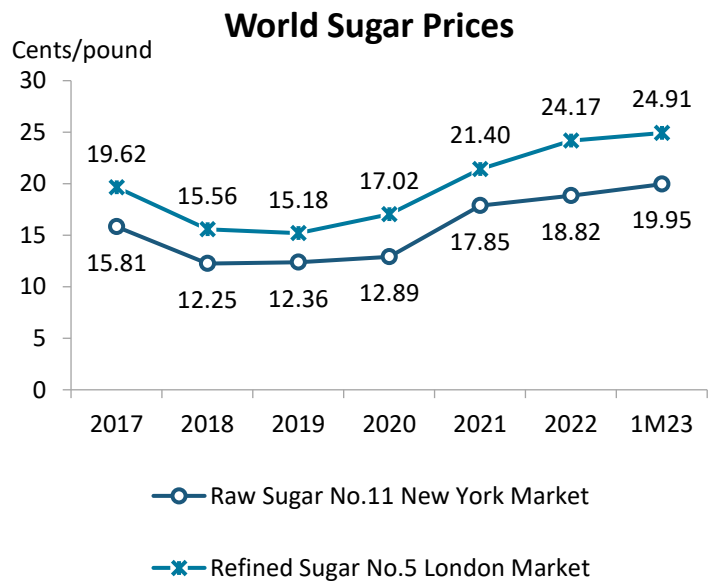
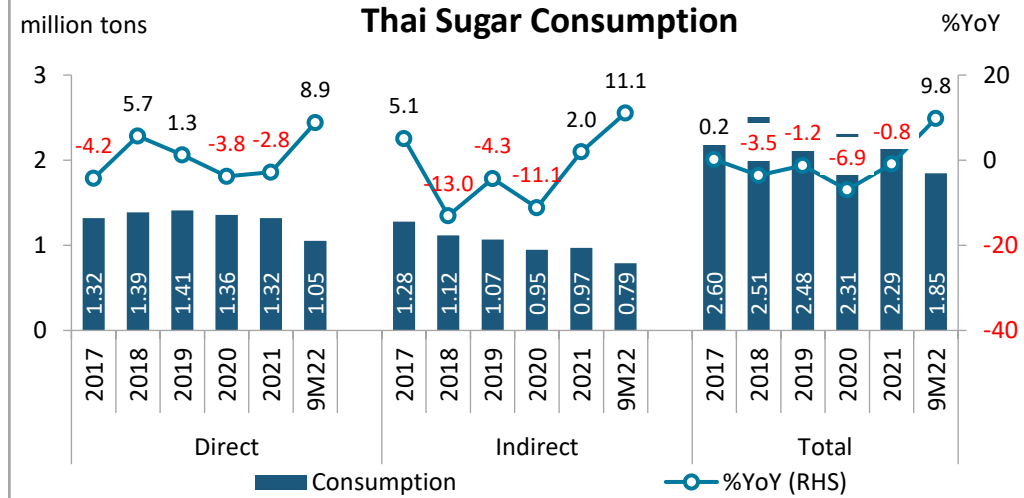
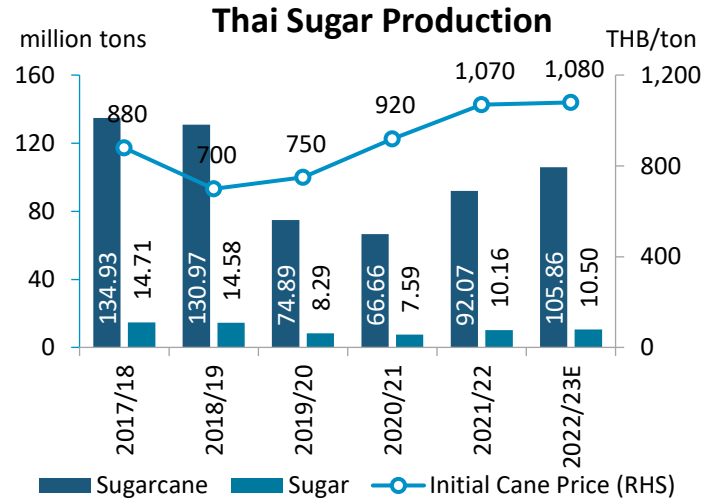
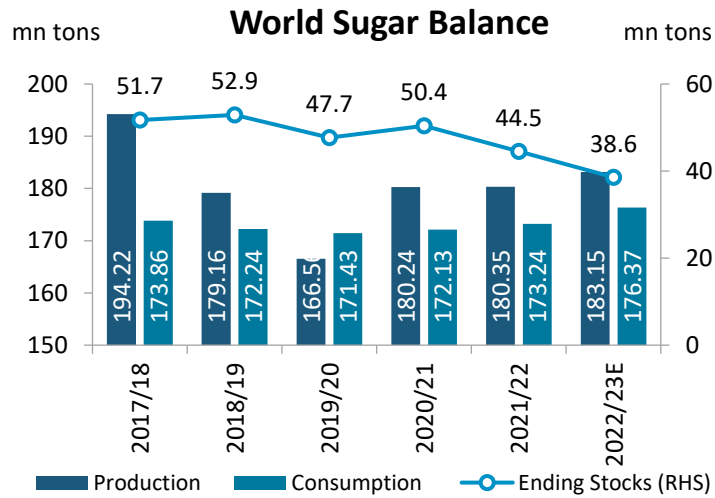
Source : MOC

### 2022 Thai Rubber Exports by Destination

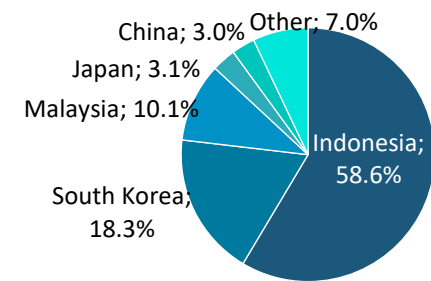


Source : MOC

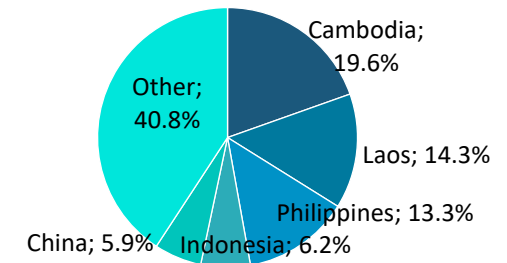
# Sugar (น้ำตาล)



### 2022 Raw Sugar Exports by Destination

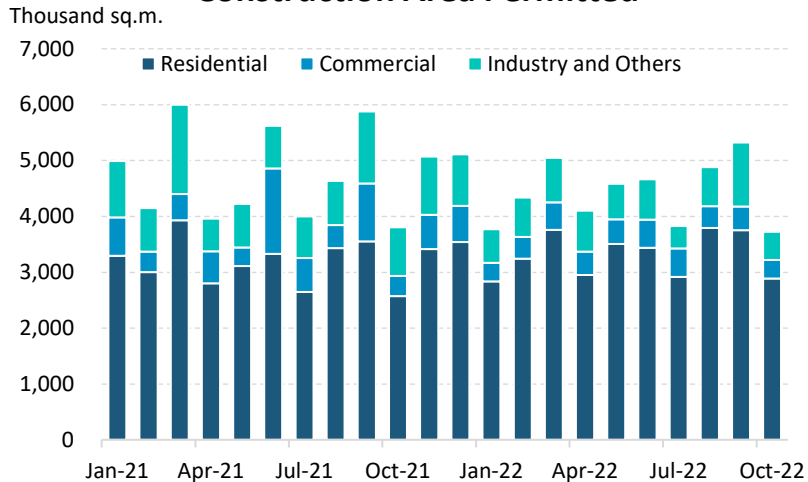


### 2022 White Sugar Exports by Destination



# Cement (ปูนซีเมนต์)

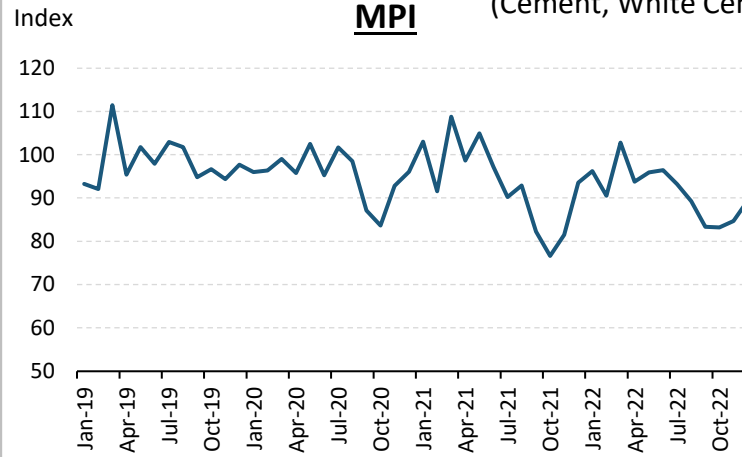
## Construction Area Permitted



Source: Toyota, FTI

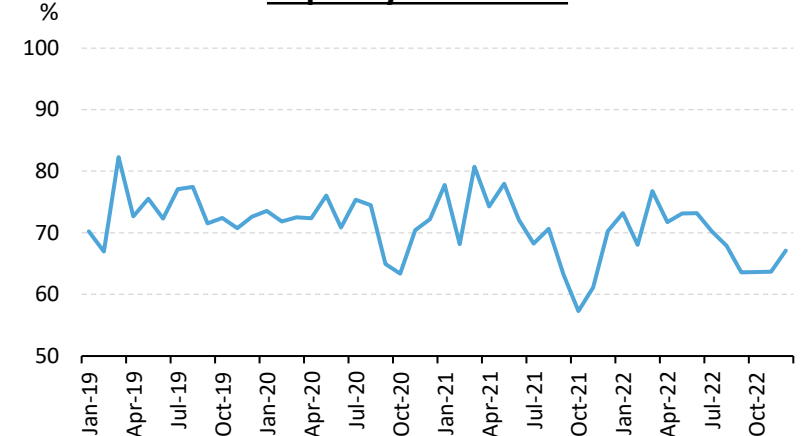
## MPI & Capacity Utilization

(Cement, White Cement and Clinkers)



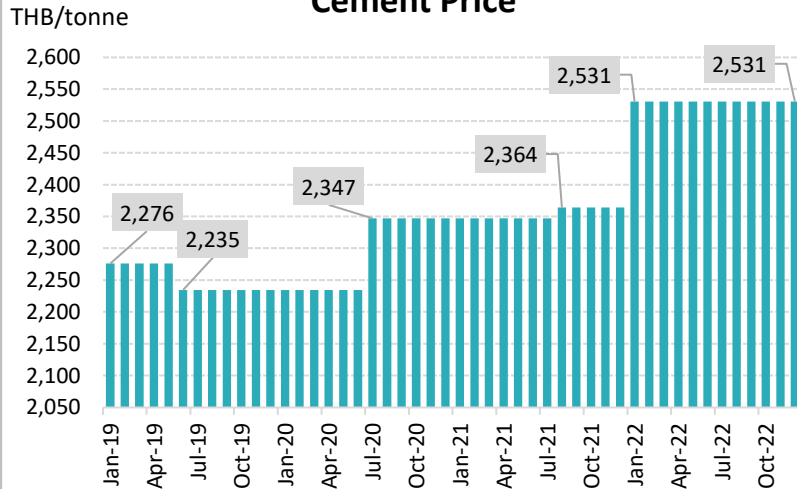
Note: MPI as of the base year (2016=100)  
Source: OIE

### Capacity Utilization



Source: Semiconductor Equipment Association of Japan (SEAJ)

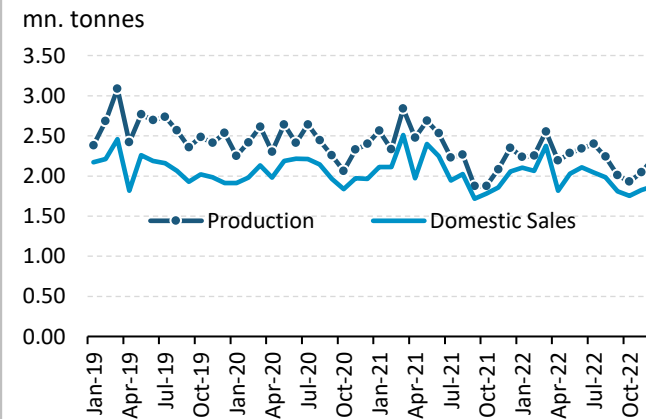
## Cement Price



Source: MOC

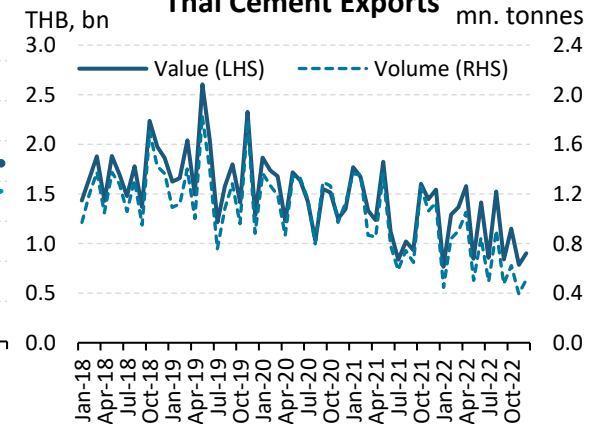
## Thai Cement Production, Domestic Sales and Exports

### Production & Domestic Sales



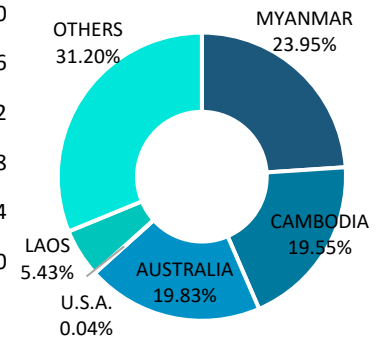
Source: OIE

### Thai Cement Exports



Source: MOC

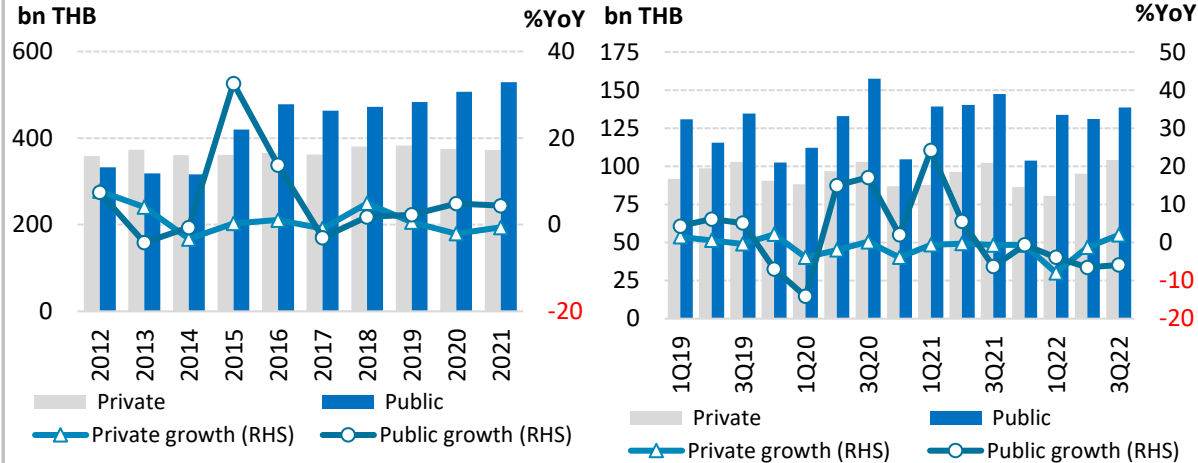
### Export Market Shares in 2022 by Value



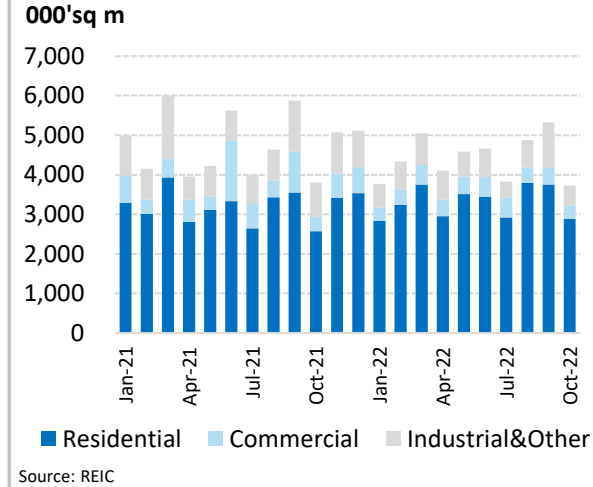
Source: MOC

# Construction Contractor (รับเหมาก่อสร้าง)

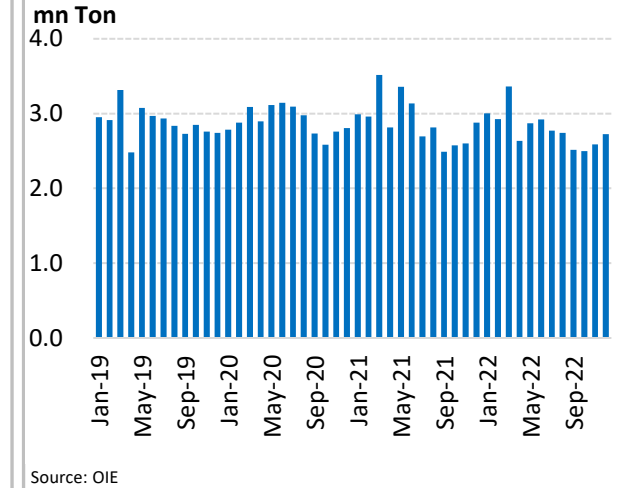
## Construction Gross Fixed capital (constant price)



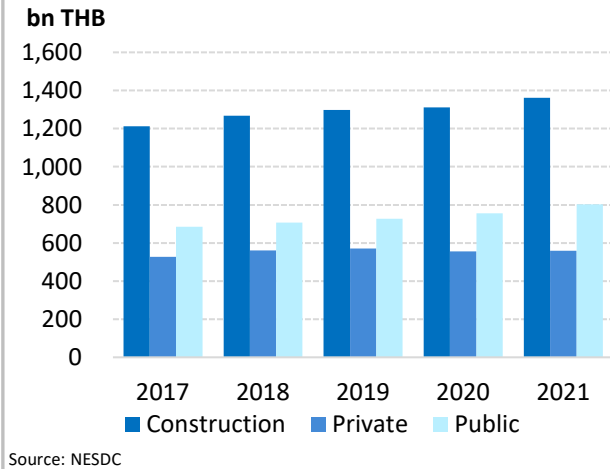
## Construction areas permitted



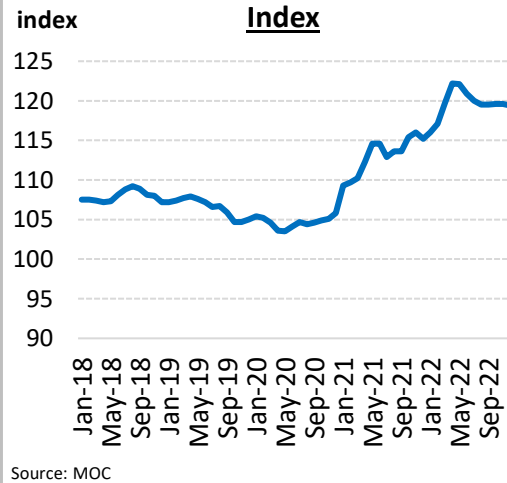
## Domestic Cement Sales



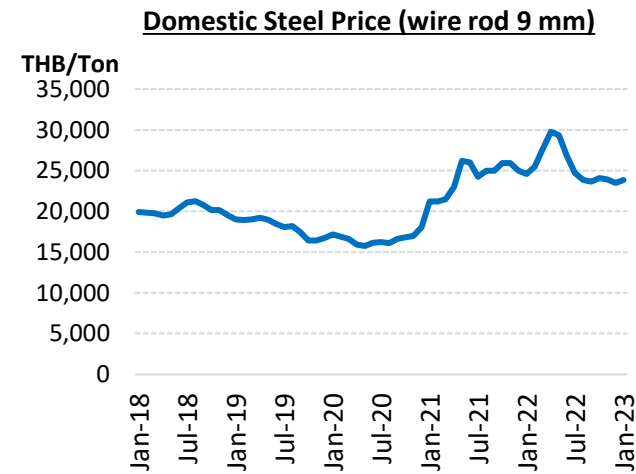
## Construction Gross Fixed capital (current price)



