



Thai Oil Public Company Limited

Q2 & 1H/21

Analyst Presentation

16 August 2021

Time : 10:00 - 12:00 hrs.

Online Channel : TOP IR Application, Facebook Live, MST



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Presentation Agenda (Q2 & 1H/21)

KEY HIGHLIGHTS

PERFORMANCE ANALYSIS

OUTLOOK

FINAL REMARKS



KEY HIGHLIGHTS

Q2/21 Recovery On The Way

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Key Highlights

Performance

Outlook

Final Remarks

Market & Business

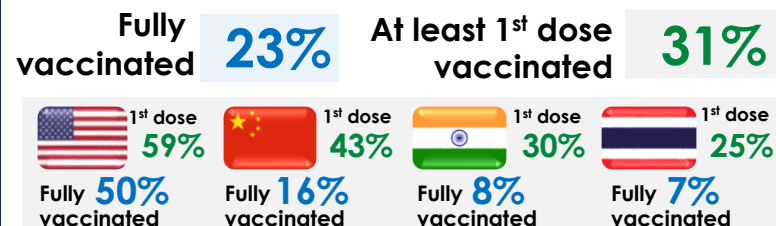
Strategic Direction

Key Events

COVID-19 Pandemic Recovery

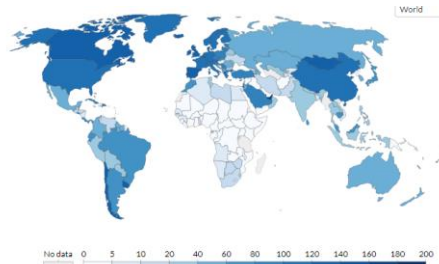
Vaccination rate

Share of people vaccinated against COVID-19 (Aug 13, 2021)



Source: WHO (Aug'21), OMS & GCDL & University of Oxford (Aug'21)

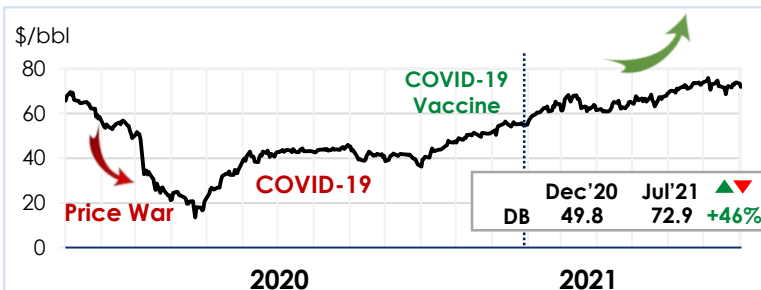
- 31% of the world population has received at least one dose of COVID-19 vaccine, 4.7 billion doses have been administered globally



- Widespread immunization is expected to be achieved by most developed economies i.e. the U.S., Europe & China
- The economic recovery from COVID-19 has started to accelerate particularly in the U.S., Europe & China on the back of a massive fiscal stimulus plan and easing COVID-19

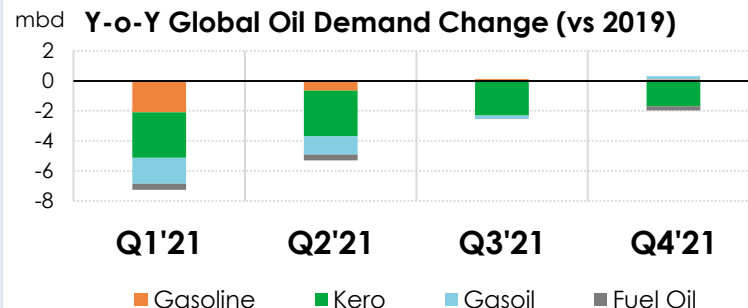
Global Oil Demand Recovery

- Rising crude prices amid demand recovery and tightening supply



Source: Reuters (Aug'21)

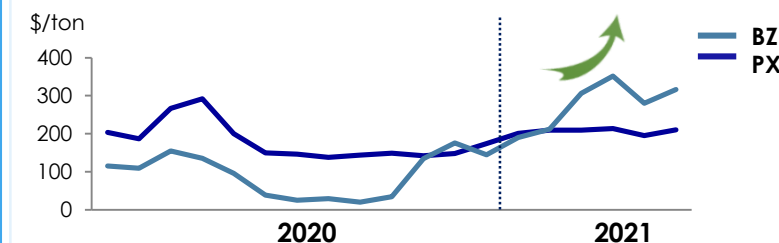
- Improving product demand due to increasing global vaccination rate and easing COVID-19 restrictions in developed countries



Source: Energy Aspects (Jul'21)

Strong Downstream Markets

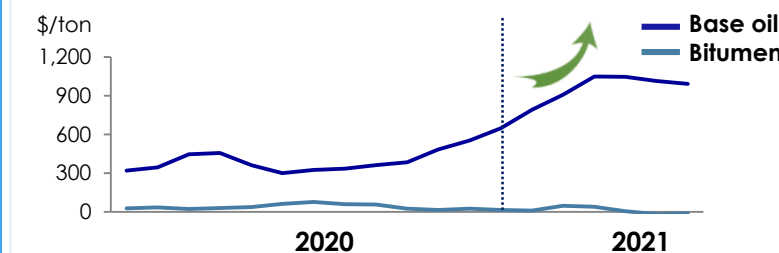
- Improving Aromatic & LAB Markets



Source: Reuters (Aug'21)

- Improving aromatics market on less additional capacity and demand recovery
- Robust LAB market on growing demand for hygiene products during COVID-19 pandemic amid limited supply

- Record High Base Oil Margin



Source: Reuters (Aug'21)

- Extremely strong base oil market on limited supply from refinery run cuts and demand recovery

Continuous Business Excellence

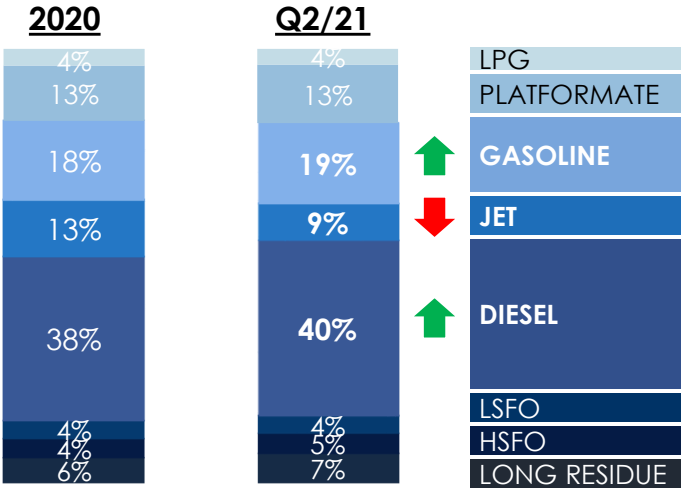


Operational

• Optimize overall utilization rates

U-Rate %	Q1/21	Q2/21	1H/20	1H/21
Refinery	100%	98%	105%	99%
Aromatics	80%	89%	78%	85%
LAB	91%	117%	113%	104%
Base Oil	93%	95%	85%	94%

• Stretched operational boundaries

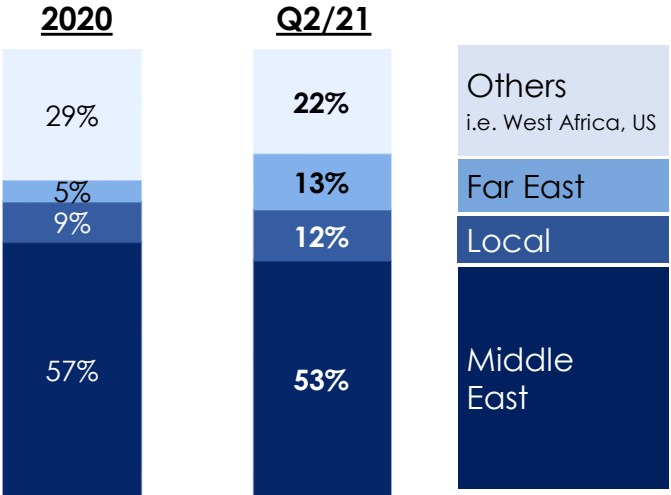


Commercial

• Maximize domestic & Indochina sales

	Q1/21	Q2/21	1H/20	1H/21
Local	83%	84%	85%	84%
Indochina	14%	12%	11%	13%
Other exports	3%	4%	4%	3%

• Crude diversification



Financial

• Affirmed Credit Rating

- In line with TOP's strategic direction
- Clear recapitalization plan, but subject to market conditions
- Strong parental support from PTT



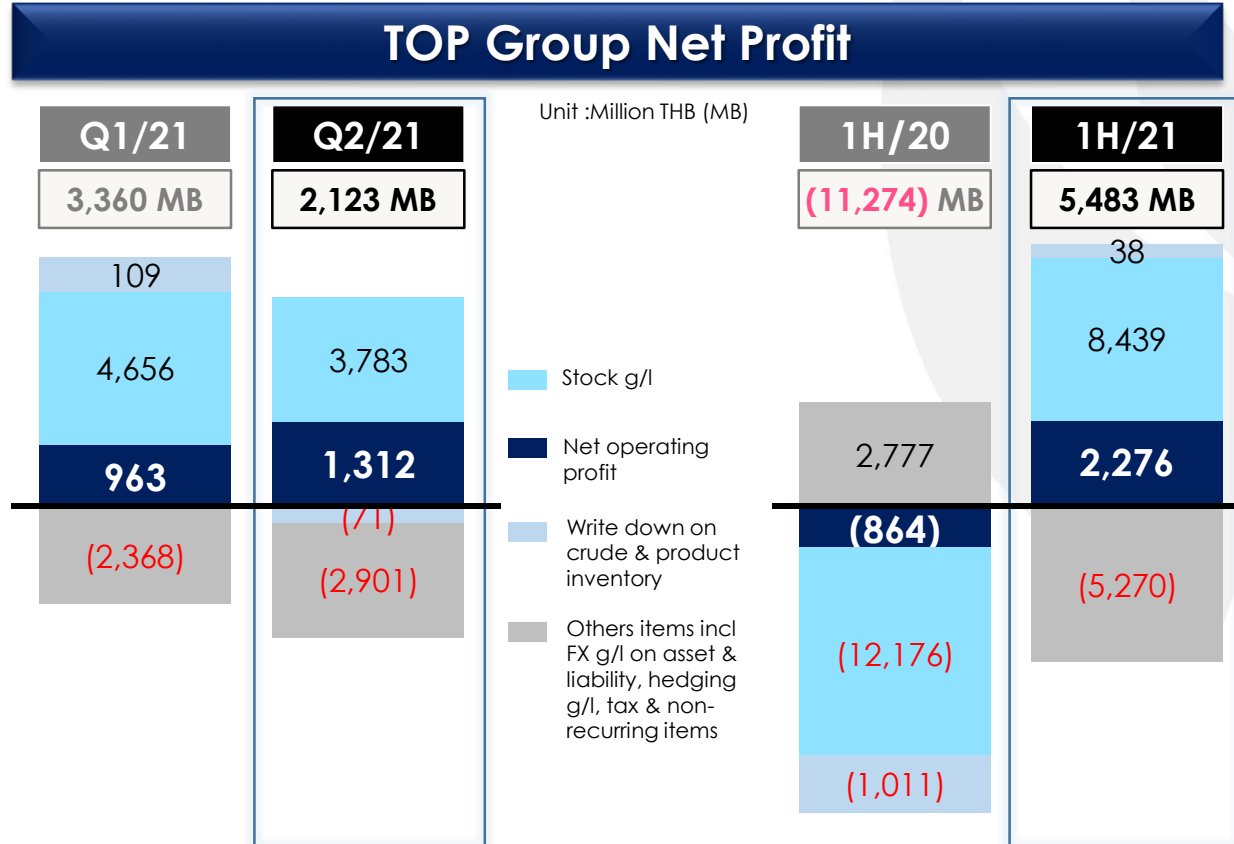
- Successful completion of marine business restructuring in Apr'21
- Continuously enhanced cost management
- Funding Readiness

Q2 & 1H/21 Performance

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Crude	<p>QoQ Dubai rose from \$64.4/bbl to \$71.6/bbl</p> <p>YoY Dubai rose from \$40.8/bbl to \$71.6/bbl</p> <ul style="list-style-type: none"> Oil demand recovery due to increasing global vaccination rate & easing COVID-19 restrictions in developed economies Limited crude oil supply from strong compliance of OPEC+ cut by 6.6 MBD
Refinery	<p>QoQ Mkt GRM softened from \$0.7/bbl to \$0.4/bbl</p> <p>YoY Mkt GRM slightly softened from \$0.7/bbl to \$0.6/bbl</p> <ul style="list-style-type: none"> Higher crude cost due to tight crude oil market and stronger oil demand in the U.S. Improving Gasoline spread due to rising demand in the U.S. and Europe from easing COVID-19 restrictions and higher summer driving season demand in the U.S. Improving Middle Distillate spreads due to increasing demand from higher economic activities from easing COVID-19 restrictions in the U.S., Europe & China
Aromatic & LAB	<p>QoQ Contributions improved from \$2.0/bbl to \$2.4/bbl</p> <p>YoY Contributions improved from \$1.5/bbl to \$2.2/bbl</p> <ul style="list-style-type: none"> Strong BZ margin due to higher demand from new SM plant start-up (1.2 mtpa) and supply disruption in the U.S. following historic cold blast Robust LAB Contribution from growing demand for hygiene products during COVID-19 pandemic amid limited supply
Lube	<p>QoQ Contribution improved from \$1.5/bbl to \$2.4/bbl</p> <p>YoY Contribution improved from \$0.3 to \$1.9/bbl</p> <ul style="list-style-type: none"> Record high Base Oil margin due to limited supply from refinery run cuts and regional demand recovery



QoQ

- Higher Market GIM** from \$4.1/bbl to \$5.2/bbl
- Lower Utilization Rate** from 100% to 98%

YoY

- Improving Market GIM** from \$2.5/bbl to \$4.7/bbl
- Lower Utilization Rate** from 105% to 99%

Thaioil's 2021 Strategic Direction : Building on Our Strong Foundation

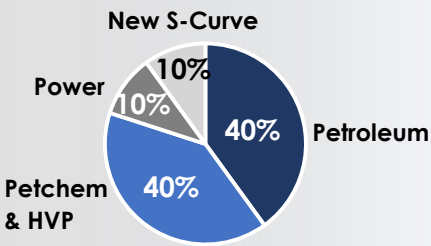


Vision

Strategic Objective

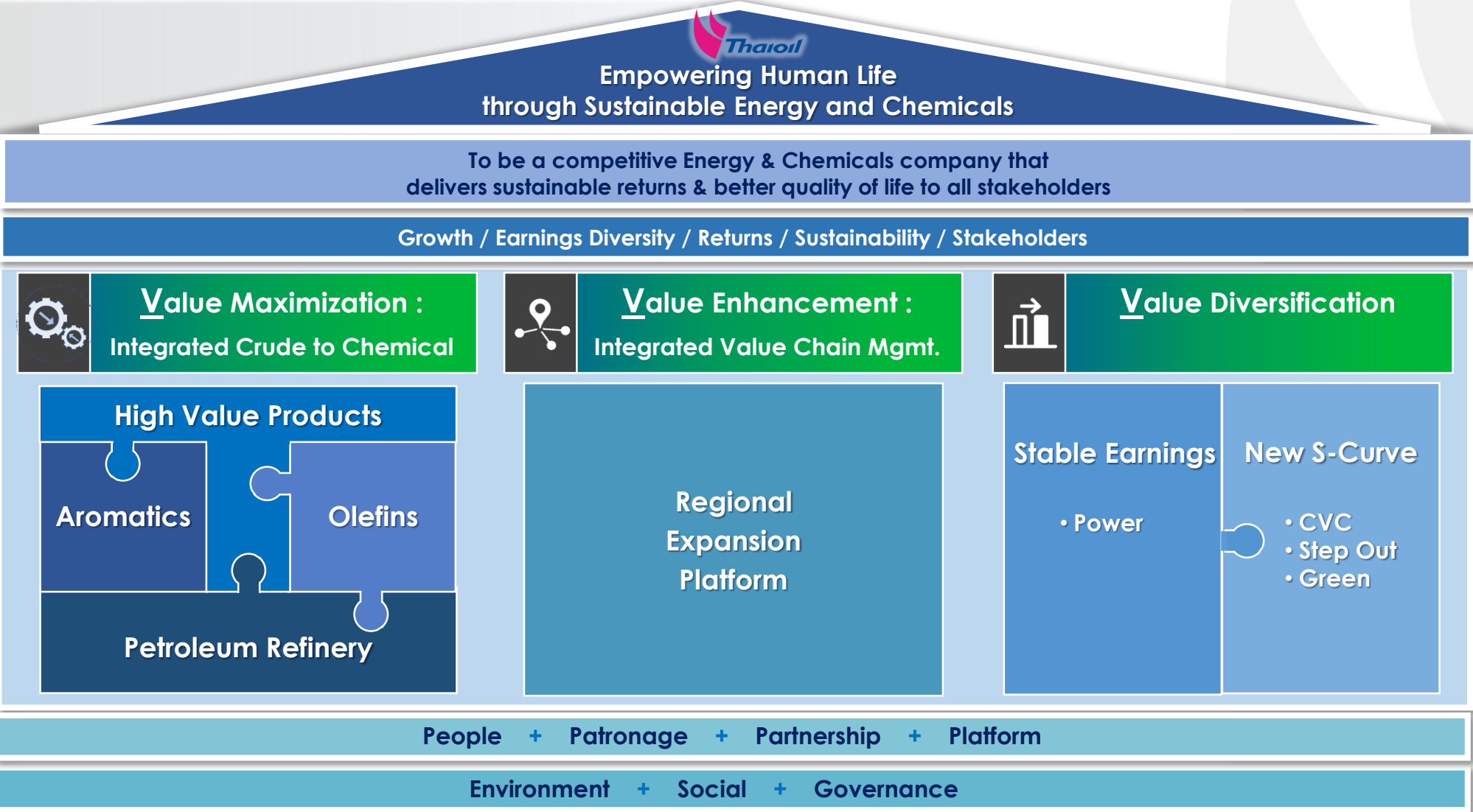
Measurement

Portfolio Strategic Direction



Effective Execution 

Drive for Sustainability



3-Pronged Strategy (3V)



Value Maximization :
Integrated Crude to Chemicals

“Build on our strong foundation”

- Strengthen core through CFP project
- Speedup growth by building on our strong foundation
- Existing value chain (Aromatics, Lube & LAB) & HVP via revamp/debottleneck & partnership
- Olefins value chain, jumpstart via JV/partnership & bypass to downstream HVP
- Expand product portfolio & develop HVP through customer orientation, technical expertise & partnership



Value Enhancement :
Integrated Value Chain Management

“Know your customers & knowledge-based”

- ASIAN region as our investment playground & market
- Prepare for CFP & PetChem
- Move closer to customers to promote HVP's



Value Diversification

“Stable Earnings & New S-Curve”

- Power to provide stable earnings
- Step up effort on New Ventures
- Window to identify new S-curve opportunities & diversity sources of earnings

Olefins Investment



Transaction Summary



15.38% stake in CAP



Chandra Asri



#1

The Largest & Dominant
Integrated Petrochemical
Producer in Indonesia



Investment US\$ 1,183 mn

- 1st Tranche US\$ 913 mn 15.0%
- 2nd Tranche US\$ 270 mn 0.38% on CAP2 FID



Timeline

- Closing date by 30 Sep 21
- Realize contribution in Q4/21 onwards



CAP2

- Expected Final investment decision (FID) in 2022
- Expected COD in 2026



Total capacity

- CAP1 4.2 mtpa
- CAP1+2 8.1 mtpa

Key Investment Highlight



Strategic Fit

- Jump-start our Olefins value chain
- Perfectly timed with CFP project
- Avoid adding new capacity
- Allow to concentrate on downstream HVP



Indonesia A Strategic Market

- The region is our investment playground
- Young & fastest growing economy
- Net importer & growing PetChem market
- Gateway to Indonesia



CAP A Premier Operator

- Largest PetChem producer in Indonesia
- Market share over 50%
- Proven track record of sustainable & profitable growth



Tangible Strategic Collaboration

- Advance develop stage of expansion project
- CAP2 more than double capacity to 8 MTPA
- Capital injection by TOP & SCG will anchor CAP2
- TOP to supply feedstock and distribute products



Well-Defined & Well-Balanced Funding Plan

- Investment is financed by loans from banks & PTT
- Take-out plan designed to optimize long-term capital structure



Win-Win-Win Partnership TOP-CAP-SCG

- Represent a strong and mutually beneficial partnership between TOP, CAP and SCG



Q2/21 Key Events

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Key Highlights

Market & Business

Performance

Strategic Direction

Outlook

Final Remarks

Key Events

Thaioil's 60th Anniversary

Olefins Investment in Indonesia



- On 29 July 2021, Thaioil & PT Chandra Asri Petrochemical Tbk (CAP) signed definitive agreements to proceed with share acquisition in CAP.

