

Member of
**Dow Jones
Sustainability Indices**

Powered by the S&P Global CSA

Sustainability Award
Silver Class 2022
S&P Global



Thai Oil Public Company Limited

Presentation to Investors

March 2022



Disclaimer

The information contained in this presentation is intended solely for your personal reference. Please do not circulate this material. If you are not an intended recipient, you must not read, disclose, copy, retain, distribute or take any action in reliance upon it.

Some statements made in this material are forward-looking with relevant assumptions, which are subject to uncertainties, which may cause the actual result/performance to be materially deviated from any future result/performance implied by such forward-looking statements. Please note that the company and management/staff are not capable to control and guarantee if these forward-looking statements will be accurately materialized, they are subject to various risks and uncertainties.

Presentation Agenda

TOP GROUP BUSINESS OVERVIEW

KEY HIGHLIGHTS

FINANCIAL HIGHLIGHTS

STRATEGIC INVESTMENT PLANS

OUTLOOK

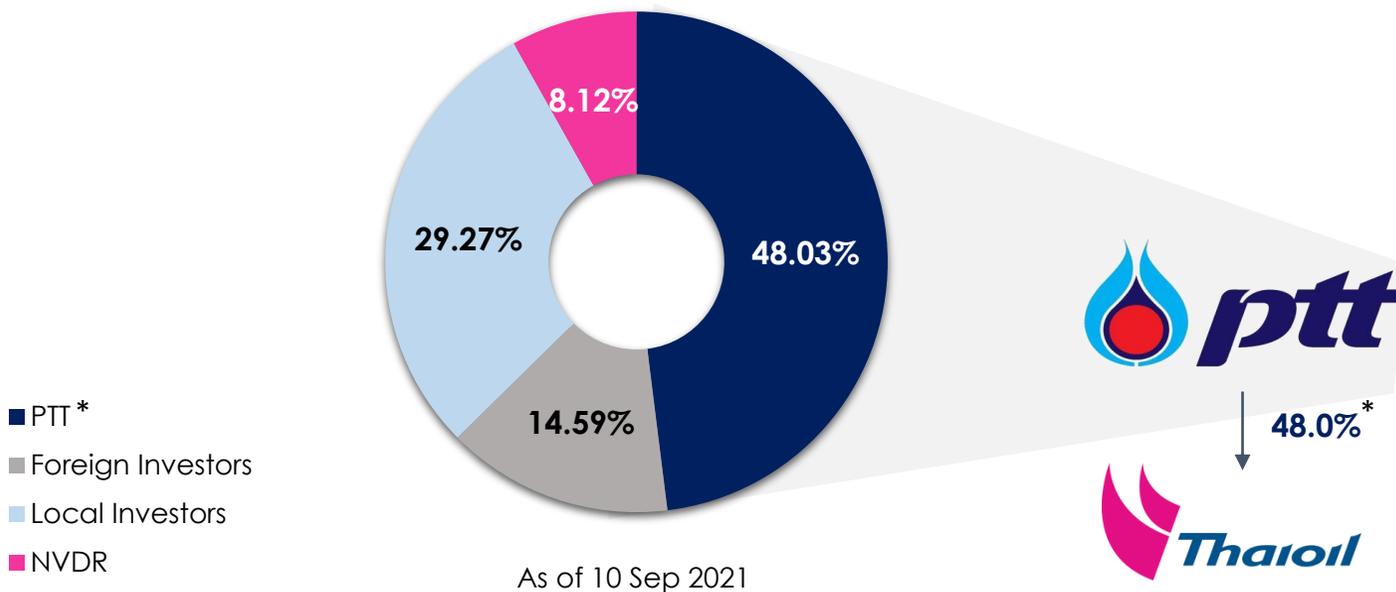
FINAL REMARKS



TOP GROUP BUSINESS OVERVIEW

Strategic Relationship and Operational Integration with PTT

Thai Oil's strong shareholder base



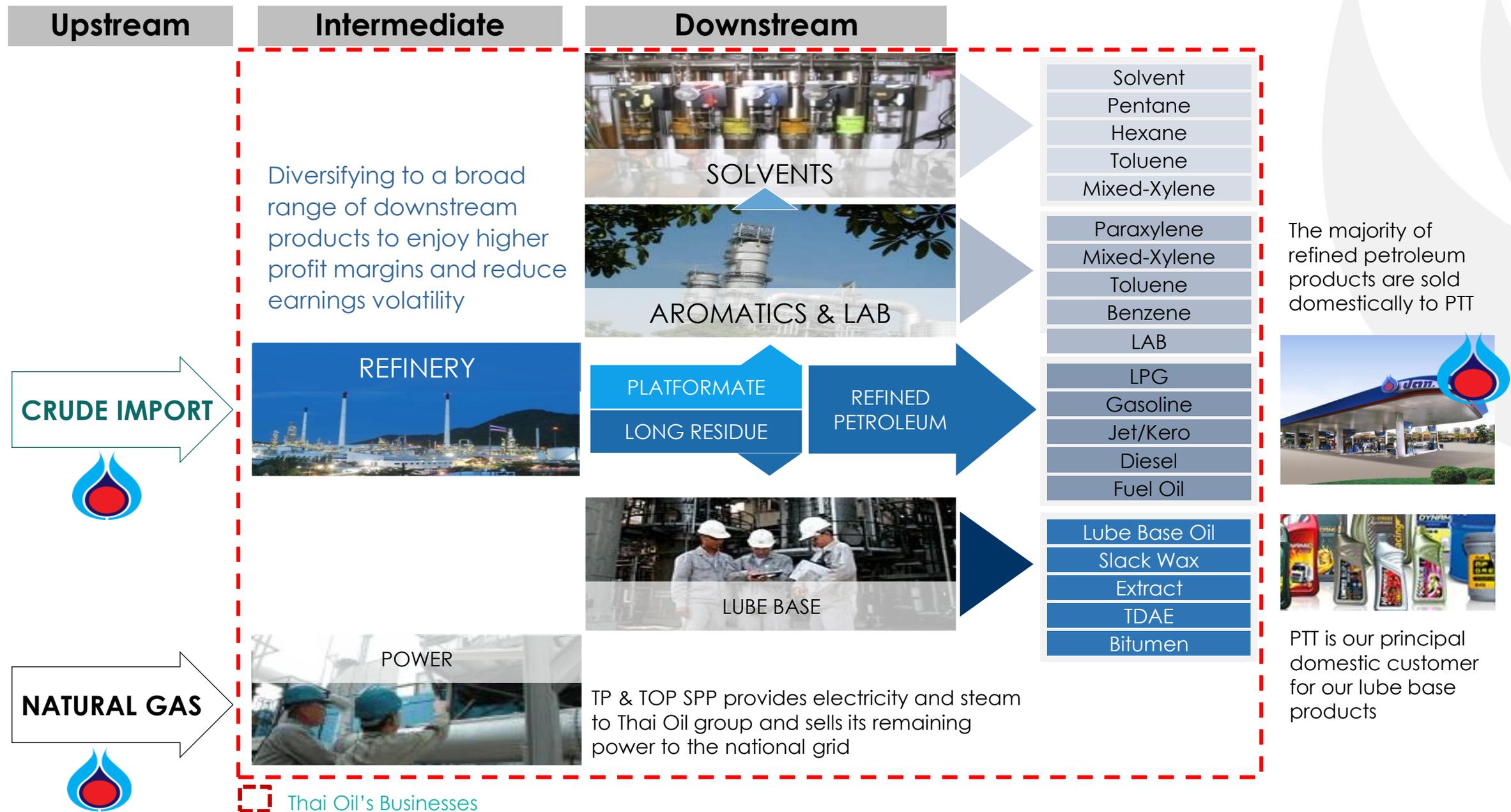
- Benefits from PTT's dual role as our major shareholder and key business partner
- All transactions take place at arm's length and in adherence with strong corporate governance principles