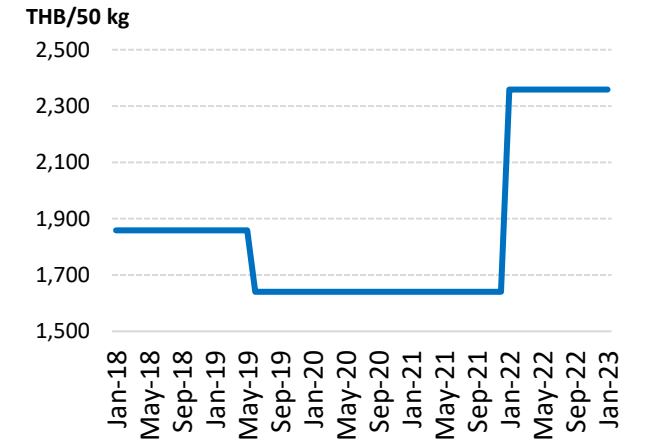
## Construction Materials Price



## Construction Material Price



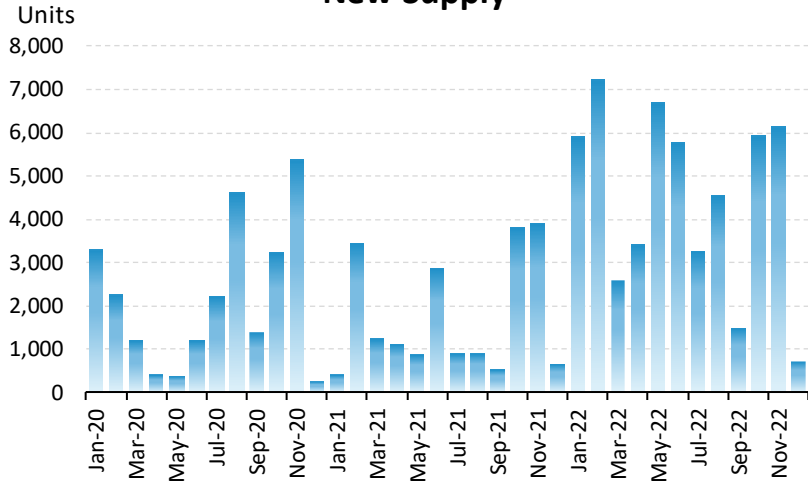
## Domestic Cement Price





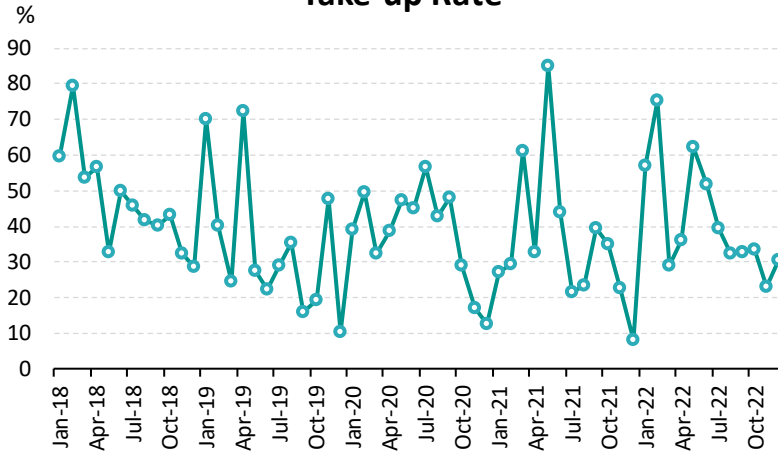
# Condominiums in BMR (คอนโดมิเนียม)

## New Supply



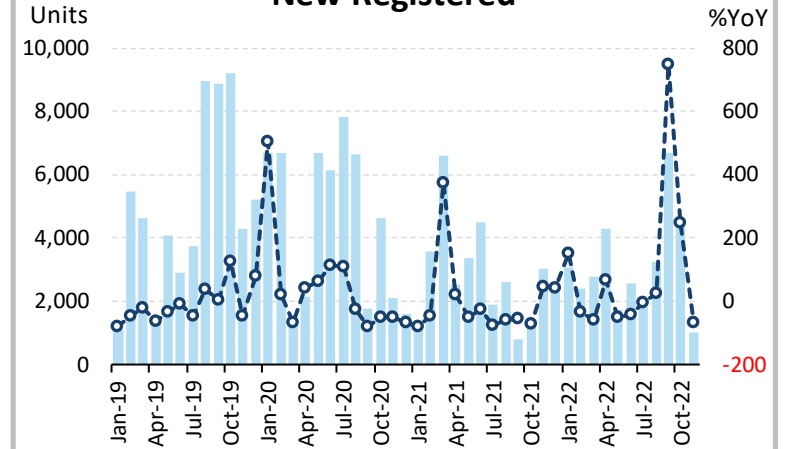
Source: AREA

## Take-up Rate



Source: AREA

## New Registered

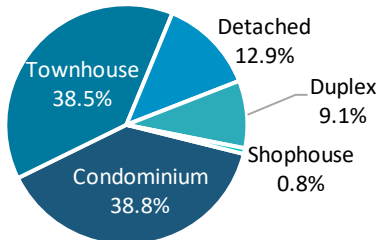


Source: BOT

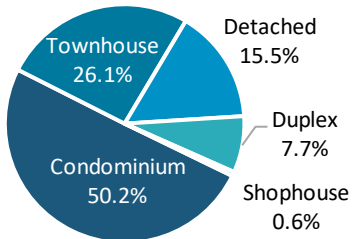
## New Launched Project

% of Unit

**2021**

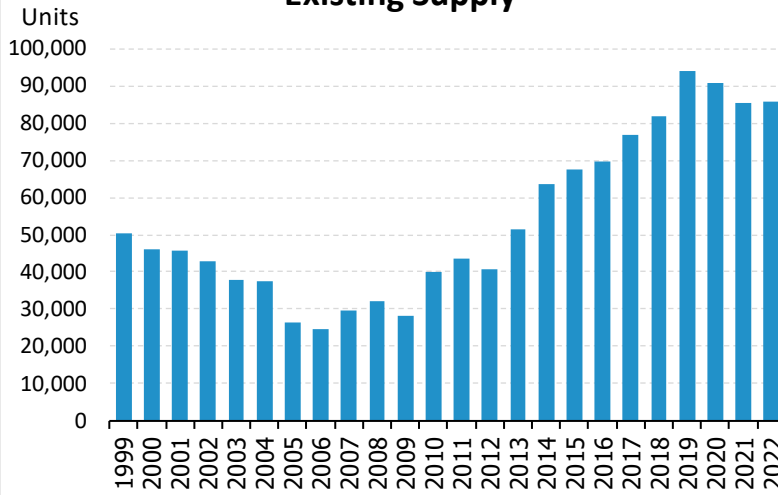


**2022**



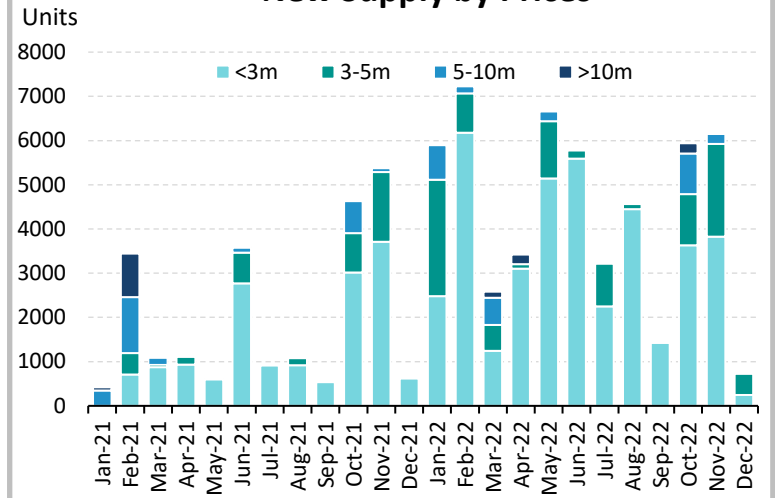
Source: AREA

## Existing Supply



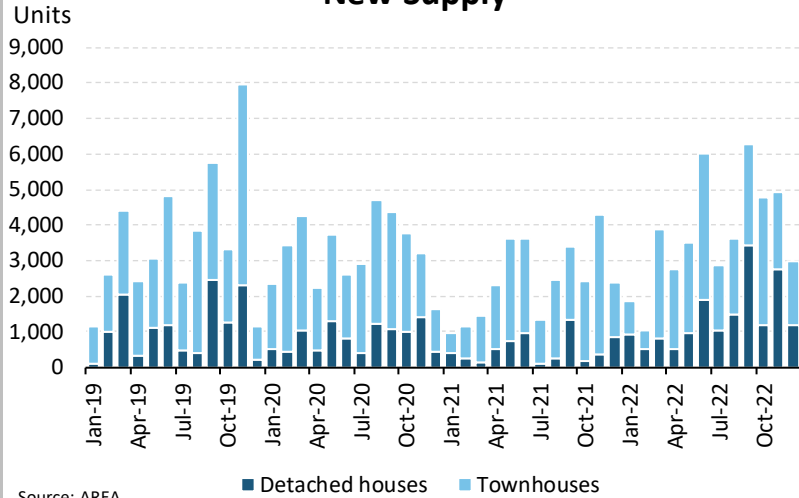
Source: AREA

## New Supply by Prices

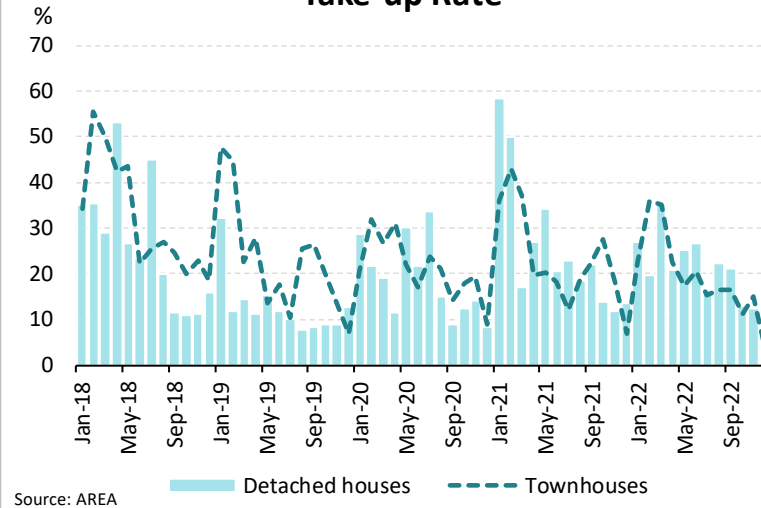


# Low-rise Housing in BMR (บ้านจัดสรร)

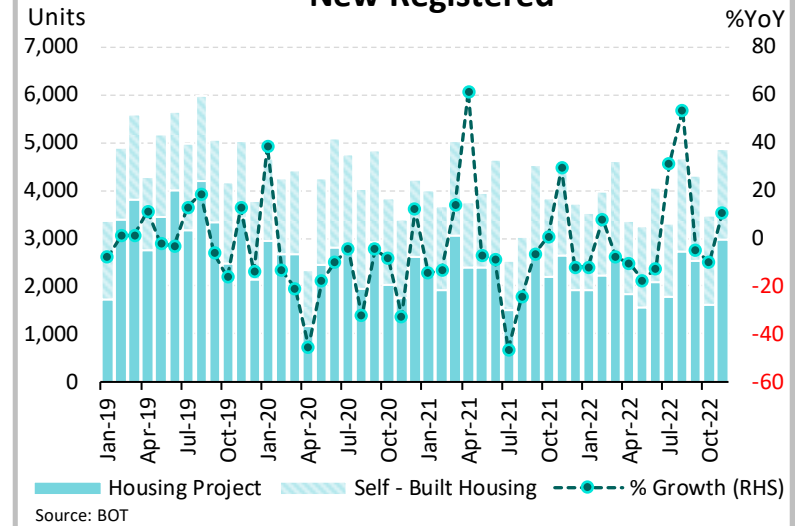
## New Supply



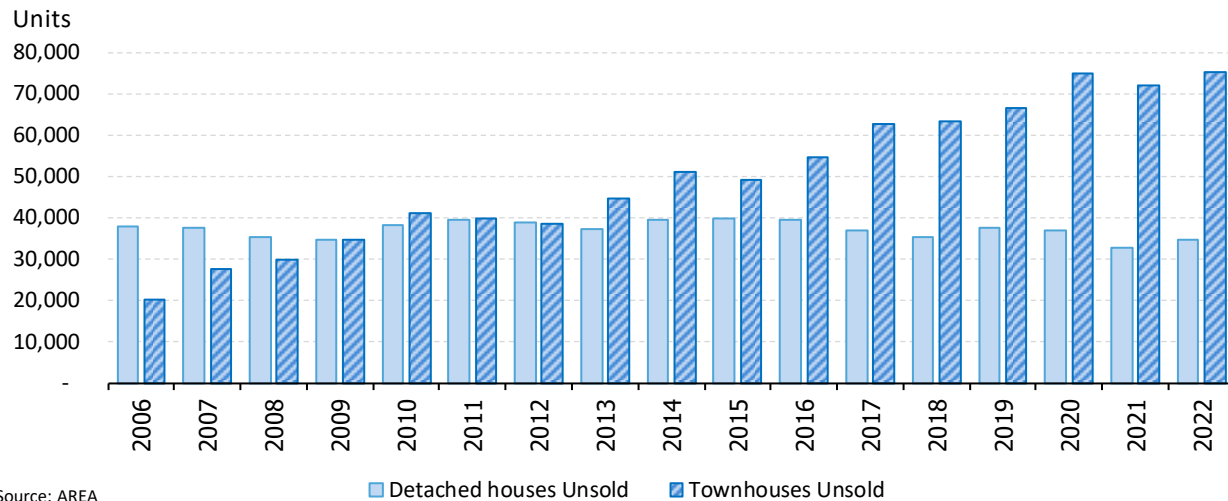
## Take-up Rate



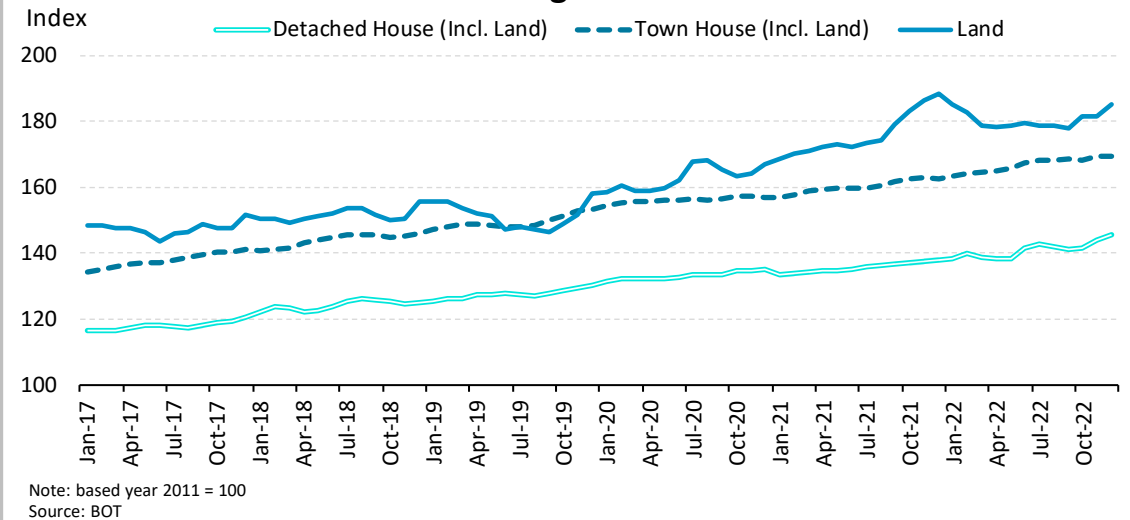
## New Registered



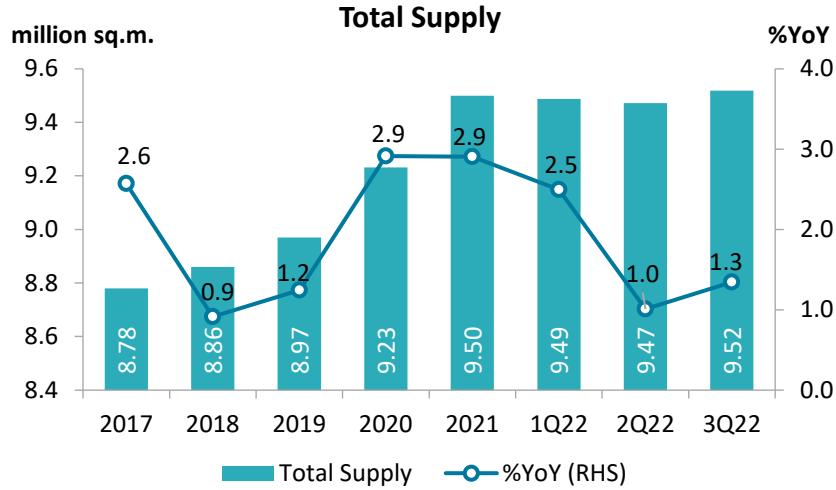
## Existing Supply



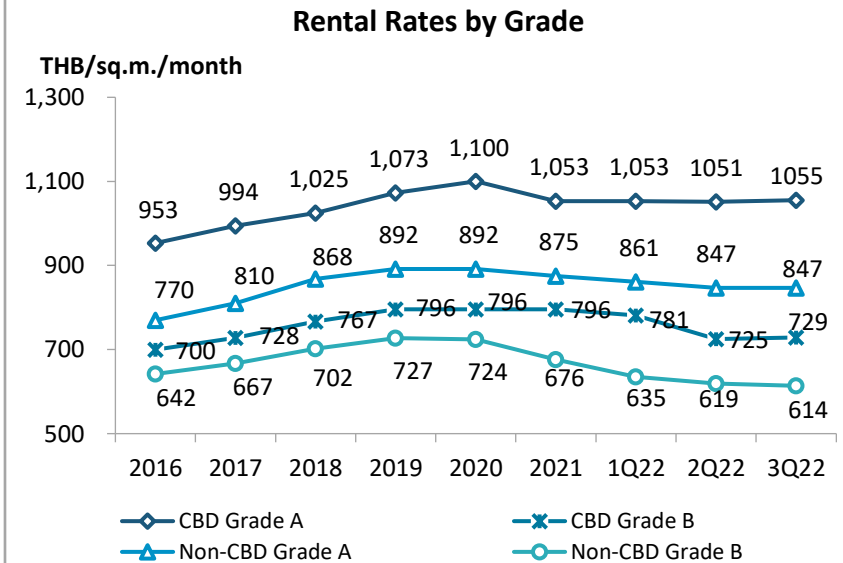
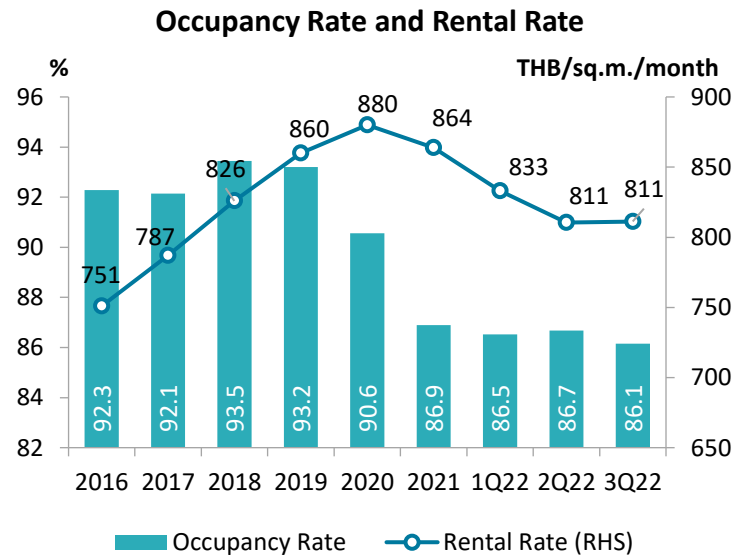
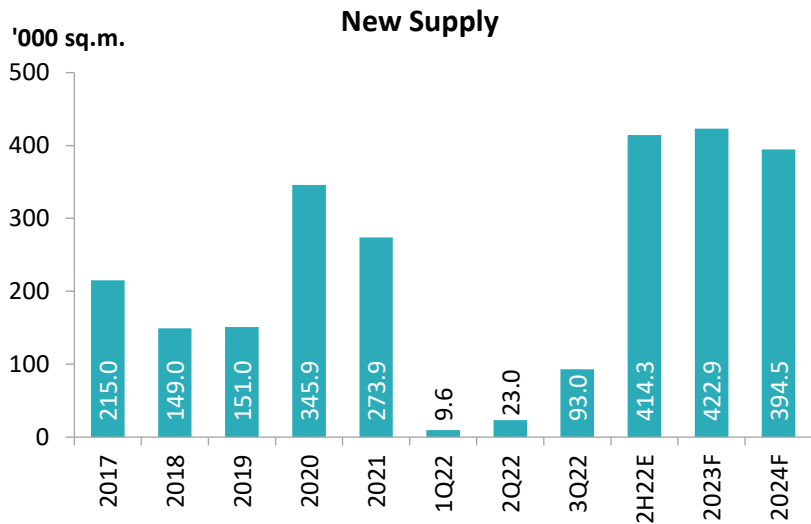
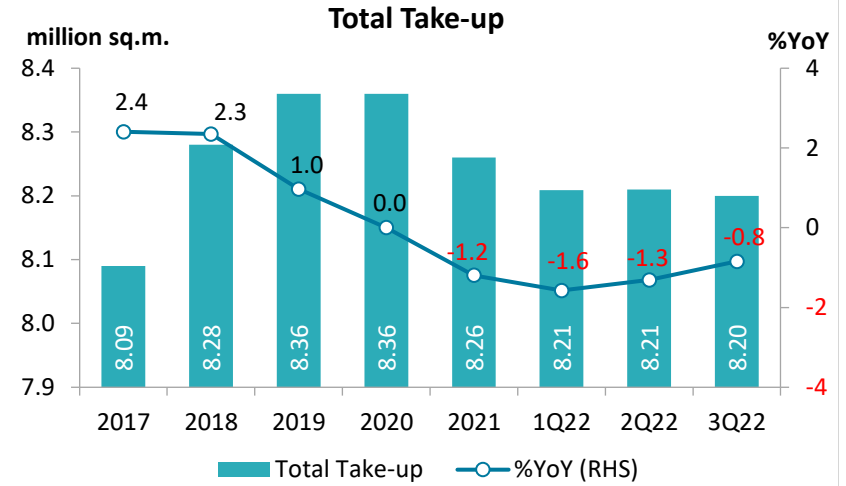
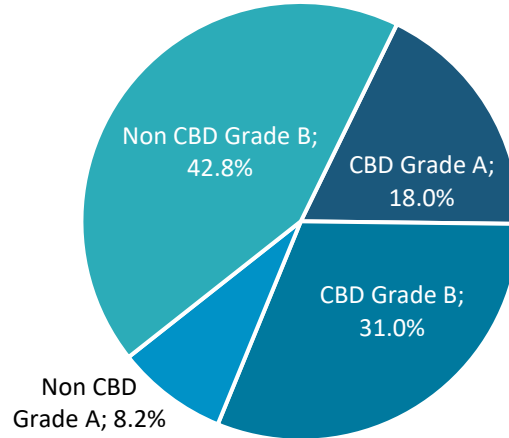
## Housing Price Index