60th Anniversary Campaign



- Thaioil has implemented campaigns to celebrate 60th anniversary i.e. 60th Thaioil Charity Virtual Run, CSR activities during COVID-19, and advertising package
- New normal celebration via digital platform

CSR Activities

Healthcare support for medical workforce

- Necessary equipment support for field hospitals in Chonburi area
- Medical equipment support to the Queen Savang Vadhana Memorial Hospital of Sriracha



Contributing Energy - Empowering Vaccination

- Contribution of gasoline to Ministry of Health, Thai Red Cross Society, Chulalongkorn & Siriraj Hospital
- Contribution of gasoline in support of vaccination activities of Thaioil's area based in Chonburi



Awards & Recognitions

- 4 Regional Awards from Alpha Southeast Asia** organized by Alpha Southeast Asia Magazine



- Strongest Commitment to Sustainable Energy** for 9 yrs
- Best Strategic Corporate Social Responsibility** for 7 yrs
- The Strongest Adherence to Corporate Governance**
- Most Organized Investor Relations** for 2 yrs

- 2 Awards from International Finance** organized by International Finance Magazine



- Fastest Growing Investor Relation Energy Company**
- Most Innovative Ecosystem - Oil**

- International Business Magazine Award** organized by International Business Magazine



- Fastest Growing Energy Company Thailand 2021**

PERFORMANCE ANALYSIS



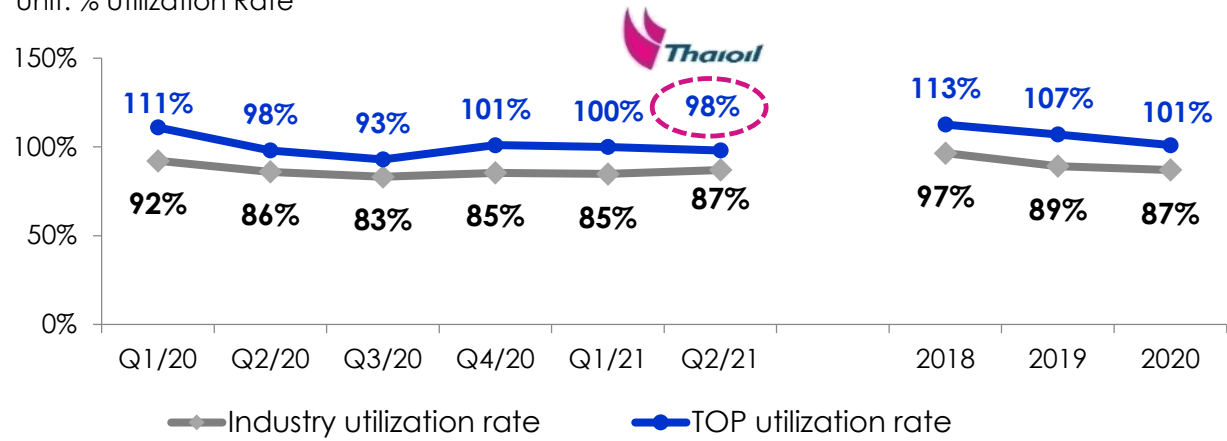
Refinery: Slightly Lower Utilization as Softening Domestic Oil Demand

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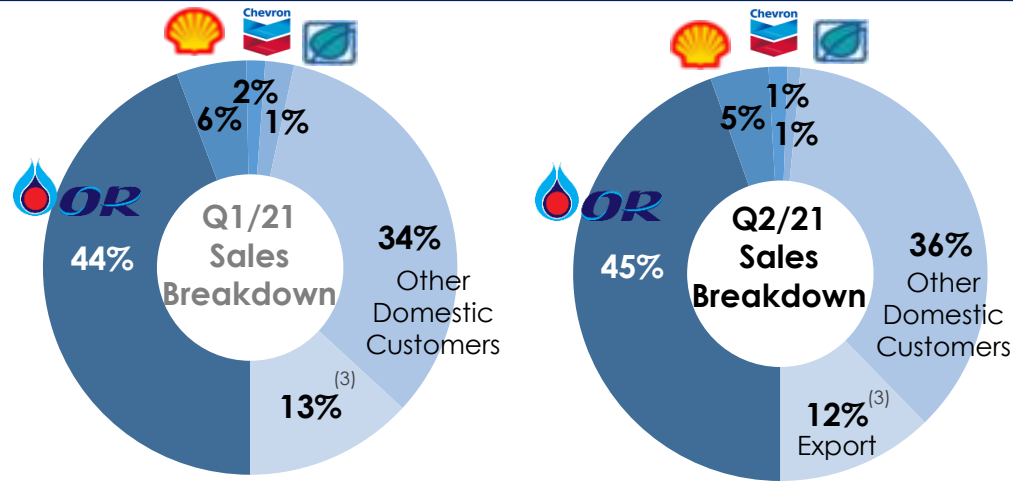


TOP/ Domestic Refinery Utilization Rate

Unit: % Utilization Rate



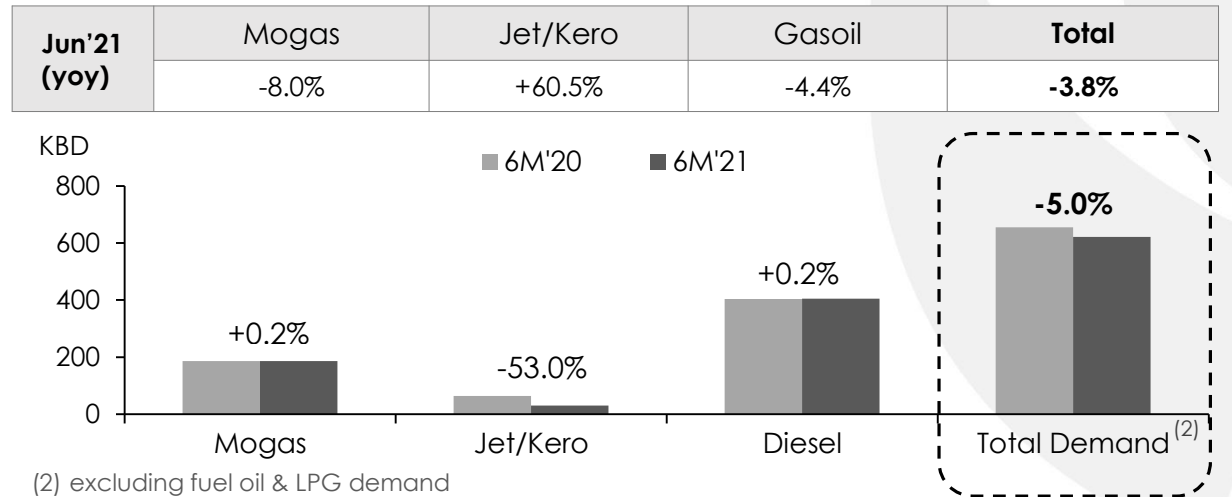
Sales Breakdown by Customers



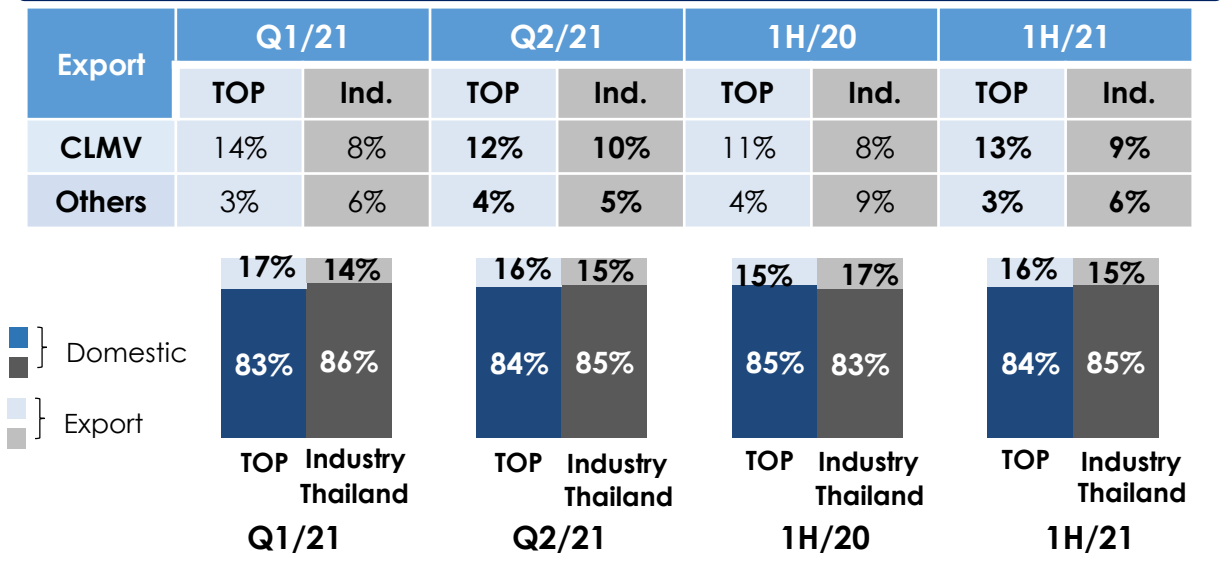
(3) Excluding export sale through PTT

(4) Source: Department of Energy Business, Ministry of Energy

Domestic Oil Demand



TOP's Domestic Sales vs Industry



Refinery: Softening Mkt GRM Pressured by Higher Crude Premium

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Dubai Crude Price & Key Petroleum Product Spreads

	2020				2021				2020
\$/bbl	Q1	Q2	Q3	Q4	Q1	Q2	1H	Q3TD*	FY
DUBAI (DB)	50.9	30.6	42.9	44.6	60.0	66.9 ↑	63.5	72.1	42.2
ULG95 - DB	6.7	2.6	4.4	4.1	7.1	9.9 ↑	8.5	12.5	4.5
JET - DB	8.6	(0.1)	(0.7)	2.4	3.3	4.5 ↑	3.9	4.6	2.5
GO - DB	11.1	5.7	4.2	3.7	4.7	5.3 ↑	5.0	5.1	6.2
VLSFO - DB	13.8	5.3	3.2	5.5	7.6	5.0 ↓	6.3	4.6	7.0
HSFO - DB	(7.5)	(1.6)	(2.5)	(0.6)	(3.5)	(5.8) ↓	(4.6)	(6.0)	(3.0)

Refinery Utilization

Q1/21	Q2/21	1H/20	1H/21
100%	98%	105%	99%

% MB Intake/ MB-DB (\$/bbl)

17%/0.7	8%/1.3	20%/(1.1)	13%/1.0
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% Middle East crude intake

52%	53%	50%	52%
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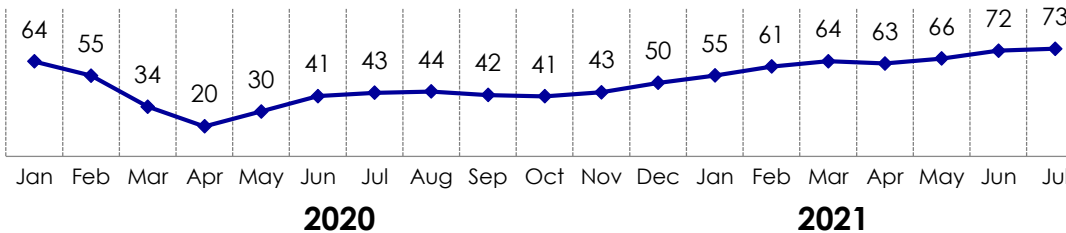
Q2/21 Market GRM

- **Higher crude premium** due to tight crude oil market and stronger oil demand in the U.S.
- **Higher fuel & loss** following rising crude price
- + **Improving Gasoline spread** due to rising demand in the U.S. and Europe from easing COVID-19 restrictions and higher summer driving season demand in the U.S.
- + **Improving Middle Distillates margins** due to improving demand from higher economic activities from easing COVID-19 restrictions in the U.S., Europe & China

Q2/21 Performance

- **Lower refinery run rate to 98%** due to softening domestic oil demand from the new wave of COVID-19 in Thailand

Dubai Price
(US\$/bbl)



*Q3TD as of 13 Aug'21

Gross Refinery Margins - GRM

	2020				2021			2020
\$/bbl	Q1	Q2	Q3	Q4	Q1	Q2	1H	FY
Market GRM	0.1	1.4	(1.1)	1.2	0.7	0.4	0.6	3.1
Stock G/(L)	(12.3)	(1.8)	4.0	2.3	6.2	4.9	5.5	0.5
Accounting GRM	(12.2)	(0.4)	2.9	3.4	6.9	5.3	6.1	3.6

Aromatic: Higher Contribution Supported by BZ & LAB Margins

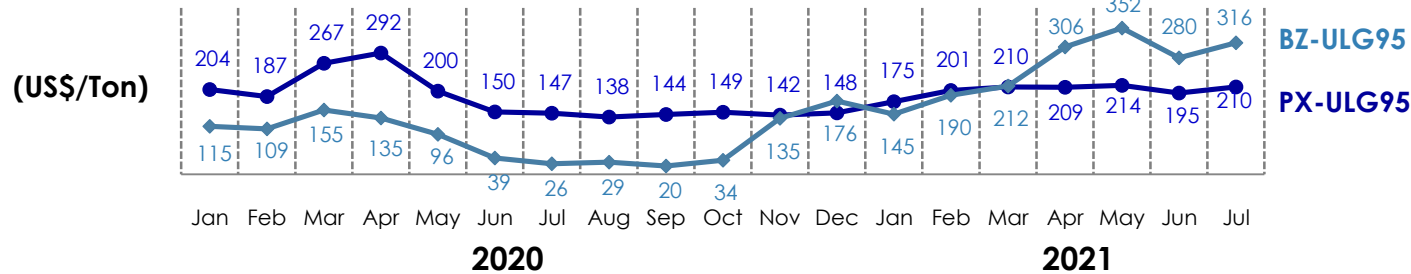
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Aromatic Spreads and Margins

	2020				2021				2020
\$/ton	Q1	Q2	Q3	Q4	Q1	Q2	1H	Q3TD*	FY
PX-ULG95	218	214	143	146	195	206 ↑	201	223	180
BZ-ULG95	126	90	25	115	182	313 ↑	247	284	89

*Q3TD as of 13 Aug'21



Aromatics Production

Q1/21	Q2/21	1H/20	1H/21
80%	89%	78%	85%

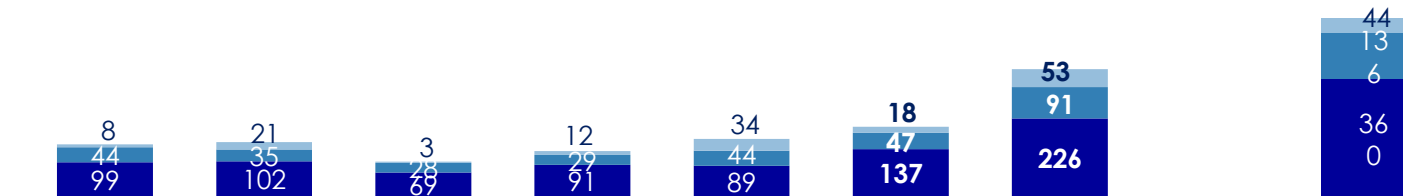
Q2/21 Market

- + **Improving PX margin** due to greater demand for downstream products i.e. PET & polyesters
- + **Strong BZ margin** due to higher demand from new SM plant start-up (1.2 mtpa) and supply disruption in the U.S. following historic cold blast
- + **Robust LAB Contribution** from growing demand for hygiene products during COVID-19 pandemic amid limited supply

Aromatic's Sales (excluding by product) & Product-To-Feed Margin (P2F)

(Unit : KTon)

TL
BZ
PX



	2020				2021			2020
	Q1	Q2	Q3	Q4	Q1	Q2	1H	FY
P2F -\$/ton	85	77	68	76	106	112	110	77
P2F -\$/bbl	11.1	10.0	8.9	9.9	13.9	14.8	14.3	10.0
GIM -\$/bbl ⁽¹⁾	1.5	1.6	1.2	1.6	2.0	2.4	2.2	1.5

(1) Including LAB contribution

Q2/21 Performance

- + **Higher utilization rate at 89%**
- + **Increasing LAB utilization rate to 117%** after LABIX's maintenance for 18 days in Q1/21

Base Oil: Robust Contribution Supported by Strong Lube Spread

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Key Highlights

Performance

Outlook

Final Remarks

Refinery

Aromatic

Base Oil

GIM

Power

All business

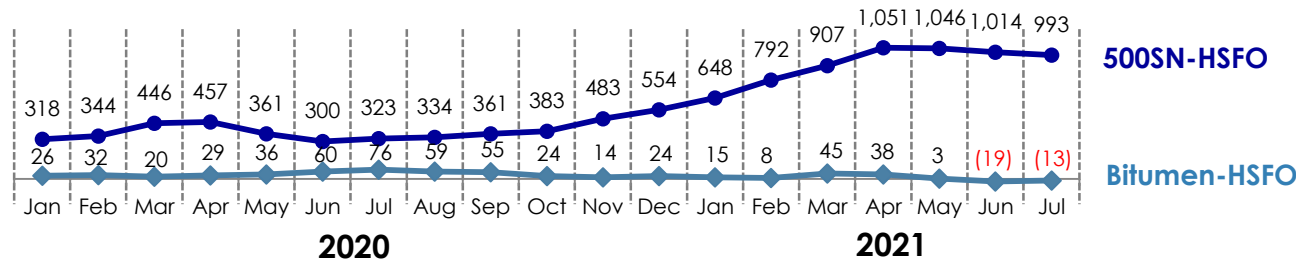
F/S & others

Base Oil & Bitumen Spreads & Margins

	2020				2021				2020
\$/ton	Q1	Q2	Q3	Q4	Q1	Q2	1H	Q3TD*	FY
500SN-HSFO	369	372	340	474	783	1,037 ↑	910	979	389
BITUMEN-HSFO	26	42	63	21	23	7 ↓	15	(25)	38

*Q3TD as of 13 Aug'21

(US\$/Ton)



Base oil Production

Q1/21	Q2/21	1H/20	1H/21
93%	95%	85%	94%

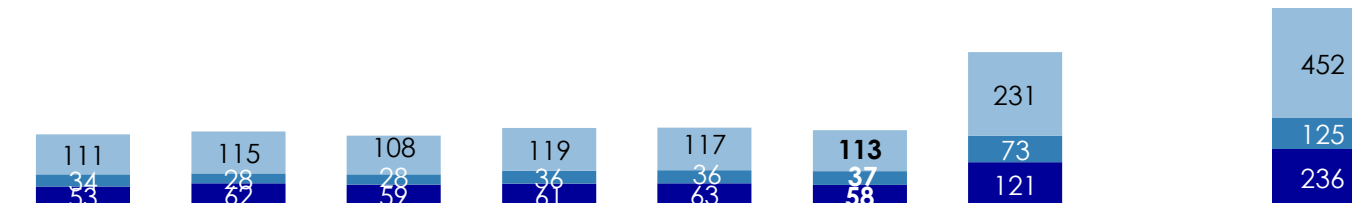
Q2/21 Market

- + **Record high Base Oil margin** due to limited supply from refinery run cuts and regional demand recovery
- **Softening Bitumen margin** due to weak regional demand from COVID lockdown in many countries

TLB's Sales (excluding by product) & Product-To-Feed Margin (P2F)

(Unit : KTon)

Bitumen
Specialty
Base Oil



	2020				2021			2020
	Q1	Q2	Q3	Q4	Q1	Q2	1H	FY
P2F -\$/ton	86	24	100	105	170	231	202	79
P2F -\$/bbl	13.1	3.6	15.1	15.9	25.7	34.9	30.3	11.9
GIM -\$/bbl	0.6	0.0	0.8	0.8	1.5	2.4	1.9	0.5

Q2/21 Performance

- + **Higher utilization rate at 95%** to capture strong base oil margin

Integrated Margin & Competitive Cash Cost

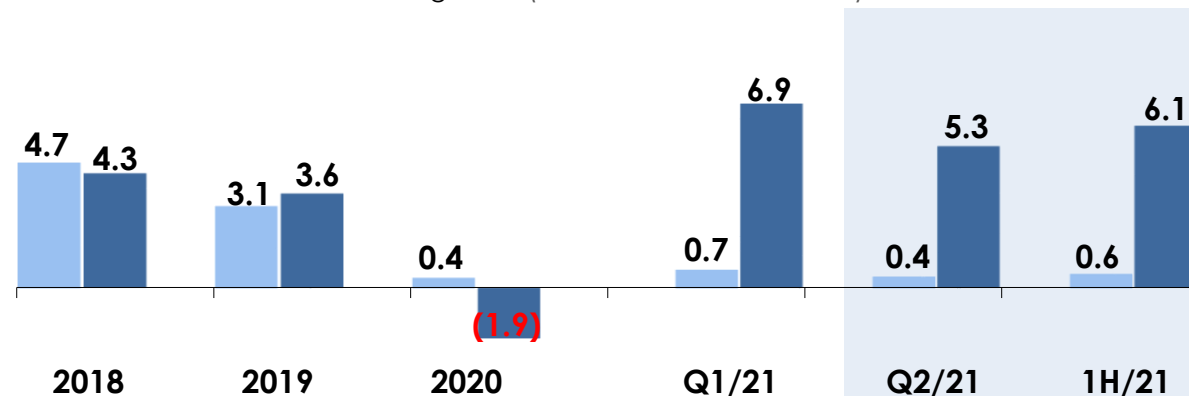
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Gross Refining Margin

(Unit: US\$/bbl)

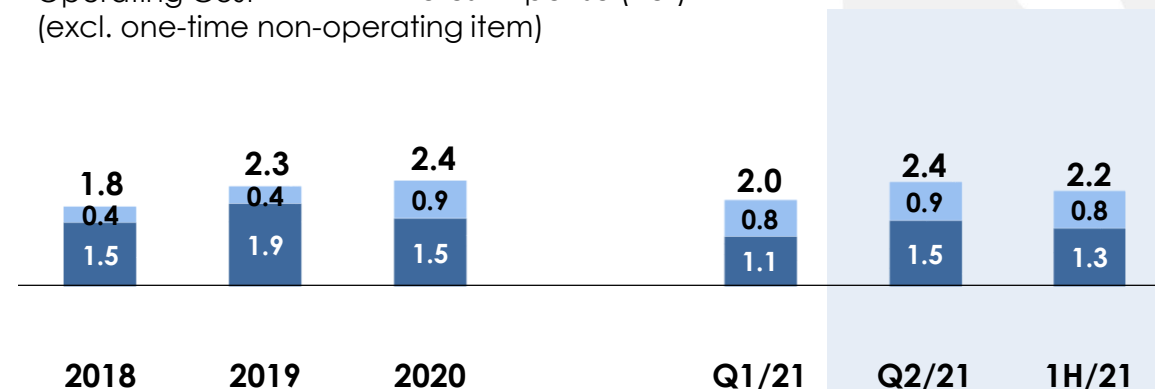
■ Market GRM ■ Accounting GRM (Market GRM + Stock G/L)



Refinery's Cash Cost

(Unit: US\$/bbl)

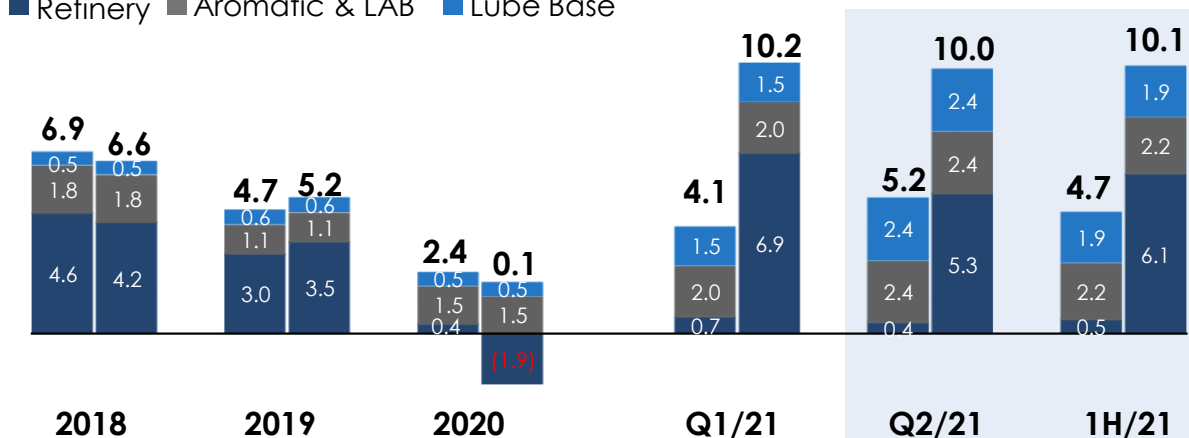
■ Operating Cost ■ Interest Expense (net)
(excl. one-time non-operating item)



Gross Integrated Margin

(Unit: US\$/bbl)

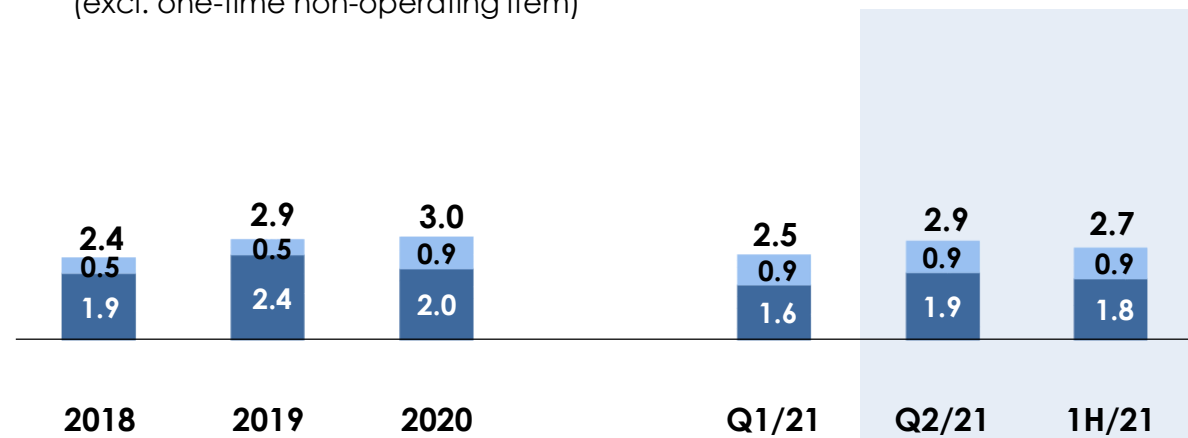
■ Market GRM ■ Accounting GRM (Market GRM + Stock G/L)
■ Refinery ■ Aromatic & LAB ■ Lube Base