Key strategic benefits for Thai Oil

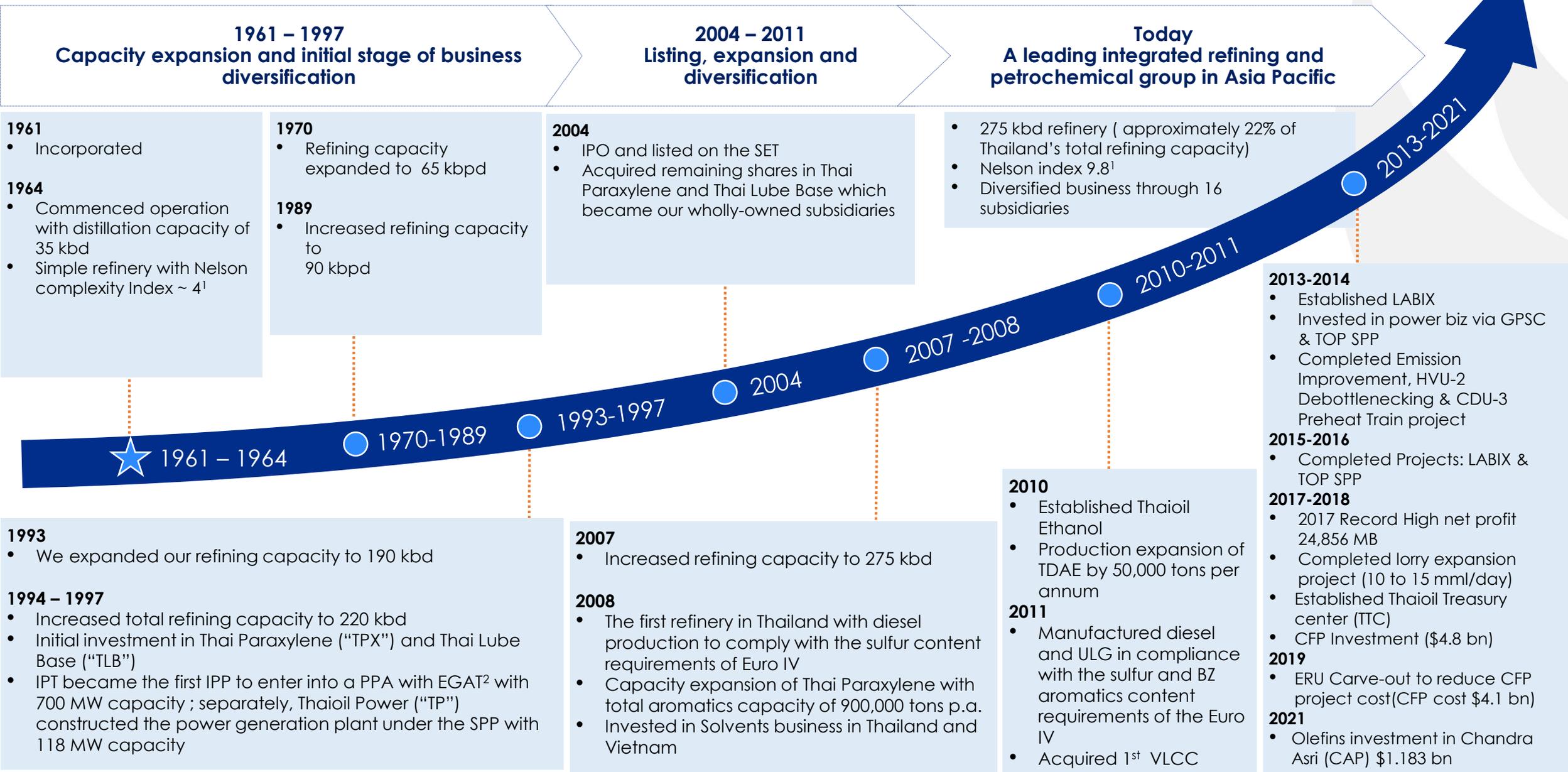
<p>1. Long-term strategic partnership</p> <ul style="list-style-type: none"> • Thai Oil is PTT's principal refiner • Long-term strategic shareholder and joint investment 	<p>2. Business partnership</p> <ul style="list-style-type: none"> • Product offtake • Crude procurement 	<p>3. Operational synergies</p> <ul style="list-style-type: none"> • Freight costs reduction • Knowledge transfer and shared services • Close management collaboration and secondment of trained staff
---	---	---