# Office Building in BMR (อาคารสำนักงานให้เช่า)



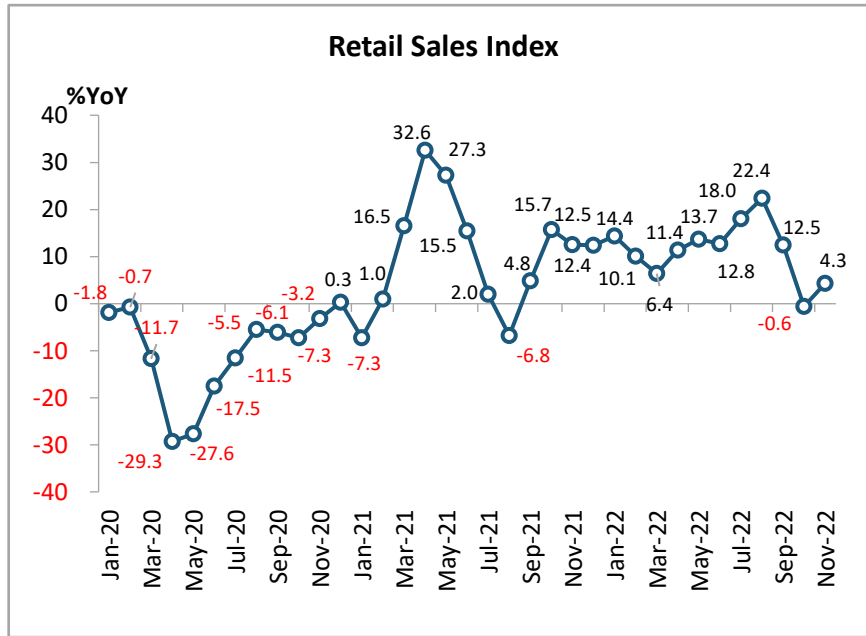
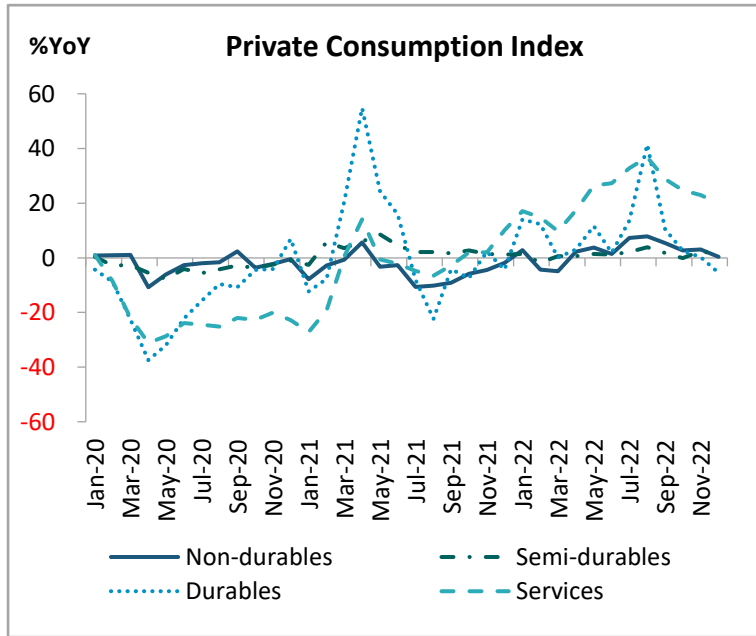
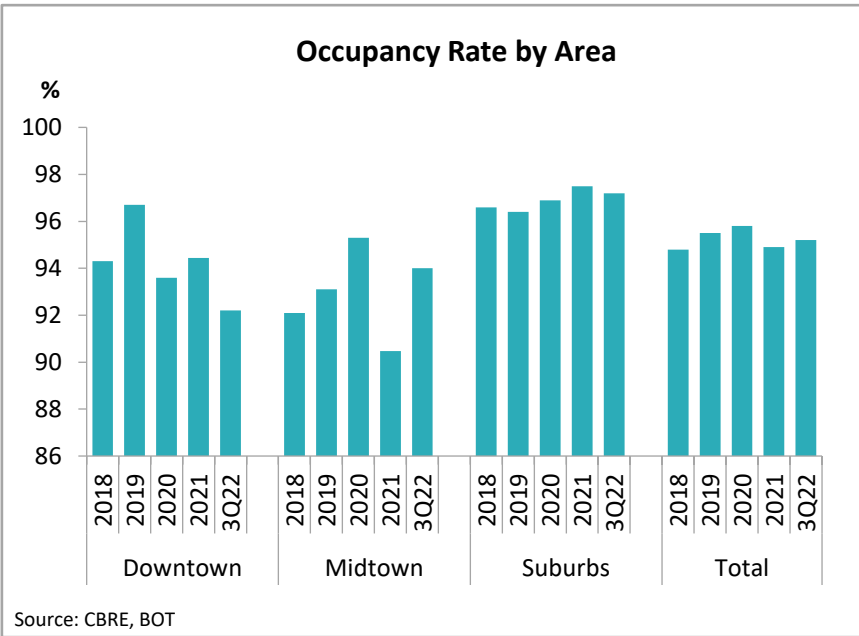
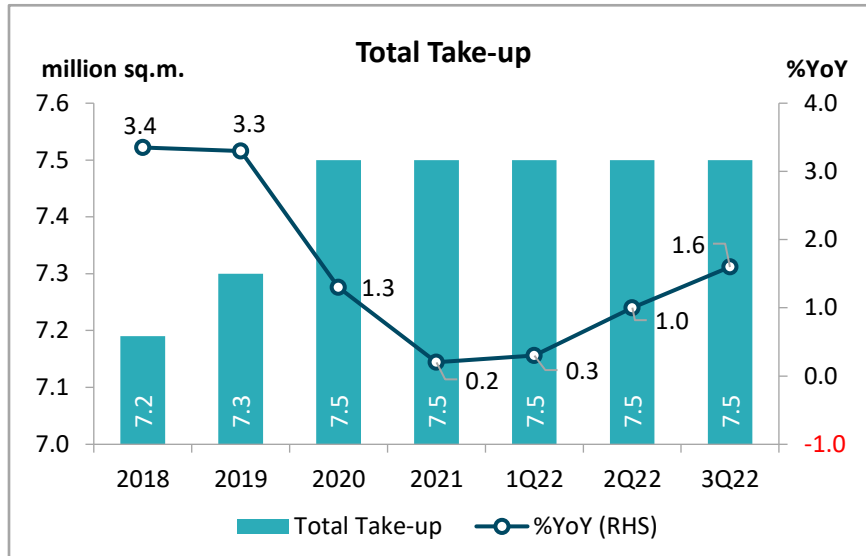
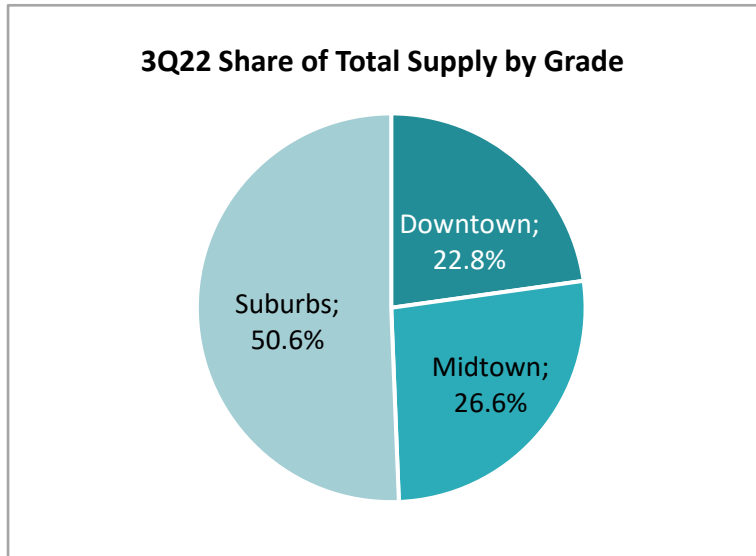
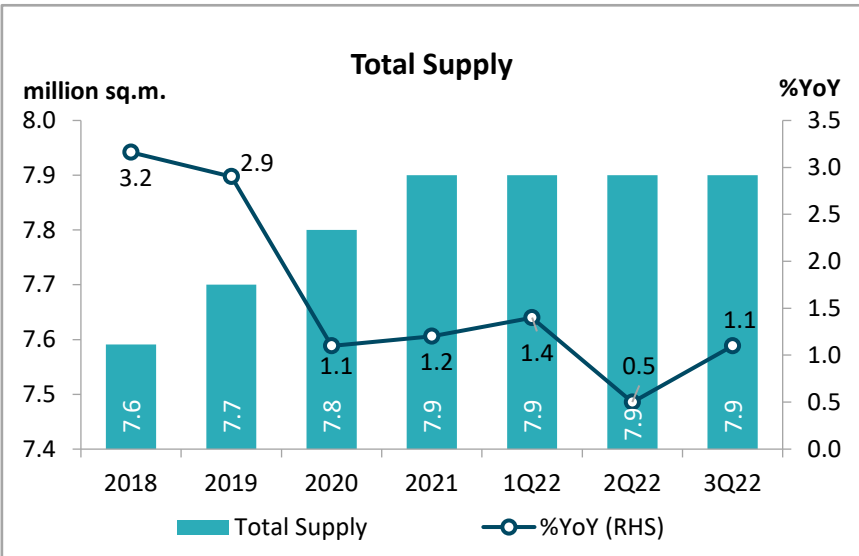
### 3Q22 Share of Total Supply by Grade



Source: CBRE Note: E=Estimate, F=Forecast

Source: LH Business Research analysis

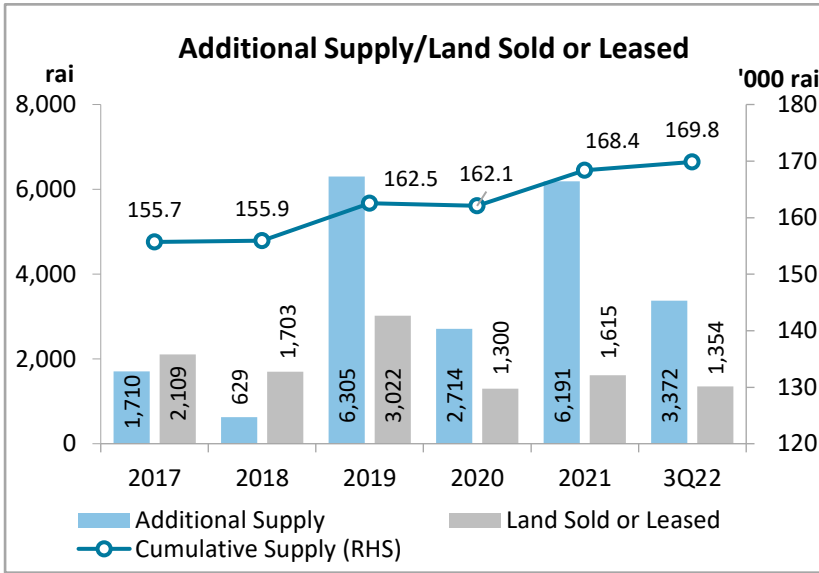
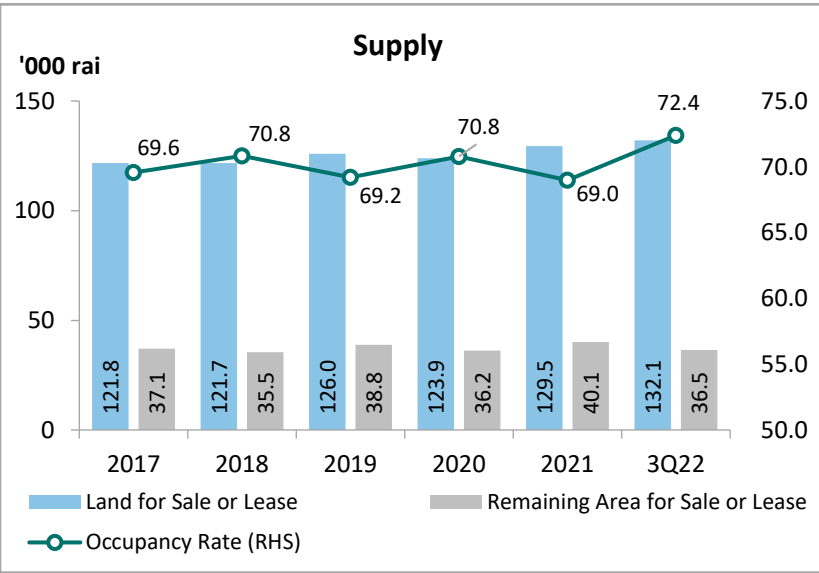
# Retail Space in BMR (พื้นที่ค้าปลีก)



Source: CBRE, BOT

Source: LH Business Research analysis

# Industrial Estate (นิคมอุตสาหกรรม)

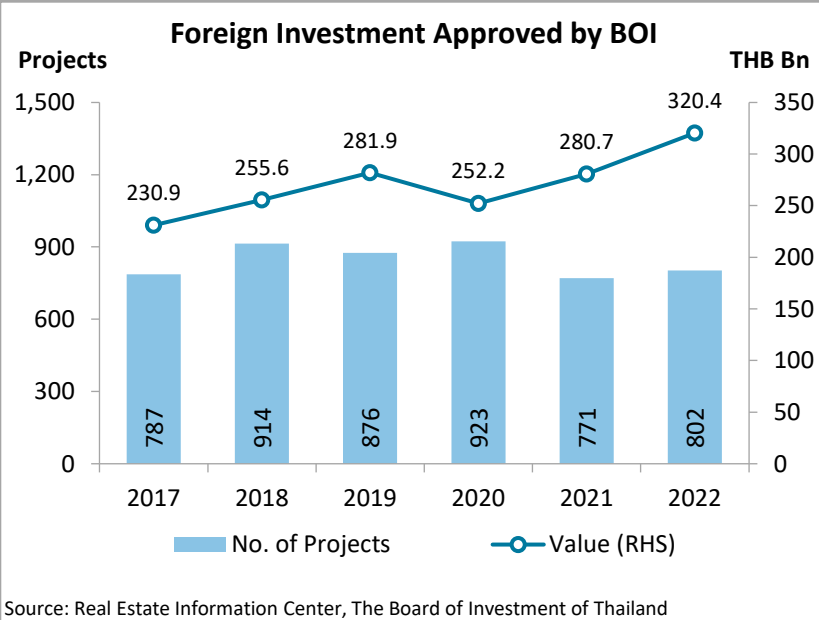


### Additional Supply (rai)

Year	BKK& Vicinity	North	Central	East	NE	West	South	Total
2020	-	-	1,392	1,322	-	-	-	2,714
2021	-	-	-	6,191	-	-	-	6,191
1Q22	-	-	-	3,372	-	-	-	3,372

### Land Sold or Leased (rai)

Year	BKK& Vicinity	North	Central	East	NE	West	South	Total
2020	42	202	11	1,041	-	4	-	1,300
2021	117	-	113	1,325	60	-	-	1,615
3Q22	37	17	-	1,121	-	20	159	1,354



### Foreign Investment Projects Classified by Sector

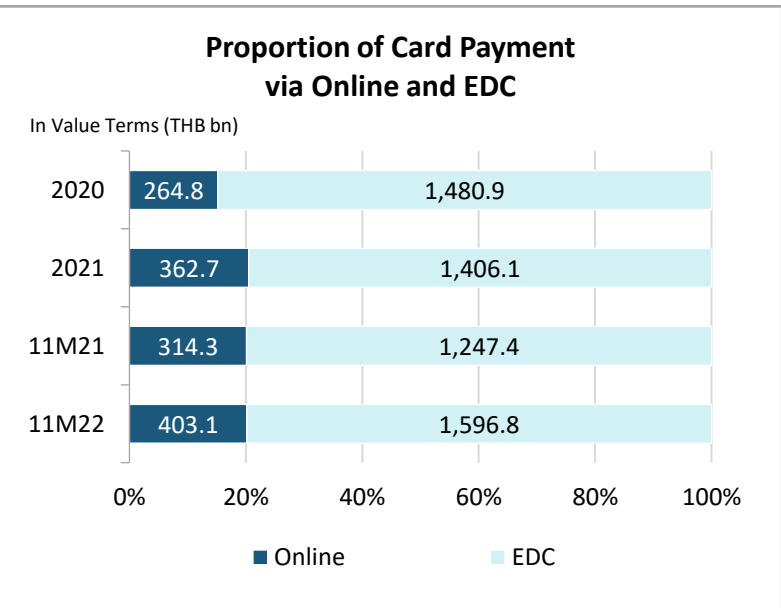
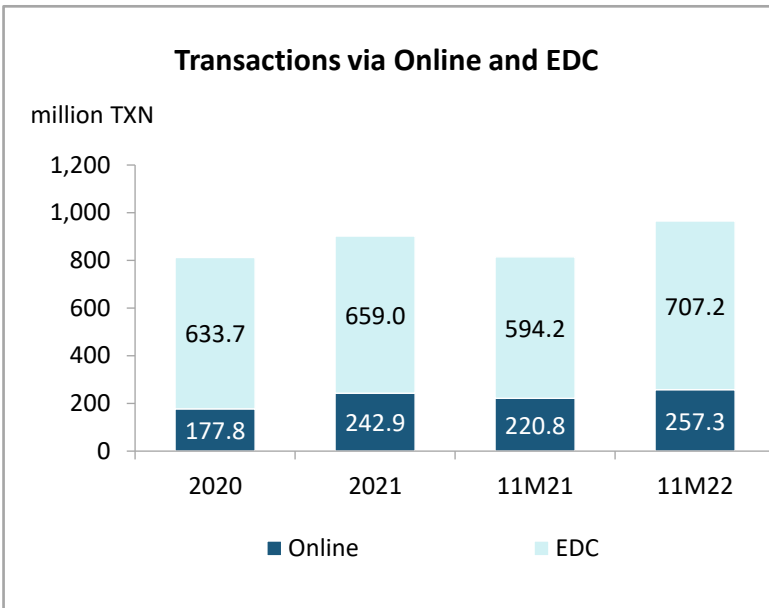
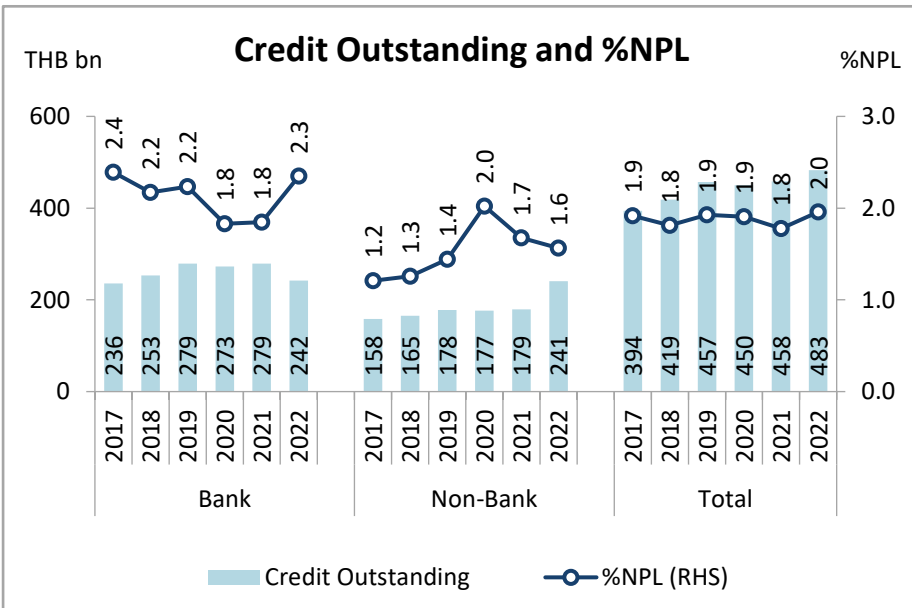
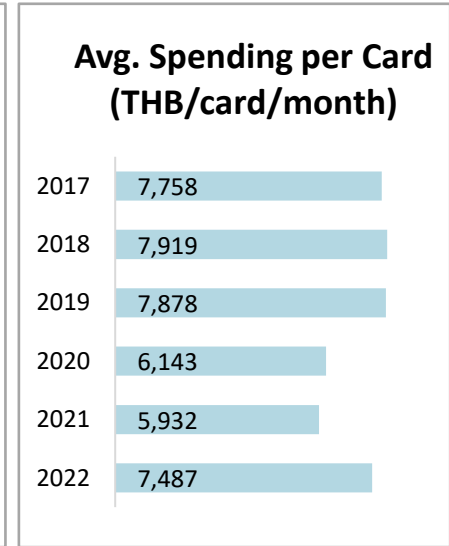
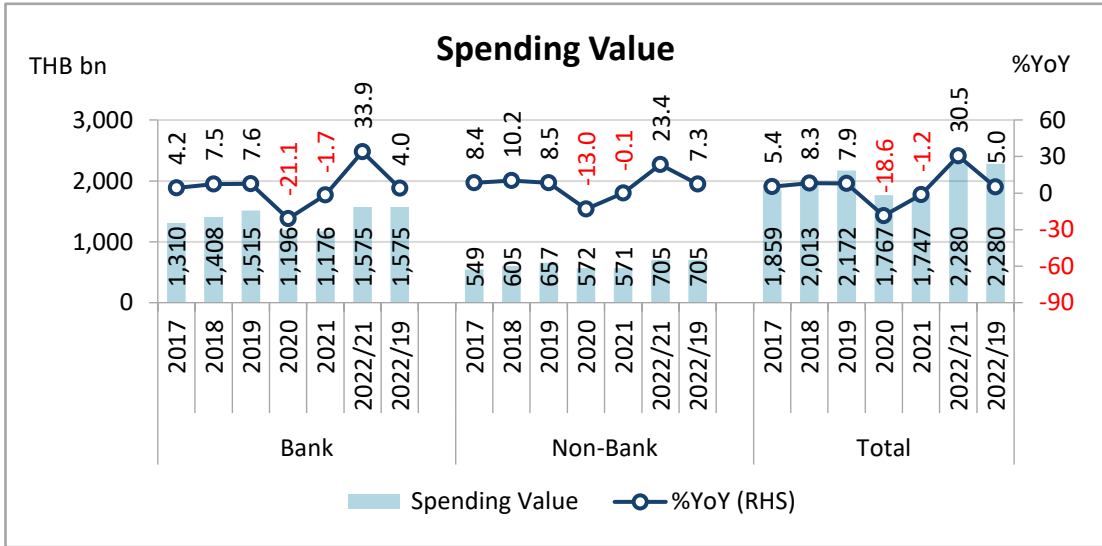
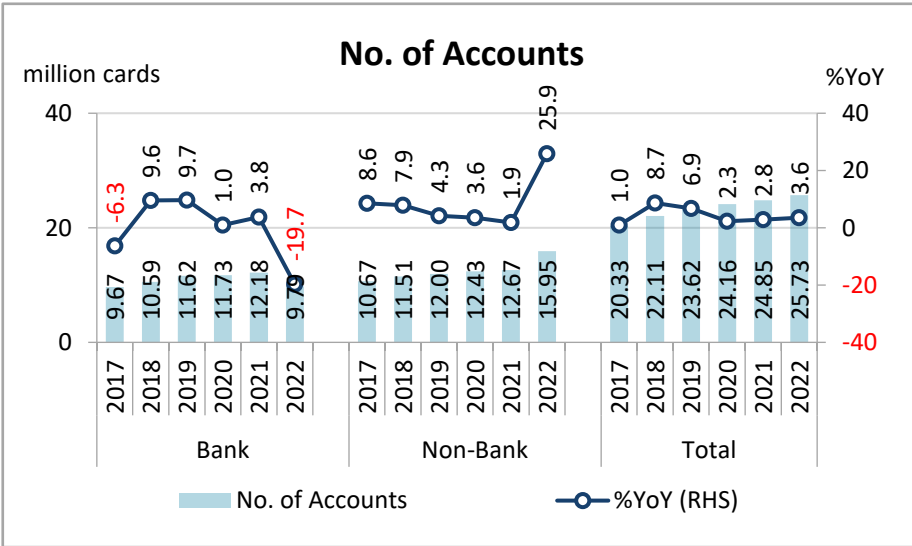
Unit: THB Bn	2020		2021		2022	
	No. of Projects	Value	No. of Projects	Value	No. of Projects	Value
Agricultural Products	57	8.2	72	24.9	66	25.0
Minerals and Ceramics	32	21.9	14	5.7	22	23.2
Light Industry/Textiles	64	8.1	57	43.1	43	30.5
Metal Products and Machinery	234	77.9	179	45.1	183	83.1
Electrical and Electronic Products	233	55.2	186	67.8	175	79.0
Chemicals and Paper	57	17.1	64	59.4	58	21.2
Services	245	63.5	199	34.7	255	58.5
Technology and Innovation Development	1	0.4	0	0	0	0
<b>Total</b>	<b>923</b>	<b>252.2</b>	<b>771</b>	<b>280.7</b>	<b>802</b>	<b>320.4</b>