Group's Cash Cost

(Unit: US\$/bbl)

■ Operating Cost ■ Interest Expense (net)
(excl. one-time non-operating item)



Power Sector Performance...Growing Contribution to the Group

Key Highlights

Performance

Outlook

Final Remarks

Refinery

Aromatic

Base Oil

GIM

Power

All business

F/S & others

Power Business Sector

SPP



Equity holding in



Power & Steam Sales

Electricity⁽¹⁾
(GWh)

2,544

2,491

2,455

455

397

852

Steam⁽¹⁾
(kton)

4,333

4,125

4,126

700

572

1,272

(1) 100% of TP and TOP SPP

FY/18

FY/19

FY/20

Q1/21

Q2/21

1H/21

EBITDA & Net Profit

EBITDA⁽²⁾
(THB million)

2,653

2,404

2,512

478

429

907

(2) Consolidated EBITDA of TP and TOP SPP

Net Profit⁽³⁾
(THB million)

2,183

2,036

2,646

598

+111

709

1,308

(3) Net profit of 74% TP + 100 % TOP SPP + 24.29% profit sharing from GPSC

FY/18

FY/19

FY/20

Q1/21

Q2/21

1H/21

■ Equity income from GPSC
■ SPP (TP+TOP SPP)

(4) Thaioil Power(TP) completely transferred whole business to be under TOP in Feb'21

(5) TOP shareholding in GPSC decreased from 24.29% to 15.38% in Nov'20 – Jan'21, and increase to 20.78% in Feb'21 after TP's EBT completion

Q2/21 Performance Highlight

+ Higher power business contribution
mainly from higher contribution from GPSC

Performance Breakdown

Key Highlights		Performance			Outlook		Final Remarks	
		Refinery	Aromatic	Base Oil	GIM	Power	All business	F/S & others
	Petroleum	Petrochemical & Lube Base ⁽¹⁾	Power ⁽²⁾	Others & New Business ⁽³⁾	Consolidated Net Profit (incl. Stock G/(L))	Stock Gain/ (Loss)	Consolidated Net Profit (excl. Stock G/(L))	
Q1/21	898	1,431	598	380	3,360	4,656	(1,296)	
Q2/21	(1,014)	2,302	709	260	2,123	3,783	(1,660)	
1H/20	(13,302)	1,118	1,302	446	(11,274)	(12,176)	902	
1H/21	(117)	3,734	1,307	639	5,483	8,439	(2,956)	

Q2/21 Key Points

Petroleum

- Lower utilization rate to 98%
- Lower market GRM (from \$0.7 /bbl in Q1/21 to \$0.4/bbl in Q2/21)
- Huge stock gain of \$4.9/bbl as rising crude price

Power

- Higher contribution from TOP SPP due to higher electricity & stream demand and higher selling prices
- Higher contribution from GPSC mainly from XPCL and insurance claim

Petrochemical & Lube

- **Aromatics & LAB** : strong contribution supported by improving BZ from greater demand for new SM plant start up, as well as strong LAB margins
- **Lube** : record high contribution supported by strong lube spread from improving demand amid limited supply

Others & New Business

- **Solvent** : lower contribution due to narrower gross margin from weak demand from the new wave of COVID-19 in Southeast Asia
- **Ethanol** : lower contribution due to weak demand from the new wave of COVID-19 in Thailand
- **Marine** : successful completion of marine business restructuring in Apr'21

(1) Includes 75% of LAB net profit Q1/21 54 MB, Q2/21 197 MB, 1H/20 9 MB, 1H/21 251 MB

(2) Apply on an equity accounted basis in the consolidated financial statement.

(3) Consisting of Solvent, Ethanol and other business

Q2 & 1H/21 TOP Group Consolidated P&L

Key Highlights		Performance				Outlook		Final Remarks	
		Refinery	Aromatic	Base Oil	GIM	Power	All business	F/S & others	
(Unit : MB)		Q2/21	Q1/21	QoQ+ /(-)	Q2/20 Represented	YoY+ /(-)	6M/21	6M/20 Represented	YoY+ /(-)
Sales Revenue		78,120	73,449	4,671 ^(A)	49,246	28,874	151,570	125,815	25,755 ^(C)
Net Realized G/(L) on Financial Instrument		(56)	(119)	63	(45)	(11)	(175)	(64)	(111)
EBITDA		↓ 7,003	8,272	(1,269) ^(B)	2,881	4,122	↑ 15,275	(9,367)	24,642 ^(D)
EBITDA excl. Stk G/(L)&NRV		3,291	3,507	(216)	1,816	1,475	6,798	3,820	2,978
Net Loss on FV of Financial Instrument		(1,043)	217	(1,260)	389	(1,432)	(827)	12	(839)
FX G/(L) & CCS		(1,286)	(2,604)	1,318	2,049	(3,335)	(3,889)	(294)	(3,595)
Financial cost		(907)	(796)	(111)	(1,049)	142	(1,703)	(2,134)	431
Tax Expense		(358)	(388)	30	(494)	136	(746)	3,063	(3,809)
Net Profit		↓ 2,123	3,360	(1,237)	2,480	(357)	↑ 5,483	(11,274)	16,757
EPS (THB/Share)		1.04	1.65	(0.61)	1.22	(0.18)	2.69	(5.53)	8.21
Stock G/(L) and NRV		3,712	4,765	(1,053)	1,065	2,647	8,477	(13,187)	21,664
Net Profit excl. Stk G/(L)& NRV		(1,589)	(1,405)	(184)	1,415	(3,004)	(2,994)	1,913	(4,907)
THB/US\$ - average selling		31.53	30.46	1.07	32.11	(0.58)	30.98	31.77	(0.80)
THB/US\$ - ending		32.22	31.51	0.72	31.07	1.16	32.22	31.07	1.16

Analysis

QoQ

(A) Higher sales revenue due to improving average selling prices

(B) Lower EBITDA from lower stock gain \$4.9/bbl in Q2/21 vs \$6.2/bbl in Q1/21

YoY

(C) Higher sales revenue due to higher average selling prices

(D) Higher EBITDA from improving MKT GIM and huge stock gain

Final Remarks

F/S & others

1H/20
Represent

1H/20
Represent

(66,440)

841

(42,009)

—

(25,272)

(67,339)

26,894

4,499

(3,970)

31,120

(2.905)

(1.851)

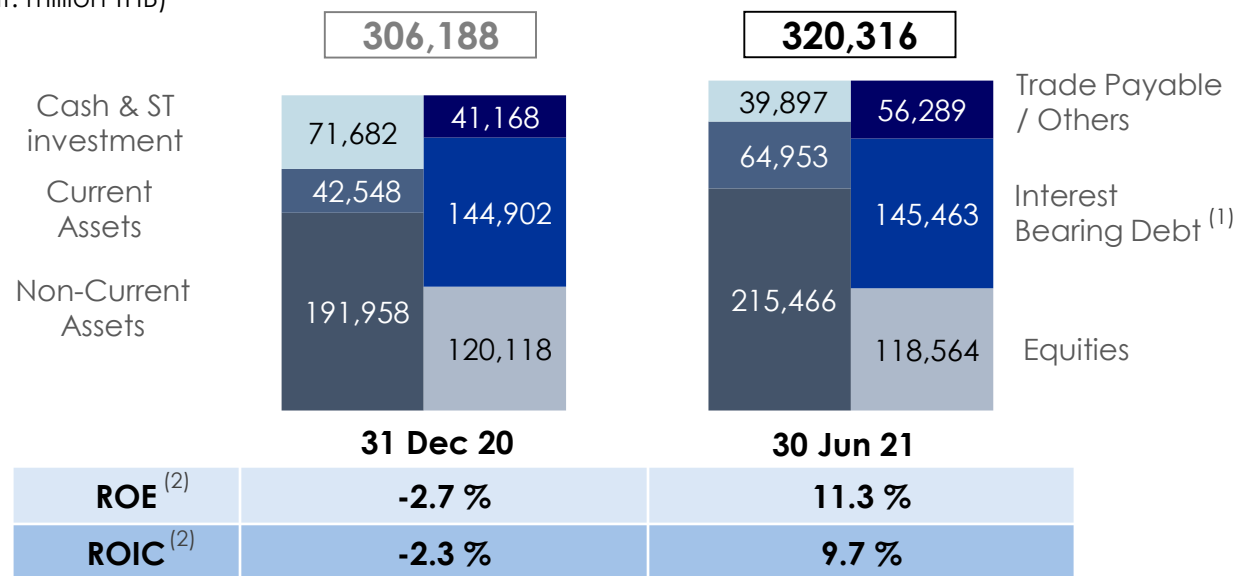
Cash
25,489

Cash + S/T Investment
39,897



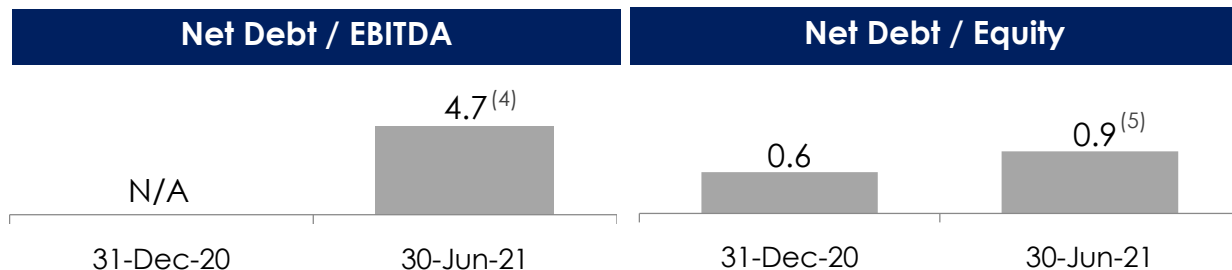
Consolidated Long-Term Debt as at 30 Jun 21

(Unit: million THB)



(1) Including current portion of Long-Term Debt
(2) Based on actual performance in the past 12 month

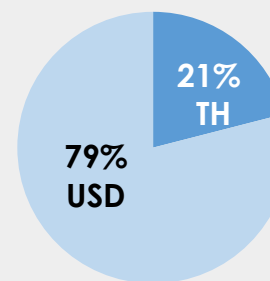
Financial Ratios



(4) Based on actual performance in the past 12 month
(5) As of 30 Jun 21 Net Debt 105,566 MB or 3,278 M\$

Total IBD

145,463 million THB
(US\$ 4,517 million
equivalence)

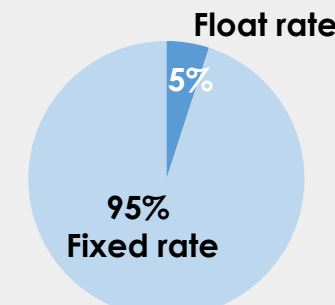


Net Debt

105,566 million THB
(US\$ 3,278 million
equivalence)

As at 30 Jun 21 (32.22 THB/US\$)

Interest Rate Breakdown



Avg. Debt Life (yrs)	16.6 yrs
Cost of Debt (Net)	3.93% ⁽³⁾
(Gross)	4.20%

(3) Due to yield enhancement

MOODY'S

STANDARD
& POOR'S

FitchRatings

Final rating

Baa3
Negative Outlook

BBB
Stable Outlook

A+(Tha)
Negative Outlook

2H/2021 OUTLOOK

- Crude Oil
- Refinery
- Aromatics
- Base Oil & Bitumen

Stable Oil Price on Improved Demand Amid Higher OPEC+ Supply in 2H/21

-24-

Key Highlights

Performance

Outlook

Final Remarks

Crude

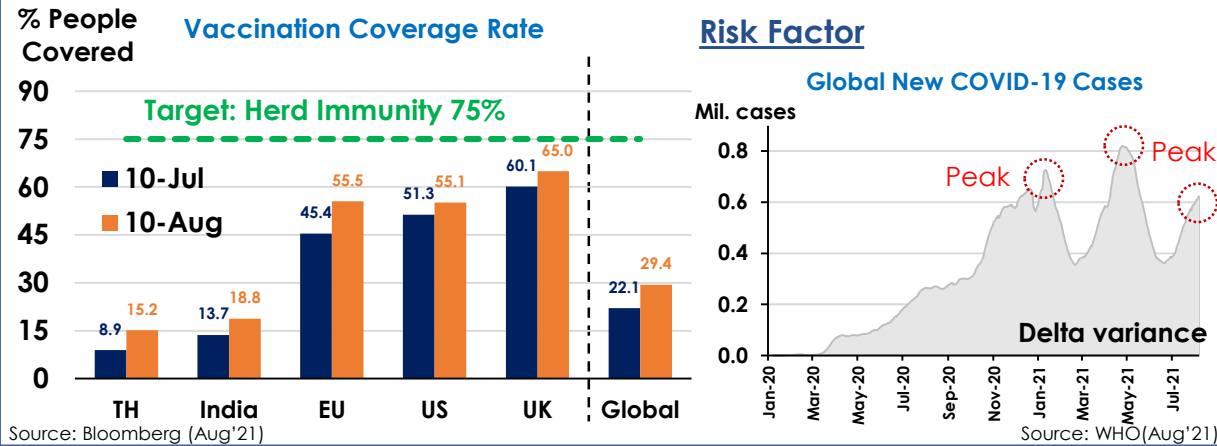
Refinery

Aromatics

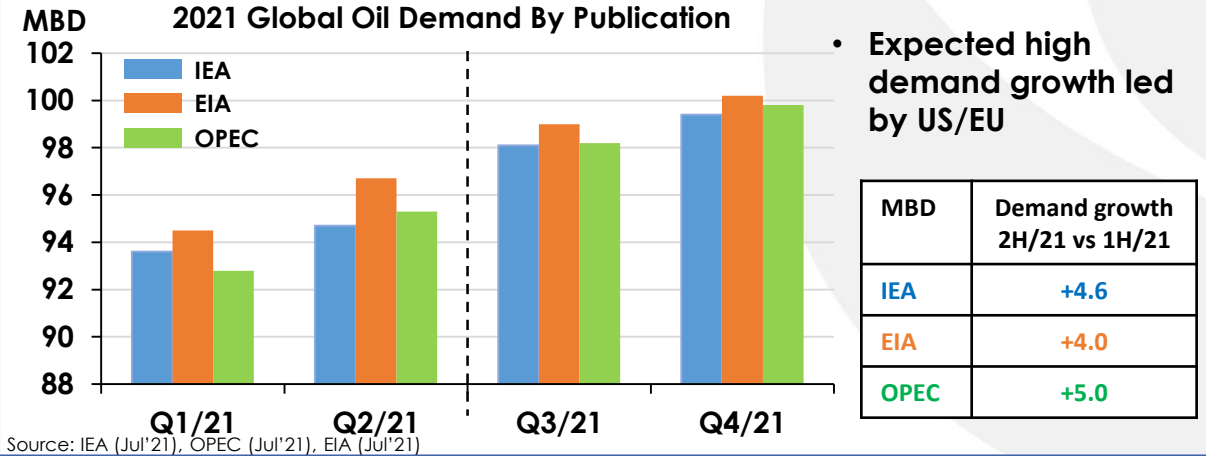
Lube&Bitumen

Conclusion

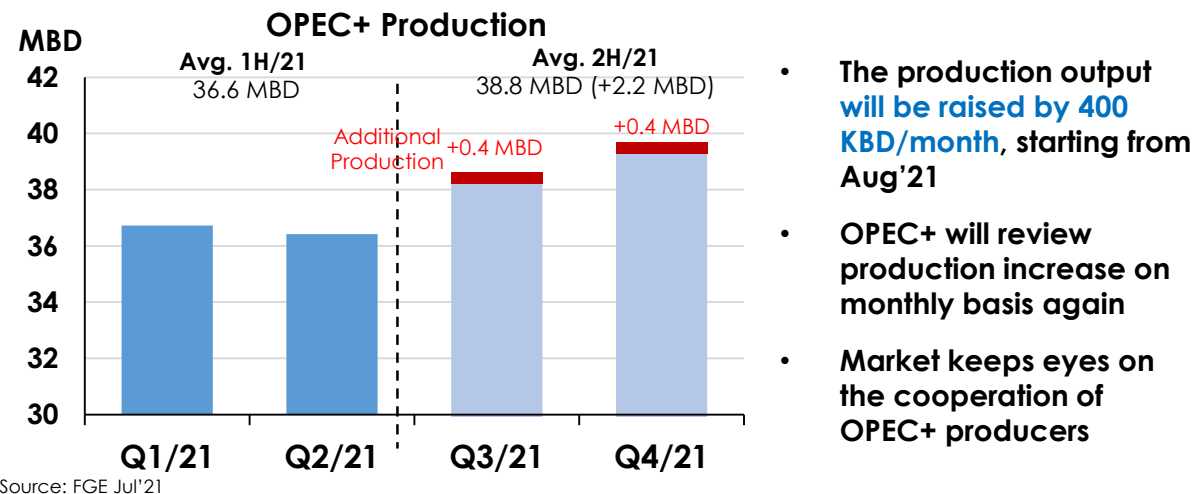
A High Global Vaccination Coverage Rate amid High Delta New Cases



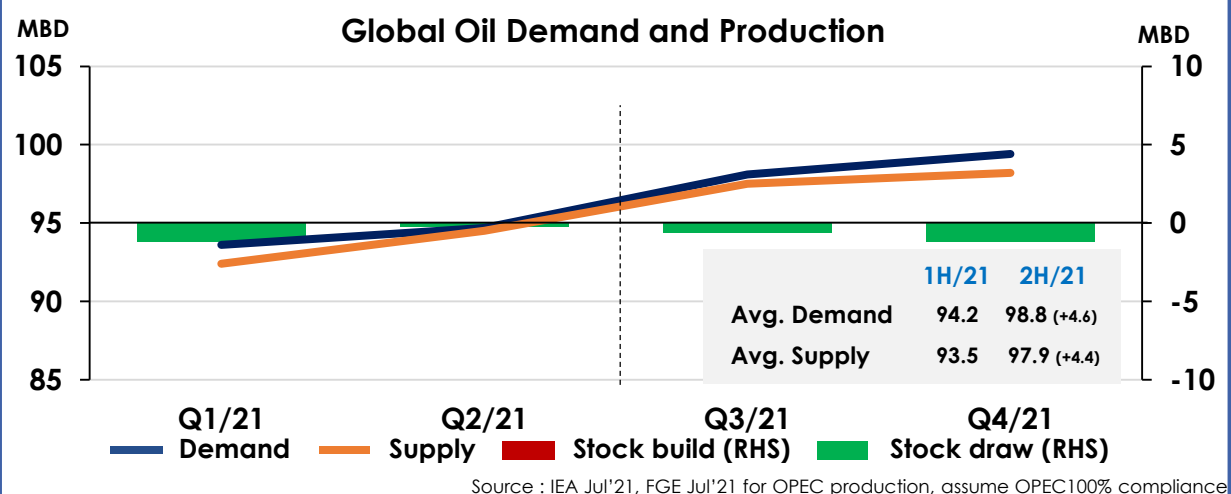
B Expected Higher Global Demand with Limited Lockdown



C Higher Supply on OPEC+ Agreement to Increase Production in 2H/21



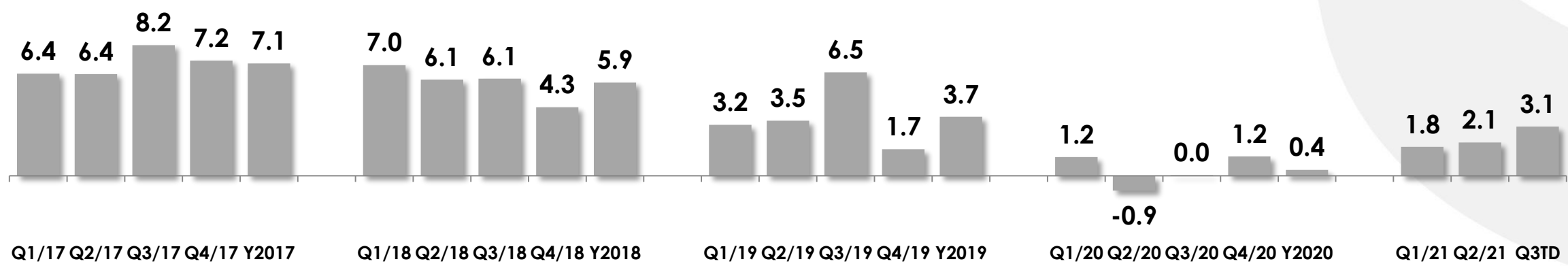
D Expected Tight Crude Market in 2H/21 from Demand Improved



Increasing Refinery Margin on Recovering Economic after Easing Restrictions -25-



Singapore Cracking GRM (\$/BBL)



Source : Reuters Aug'21, Exclude Fuel and Loss

Remark : QTD as of 13 Aug'21

2H/21 Key Highlights: GRM to Recover on Resuming Petroleum Product Demand

- Improving Gasoline Demand on Higher Global Mobility after Easing Lockdown
- Recovering Jet Demand on Re-Opening Border
- Gradually Improving Economic Activities to Support Global Gasoil Demand
- Improving Fuel Oil Market on Higher Trading Activities and ME Summer Demand

Improving Gasoline Demand on Higher Global Mobility after Easing Lockdown Recovering Jet Demand on Re-Opening Border

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Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