Remark
* PTT holds total of 48.03 % both direct and indirect

TOP Group Synergy & Strategic Role in PTT Group Value Chain



Key Milestones: 60 Years, A Long Track Record of Success

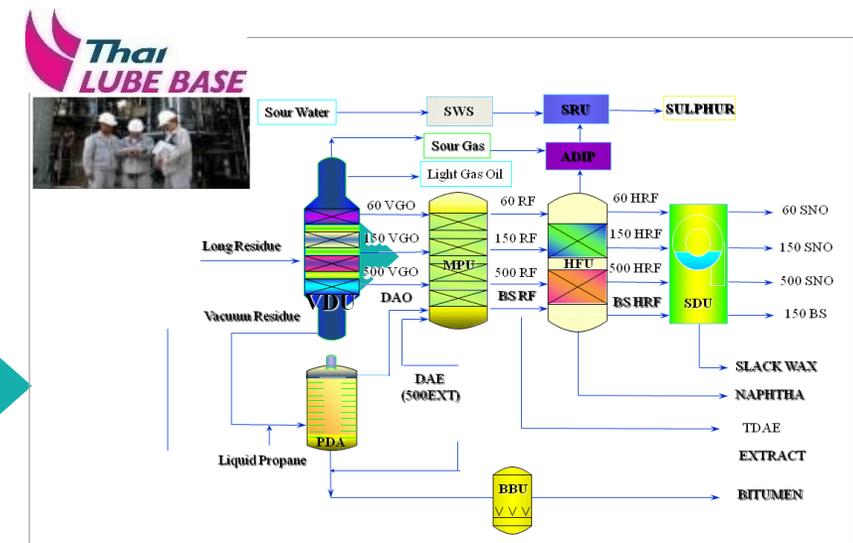
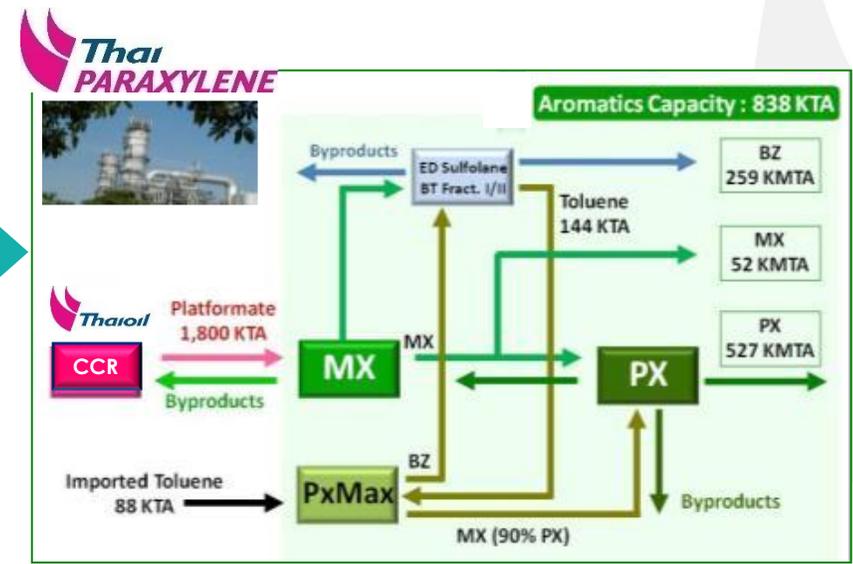
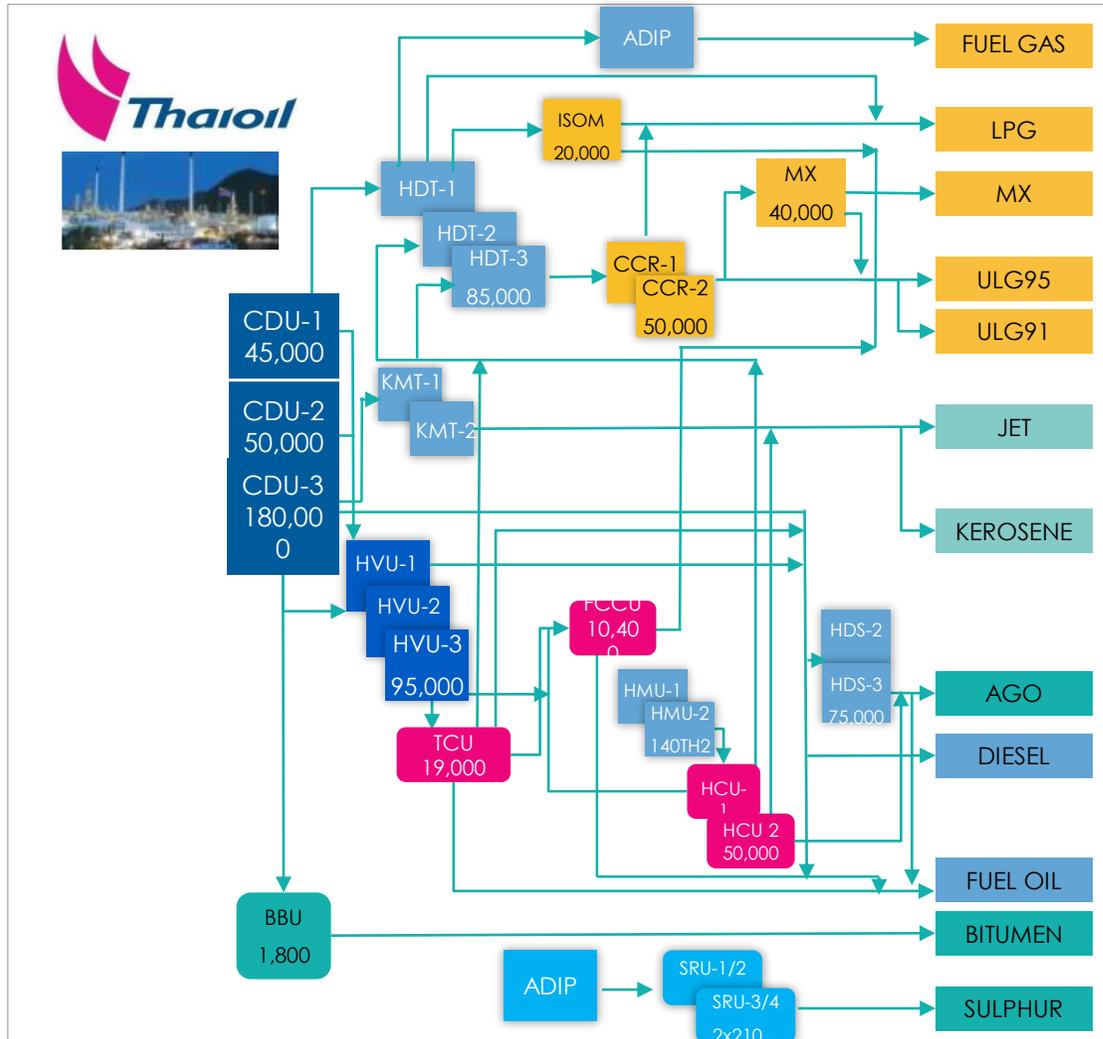