### Top 10 Foreign Investment 2022 Approved by BOI

Ranking	Country	No. of Projects	Value (THB Bn)
1	Japan	216	49.96
2	Taiwan	44	45.48
3	China	100	41.69
4	The US	33	38.17
5	Singapore	139	34.18
6	Hong Kong	57	22.85
7	Austria	3	14.80
8	South Korea	25	5.31
9	Netherland	52	4.56
10	Australia	20	4.28

Source: Real Estate Information Center, The Board of Investment of Thailand

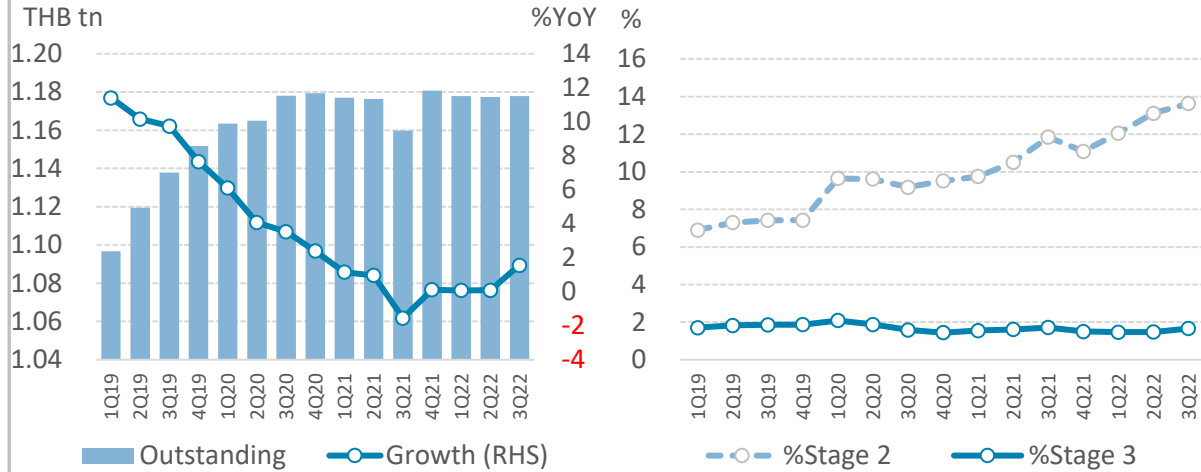
# Credit Card (บัตรเครดิต)



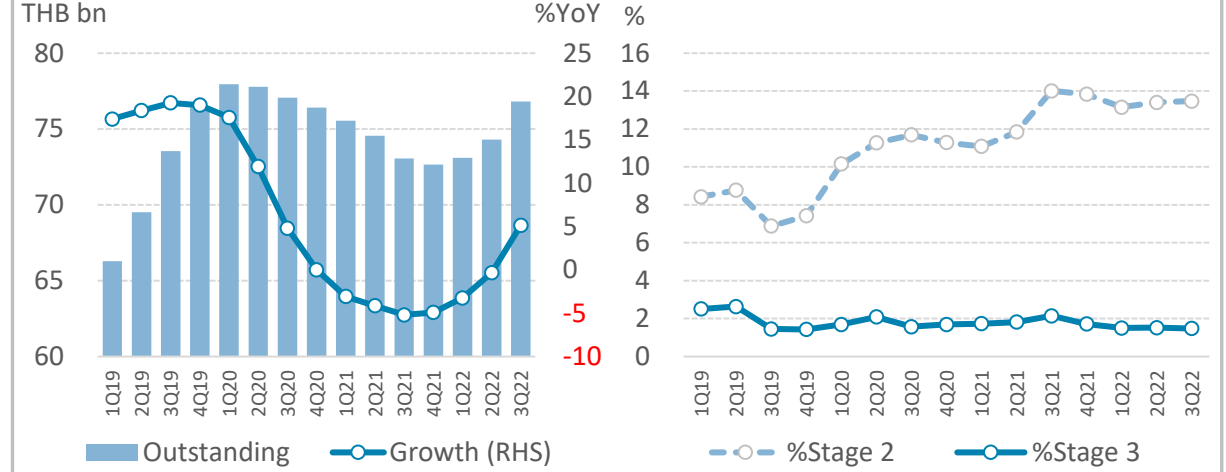
Note: EDC stands for Electronic Data Capture.

# Auto Hire-Purchase (เช่าซื้อรถยนต์)

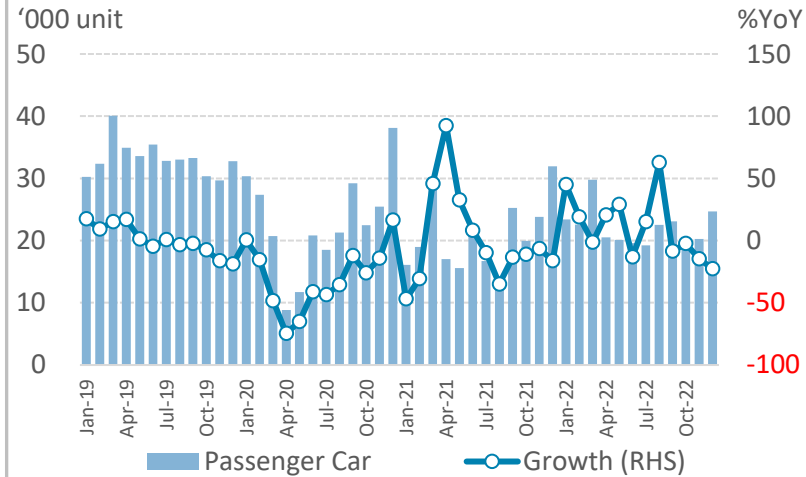
## Hire-Purchase Loan Outstanding & Quality



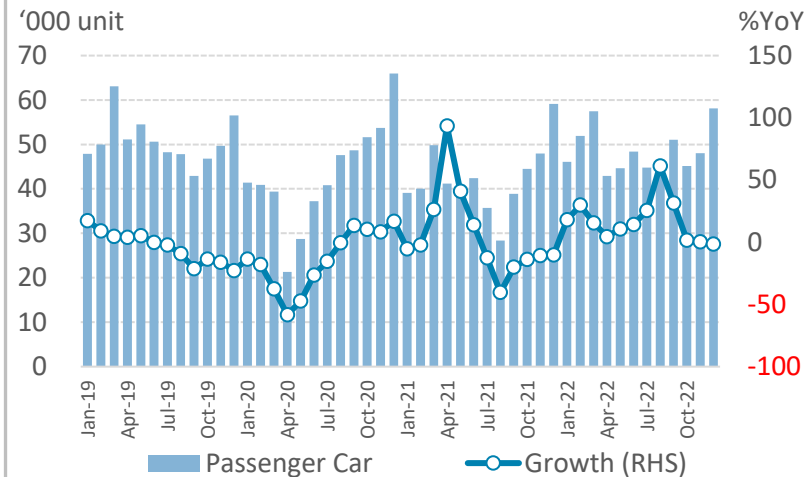
## Title Loan Outstanding & Quality



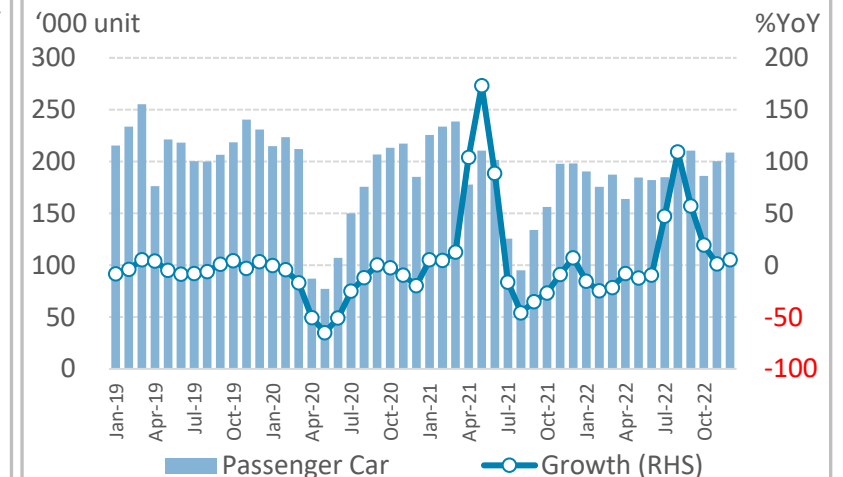
## Passenger Car sales



## Commercial Car sales



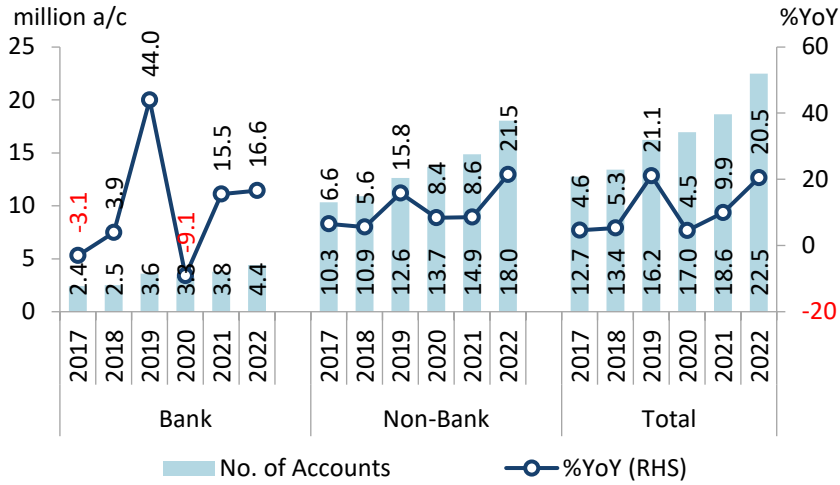
## Motorcycle sales



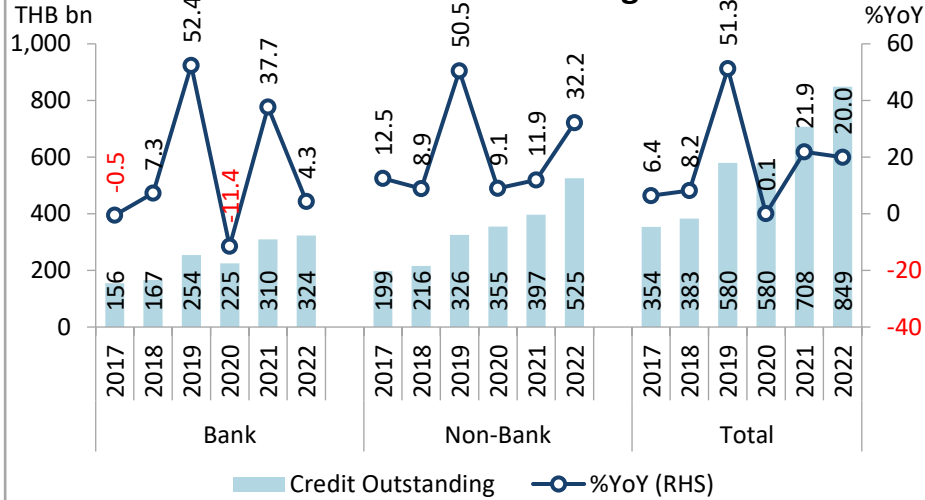


# Personal Loan (สินเชื่อส่วนบุคคล)

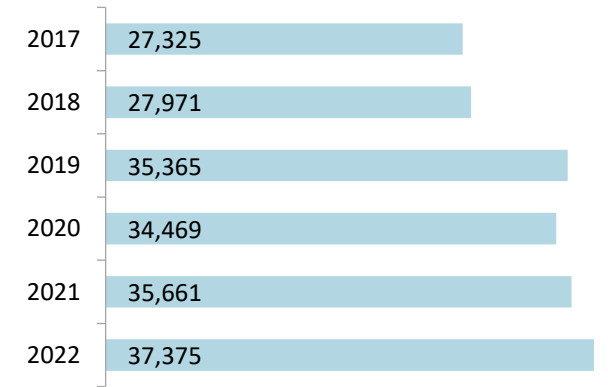
### No. of Accounts



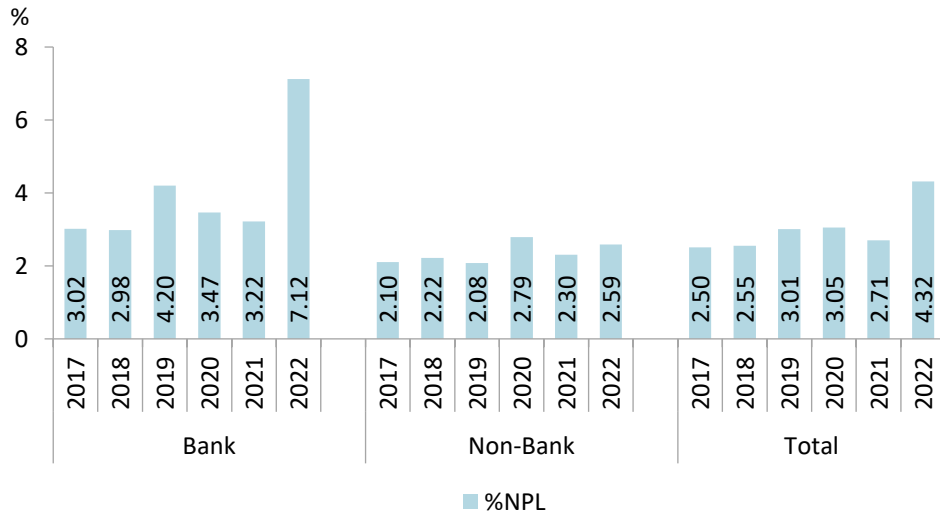
### Credit Outstanding



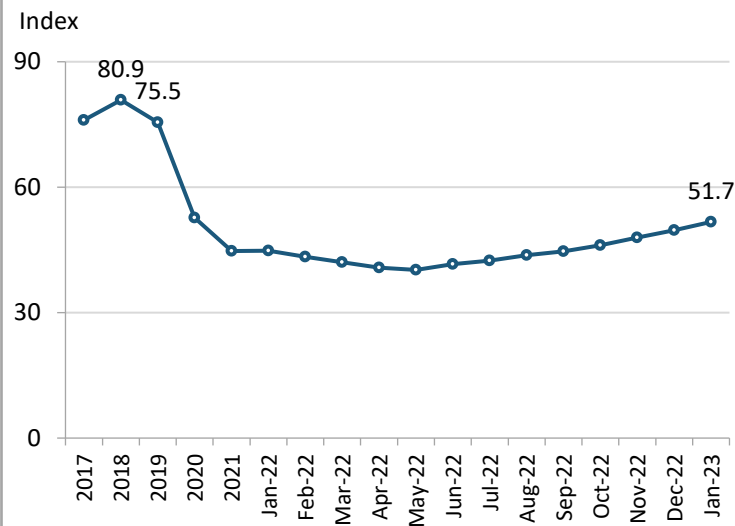
### Outstanding per Account (THB/account/month)