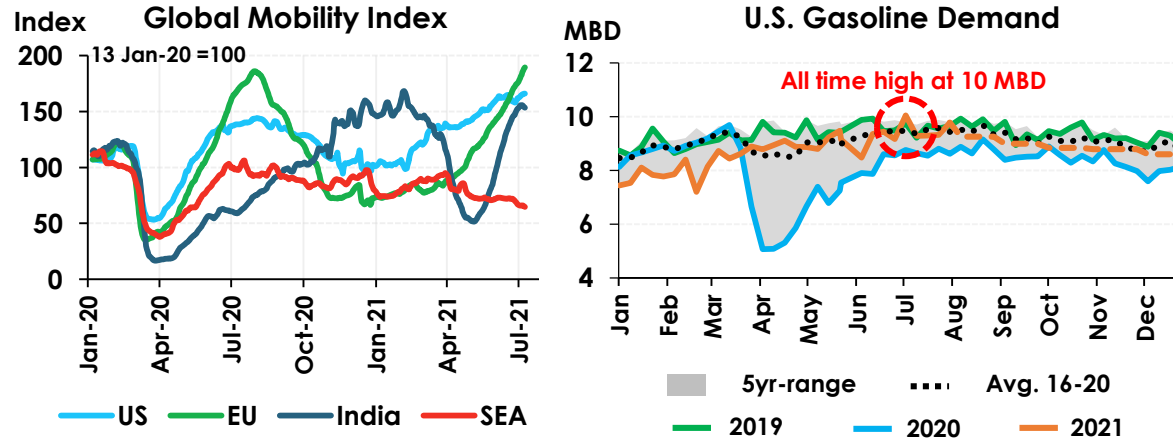
Aromatics

Lube&Bitumen

Conclusion

Higher Gasoline Demand in 2H/21 on Easing Lockdown

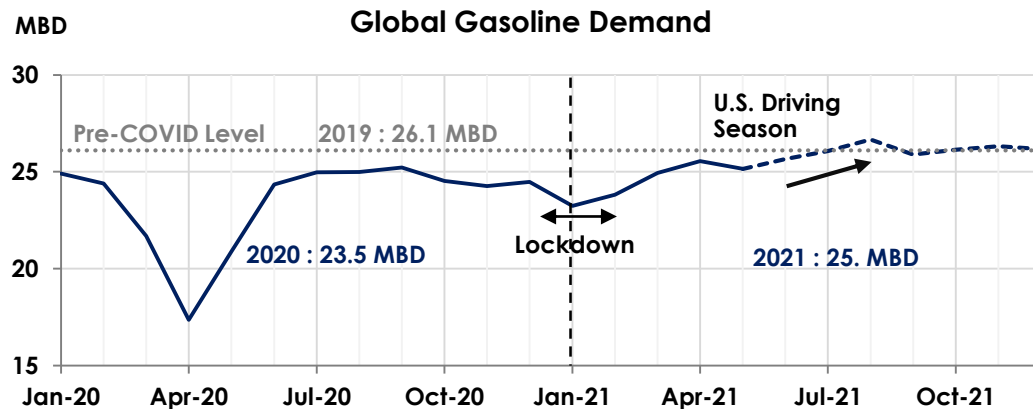
A Increase EU/US Gasoline Demand amid Slower Recovery in SEA



Source: Apple (Jul'21)

Source: EIA (Jul'21)

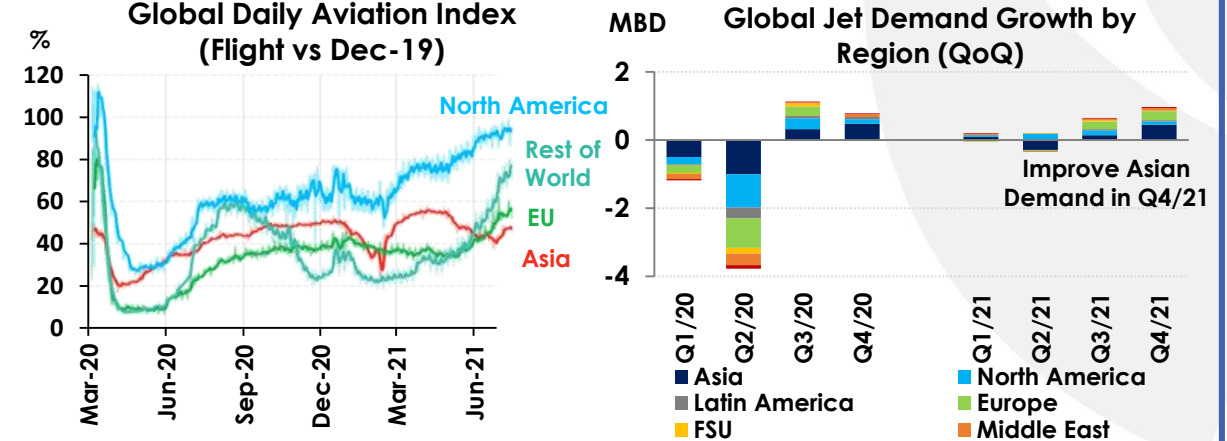
B Demand to be Above Pre-COVID Level in 2H/21



Source: Energy Aspects (Jul'21)

Higher EU/US Demand following by Asia's Demand in Q4/21

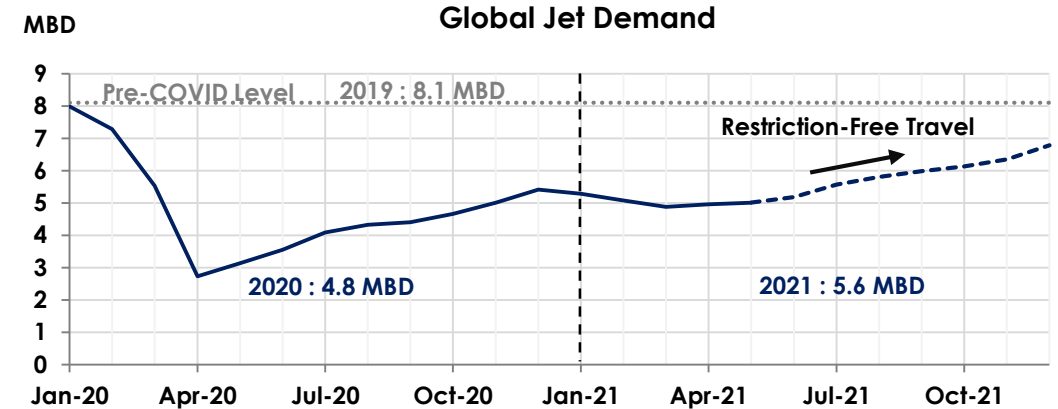
A Asian Jet Demand to Improve in Q4/21 on Reopening Borders



Source: BNEF (Jul'21)

Source: Energy Aspects (Jul'21)

B Increase Jet Demand Driven by Tourism Resumption



Source: Energy Aspects (Jul'21)

Gradually Improving Economic Activities to Support Global Gasoil Demand

Improving Fuel Oil Market on Higher Trading Activities and ME Summer Demand

-27-

Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

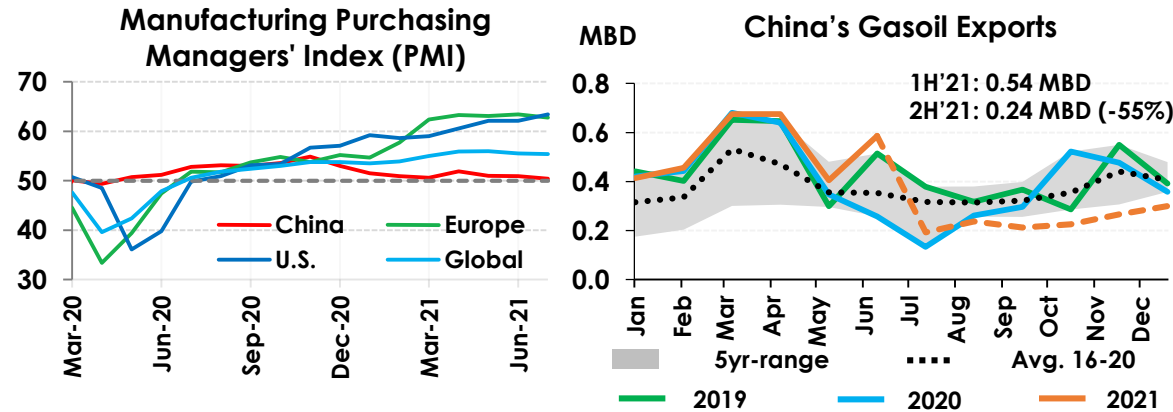
Aromatics

Lube&Bitumen

Conclusion

Improving Gasoil Demand on Economic Recovery

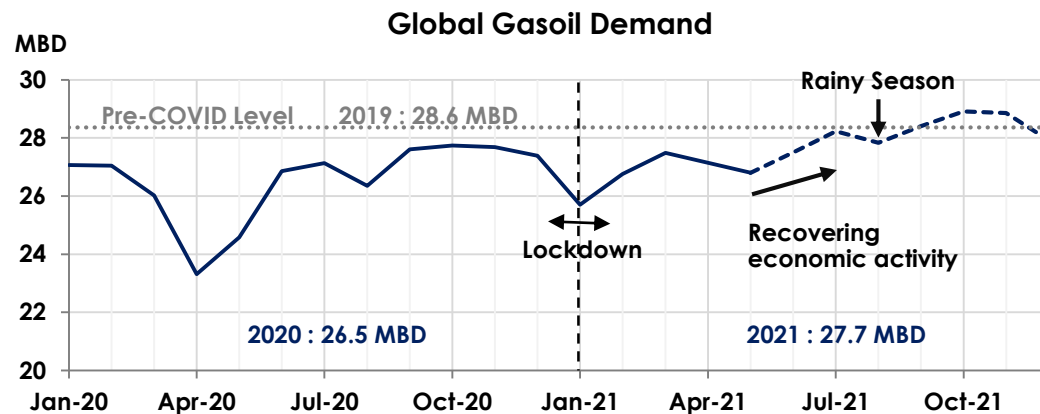
A Expanding Global Economy to Support Demand and Lower China's Gasoil Exports in 2H/21



Source: Markit economics (Jul'21)

Source: FGE (Jul'21)

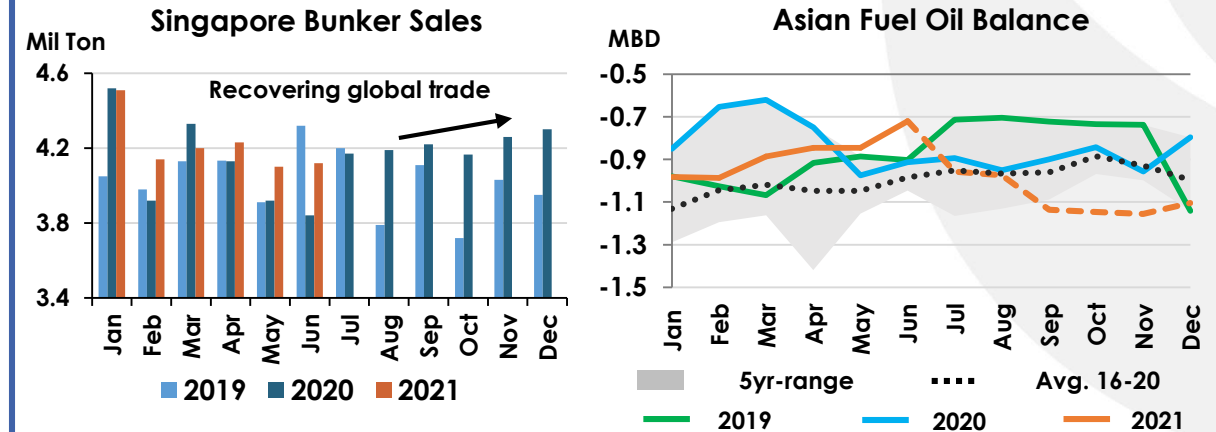
B Improve Gasoil Demand to Hit Pre-COVID by 2H/21



Source: Energy Aspects (Jul'21)

Rising Trading and ME Demand to Support Fuel Oil Market

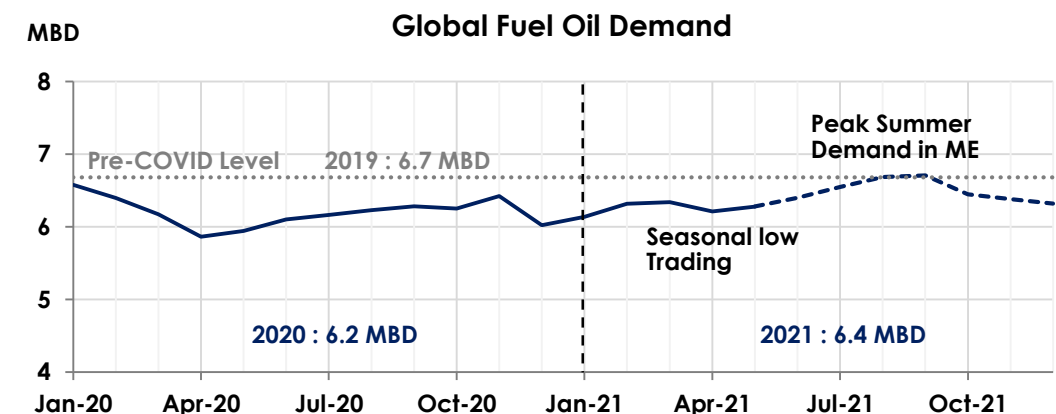
A Deficit Asian Market in 2H/21 on Rising Bunker Demand



Source: FGE (Jul'21)

Source: FGE (Jul'21)

B Recovering Demand during Summer Season in the Middle East



Source: Energy Aspects (Jul'21)

Recovering Domestic Demand in 2H/21 amid COVID-19 Uncertainty

Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

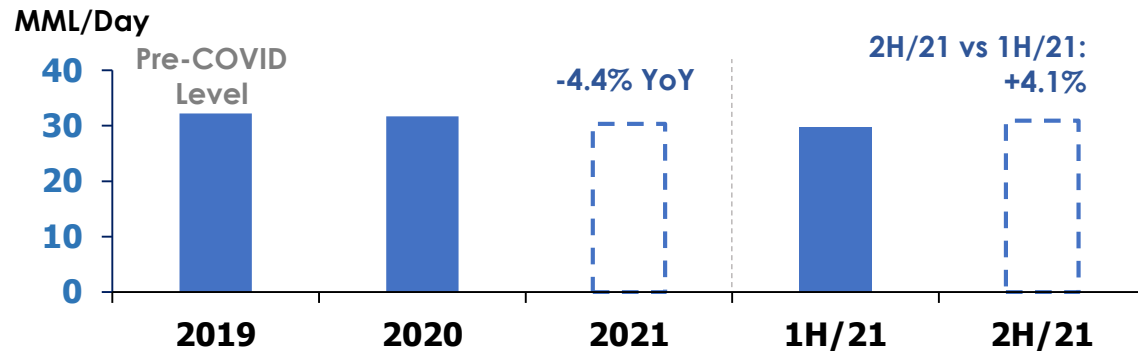
Aromatics

Lube&Bitumen

Conclusion

A Higher Gasoline Demand on Transportation Activities Improvement

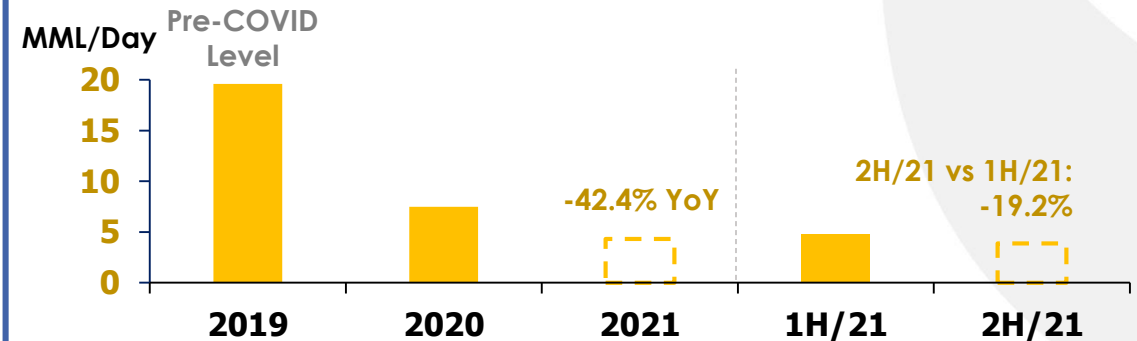
Gasoline Demand



Source : DOEB , PTT and TOP estimation (Aug'21)

B Lower Jet Demand on Drop in Flight Movements

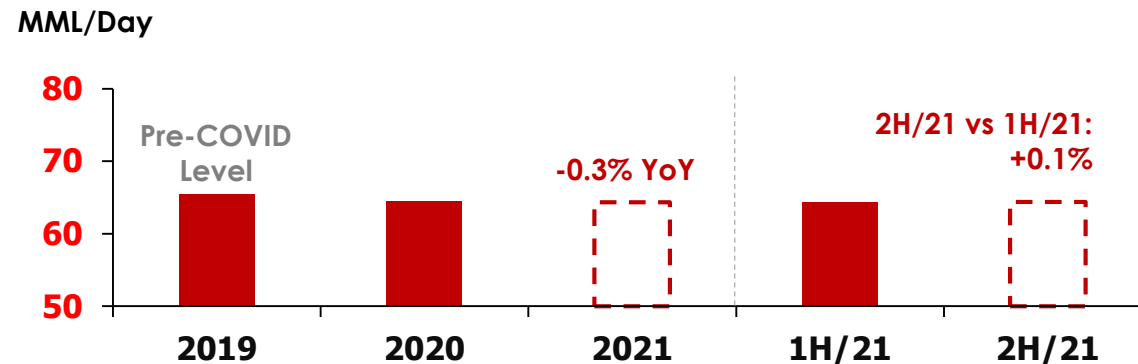
Jet Demand



Source : DOEB , PTT and TOP estimation (Aug'21)

C Higher Diesel Demand on Logistic Recovery

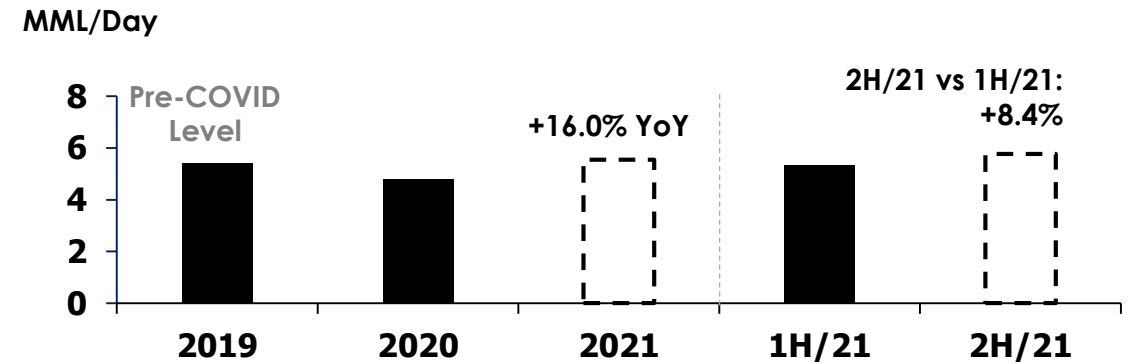
Diesel Demand



Source : DOEB , PTT and TOP estimation (Aug'21)

D Higher Fuel Oil Demand on Stronger Global Trade

Fuel Oil Demand



Source : DOEB , PTT and TOP estimation (Aug'21)

More Aromatics Supply from Mega Capacity amid Good Demand Growth

Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

Aromatics

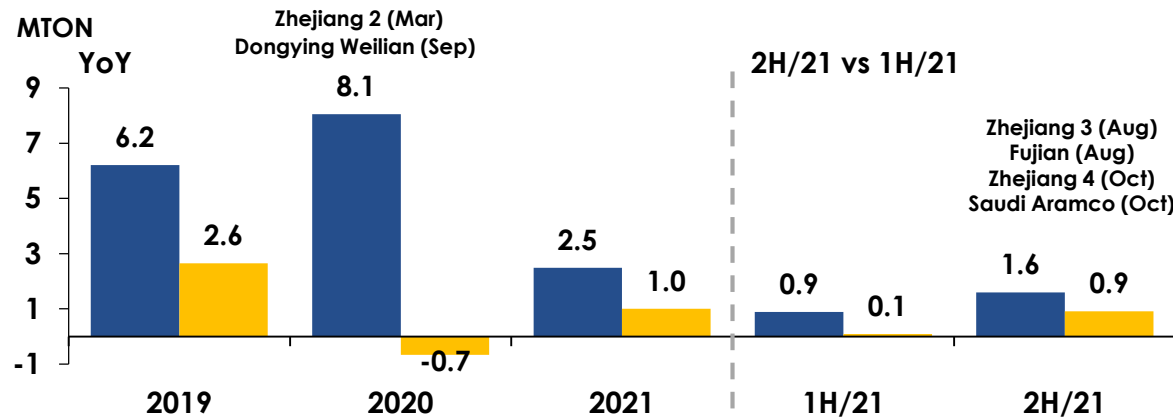
Lube&Bitumen

Conclusion

A More Capacity Addition amid Recovered Demand

AP/ME PX Capacity Addition vs. Demand Growth

■ PX Effective Capacity ■ PX Demand



More Waves of PX Plant Start-up in 2H/21

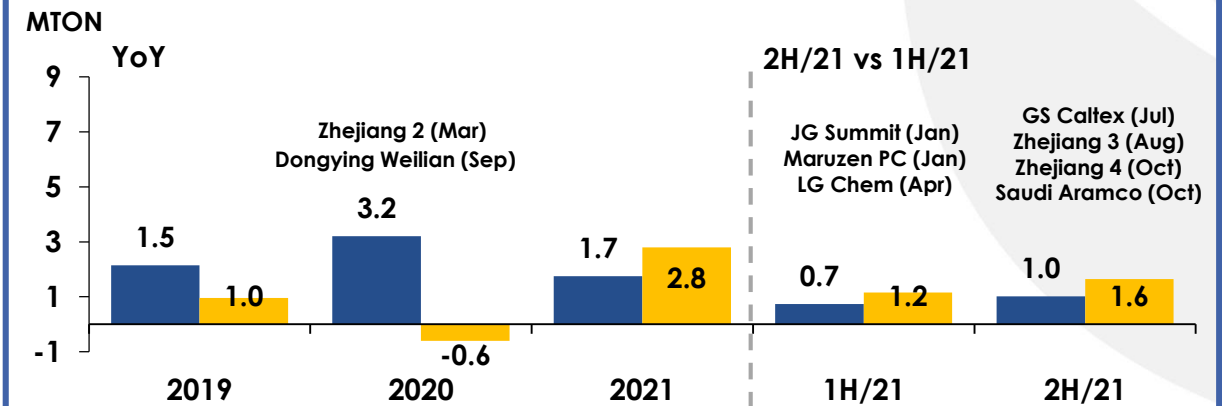
Country	PX Company	Nameplate Capacity (KTON)	Startup Period
China	Fujian Refining PC	300	Q3
China	Zhejiang PC #3	2200	Q3
China	Zhejiang PC #4	2200	Q4
Saudi Arabia	Saudi Aramco Jizan	800	Q4

Source: WM Chemicals (May-21) and TOP's Estimate

B More Capacity Addition amid Recovered Demand

AP/ME BZ Capacity Addition vs. Demand Growth

■ BZ Effective Capacity ■ BZ Demand



Additional BZ Capacities in 2H/21

Country	BZ Company	Nameplate Capacity (KTON)	Startup Period
South Korea	GS Caltex	140	Q3
China	Zhejiang PC #3	650	Q3
China	Zhejiang PC #4	650	Q4
Saudi Arabia	Saudi Aramco Jizan	420	Q4