Thai Oil Group Business Structure



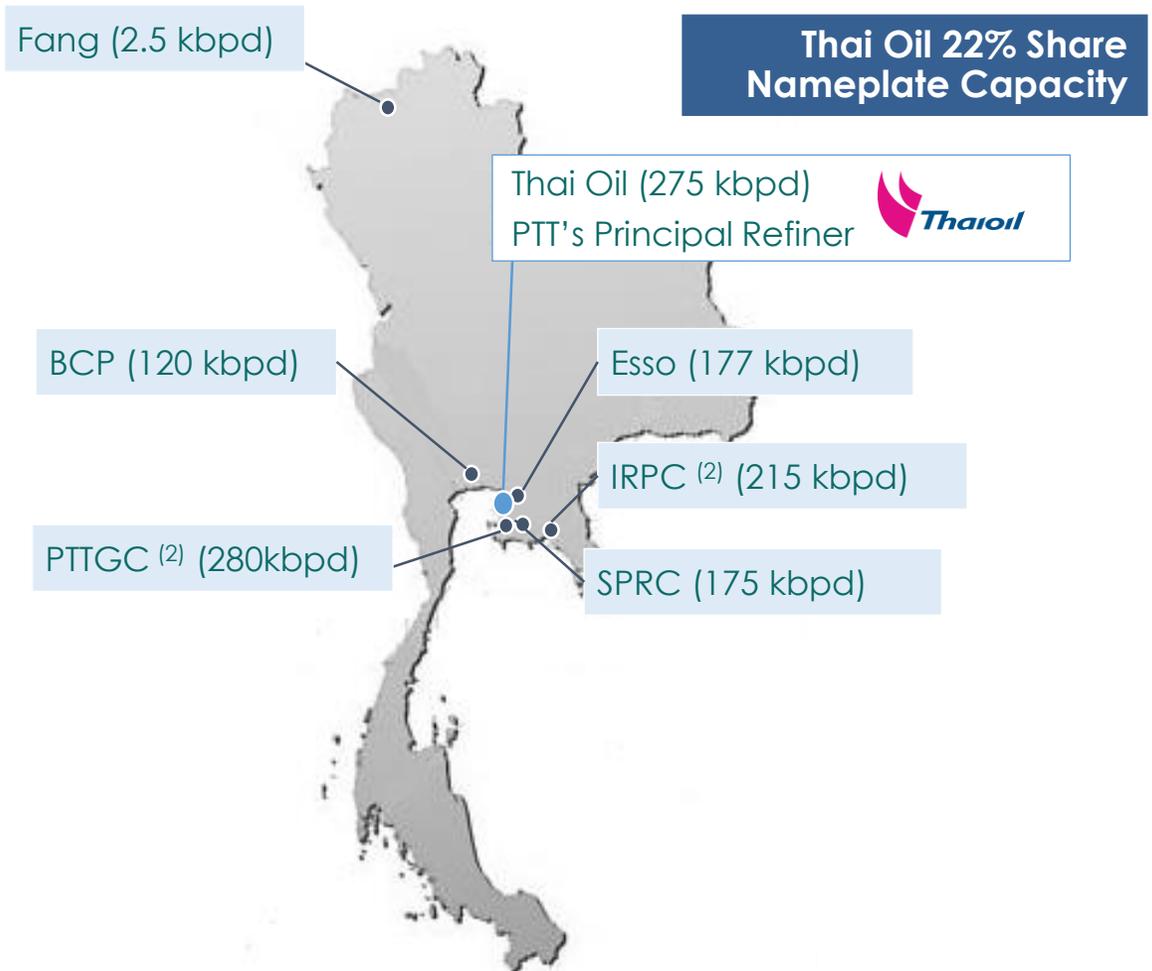
Process Linkage: Beauty of Integration

PROCESS FLOWCHART

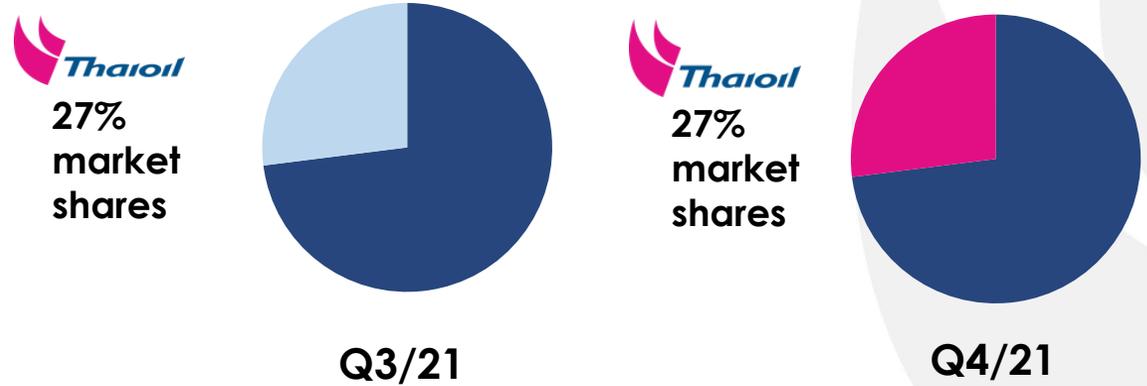


One of Region's Leading Refineries

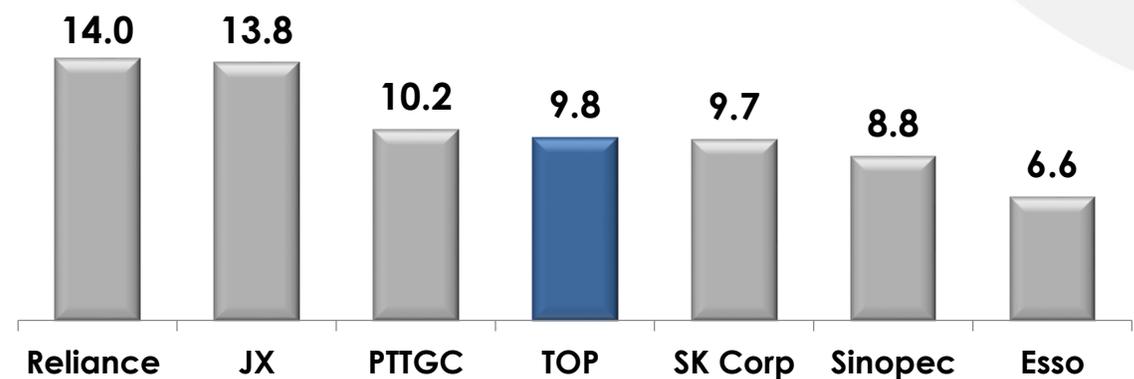
Total Thailand crude refining capacity 1,244.5 kbd ⁽¹⁾