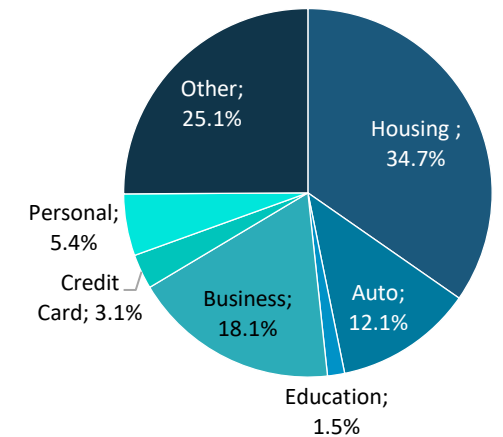
### %NPL



### Consumer Confidence Index

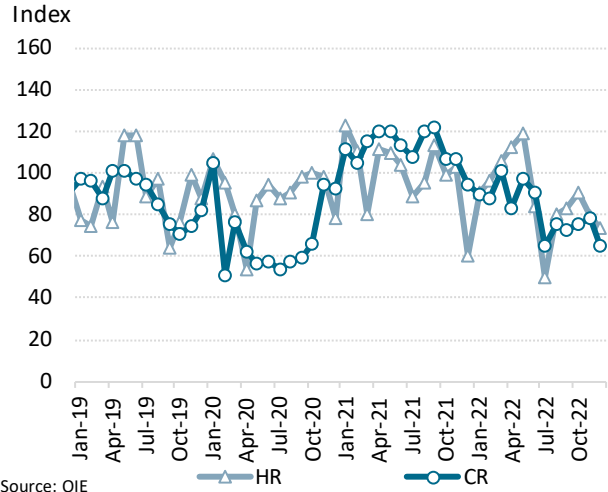


### 3Q22 Household Debt Total = 14.9 THB tn

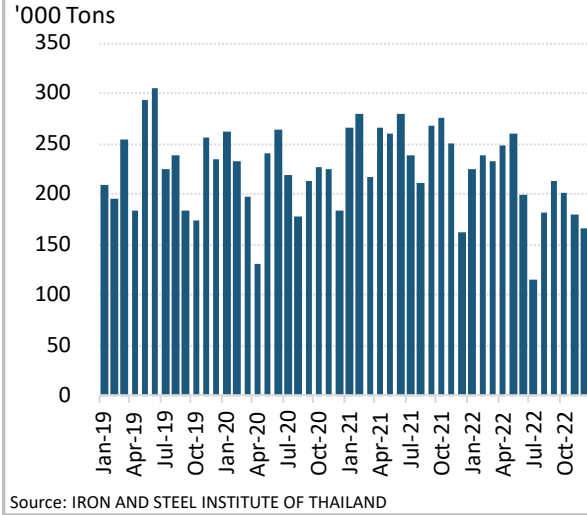


# Hot & Cold Rolled Steel Sheet (เหล็กแผ่นรีดร้อนรีดเย็น)

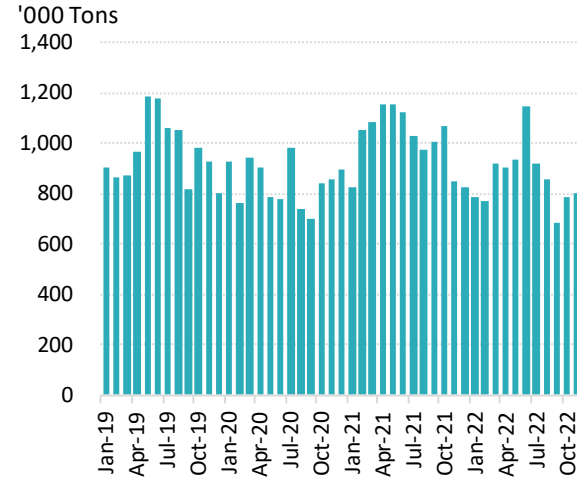
### HR & CR Steel MPI



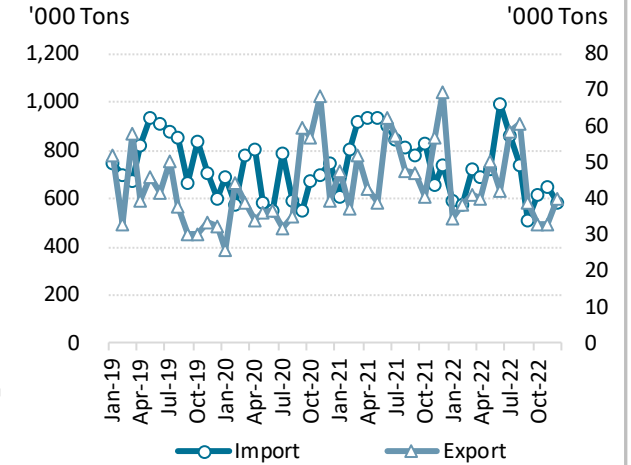
### HR & CR Production



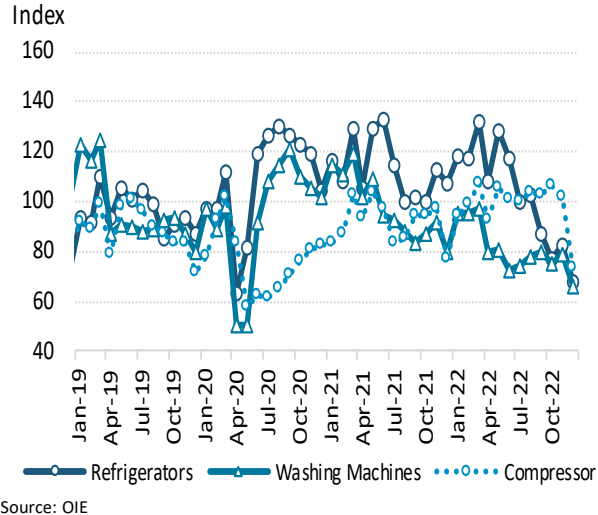
### HR & CR Domestic Demand



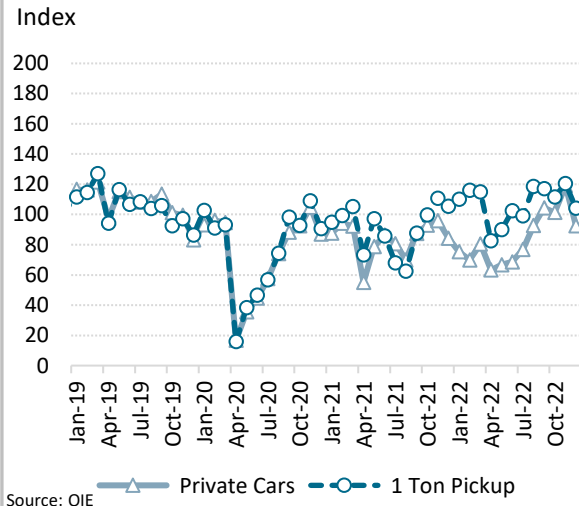
### HR & CR Import and Export



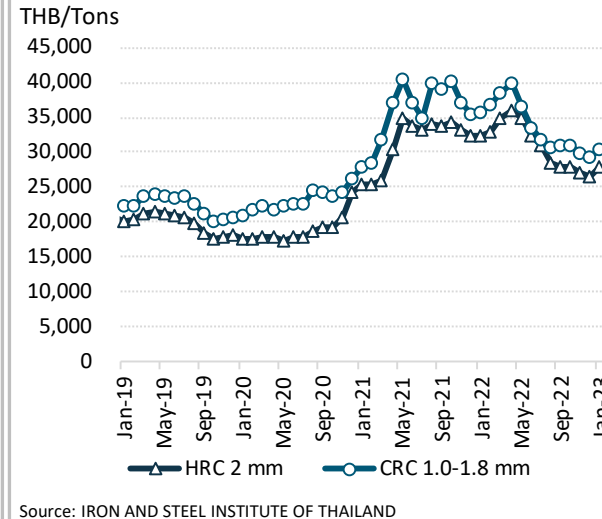
### Electrical Appliance MPI



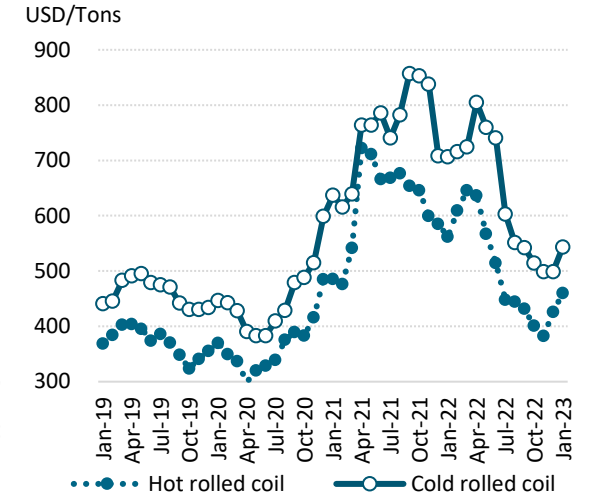
### Automobile MPI



### Domestic Steel Price

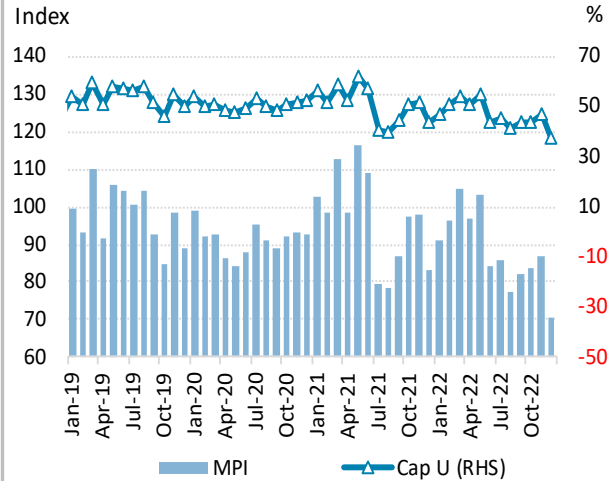


### Global Steel Price



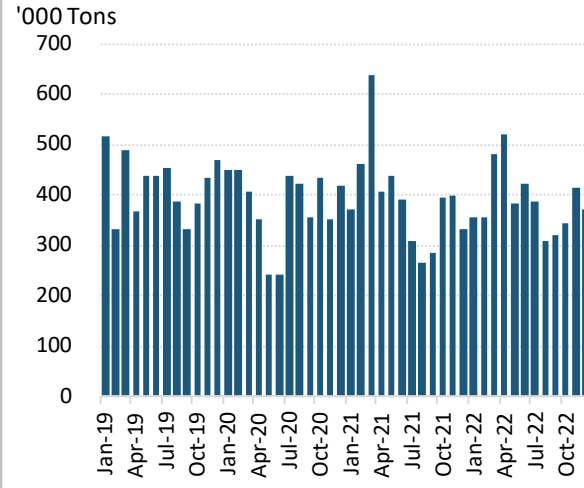
# Long Product Steel (เหล็กทรงยาว)

## MPI & Capacity Utilization



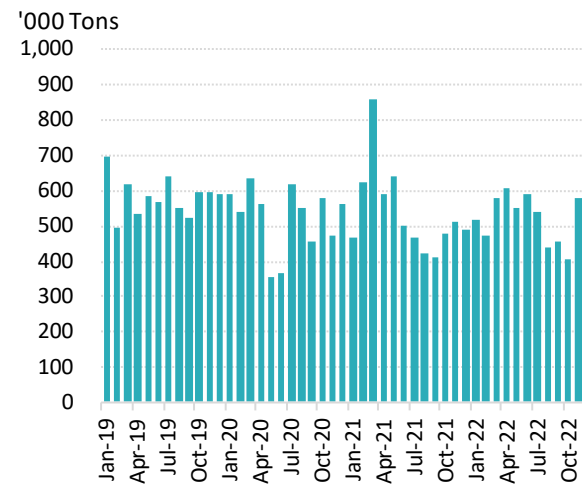
Source: OIE

## Production

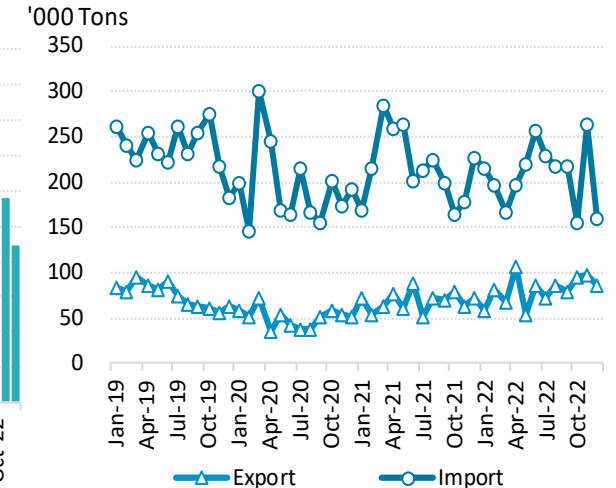


Source: IRON AND STEEL INSTITUTE OF THAILAND

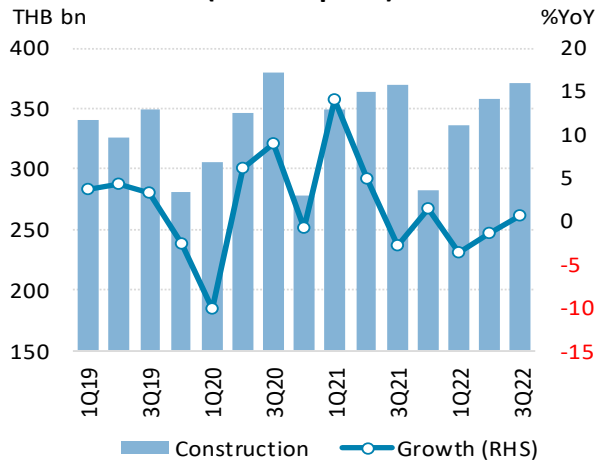
## Domestic Demand



## Import and Export

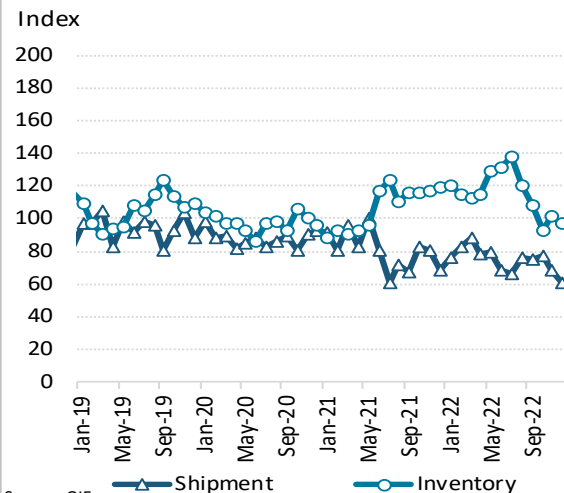


## Construction Gross Fixed Capital (current price)



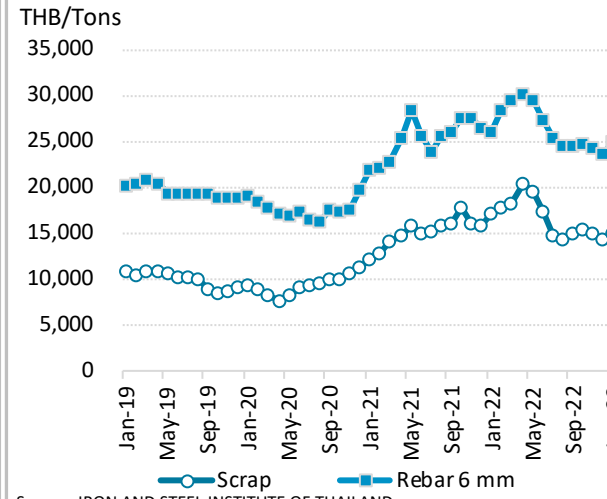
Source: NESDC

## Shipment & Inventory index



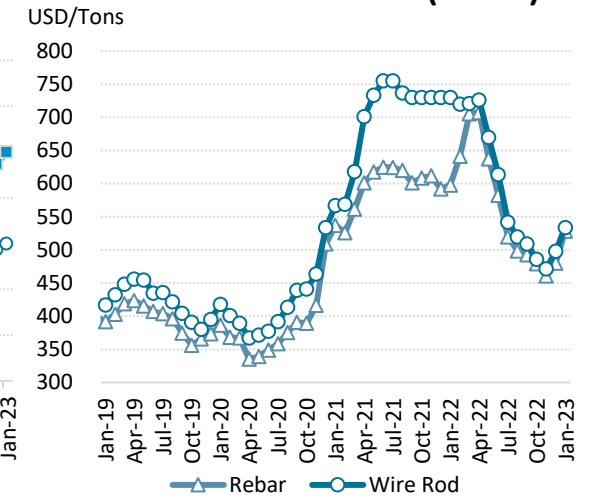
Source: OIE

## Domestic Price



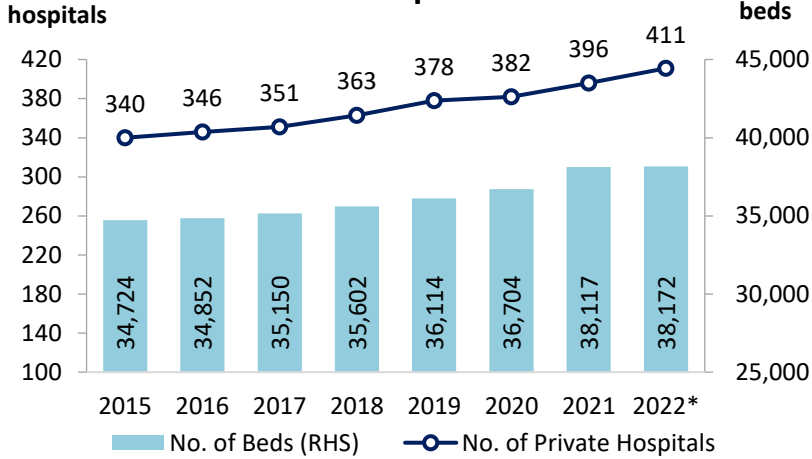
Source: IRON AND STEEL INSTITUTE OF THAILAND

## Global Steel Price (Rebar)



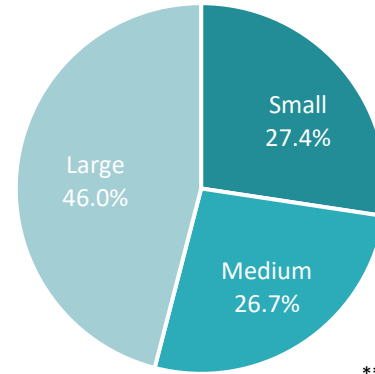
# Private Hospitals (โรงพยาบาลเอกชน)

## No. of Private Hospitals and Beds



Source: MOPH, Note: \*updated as of 6 Oct 2022

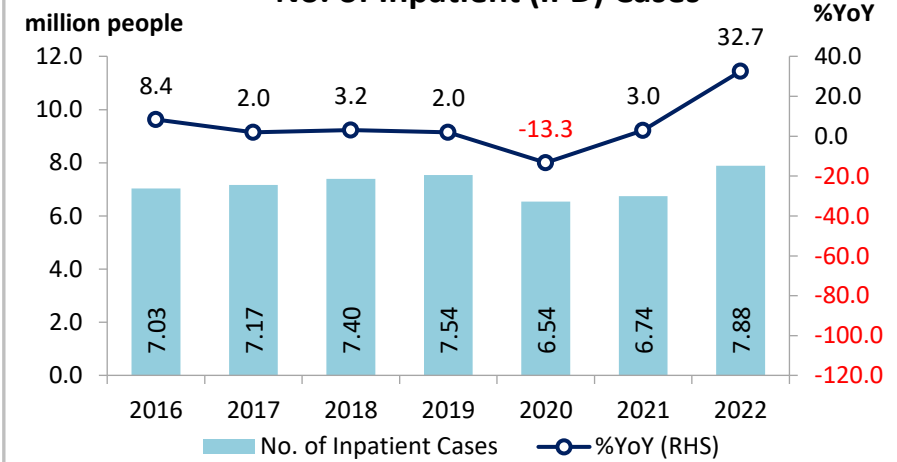
## Share of Private Hospitals by Size (2022)\*\*



\*\*As of 24 Aug 2022

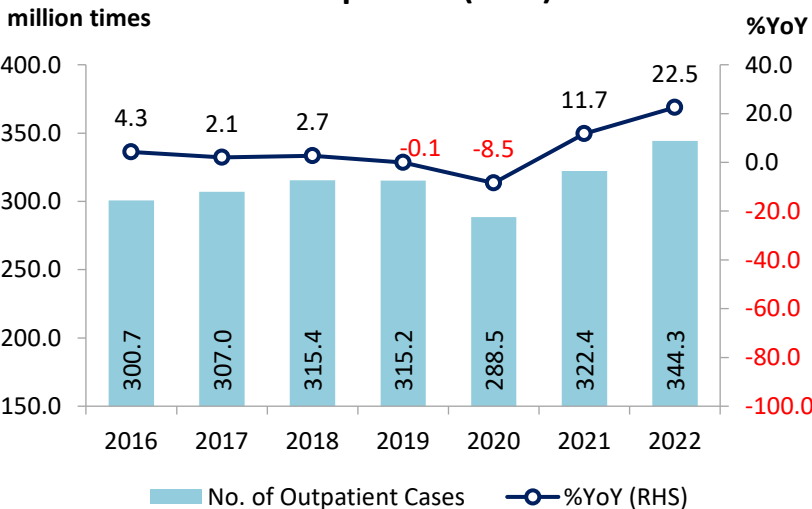
Remark: small size (1-30 beds), medium size (31-200 beds), large size (more than 200 beds)

## No. of Inpatient (IPD) Cases



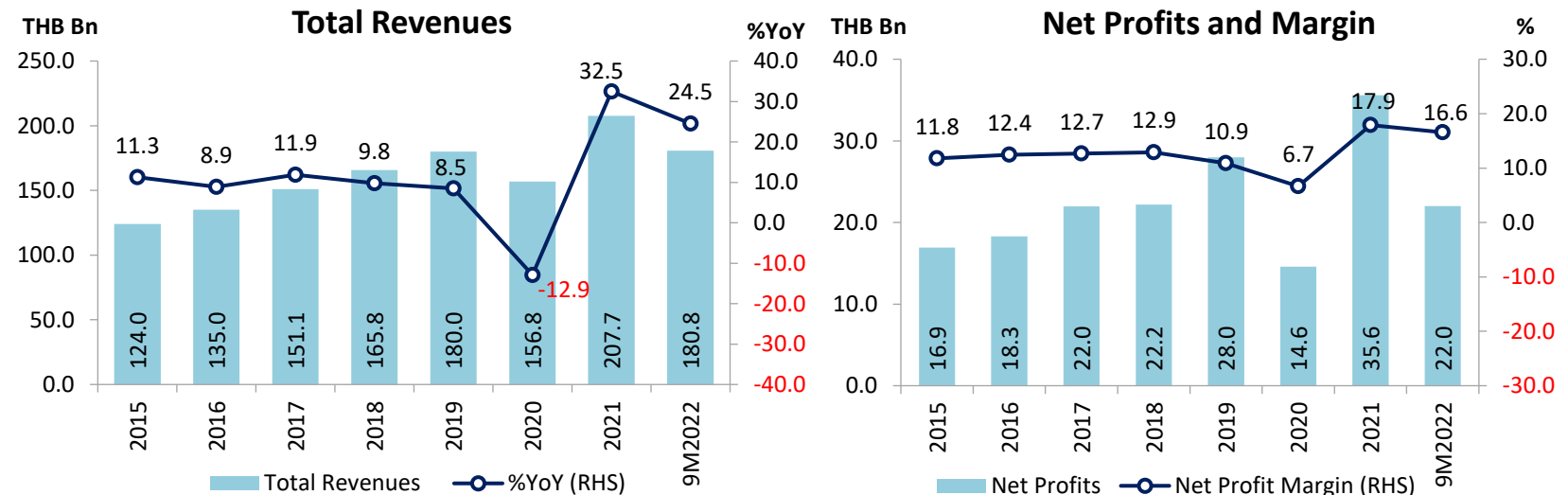
Source: Health Data Center, MOPH

## No. of Outpatient (OPD) Cases



Source: Health Data Center, MOPH

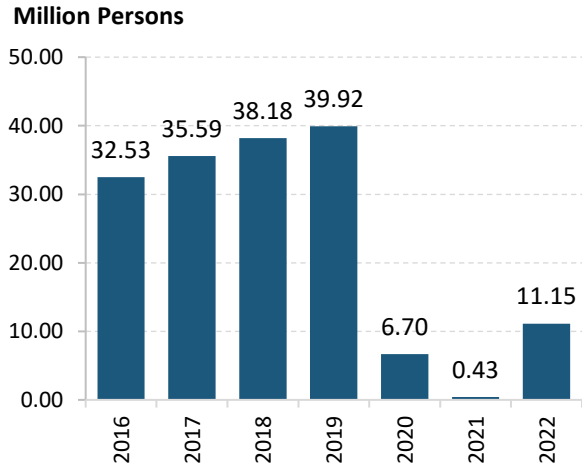
## Performance of SET-listed Private Hospitals in Thailand