Source: IHS Spring 2021 and TOP's Estimate

Higher Base Oil Capacity Addition and Easing Tight Feedstock Supply Situation

Key Highlights

Performance

Outlook

Final Remarks

Crude

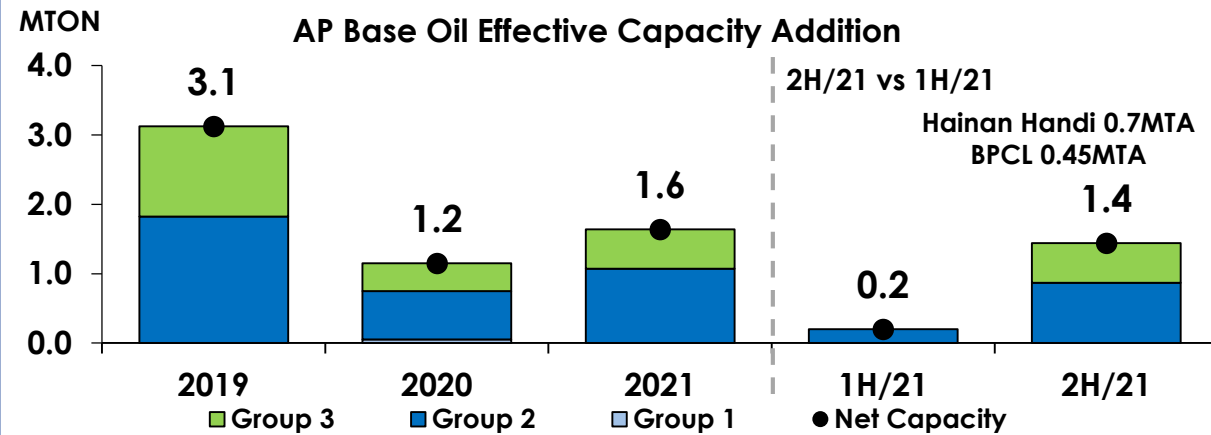
Refinery

Aromatics

Lube&Bitumen

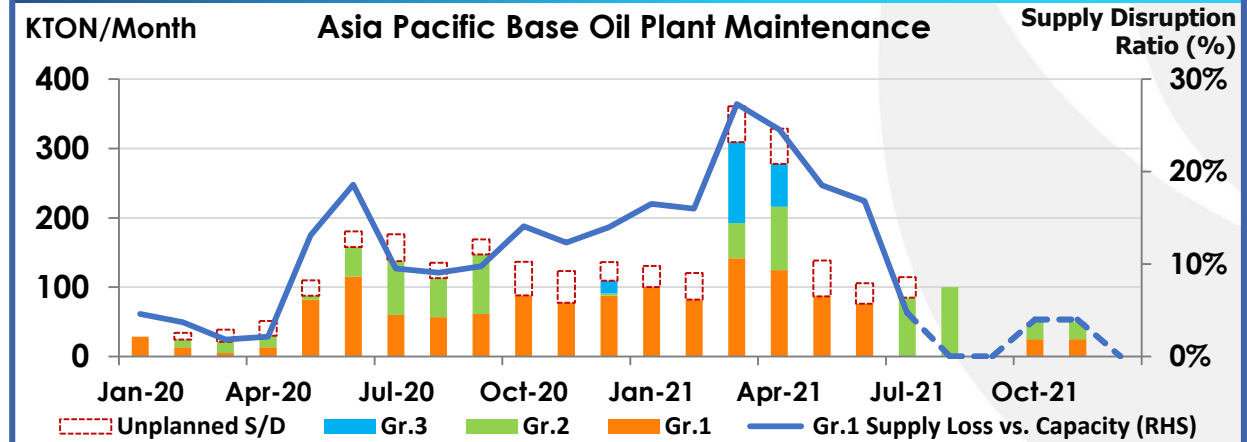
Conclusion

A Higher Base Oil Supply in 2H/21



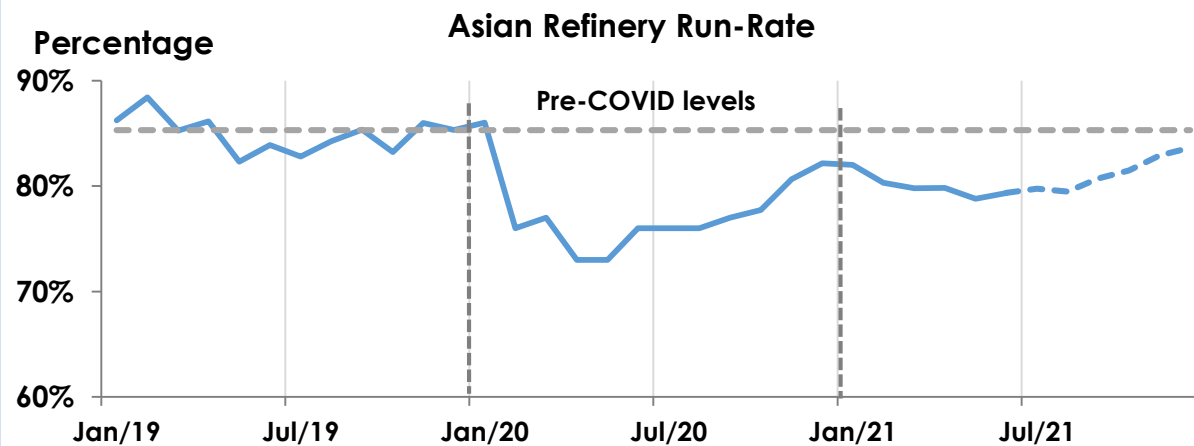
Source : Argus (Aug'21)

B Lower Asian Plant Maintenance in 2H/21 to Ease Gr.1 Supply



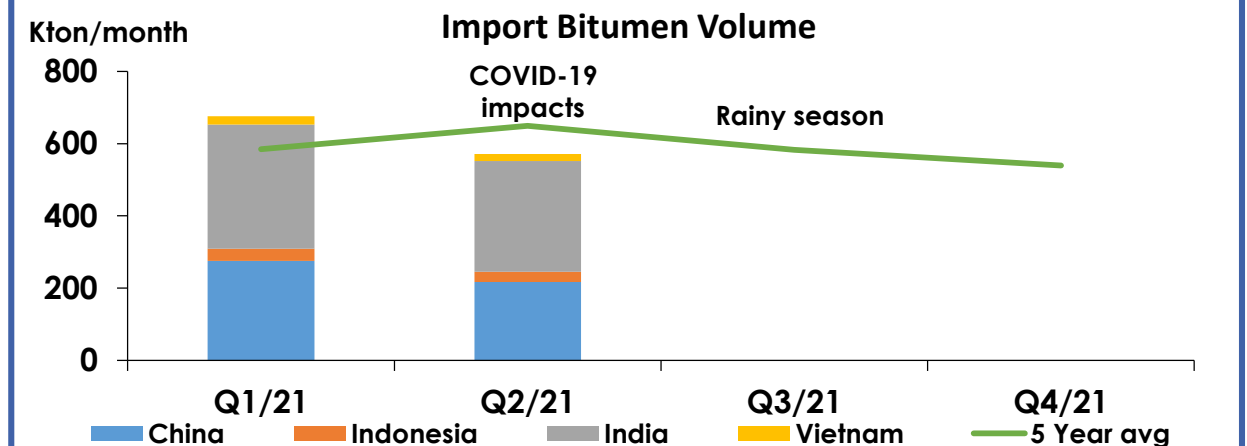
Source : ICIS (Aug'21), Argus (Aug'21)

C Easing Base Oil Feedstock Supply on Higher Refinery Run-Rate



Source : FGE (Jul'21)

D Slow Bitumen Consumption Especially in Rainy Season



Source : Petrosil (Aug'21)

Remark: 5 Year avg: 2016-2020

2H/21 Outlook Conclusion

(vs. 1H/21)

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Key Highlights

Performance

Outlook

Final Remarks

Crude

Refinery

Aromatics

Lube&Bitumen

Conclusion



Crude Oil

Supportive Oil Market on Improved Demand due to Widely Vaccine Roll Out amid Higher OPEC+ Supply



Refinery

Increasing Refinery Margin on Gradually Expanding Economic Activities after Easing COVID-19 Restrictions



Aromatics

More Aromatics Supply from Mega Capacity amid Good Demand Growth



Lube Base

Higher Base Oil Capacity Addition and Easing Tight Feedstock Supply Situation

FINAL REMARKS



Looking Forward

Key Highlights

Performance

Outlook

Final Remarks

2H/21 Market



Stable crude oil prices on improving demand amid higher OPEC+ supply



Market GRM improves on higher oil demand from less COVID-19 restriction and lower crude premium



Robust aromatic & LAB and lube contribution



Optimized overall utilization to cope with low oil demand

Looking Forward

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Key Highlights

Performance

Outlook

Final Remarks

2021-2023 Roadmap

2018 – 2021

Accelerate the Reform

2021 – 2025

Building on Our Strong Foundation : IC2C

2024 – 2030

Post CFP : New Round of Growth

- **Key investment made**

- To strengthen core : CFP FID 2018
- To jumpstart Olefins : CAP

- **Capital structure plan in place**

- **Realize strong earnings growth** from COVID-19 industry up-cycle and CFP & CAP expansion

- **Deliver on investment & focus on existing expansion in CFP & CAP2**

- **Selective investment** emphasizing revamps & projects with low investment & high returns

- **Financial discipline & regain financial strength**

- **Emphasize profitability** through efficiency, productivity & collaboration

- **Deliveries of investment : CFP & CAP2**

- **Financial strength**

- **Renew growth**

- IC2C
- Further PetChem & downstream
- HVP/specialties
- New S-curve ventures

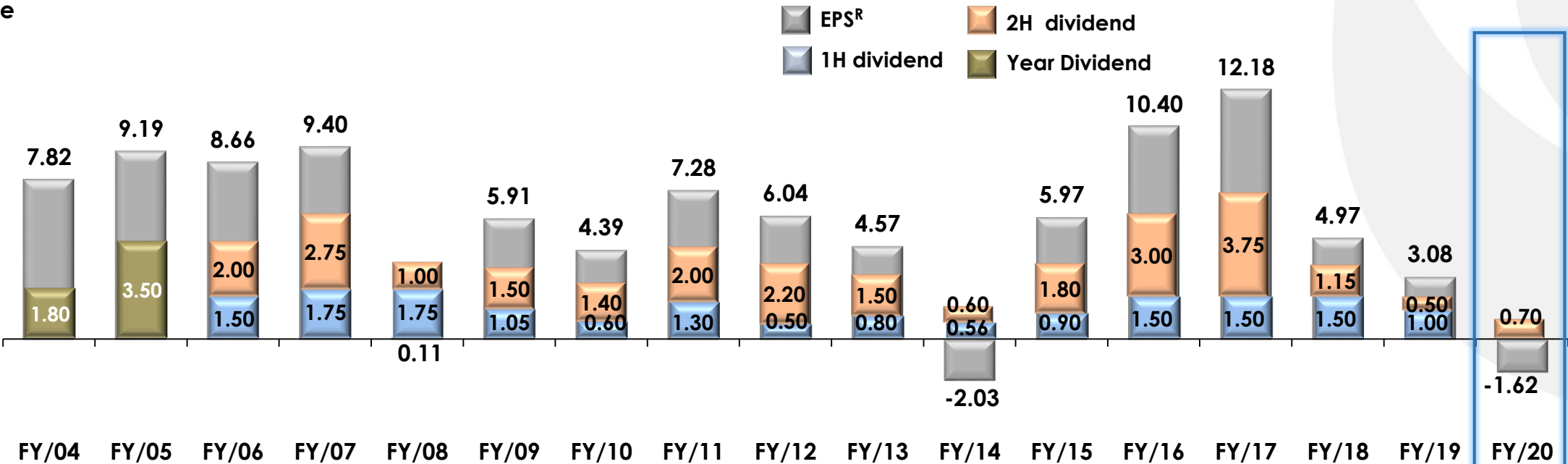
APPENDIX

- Dividend Payment
- CAPEX
- Financial Performance
- Optimised & Flexible Operations...Superior Performance
- CDU Addition VS Additional Demand – AP & ME
- World GRM / Inventories
- Thailand petroleum demand by products

Dividend Payment

Dividend Policy :
Not less than 25% of consolidated net profit after deducting reserves, subject to cash flow and investment plan

Unit : THB/Share



Annual DPS (Baht/share)	1.80	3.50	3.50	4.50	2.75	2.55	2.00	3.30	2.70	2.30	1.16	2.70	4.50	5.25	2.65	1.50	0.70
Dividend Payout	23%**	38%	40%**	48%	N/A	43%	45%	45%	45%	50%**	N/A	45%	43%	43%	53%	49%	N/A
Dividend Yield*	4.0%	5.6%	5.6%	6.2%	5.2%	7.1%	4.0%	4.7%	4.2%	3.6%	2.3%	5.0%	6.7%	6.2%	3.1%	2.2%	1.6%
Avg TOP price	44.7	63.0	62.7	72.7	53.3	35.9	49.9	69.8	65.1	64.6	50.4	53.5	66.7	84.2	86.9	68.3	44.0

^R Based on restated financial statement

* Based on average TOP share price in each year

** Dividend payout before restated ; 2004 = 25% , 2006 = 43%, 2013 = 45%

TOP Group Strategic Investment Plan

CAPEX Plan (Unit US\$ million)

Updated as of July 2021

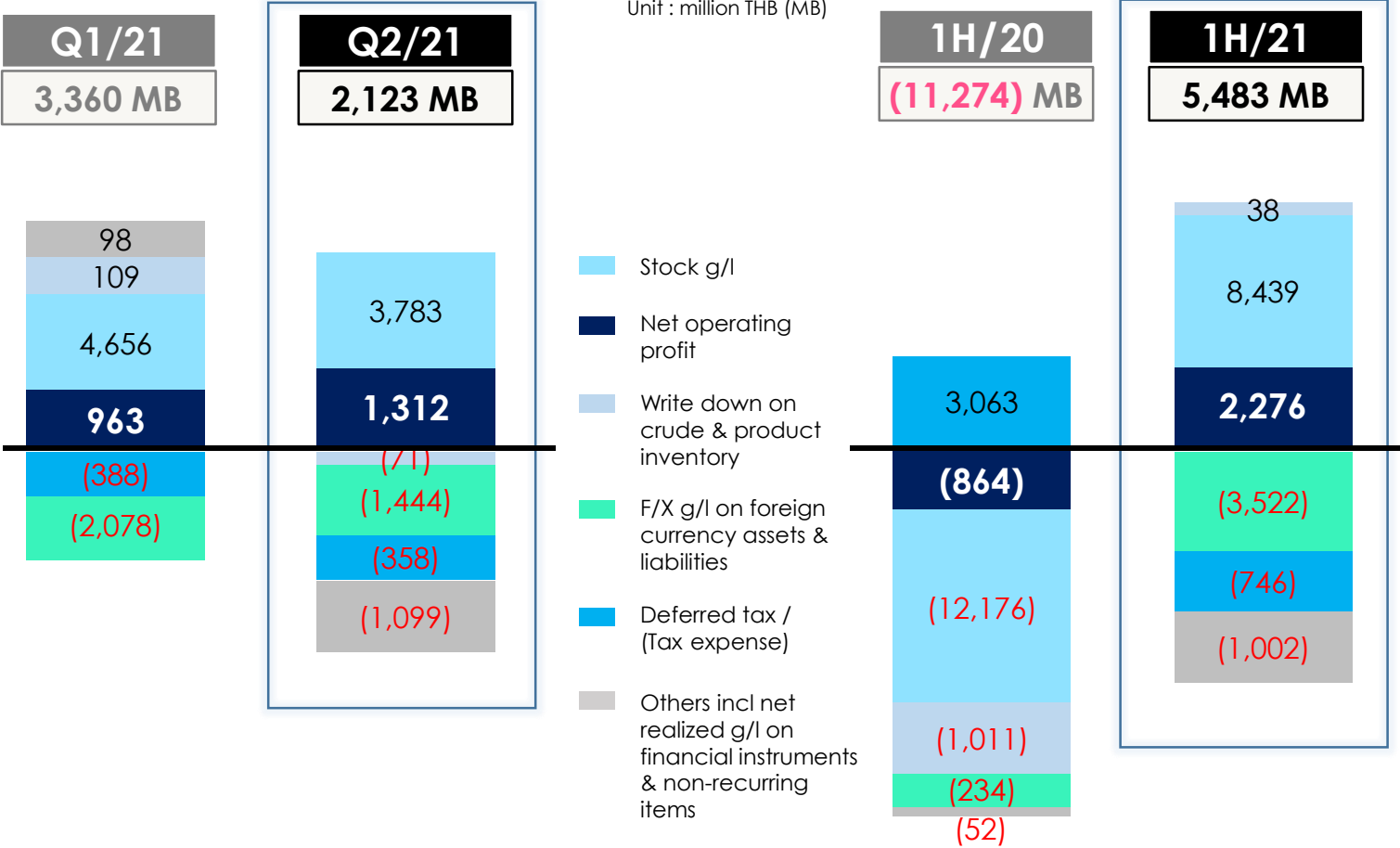
Project	Estimated Budgeting for Investment Plan 2021 - 2024
CFP project *	1,902
Total Ongoing CAPEX	201
Reliability, Efficiency and Flexibility Improvement	48
Infrastructure Improvement (i.e. Jetty 7&8, Office Relocation & New Crude Tank, Site office preparation for fire water & fire water improvement, New Bangphra Raw Water Line)	72
Other Investments (i.e. Corporate Venture Capital - CVC , Digital Transformation)	81
TOP SPP Expansion	145
Olefins Investment	1,183
Total CAPEX	3,431

* CAPEX of CFP Project including the disposal of asset to transfer ownership in the Energy Recovery Unit (ERU) which is a part of the CFP Project

Notes: Excluding approximately 40 M\$/year for annual maintenance

Q2 & 1H/21- Financial Performance

TOP Group Net Profit



Gross Refining Margin - GRM

	\$/bbl	Q1/21	Q2/21	1H/20	1H/21
Market GRM		0.7	0.4	0.7	0.6
Stock Gain/(Loss)		6.2	4.9	(7.3)	5.5
Accounting GRM		6.9	5.3	(6.7)	6.1

Gross Integrated Margin - GIM

Aromatics & LAB	2.0	2.4	1.5	2.2
Lube base	1.5	2.4	0.3	1.9
Market GIM	4.1	5.2	2.5	4.7
Accounting GIM	10.2	10.0	(4.8)	10.1

Utilization / Production Rate

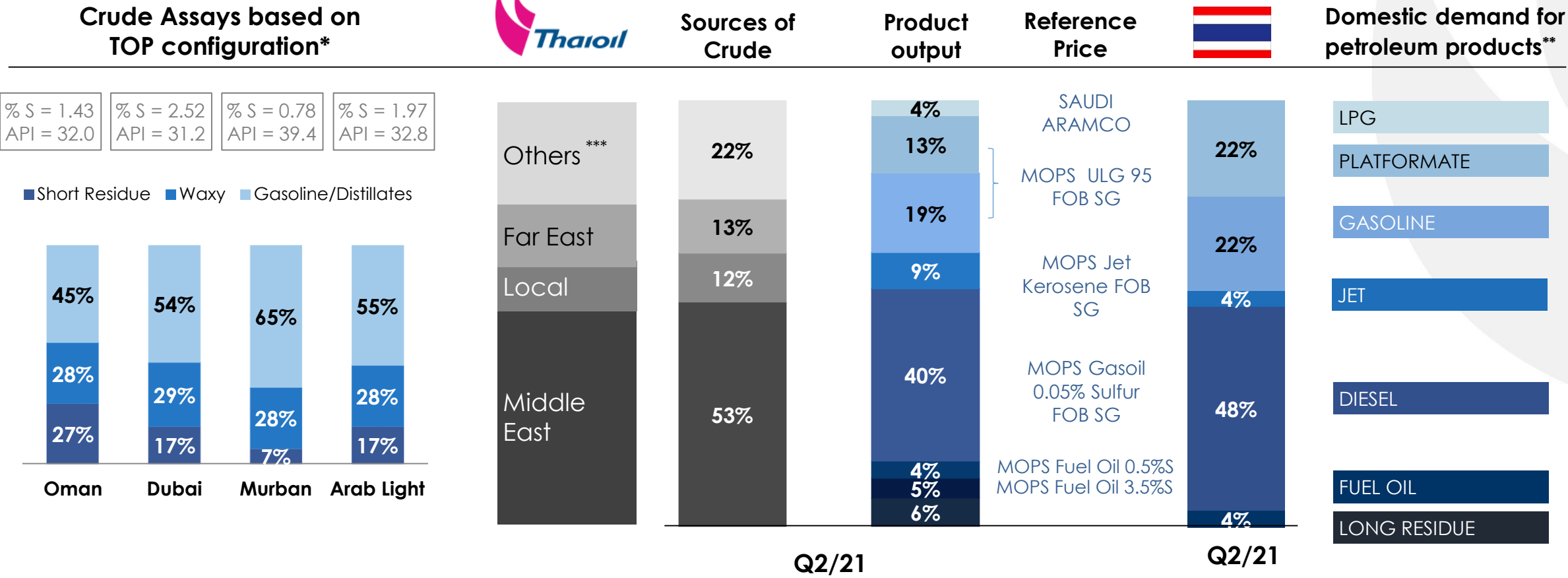
Refinery	100%	98%	105%	99%
Aromatics	80%	89%	78%	85%
LAB	91%	117%	113	104%
Base Oil	93%	95%	85%	94%

Remark

- Stock gain/(loss) : Q1/21 4,656 MB, Q2/21 3,783 MB, 1H/20 (12,176) MB, 1H/21 8,439 MB
- Reversal/ (write-down) on crude and petroleum product inventory : Q1/21 109 MB, Q2/21 (71) MB, 1H/20 (1,011) MB, 1H/21 38 MB
- F/X gain/(loss) on gain on foreign currency assets & liabilities : Q1/21 (2,078) MB, Q2/21 (1,444) MB, 1H/20 (234) MB, 1H/21 (3,522) MB
- (Tax expense)/Reversal of Tax expense : Q1/21 (388) MB, Q2/21 (358) MB, 1H/20 3,063 MB, 1H/21 (746) MB
- Net realized gain/(loss) on financial instruments : Q1/21 (119) MB, Q2/21 (56) MB, 1H/20 (64) MB, 1H/21 (175) MB
- Non-recurring item: Impact of TFRS-9 : Q1/21 217 MB, Q2/21 (1,043) MB, 1H/20 12 MB, 1H/21 (827) MB

Optimized & Flexible Operations...Superior Performance

Thai Oil is able to diversify its type of crude intake and product outputs to maximize demand and margin