Market shares for refined petroleum product ⁽³⁾



Nelson Index - Regional Comparison ⁽⁴⁾



- Remarks:
- Nelson Complexity Index measures refinery's upgrading capability for comparison
 - It is the ratio of complexity barrels divided by crude distillation capacity

Note: 1. Source: Energy Policy and Planning Office (EPPO), Ministry of Energy Thailand as of Jul 2020
 2. PTT holds a 47.6% interest in IRPC, a 47.7% interest in PTTGC as at 4 Aug 2020
 3. Calculate by total domestic sales of refined petroleum products (excluding by product & LPG) of Thai Oil divided by total sales of petroleum products in Thailand excl LPG. Source from EPPO
 4. Source: Worldwide Refinery Survey and Complexity Analysis 2019 from Oil & Gas Journal and company information

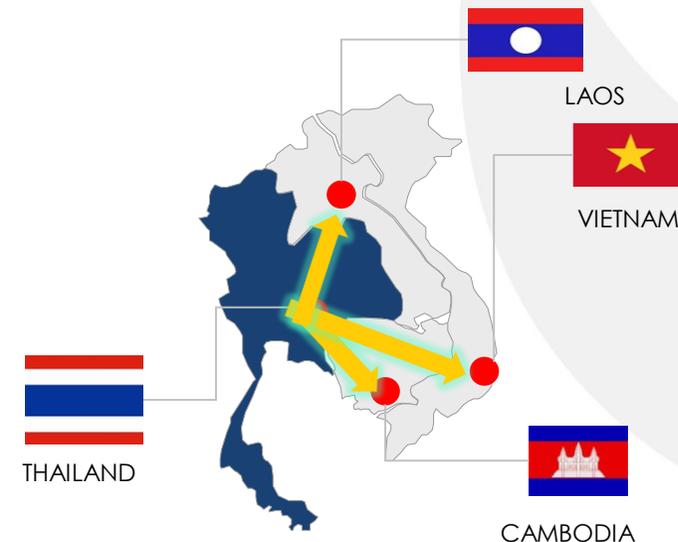
Strategic Location with Competitive Advantages in Access to Key Markets

Close proximity to the key domestic markets

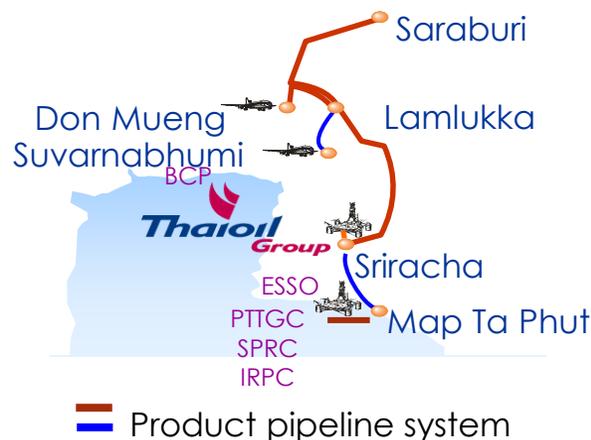
Access to Indochina markets through deep water ports and trucks

Our strategic location provide us with

1. Close proximity with the key domestic markets and Indochina
2. Direct access to deep water ports
3. Direct connection with multi-product pipelines



Direct connection with product pipeline system



- ✓ Our plants are located within the Sriracha Complex
- ✓ SBM provides direct access to deep water ports, and ability to receive feedstock directly from VLCC
- ✓ We also enjoy available connections to delivery networks such as multi-product pipelines, including Thapline

Optimized & Flexible Operations...Superior Performance

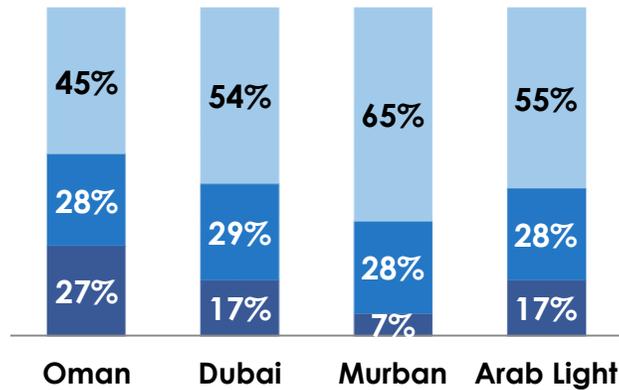
Thai Oil is able to diversify its type of crude intake and product outputs to maximize demand and margin