Source: SETSMART

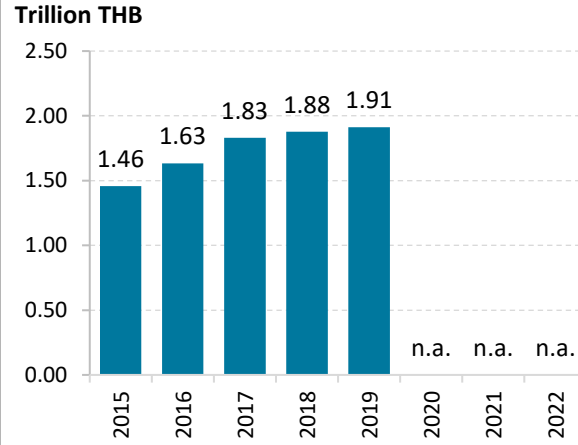
# Tourist Accommodation (โรงแรม) [1/2]

## International Tourist Arrivals



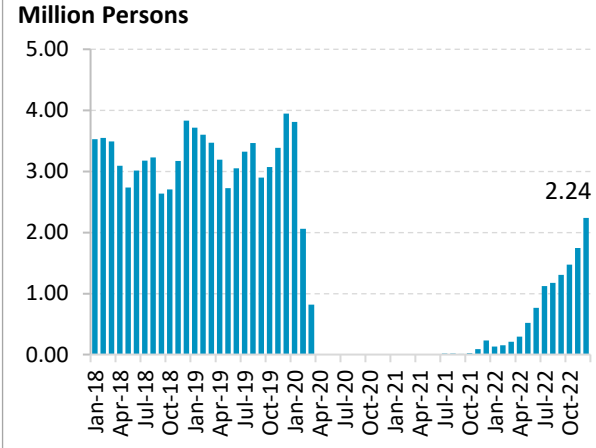
Source : MOTS

## Receipts from International Tourist



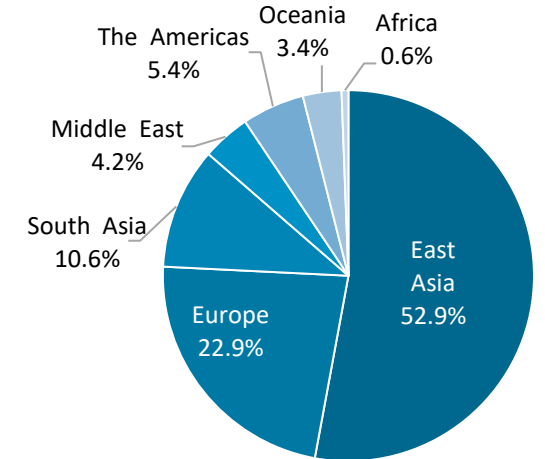
Source : MOTS

## International Tourist Arrivals



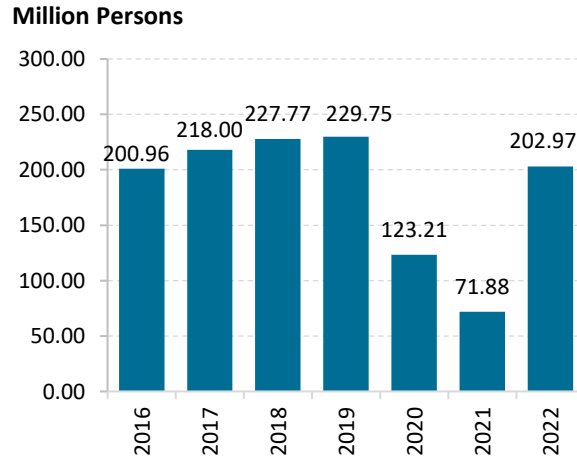
Source : MOTS

## Share by region



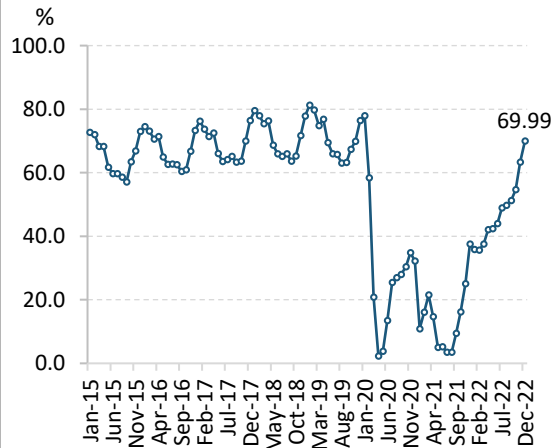
Source : MOTS

## Thai Visitor



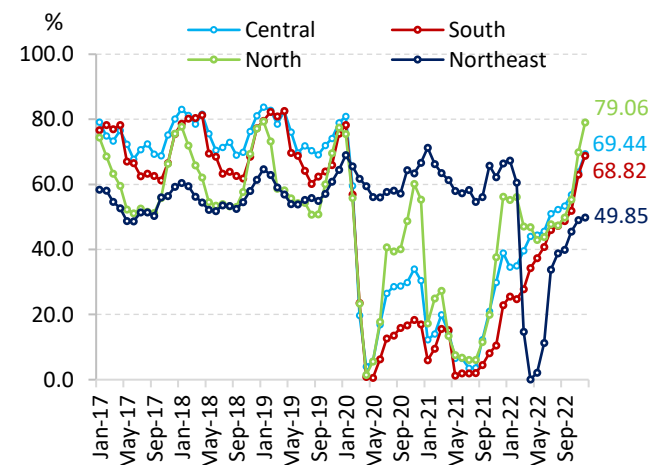
Source : MOTS

## Occupancy Rate (Nationwide)

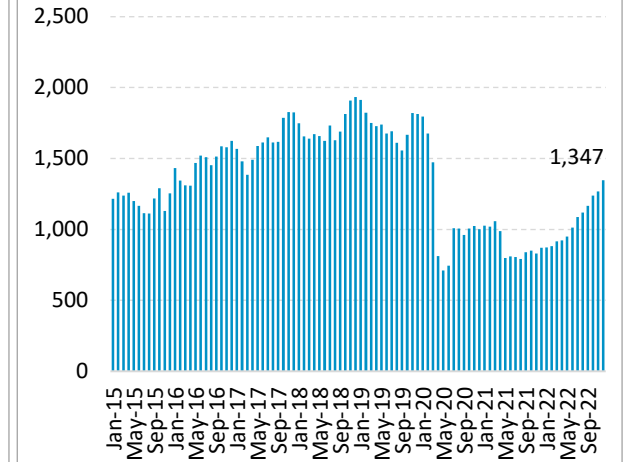


Source : BOT

## Occupancy Rate (Region)



## THB/Room



Source : BOT

# Tourist Accommodation (โรงแรม) [2/2]

## International Tourist Arrivals by Region

Million Persons					
	2019	2020	2021	2022	%YoY
ASEAN	10.69	1.65	0.03	4.53	13,692.3
East Asia	16.64	2.09	0.04	5.90	14,430.3
Europe	6.72	2.08	0.25	2.55	916.8
South Asia	2.40	0.32	0.01	1.18	9,533.7
Middle East	0.70	0.08	0.03	0.47	1,481.7
The Americas	1.63	0.32	0.05	0.61	1,180.3
Oceania	0.89	0.14	0.01	0.37	3,355.2
Africa	0.20	0.02	0.00	0.07	1,935.5
<b>Total</b>	<b>39.87</b>	<b>6.70</b>	<b>0.43</b>	<b>15.68</b>	<b>3,564.6</b>

Source : MOTS

## International Tourist Arrivals (thousand persons)

	2019	2020	2021	2022
Jan	3,718.5	3,810.2	7.7	133.9
Feb	3,603.7	2,062.0	5.7	153.0
Mar	3,473.1	819.4	6.7	210.8
Apr	3,195.0	0.0	8.5	293.4
May	2,726.8	0.0	6.1	521.4
Jun	3,052.3	0.0	5.7	767.5
July	3,327.2	0.0	18.1	1,124.2
Aug	3,466.5	0.0	15.1	1,174.7
Sep	2,902.7	0.0	12.2	1,309.1
Oct	3,074.1	1.2	20.3	1,475.4
Nov	3,386.4	3.1	91.3	1,748.4
Dec	3,947.3	6.6	230.5	2,241.2
<b>Total</b>	<b>39,873.53</b>	<b>6,702.40</b>	<b>427.87</b>	<b>11,153.03</b>

## International Tourist Arrivals (%YoY)

	2019	2020	2021	2022
Jan	5.3	2.5	-99.8	1,640.4
Feb	1.5	-42.8	-99.7	2,564.2
Mar	-0.6	-76.4	-99.2	3,029.5
Apr	3.2	-100.0	n.a.	3,339.4
May	-0.4	-100.0	n.a.	8,515.5
Jun	1.3	-100.0	n.a.	13,379.0
July	4.7	-100.0	n.a.	6,126.3
Aug	7.4	-100.0	n.a.	7,677.2
Sep	10.1	-100.0	n.a.	10,598.0
Oct	13.7	-100.0	1,587.9	7,178.2
Nov	6.8	-99.9	2,877.3	1,815.9
Dec	2.9	-99.8	3,415.8	872.3
<b>Total</b>	<b>4.4</b>	<b>-83.2</b>	<b>-93.6</b>	<b>2,506.6</b>

## Occupancy Rate (%)

	2019	2020	2021	2022
Jan	81.26	77.97	10.85	35.83
Feb	79.76	58.39	16.04	35.64
Mar	74.83	20.82	21.51	37.50
Apr	76.89	2.26	14.63	42.05
May	69.51	3.83	4.95	42.38
Jun	65.98	13.43	5.15	43.97
July	65.80	25.41	3.45	48.91
Aug	63.04	26.93	3.51	49.76
Sep	63.25	27.93	9.42	51.22
Oct	67.37	30.40	16.19	54.73
Nov	69.93	34.82	25.03	63.32
Dec	76.47	32.16	37.52	69.99
<b>Avg.</b>	<b>71.17</b>	<b>29.53</b>	<b>14.02</b>	<b>47.94</b>

## Central (Inc.BKK)

	2019	2020	2021	2022
Jan	83.77	80.97	12.24	34.58
Feb	82.84	59.55	14.08	35.01
Mar	78.53	19.73	19.94	39.64
Apr	82.54	4.01	14.63	44.01
May	76.10	5.68	6.61	44.47
Jun	69.73	16.93	6.58	45.61
July	71.89	26.58	3.47	51.02
Aug	70.38	28.55	3.57	52.30
Sep	69.09	28.82	12.23	53.42
Oct	72.01	29.83	21.01	56.78
Nov	74.18	34.03	29.89	63.80
Dec	78.96	30.48	38.92	69.44
<b>Avg.</b>	<b>75.84</b>	<b>30.43</b>	<b>15.26</b>	<b>49.17</b>

## Southern

	2019	2020	2021	2022
Jan	79.59	78.24	5.98	25.55
Feb	82.31	56.91	9.48	24.78
Mar	80.96	23.57	15.63	27.82
Apr	82.63	0.86	15.19	34.28
May	69.76	0.54	1.25	37.38
Jun	68.82	6.26	1.95	40.76
July	64.24	12.64	1.90	45.98
Aug	60.22	13.55	2.07	47.28
Sep	62.47	15.88	4.48	48.76
Oct	64.01	16.71	8.13	51.87
Nov	65.94	18.40	10.53	63.05
Dec	75.62	16.95	22.90	68.82
<b>Avg.</b>	<b>71.38</b>	<b>21.71</b>	<b>8.29</b>	<b>43.03</b>

## Northern

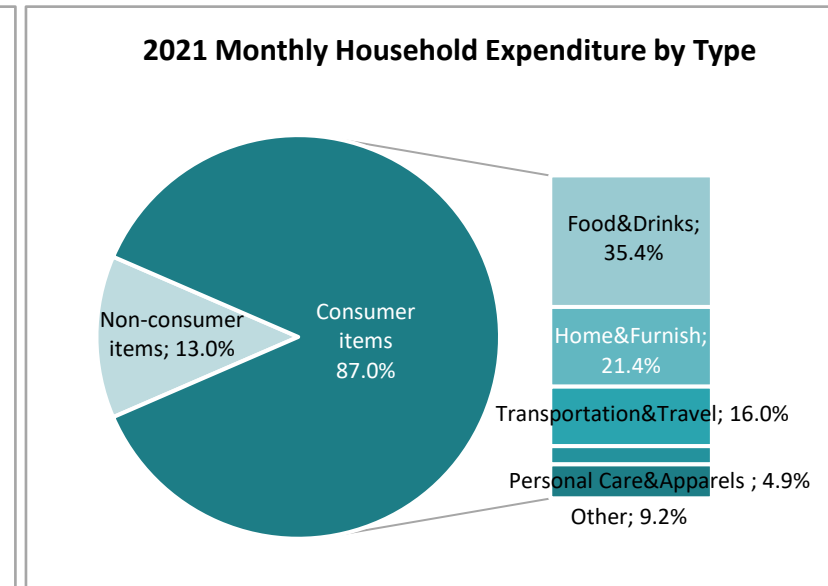
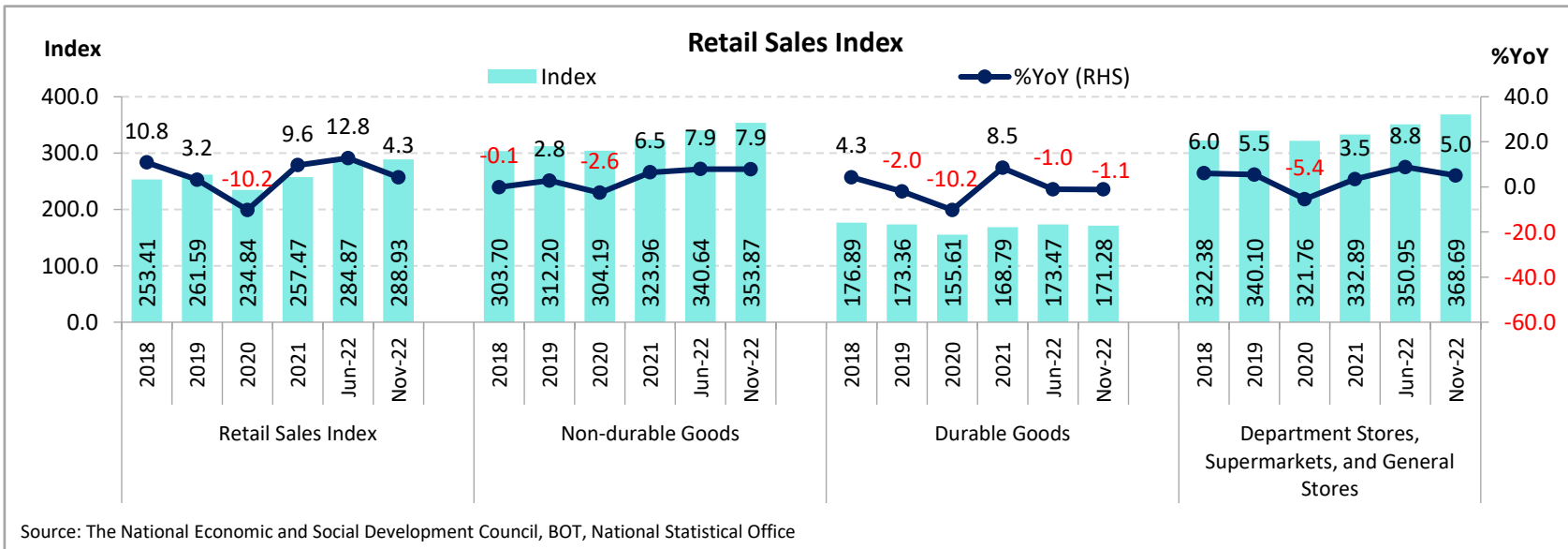
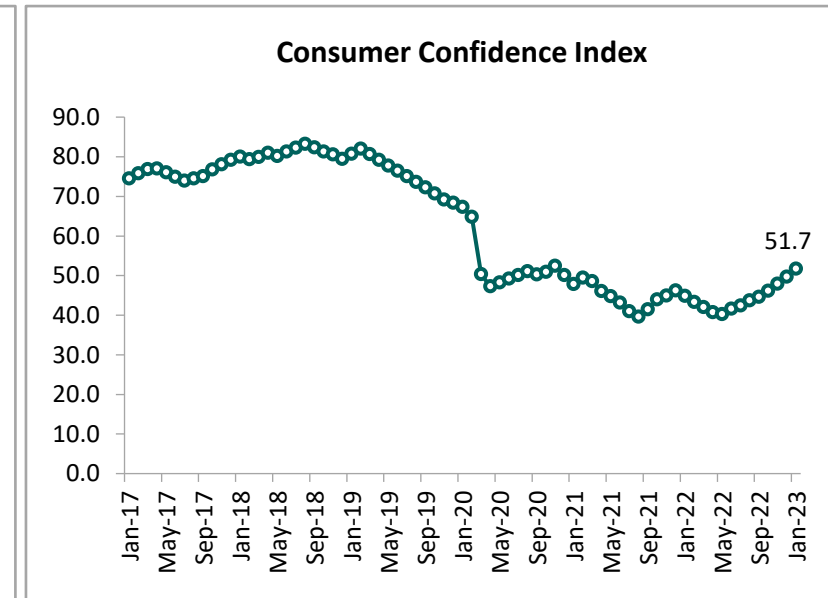
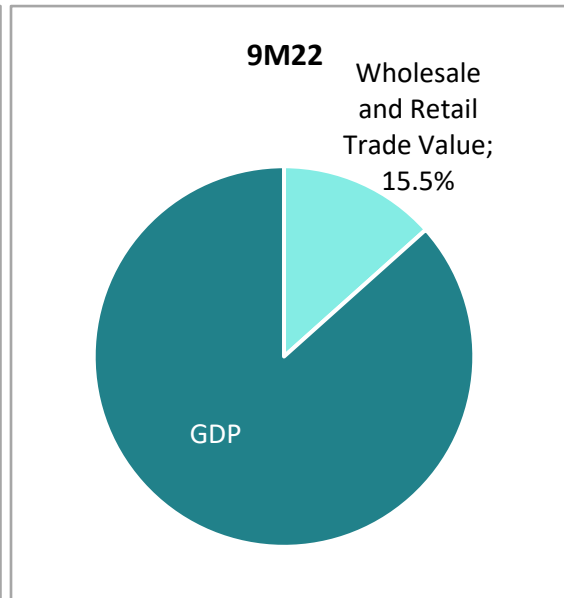
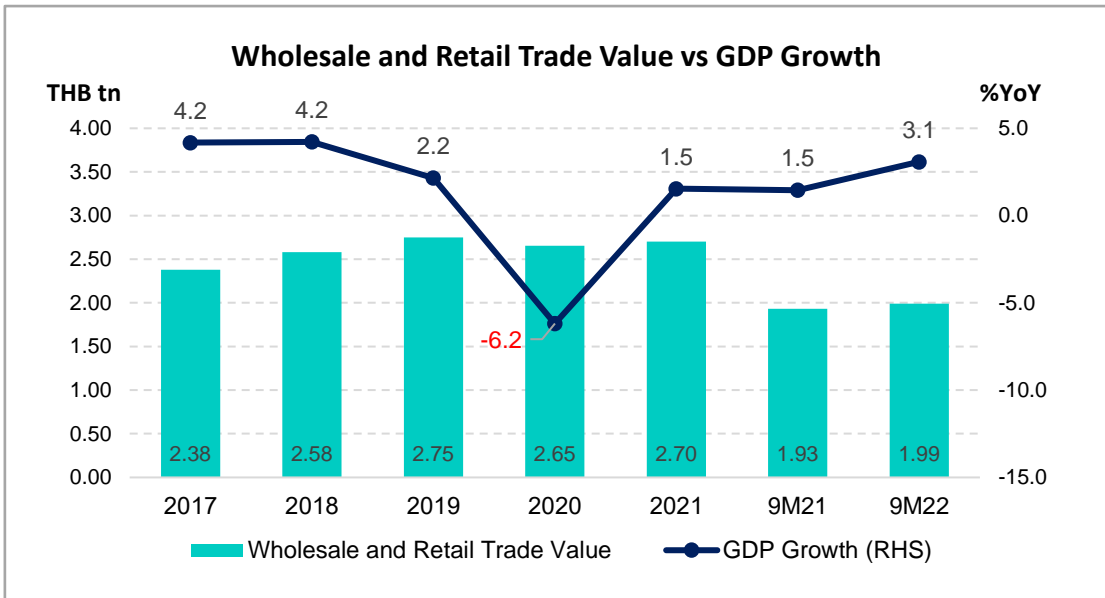
	2019	2020	2021	2022
Jan	79.40	75.47	17.27	55.29
Feb	73.26	55.84	24.99	56.15
Mar	58.71	23.40	27.35	47.08
Apr	58.18	1.45	13.45	46.89
May	55.78	5.54	7.56	42.94
Jun	54.28	17.78	6.75	43.85
July	54.39	40.72	6.12	47.80
Aug	50.69	39.45	6.09	47.42
Sep	50.84	40.14	11.56	49.84
Oct	60.10	48.72	19.90	55.39
Nov	69.65	60.18	37.60	69.86
Dec	77.44	55.32	56.25	79.06
<b>Avg.</b>	<b>61.89</b>	<b>38.67</b>	<b>19.57</b>	<b>53.46</b>

## Northeastern

	2019	2020	2021	2022
Jan	71.28	67.38	26.97	43.49
Feb	66.23	60.60	30.31	40.88
Mar	63.48	14.74	36.30	41.88
Apr	61.39	0.05	14.65	48.09
May	57.98	2.13	4.33	46.25
Jun	57.33	11.33	5.54	46.00
July	58.32	33.84	4.03	49.81
Aug	54.67	38.80	4.14	49.04
Sep	56.13	39.89	7.58	49.74
Oct	65.78	45.51	15.30	52.92
Nov	62.20	49.05	26.19	53.50
Dec	66.48	49.85	46.39	63.85
<b>Avg.</b>	<b>61.77</b>	<b>34.43</b>	<b>18.48</b>	<b>48.79</b>