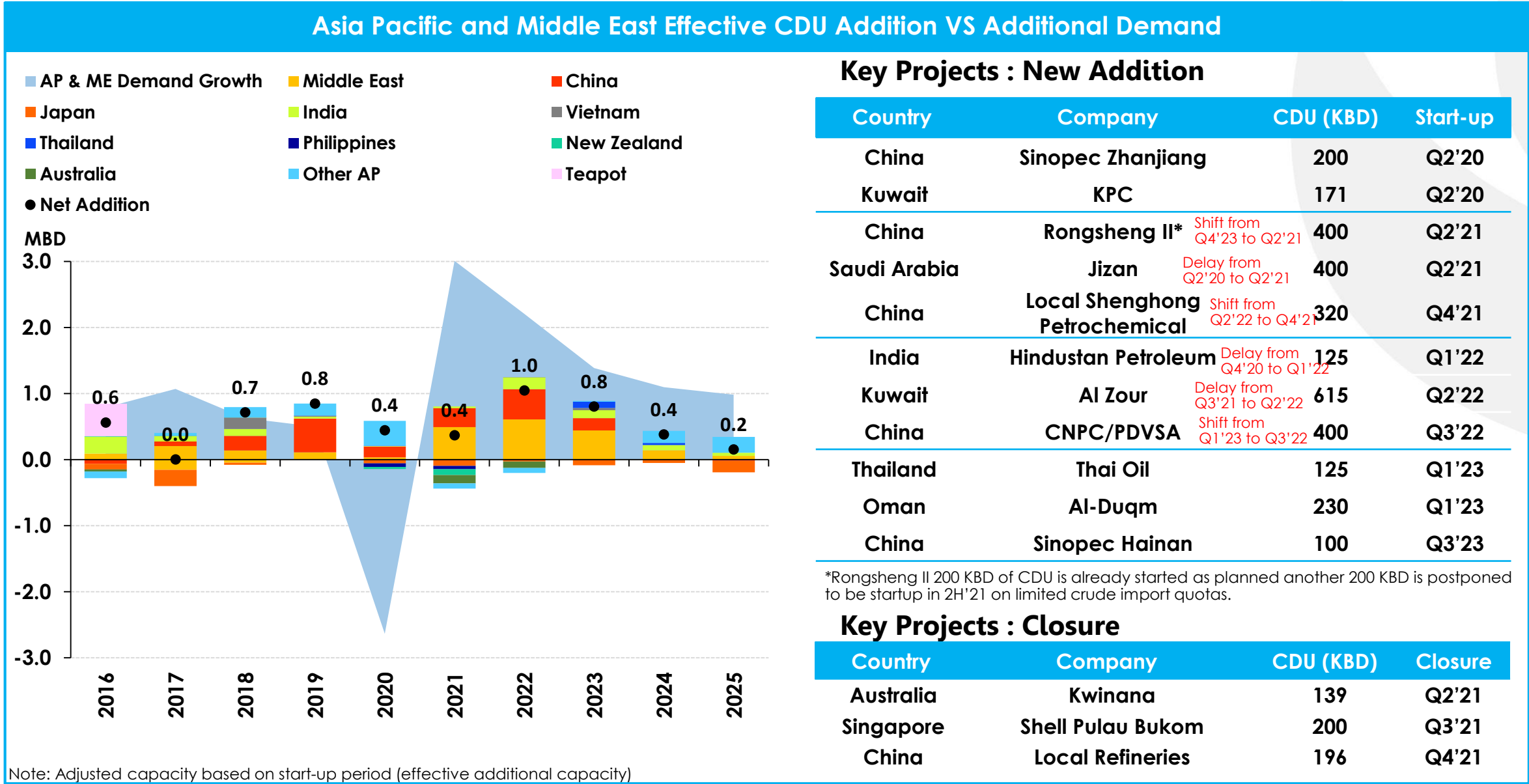
*Crude yield as per assay in Spiral as of Feb 2016

** Source: Energy Policy and Planning Office, Ministry of Energy Thailand

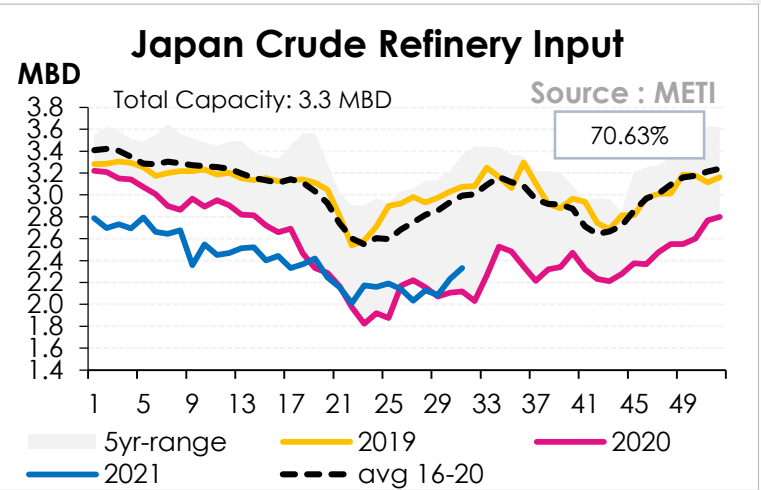
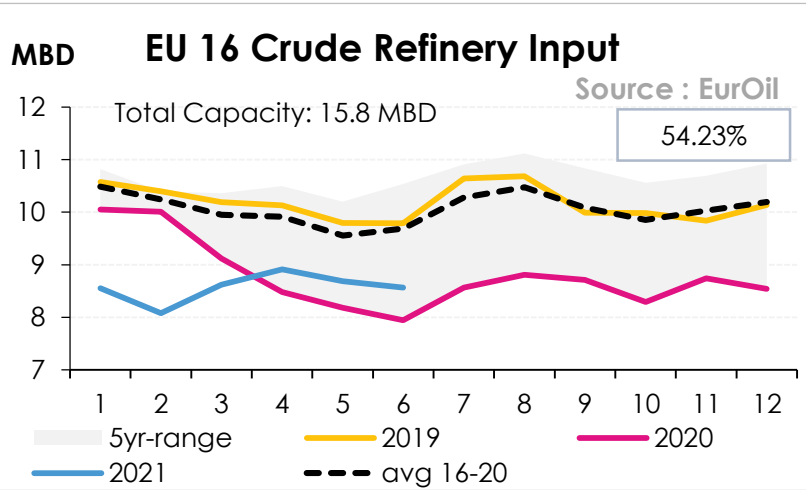
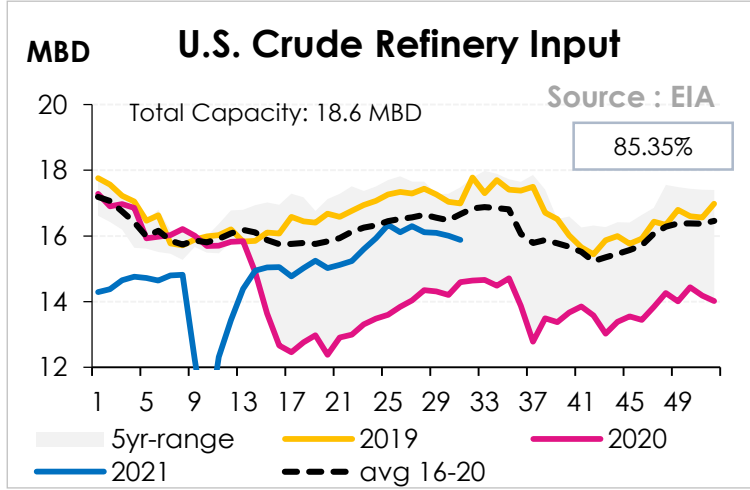
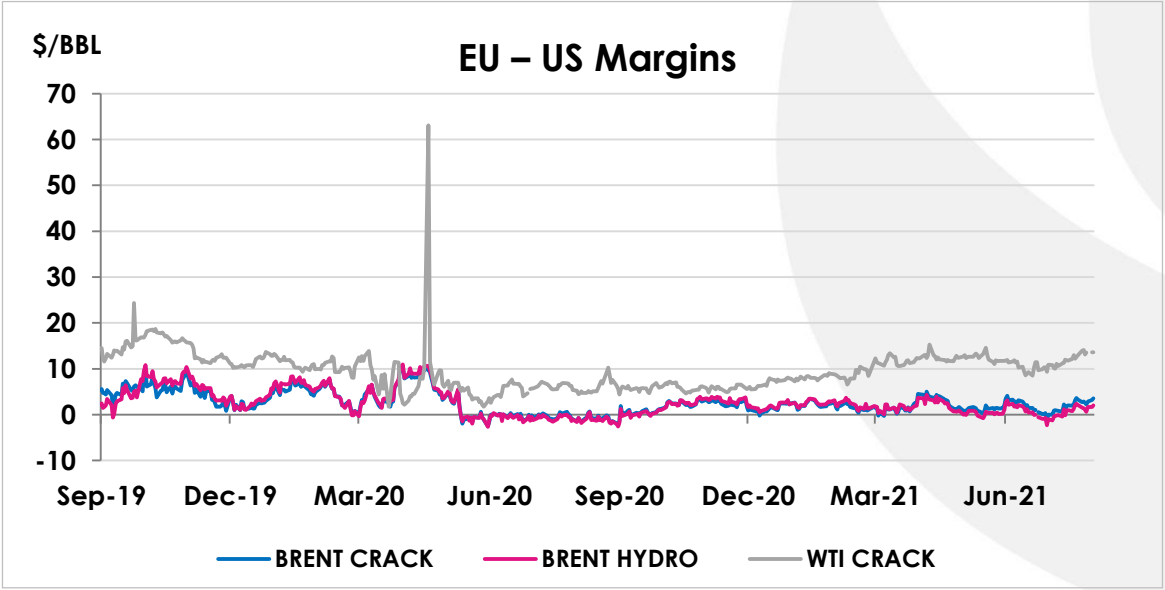
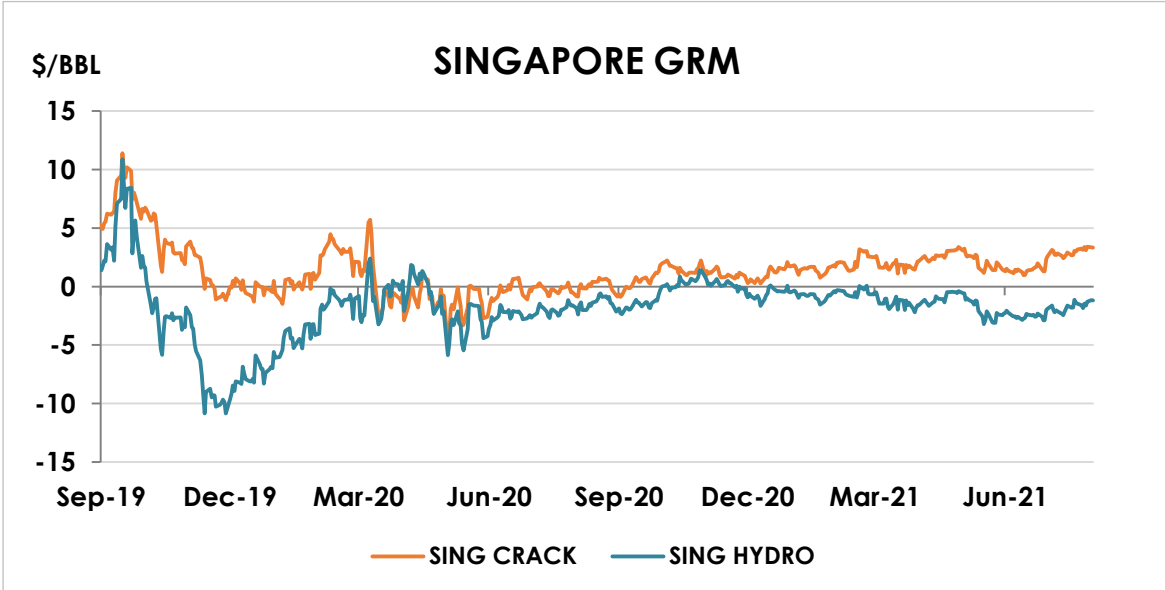
*** Including Nigeria, Russia and others

- Flexibility in crude intake allows diversification of crude types to source cheaper crude
- Flexibility in product outputs by maximizing middle distillates (jet and diesel) by adjusting production mode to capture domestic demand and price premium
- Maximize Platformate production to capture higher margin on aromatics
- Minimize fuel oil output to avoid lower margin products

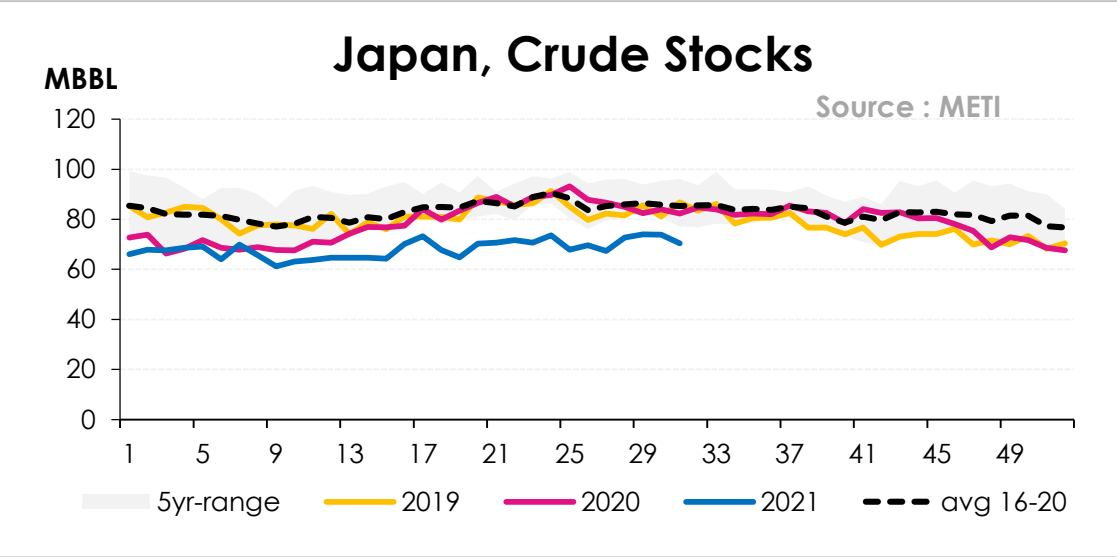
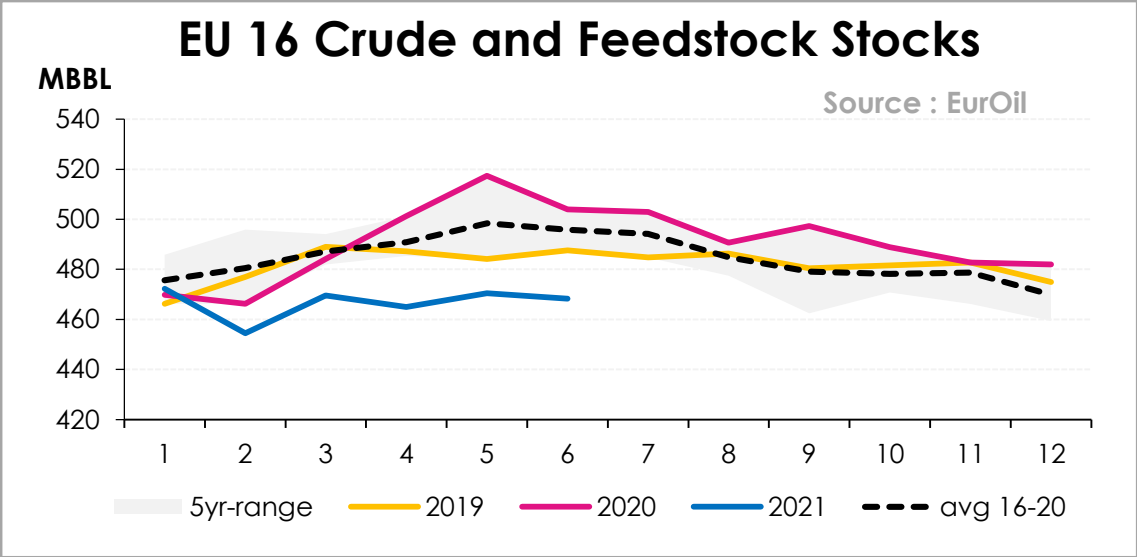
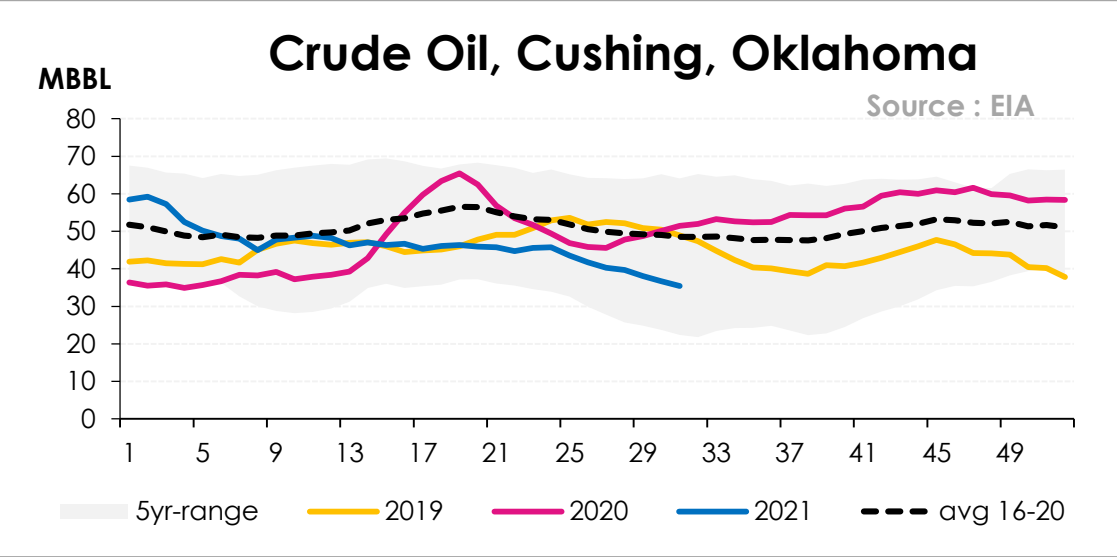
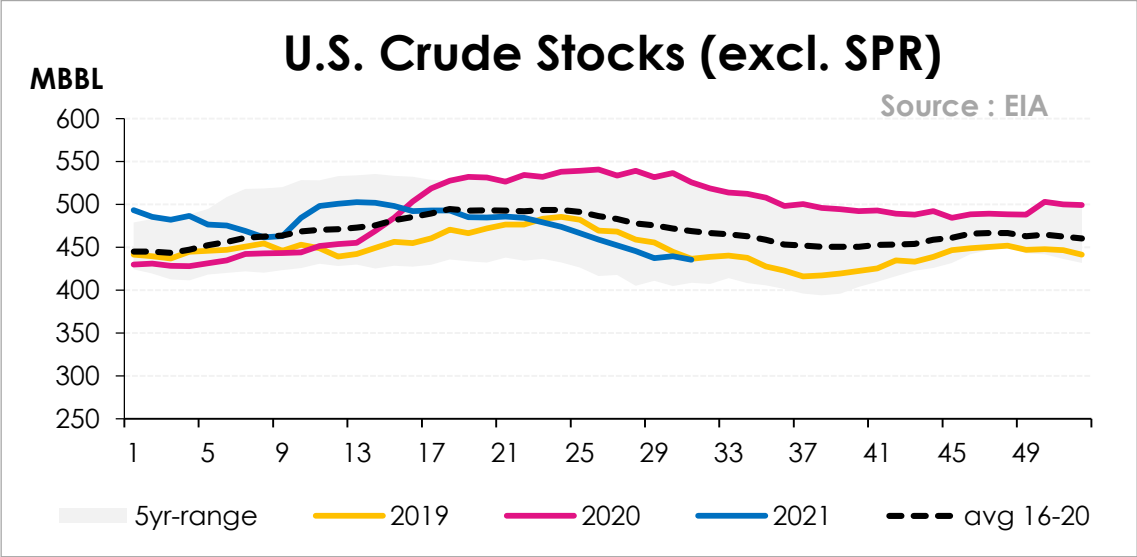
Demand Growth to Outpace Refining Capacity Addition in Medium Term



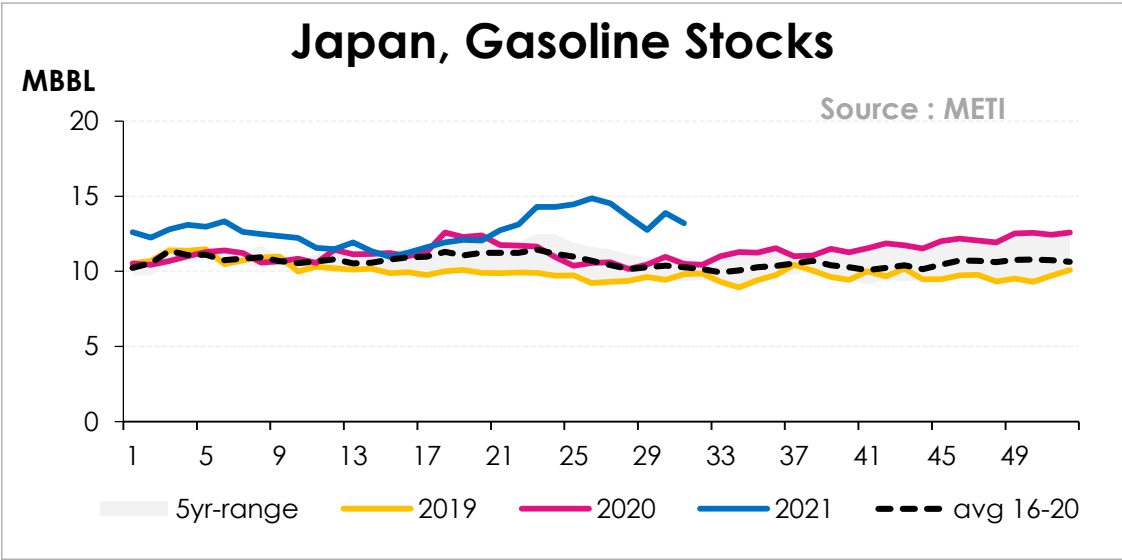
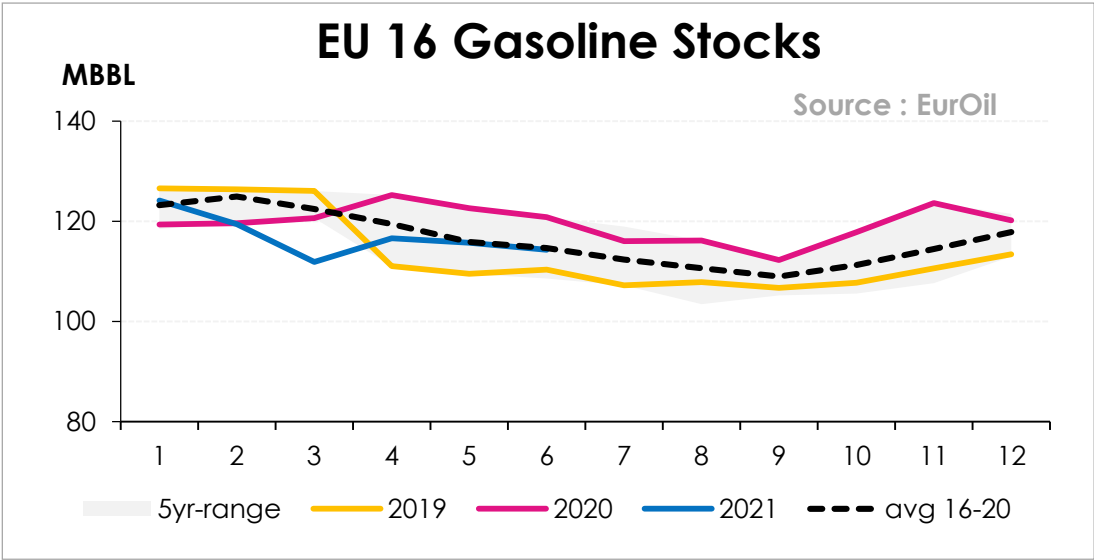
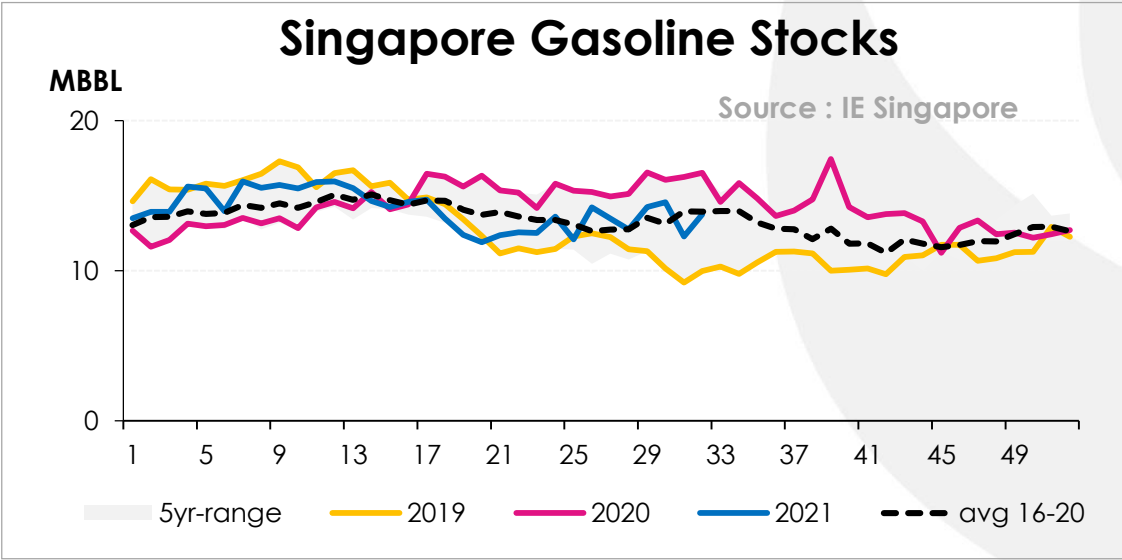
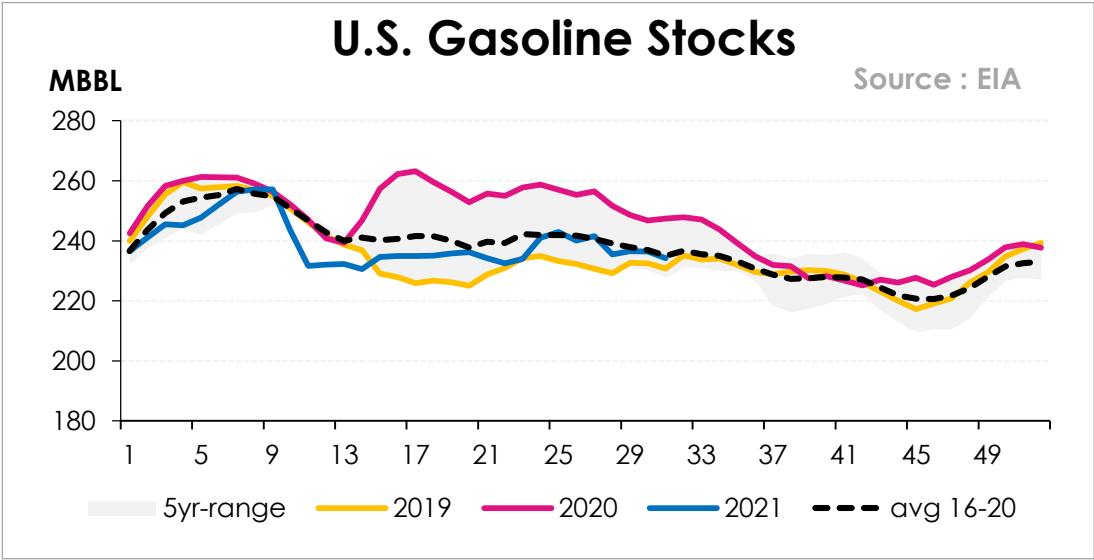
Asian Margin Vs. US-EU margin



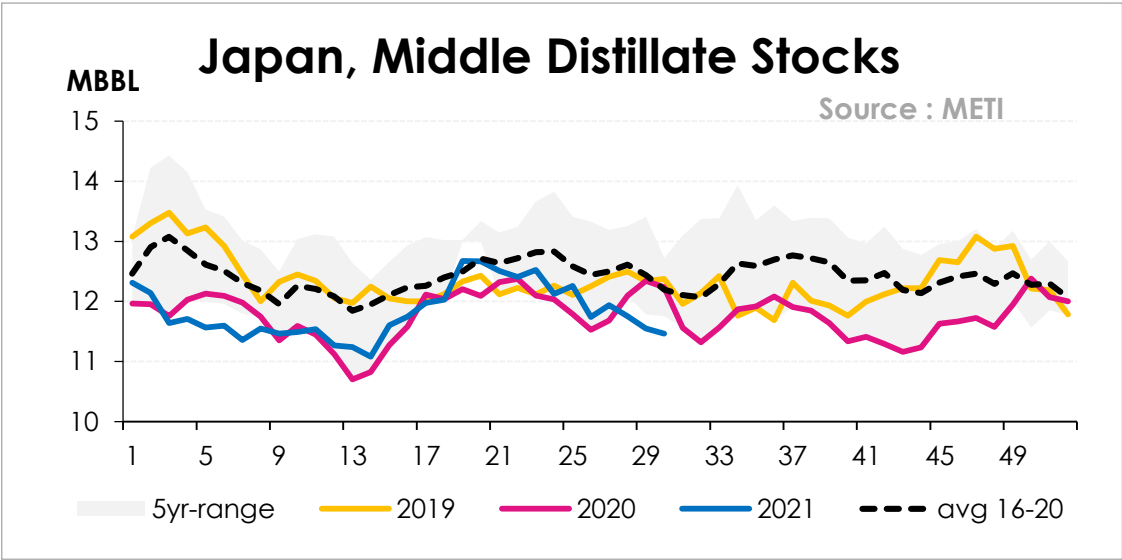
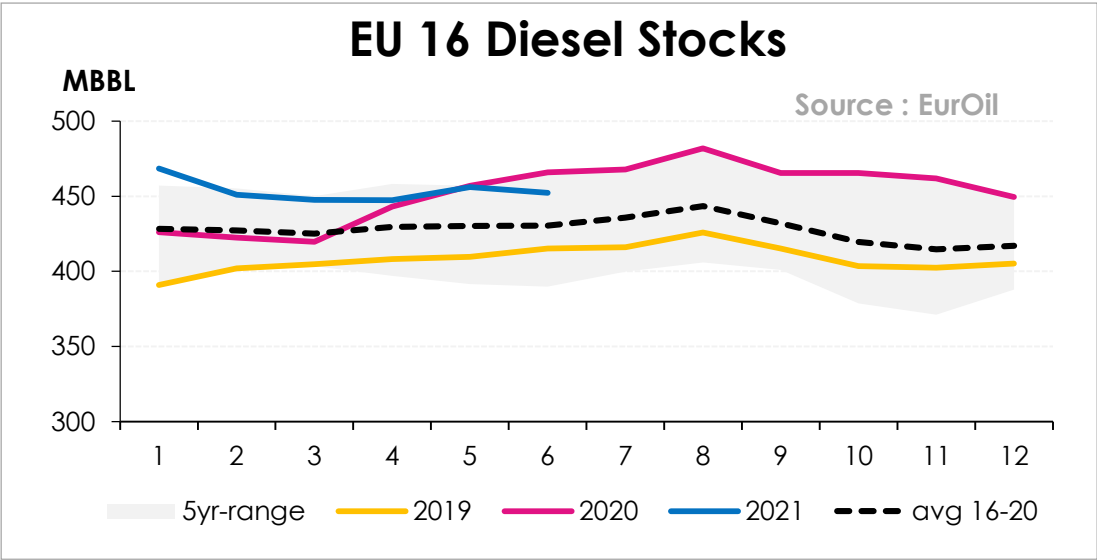
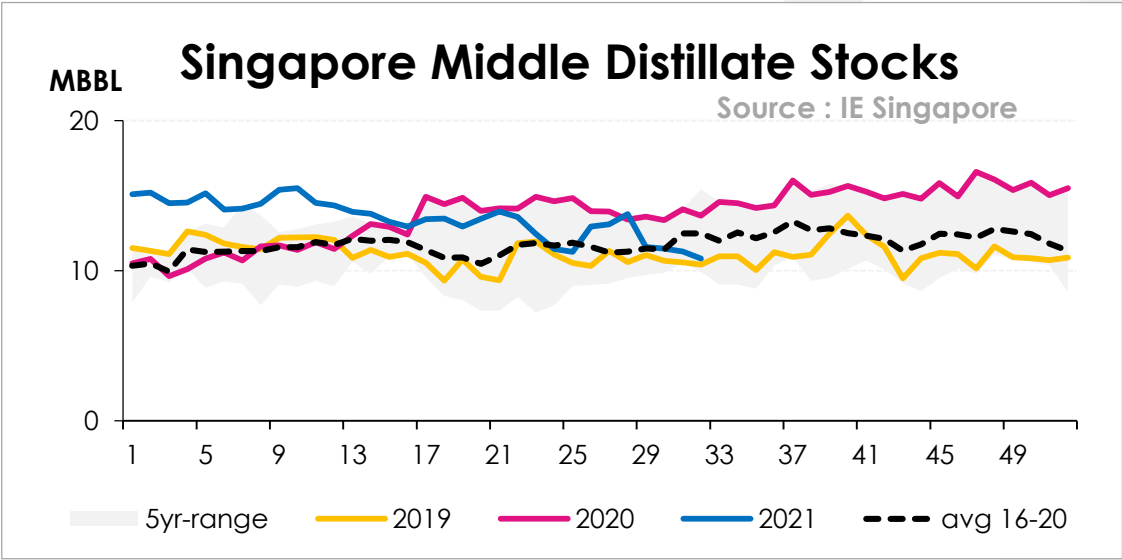
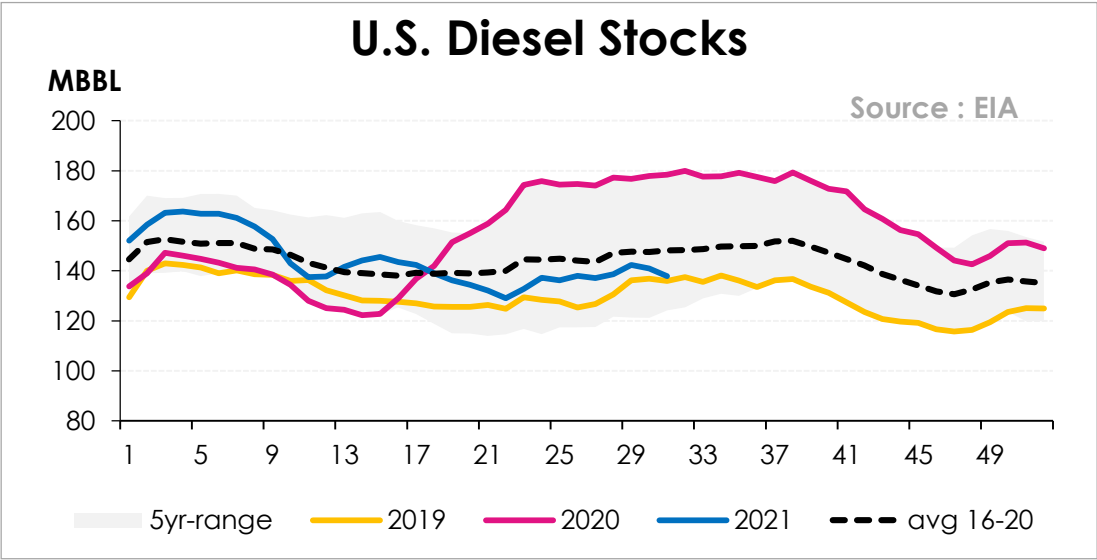
Global Crude Oil Inventories



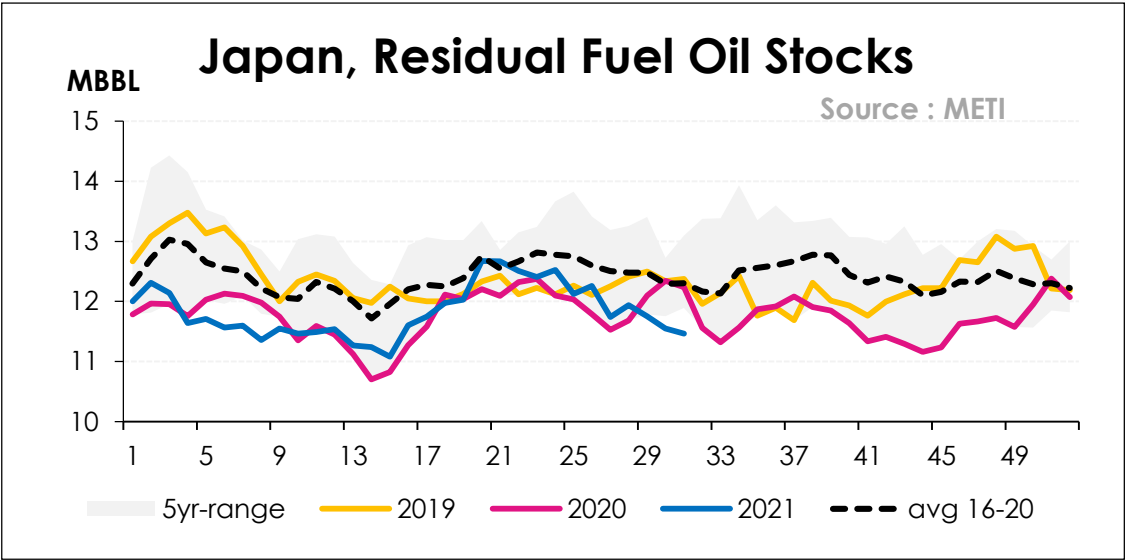
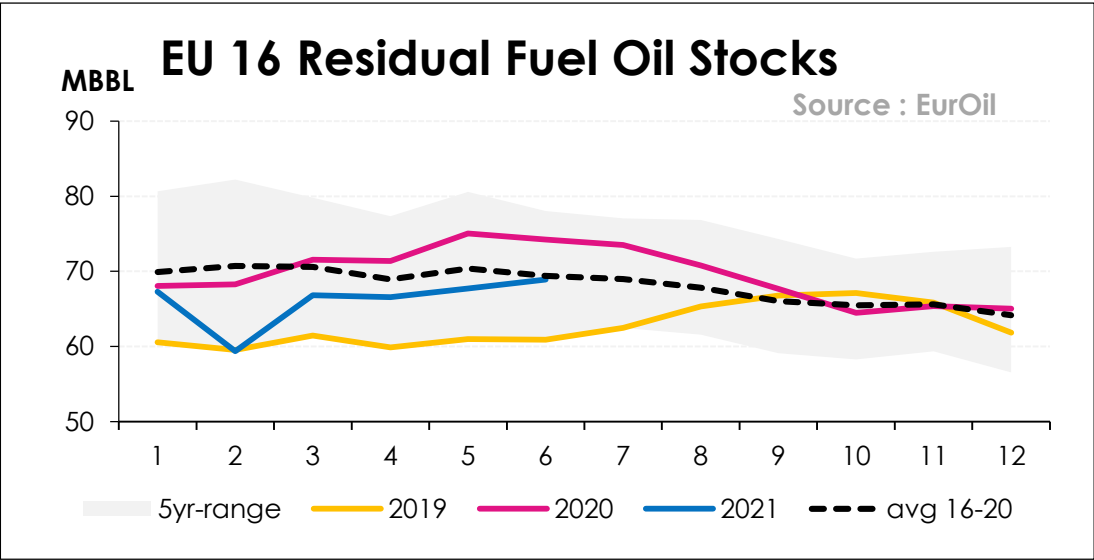
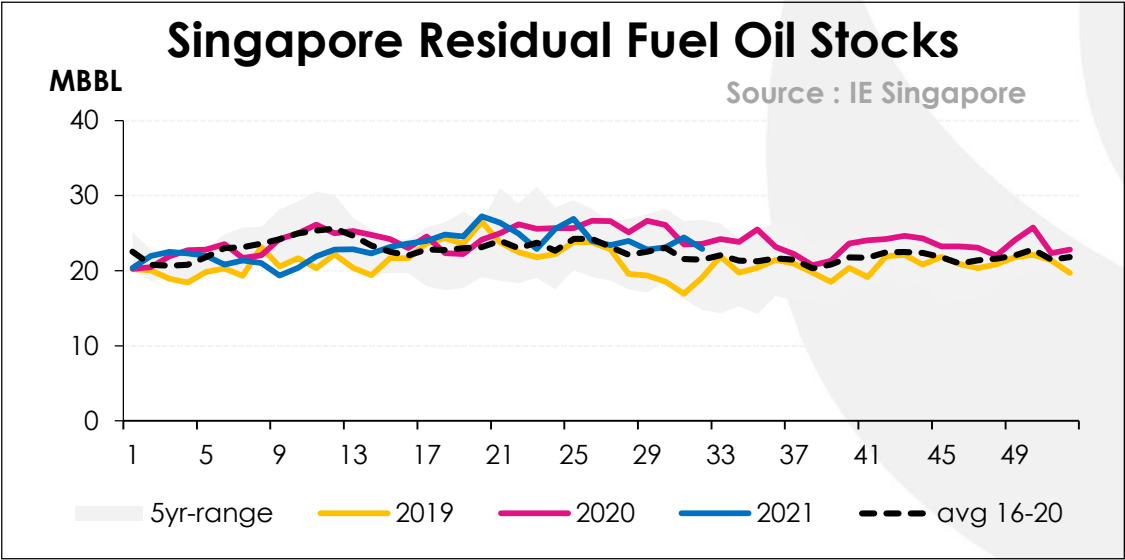
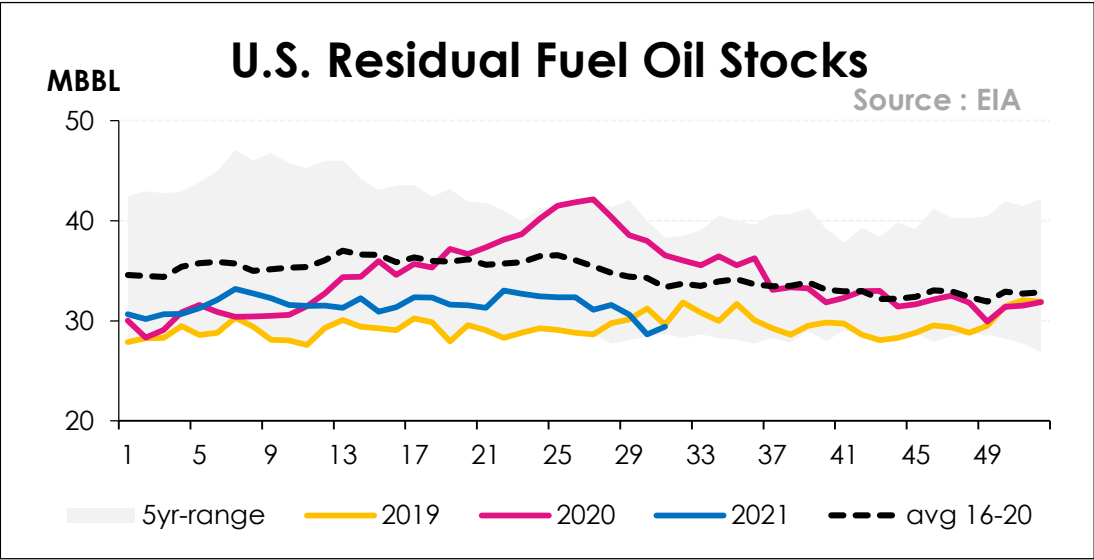
Global Gasoline Inventories



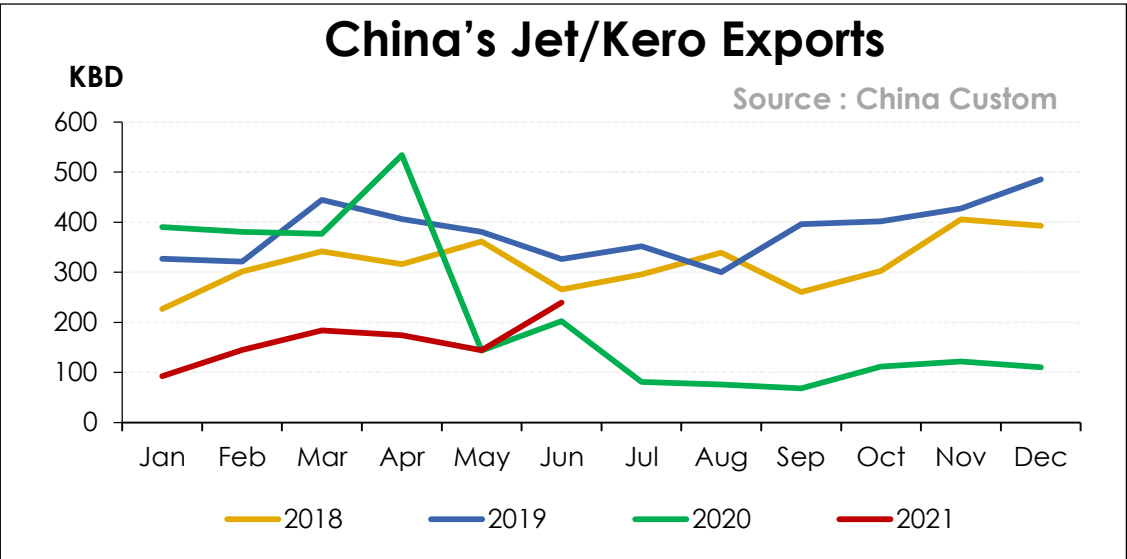
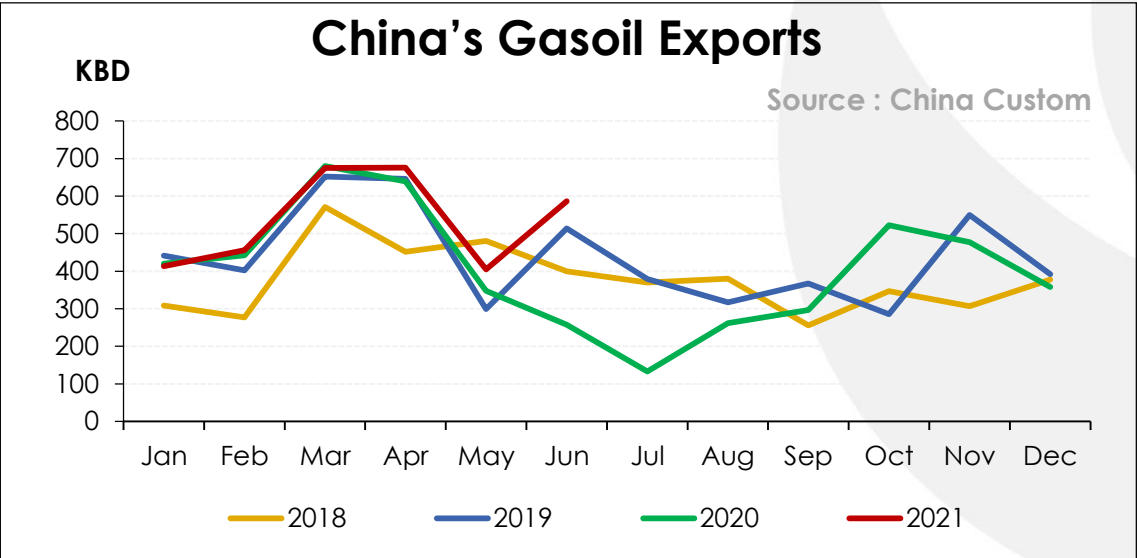
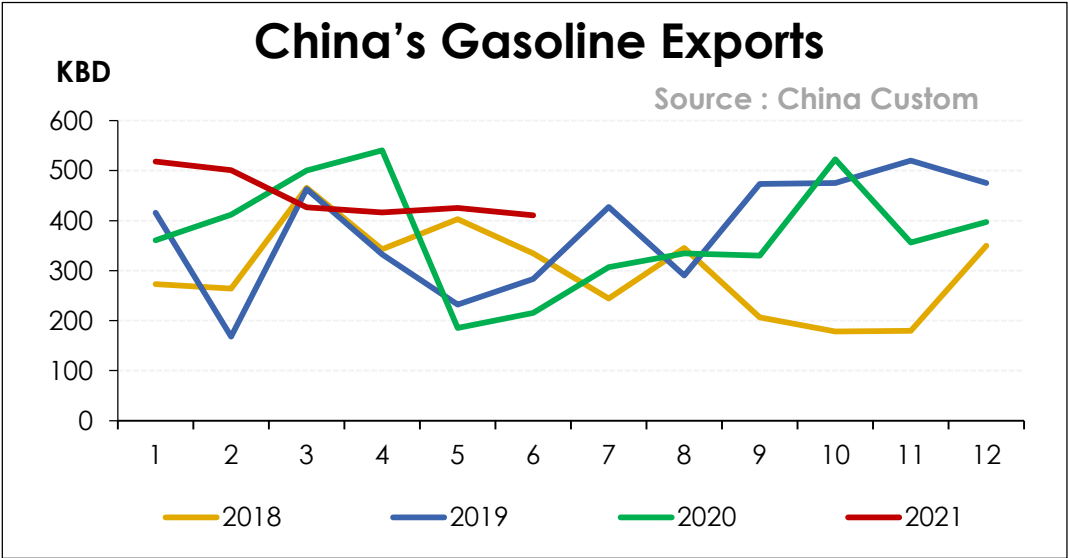
Global Middle Distillate Inventories