# Modern Trade (ร้านค้าปลีกสมัยใหม่)



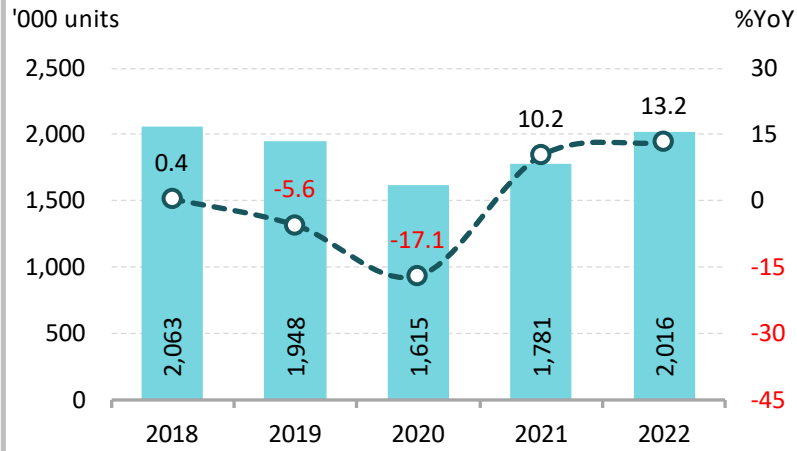
Source: The National Economic and Social Development Council, BOT, National Statistical Office

Source: LH Business Research analysis



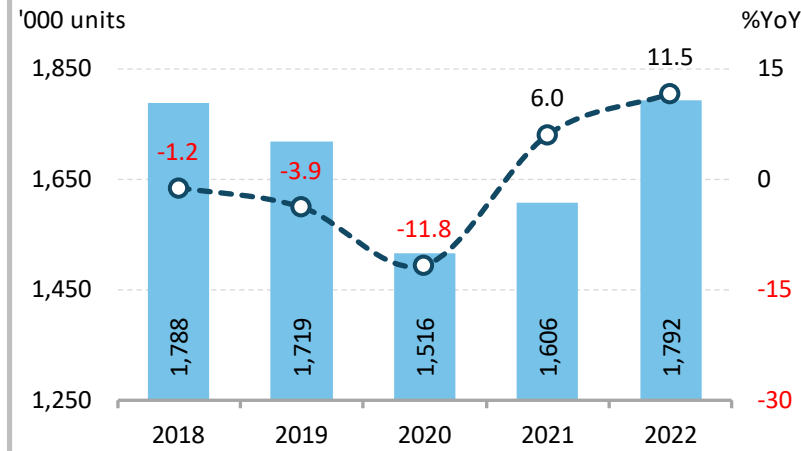
# Motorcycle (รถจักรยานยนต์)

### Production



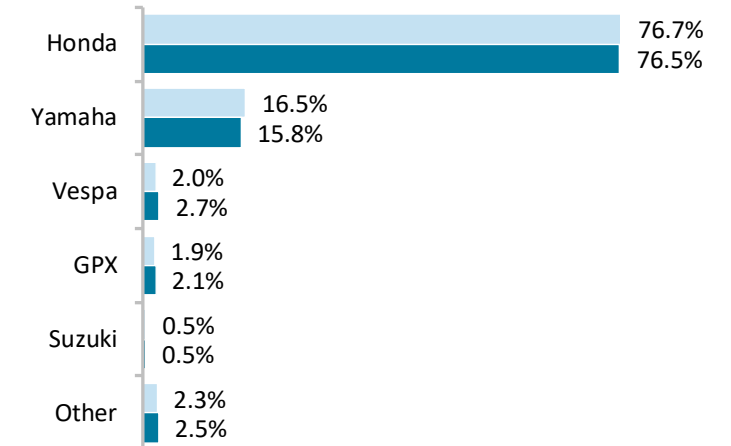
Source: FTI

### Domestic Sales



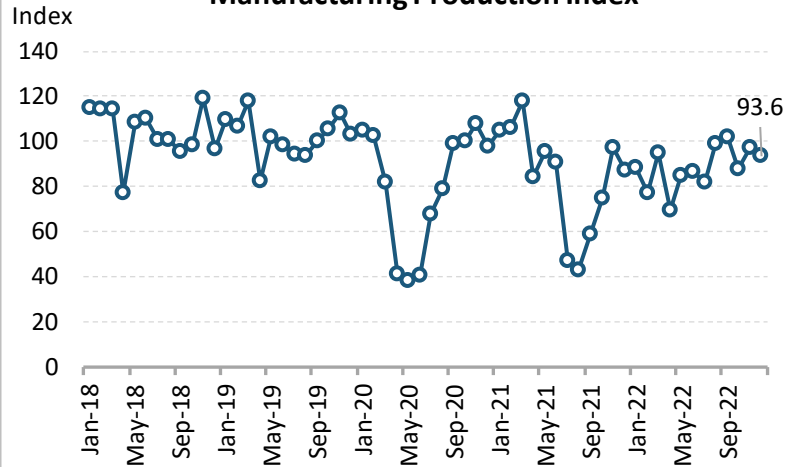
Source: FTI

### Domestic Sales by Brand



Source: DLT

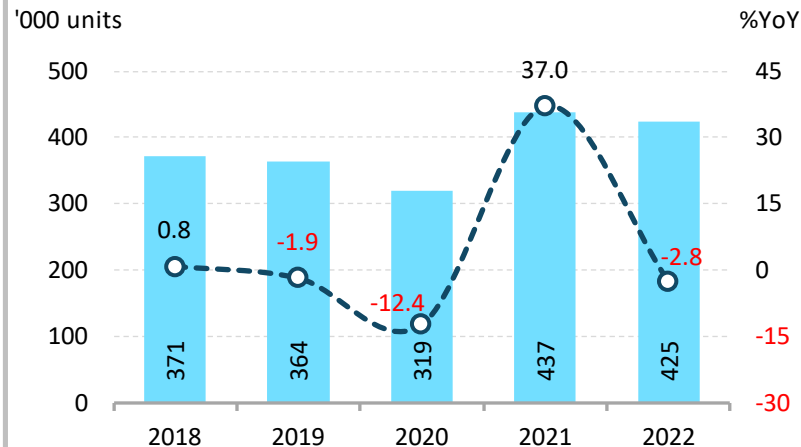
### Manufacturing Production Index



Note: MPI as of the base year (2016=100)

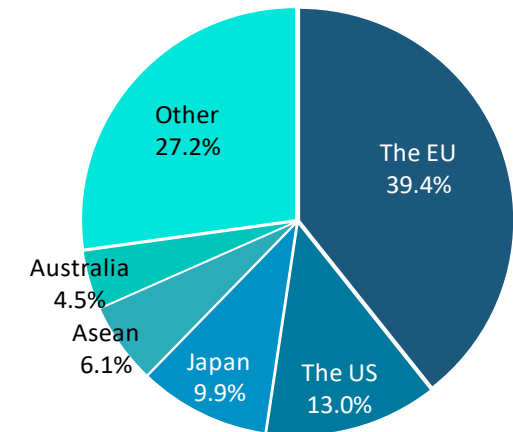
Source: OIE

### Exports



Source: MOC

### 2022 Exports by Destination

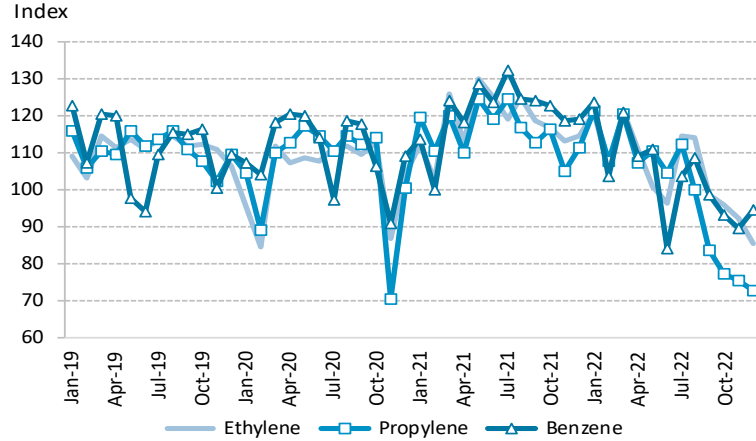


Source: MOC

# Petrochemicals (ปิโตรเคมี)

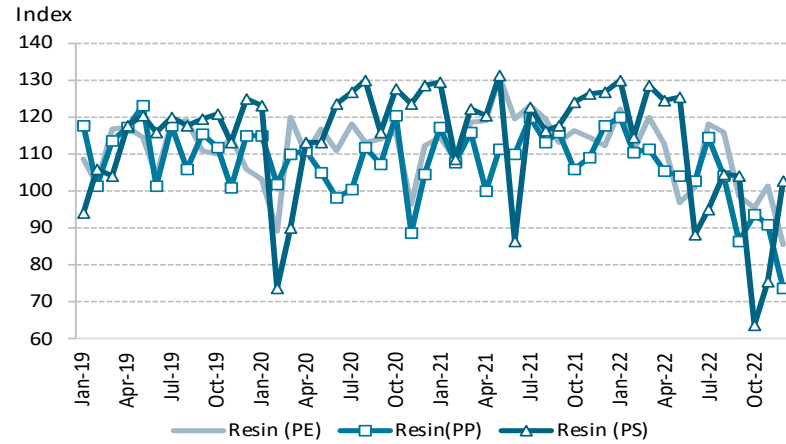
## Manufacturing Production Index

### Upstream

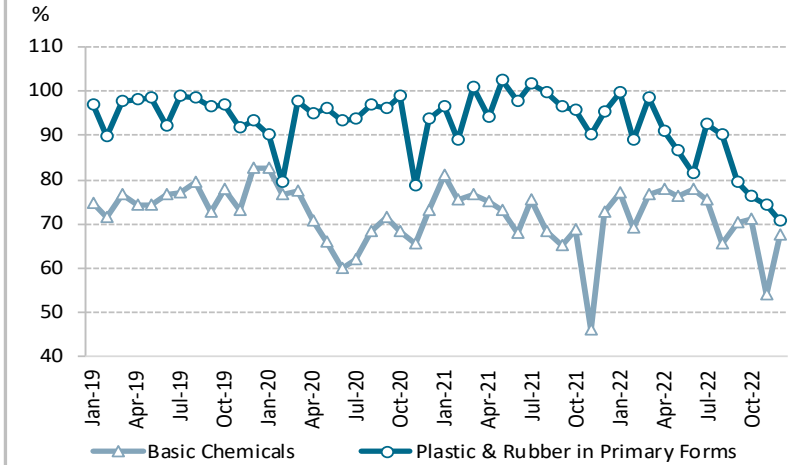


Source: OIE

### Downstream

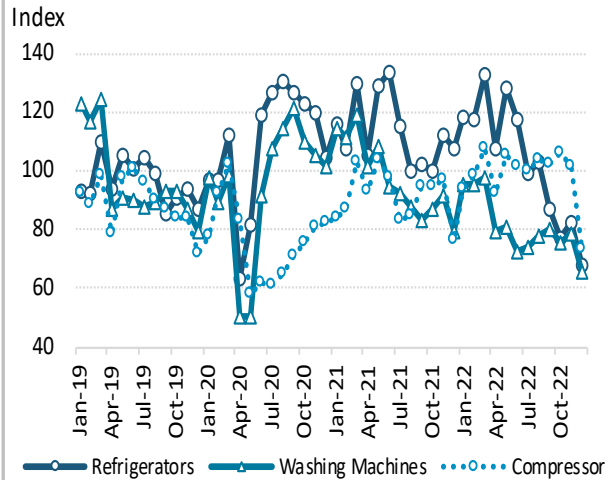


## Capacity Utilization



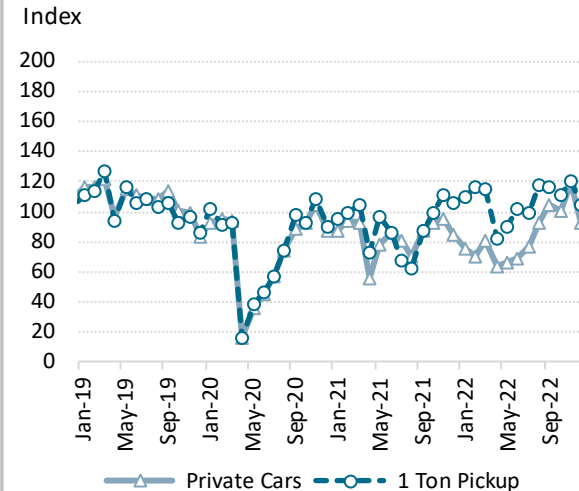
Source: OIE

## Electrical Appliance MPI



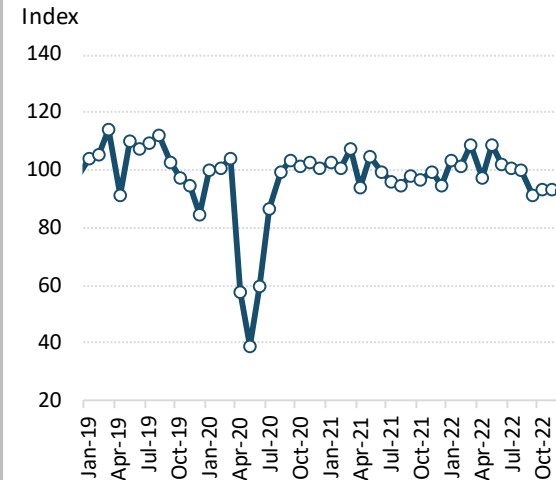
Source: OIE

## Automobile MPI



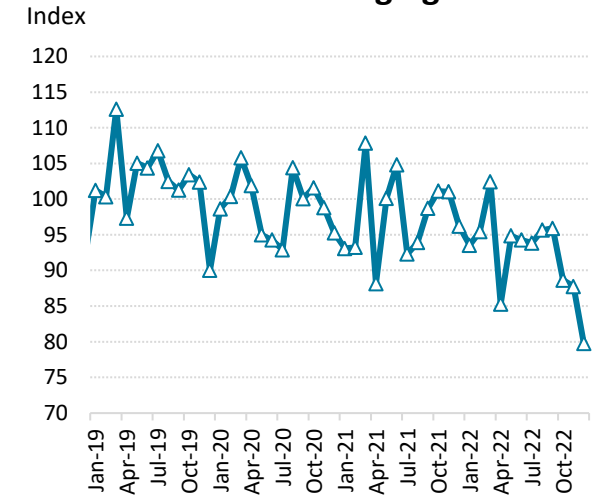
Source: OIE

## Tire MPI



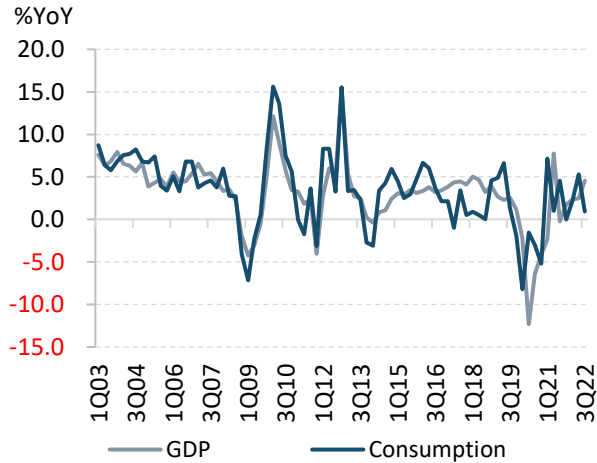
Source: OIE

## Plastic Packaging MPI



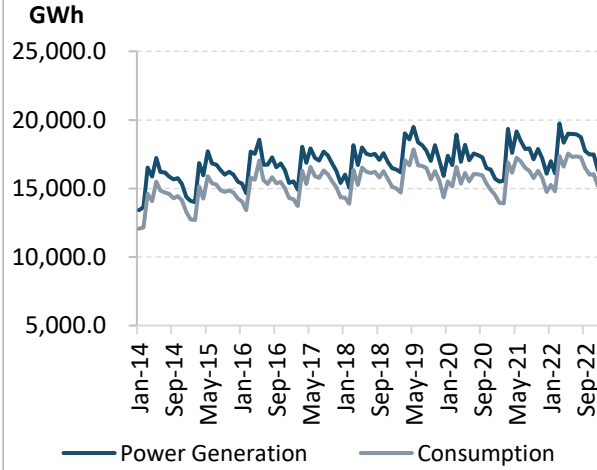
# Power Generation (ผลิตไฟฟ้า) [1/2]

### GDP & Electricity Consumption



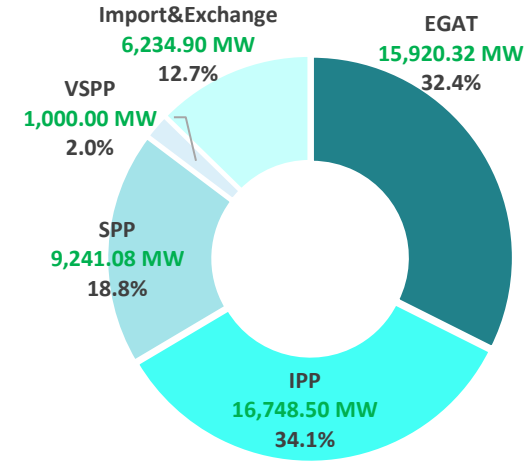
Source : EPPO

### Electricity Consumption

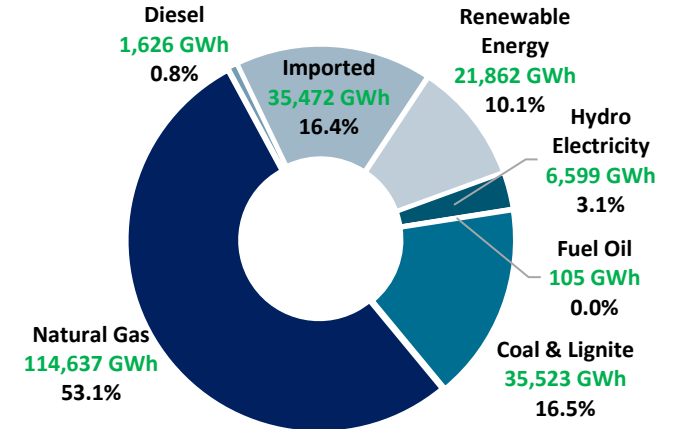


Source : EPPO

### Installed Generation Capacity

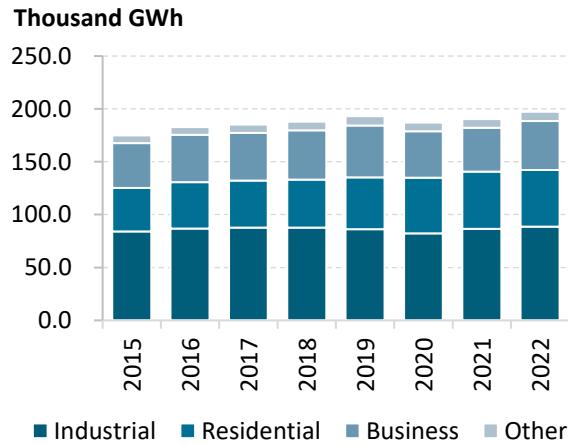


### Power Generation by Fuel



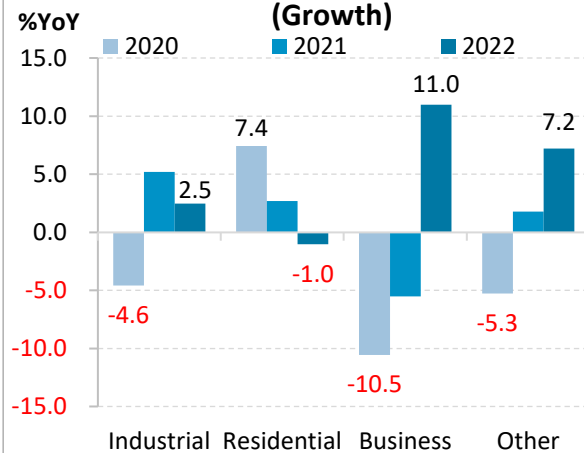
Source : EPPO

### Electricity Consumption by Sector



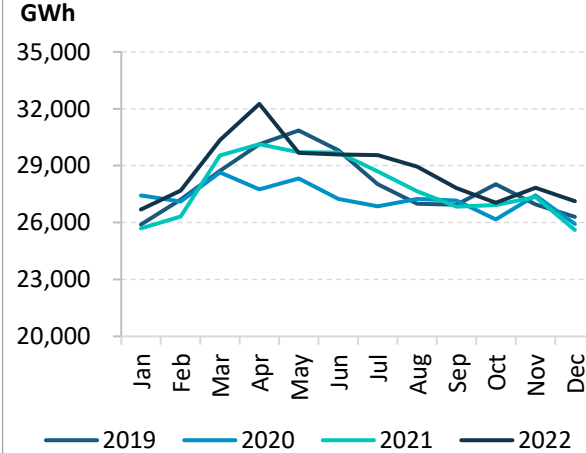
Source : EPPO

### Electricity Consumption by Sector (Growth)



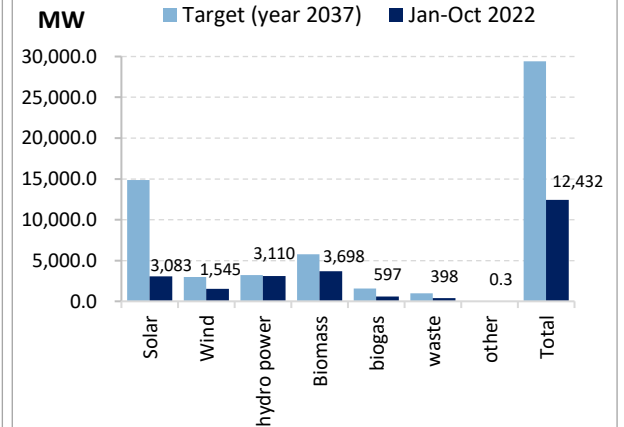
Source : EPPO

### Peak Demand



Source : EPPO

### Performance on Alternative Energy



Source : DEDE

# Power Generation (ผลิตไฟฟ้า) [2/2]

## Electricity Consumption

Unit : Gwh

	2020	2021	2022	%YoY
Industrial	82,158	86,427	88,563	2.5
Residential	52,860	54,290	53,738	-1.0
Business	43,950	41,529	46,094	11.0
Agriculture	417	398	335	-15.7
Government and Non-Profit	204	201	216	7.6
Others	3,872	3,829	4,218	10.2
Free of Charge	3,586	3,794	4,044	6.6
<b>Total</b>	<b>187,046</b>	<b>190,468</b>	<b>197,209</b>	<b>3.5</b>