Global Fuel Oil Inventories

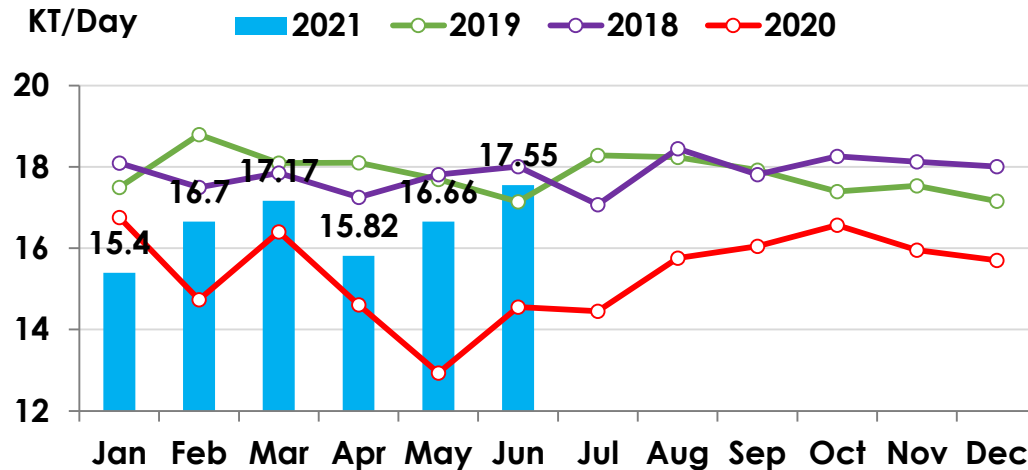


China's Refined Product Exports



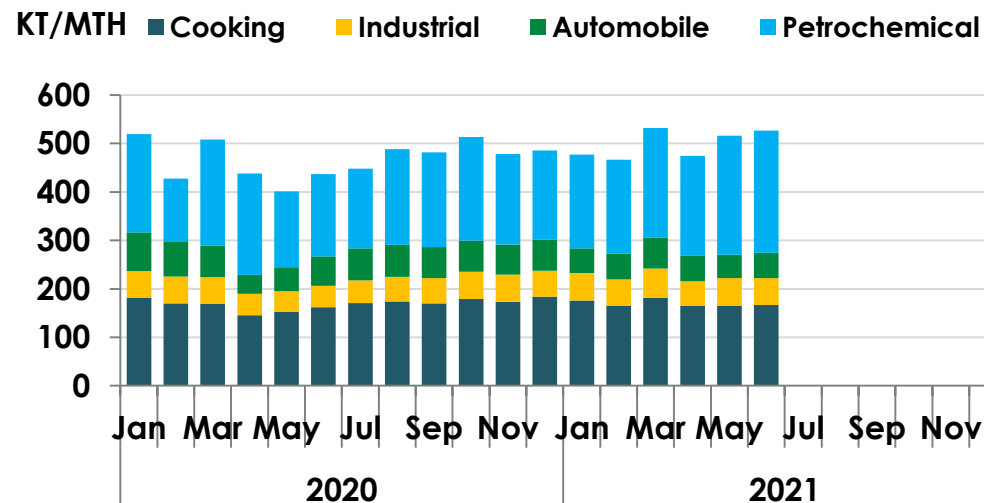
Domestic LPG Demand

Thailand LPG Demand



Remark : LPG demand includes Petrochemical consumption

LPG Demand by Sector



LPG Demand Highlight

- In 1H'21, LPG demand increased by 10.2% YoY mainly following the increase in industrial and petrochemical sectors. LPG demand in the industry and petrochemical sector rose by 13.7% and 21.8% YoY, respectively as the manufacturing production started to be recovered following the reopen of factories. In addition, cooking demand also increased by 4.4% YoY from last year. However, the demand in automobile sector still plunged by 11.5% YoY, as the pandemic partially pressured the transportation activities compared to pre-COVID level demand during Jan'20-May'20.

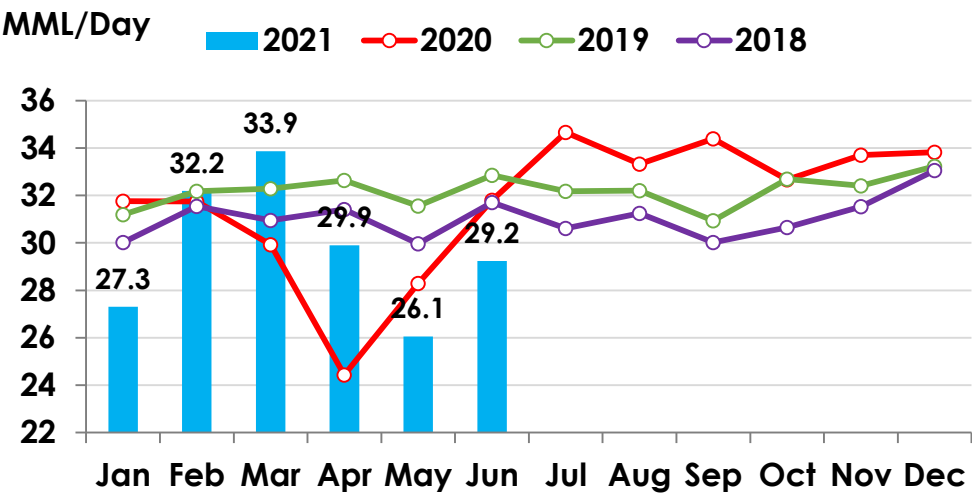
Outlook for 2021

- In 2021, LPG demand is expected to recover by 0.8% YoY, mainly from the industrial sector. Industrial demand tends to increase by 8.5% YoY as the demand will be supported by the reopening of factories as well as the higher production for exporting demand. Besides, Cooking demand tends to increase by 2.1% YoY as the demand would recover from the low base volume effect from the COVID-19 pandemic last year. However, demand in the automobile sector is expected to decrease by 9.0% YoY as most of the registered taxis powered by LPG have gradually expired since 2021 onwards leading to the lower vehicles that run on LPG.

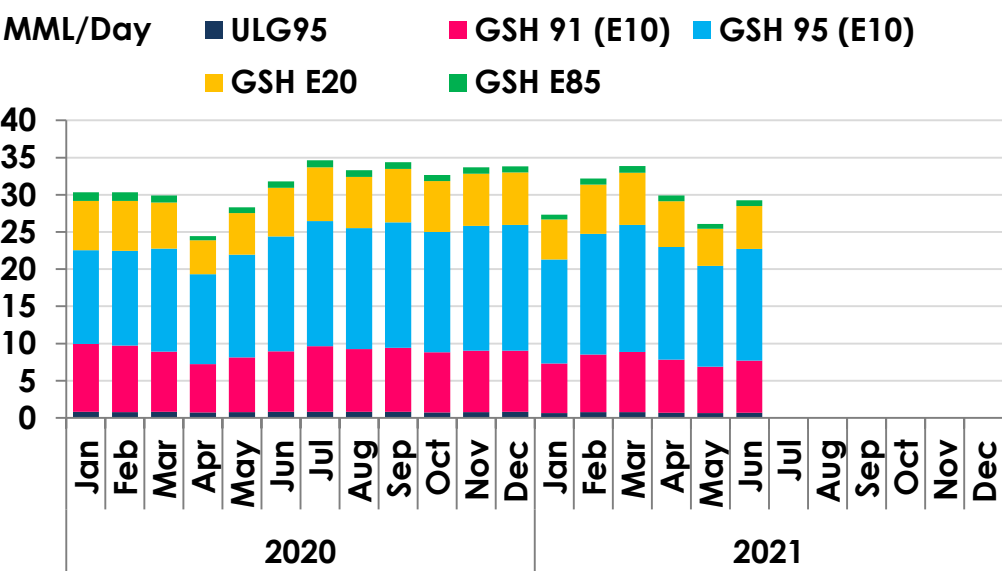
Source: EPPO, DOEB (As of Aug 2021)

Domestic Gasoline/Gasohol Demand

Thailand Gasoline/Gasohol Demand



Gasoline/Gasohol Demand by Grade



GASOLINE/GASOHOL Demand Highlight

- In 1H'21, Gasoline demand was slightly increased by 0.2% YoY to an average of 29.7 MML/day while Gasohol demand increased by 0.6% YoY, settling at 29.0 MML/day. The demand growth was supported by the low base volume last year. The demand was mainly pressured by the second wave of COVID-19 started in Jan'21 as well as the third wave in Apr'21 onwards, leading to lower transportation activities in most sectors. Besides the effect of the pandemic, the narrow price gap between GSH95 and E20 partly supported the GSH95 demand to grow by 9.0%. While E85 demand plunged by 17.6% YoY following 4.8% lower oil stations providing E85 compared to last year.

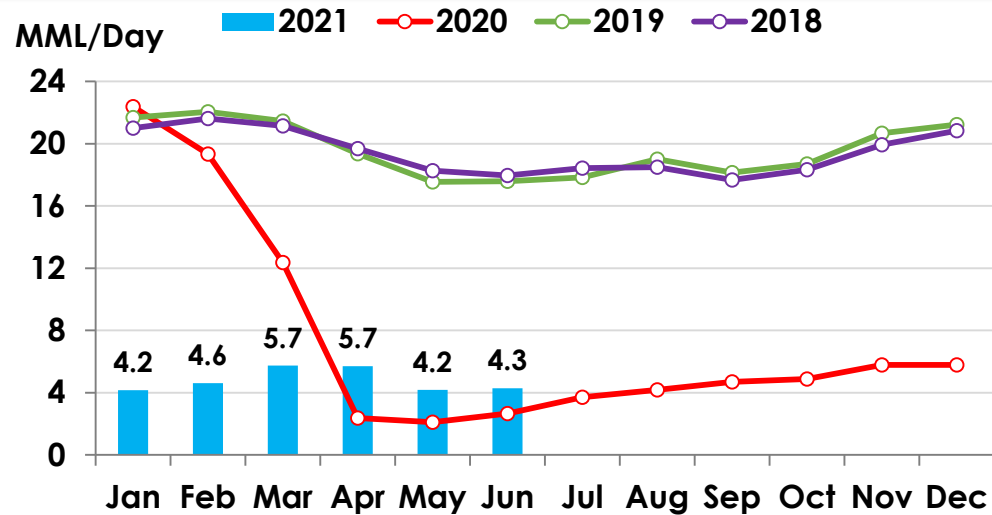
Outlook for 2021

- Gasoline consumption is expected to increase by 0.8% YoY which are still mainly pressured by the travel restriction measures for halting the second and third wave of COVID-19 pandemic since Jan'21 and Apr'21 onwards. Moreover, the stagnant economy would suppress people spending resulting in lower passenger car sales.

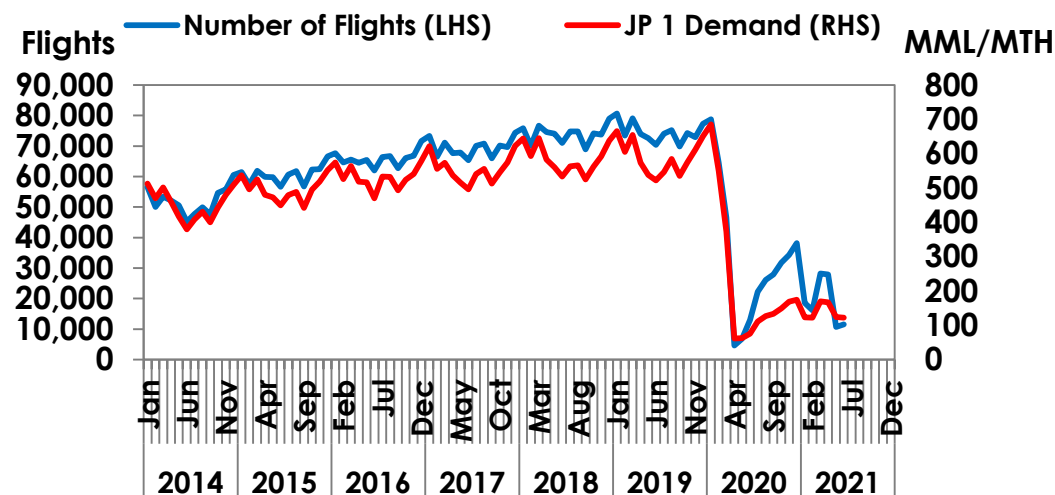
Source: DOEB (As of Aug 2021)

Domestic Jet Demand

Thailand JET Demand



JET-A1 demand and Number of flights



JET Demand Highlight

- In 1H'21, Jet consumption decreased by 53.1% YoY. Although the demand was recovered in Mar-Apr'21, the demand started to decrease again in May'21 as the COVID-19 infection rate was accelerated. The domestic flight in 1H'21 dropped by 27.1% YoY from the flight suspension due to the second wave and the third wave of COVID-19 outbreak, while the international flight continued to contract sharply by 68.0% YoY as travel restrictions remained in place. Although the Thai government started to allow foreigners who hold the Special Tourists Visa (STV) to visit Thailand since Oct'20 onwards to stimulate the tourism sector, the number of foreign tourist arrivals remained small, resulting in a 70.8% slump in the passenger number in 1H'21.

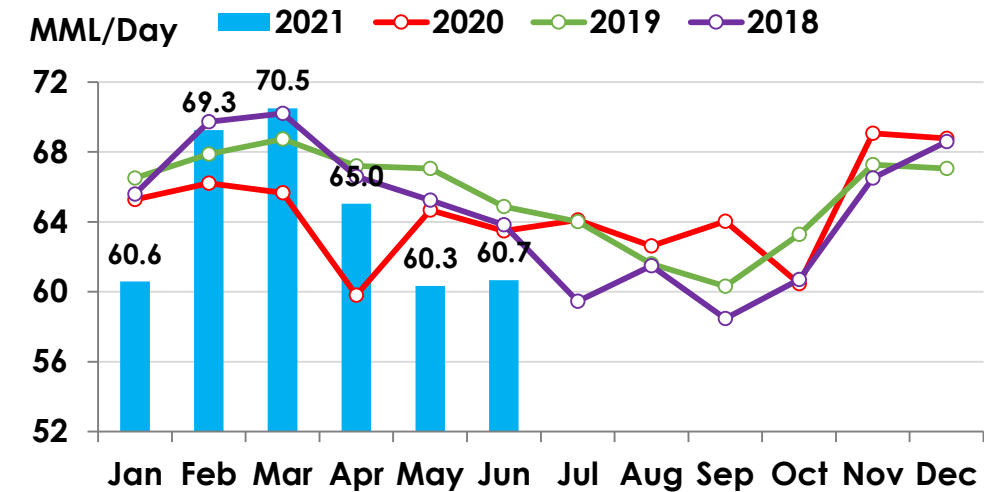
Outlook for 2021

- Jet demand growth is expected to decline by 25.0% YoY, as the second and the third wave of COVID-19 outbreak in Thailand will cause longer damage to the Thai tourism, both in the domestic and international sector. Although the Special Tourists Visa (STV), country reopening scheme and vaccination plan may support the flight movements, low and long recovery of tourism will still pressure the demand.

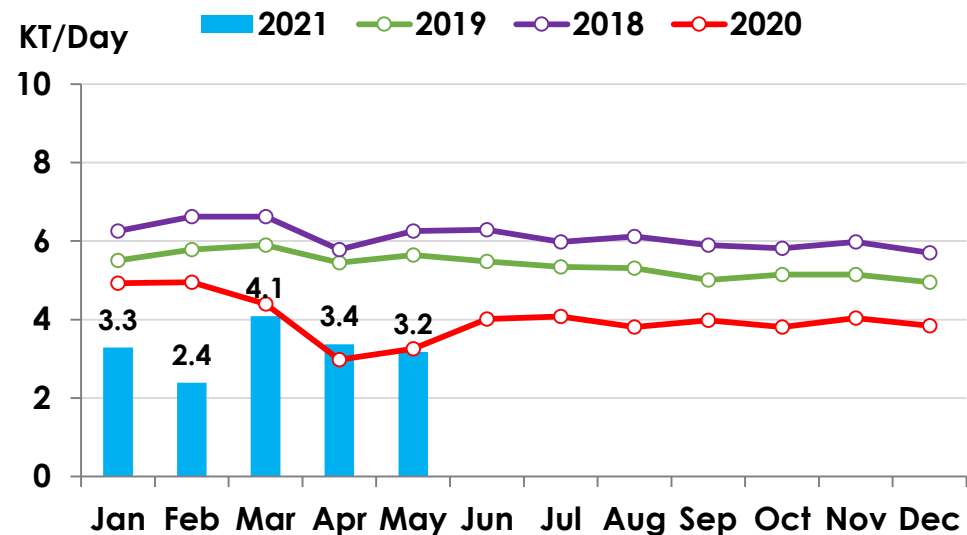
Source: DOEB, AOT, Department of Tourism (As of Aug 2021)

Domestic Gasoil and NGV Demand

Thailand Gasoil Demand



NGV Demand



Gasoil Demand Highlight

- In 1H'21, Gasoil demand increased by 0.2% YoY. After Gasoil demand was supported by the economic improvement in Feb-Mar'21, the Thai economy was slow down again in Apr'21 onwards following the third wave of COVID-19 outbreak in every region of Thailand. Thus, the demand was pressured by the lower economic activities and the drop of logistic movements.

Outlook for 2021

- Gasoil demand is expected to slightly grow by 0.8% YoY as the demand will be supported by the recovery of economic activities from the stimulus packages and other relief measures, as well as the vaccination plan. However, the uncertainty amid the third wave of the COVID-19 pandemic will still pressure Gasoil demand this year.

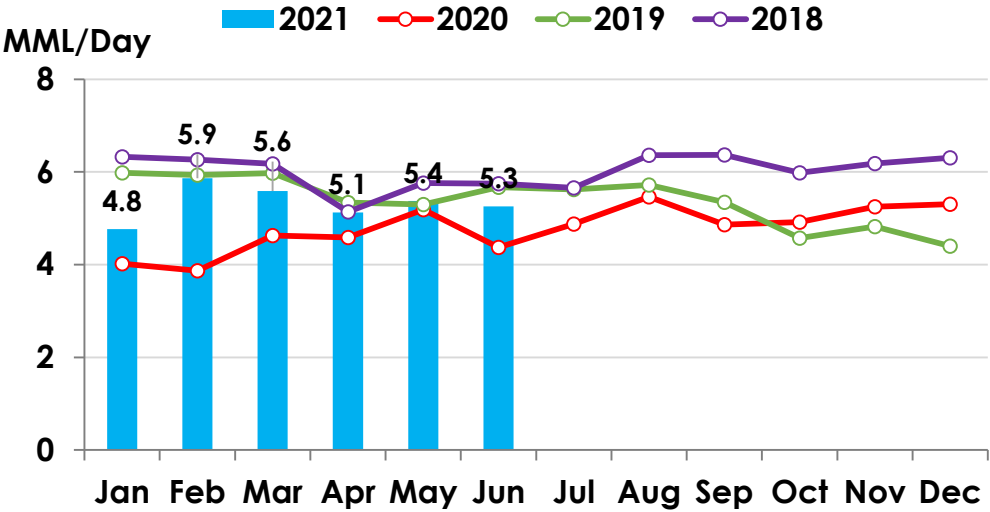
NGV Demand Highlight

- In 5M'21, NGV demand fell significantly by 20.0% YoY. Apart from the effect of COVID-19 pandemic, the demand was also pressured by the uncompetitiveness of the NGV retail price compared to the other fuels. As a result, NGV users have switched to use a substitute for NGV.

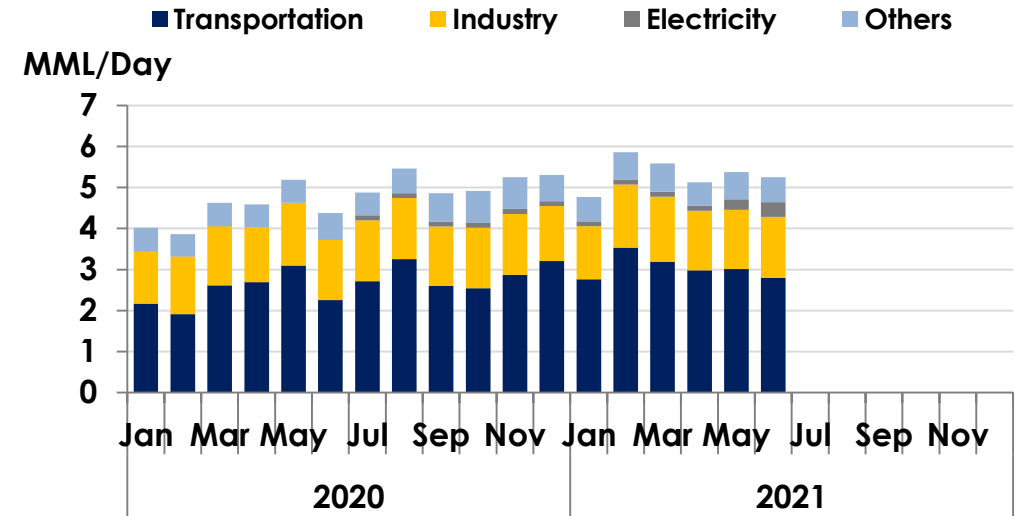
Source: DOEB (As of Aug 2021)

Domestic Fuel Oil Demand

Thailand Fuel Oil Demand



Thailand Fuel Oil Demand by Sector



Fuel Oil Demand Highlight

- In 1H'21, Fuel Oil consumption rose by 19.6% YoY, as the demand in the transportation sector, which accounted for 57.1% of total Fuel Oil demand, rose by 23.9% YoY due to higher import and export volume as well as the low base volume effected from the IMO transition phase last year. Moreover, demand in the industrial sector, which accounted for 27.5% of total Fuel Oil demand, increased by 4.2% YoY due to the recovery of the economy and competitive prices compared to the other alternative fuels.

Outlook for 2021

- Fuel Oil demand is expected to increase by 16.0% YoY, mainly due to the higher import and export activities following the global economic recovery. Besides, the abilities to procuring and distributing vaccines across the world is the key factor to support the demand.

Source: DOEB (As of Aug 2021)

Thank You

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We Appreciate Your Feedback

We would appreciate if you take just a minutes of your time to share your thoughts. Your feedback will help us make our next arrangement even better.

Thank you for taking our survey.