Source : EPPO

## Power Generation by Fuel

Unit : Gwh

	2020	2021	2022	%YoY
Natural Gas	113,859	113,113	114,637	1.3
Coal&Lignite	36,823	36,065	35,523	-1.5
Imported	29,551	33,356	35,472	6.3
Renewable Energy	20,529	21,927	21,862	-0.3
Hydro Electricity	4,540	4,540	6,599	45.3
Diesel	97	294	1,626	452.3
Fuel Oil	624	422	105	-75.0
<b>Total</b>	<b>206,023</b>	<b>209,717</b>	<b>215,824</b>	<b>2.9</b>

Source : EPPO

## Renewable Energy Consumption for Power Generation by Fuel Type

Unit : MW

Target 2037	Target 2037	2019	2020	2021	2022 (Jan - Oct)
Solar	12,139	2,982.62	2,979.24	2,982.68	3,037.72
Hydro-floating Solar	2,725	-	-	45.00	45.00
Biomass	5,790	3,410.14	3,517.38	3,773.67	3,698.47
Wind	2,989	1,506.82	1,506.73	1,546.32	1,545.32
Biogas	1,565	529.98	557.24	572.72	597.04
Municipal Waste	900	314.67	333.68	348.48	363.09
Industrial Waste	75	-	-	-	34.43
Small Hydro Power	308	187.85	190.39	190.39	191.75
Large Hydro Power	2,920	2,919.66	2,919.66	2,919.66	2,918.40
Other	0.30	0.30	0.30	0.30	0.30
<b>Total</b>	<b>29,411</b>	<b>11,852</b>	<b>12,005</b>	<b>12,379</b>	<b>12,432</b>

Source : DEDE

## Peak Demand

Unit : MW

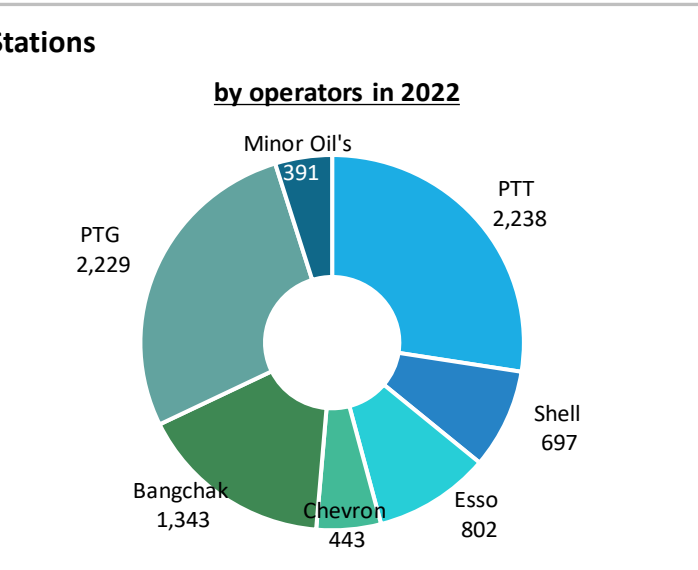
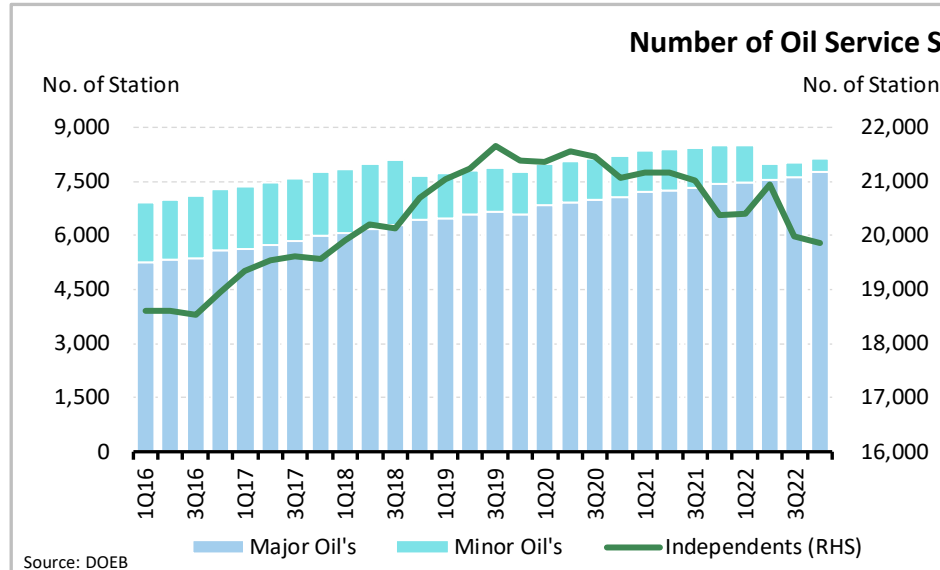
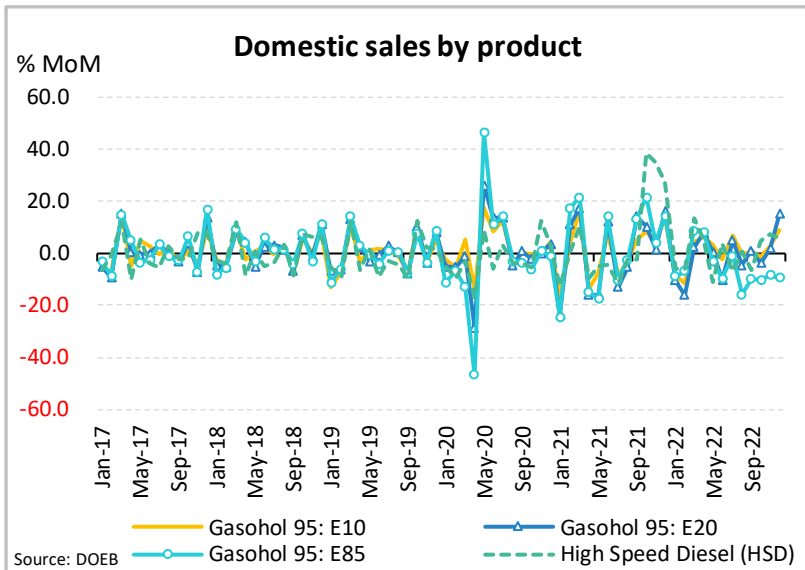
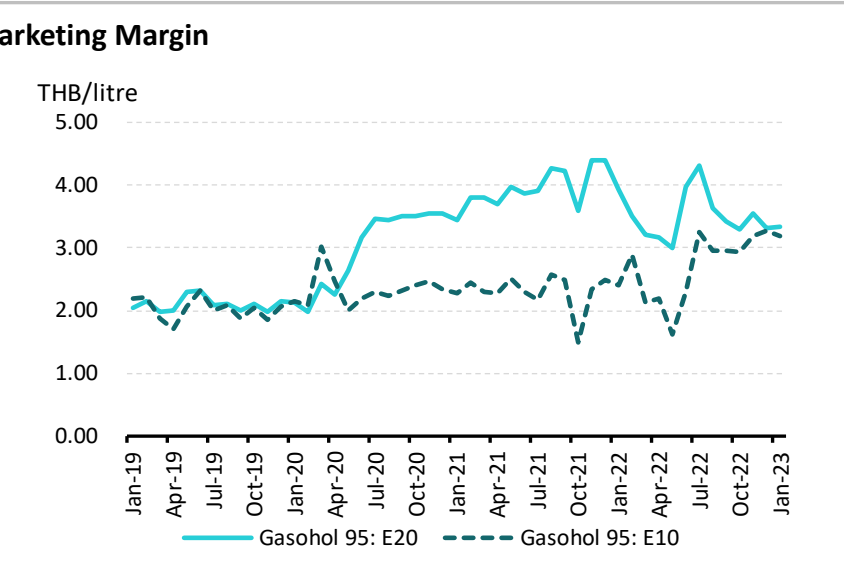
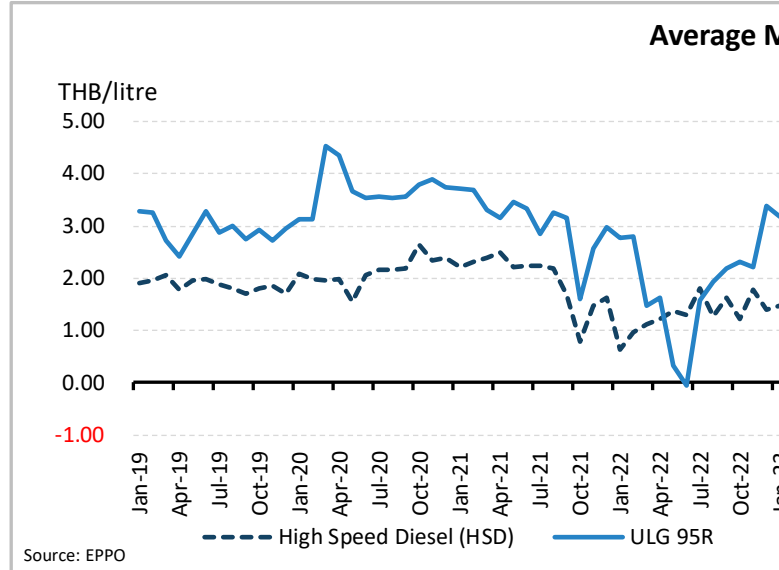
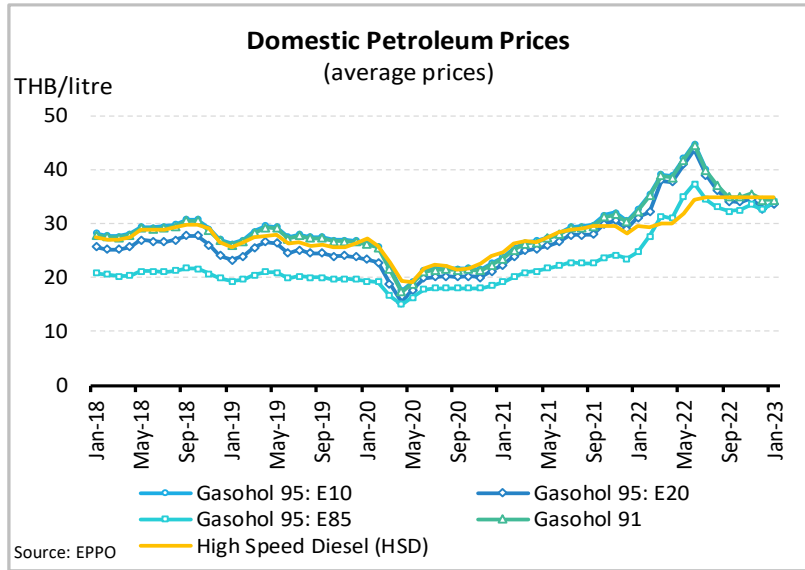
	2019	2020	2021	2022
Jan	25,898	27,423	25,686	26,688
Feb	27,215	27,112	26,319	27,673
Mar	28,722	28,637	29,537	30,349
Apr	30,120	27,747	30,135	32,255
May	30,853	28,328	29,702	29,675
Jun	29,800	27,240	29,692	29,594
July	28,015	26,855	28,691	29,558
Aug	26,987	27,235	27,642	28,952
Sep	26,937	27,159	26,841	27,808
Oct	28,026	26,162	26,920	27,042
Nov	26,958	27,433	27,347	27,833
Dec	26,295	25,924	25,597	27,125
<b>Max</b>	<b>30,853.2</b>	<b>28,636.7</b>	<b>30,135.3</b>	<b>32,254.5</b>

## Power Generation

Unit : Gwh

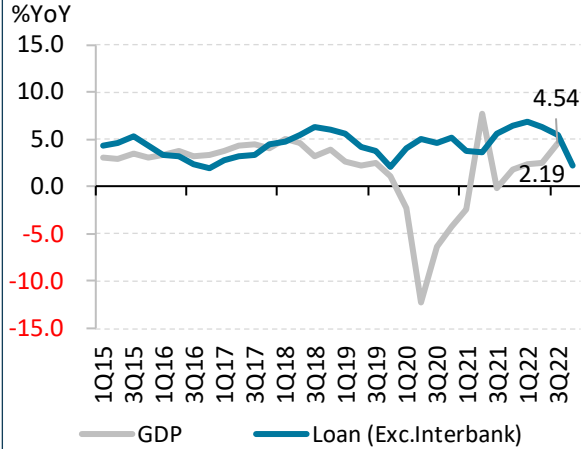
	2019	2020	2021	2022
Jan	16,374	17,383	15,499	16,991
Feb	16,178	16,699	15,558	16,099
Mar	19,020	18,925	19,344	19,739
Apr	18,582	16,933	17,605	18,333
May	19,491	18,170	19,169	19,000
Jun	18,377	17,066	18,450	18,971
July	18,168	17,542	17,875	18,943
Aug	17,754	17,445	17,920	18,730
Sep	17,014	17,279	17,138	17,728
Oct	18,164	16,480	17,882	17,484
Nov	17,007	16,387	17,204	17,473
Dec	15,920	15,713	16,074	16,335
<b>Total</b>	<b>212,050</b>	<b>206,023</b>	<b>209,717</b>	<b>215,824</b>

# Oil Service Station (สถานีบริการน้ำมันเชื้อเพลิง)



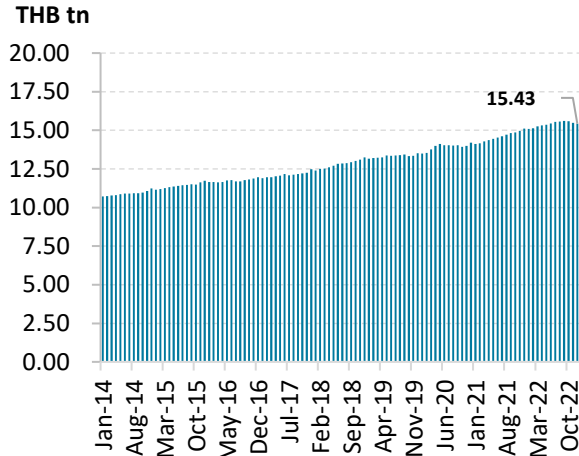
# Banking (ธนาคาร)

### Bank Loan Growth



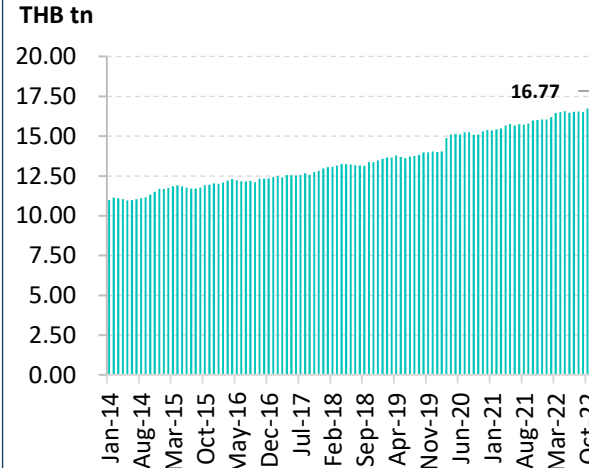
Source : BOT

### Bank Loan (Exc. Interbank)



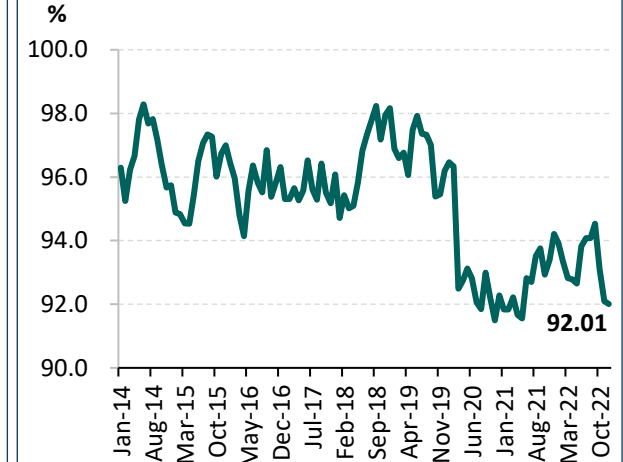
Source : BOT

### Bank Deposit



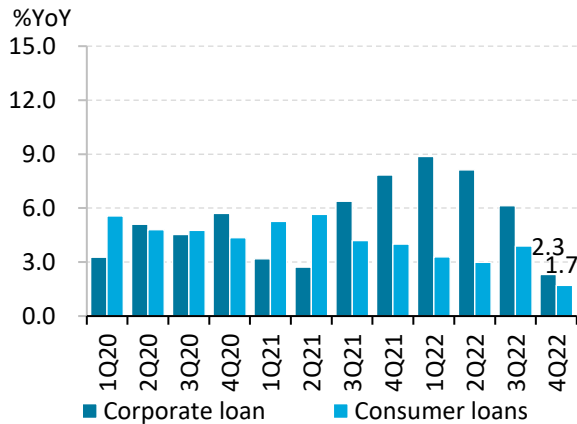
Source : BOT

### Loan-to-deposit ratio



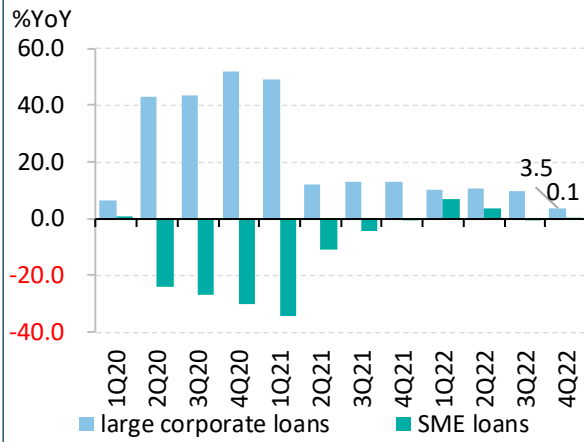
Source : BOT

### Bank Loan Growth by Sector



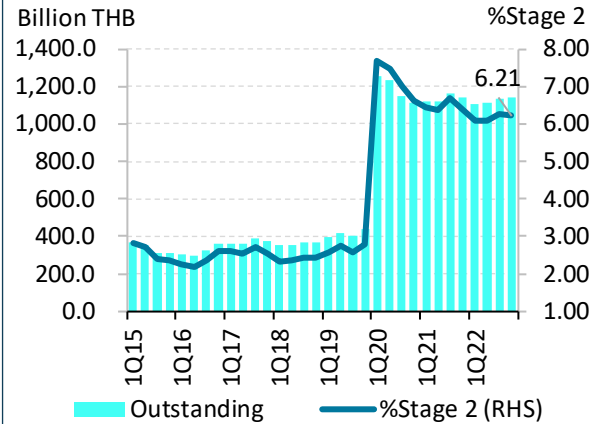
Source : BOT

### Corporate Loan Growth by Size



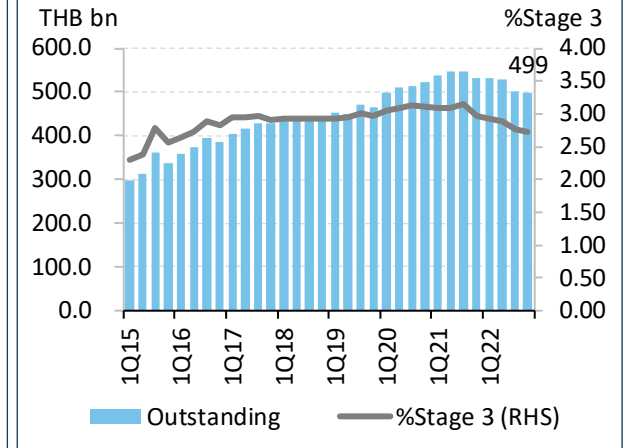
Source : BOT

### SM ratio



Source : BOT

### NPL ratio



Source : BOT

# End of Presentation

---

## Disclaimer

ข้อมูล บทวิเคราะห์ และการแสดงความคิดเห็นต่างๆที่ปรากฏอยู่ในรายงานฉบับนี้ ได้จัดทำขึ้นบนพื้นฐานของแหล่งข้อมูลที่ได้รับมาจากแหล่งข้อมูลที่เชื่อถือได้ เพื่อใช้ประกอบการวิเคราะห์ภาวะเศรษฐกิจและอุตสาหกรรมซึ่งเป็นเอกสารภายในของธนาคารแลนด์ แอนด์ เฮ้าส์ จำกัด (มหาชน) เท่านั้น ทั้งนี้ธนาคารฯ จะไม่รับผิดชอบความเสียหายใดๆทั้งปวงที่เกิดขึ้นจากการนำข้อมูล บทวิเคราะห์ การคาดหมาย และความคิดเห็นต่างๆ ที่ปรากฏในรายงานฉบับนี้ไปใช้ โดยผู้ที่ประสงค์จะนำไปใช้ต้องยอมรับความเสี่ยง และความเสียหายที่อาจเกิดขึ้นเองโดยลำพัง