Crude Assays based on TOP configuration*

% S = 1.43 API = 32.0	% S = 2.52 API = 31.2	% S = 0.78 API = 39.4	% S = 1.97 API = 32.8
--------------------------	--------------------------	--------------------------	--------------------------

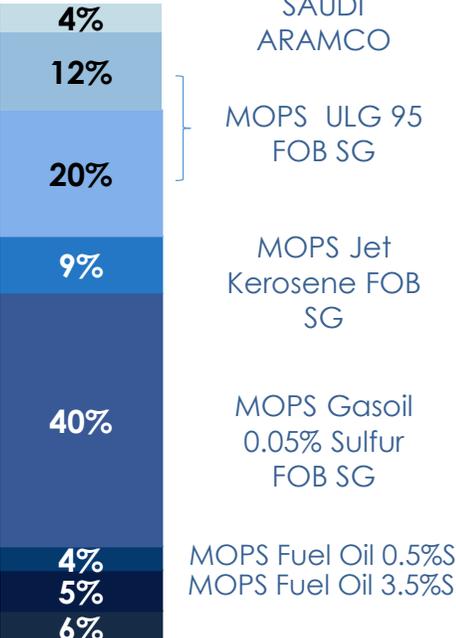
■ Short Residue ■ Waxy ■ Gasoline/Distillates



Sources of Crude



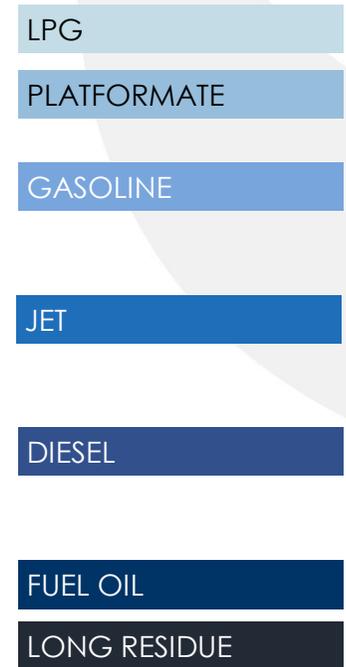
Product output



Reference Price



Domestic demand for petroleum products**



Q4/21

Q4/21

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

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

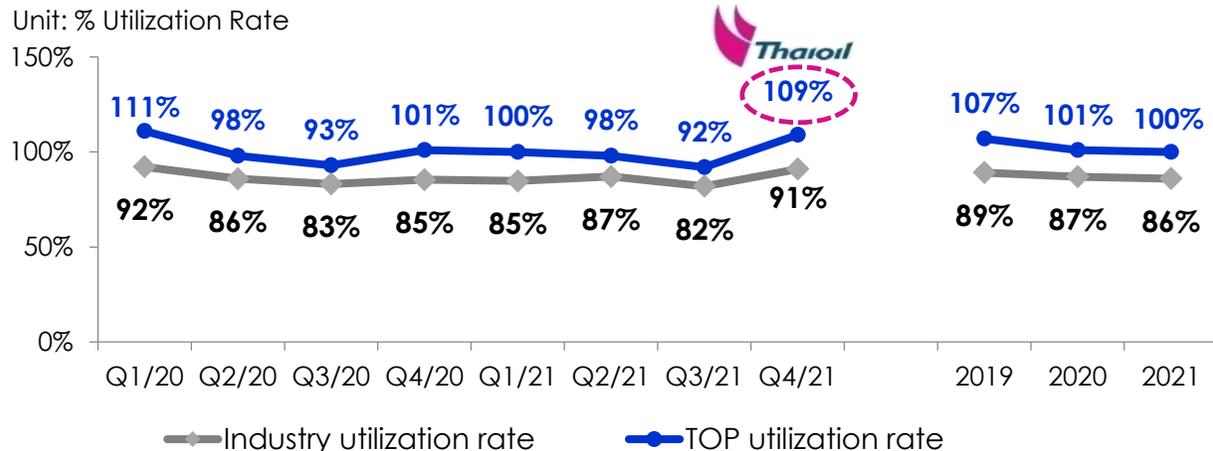
*** Including Nigeria, Russia and others

- 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

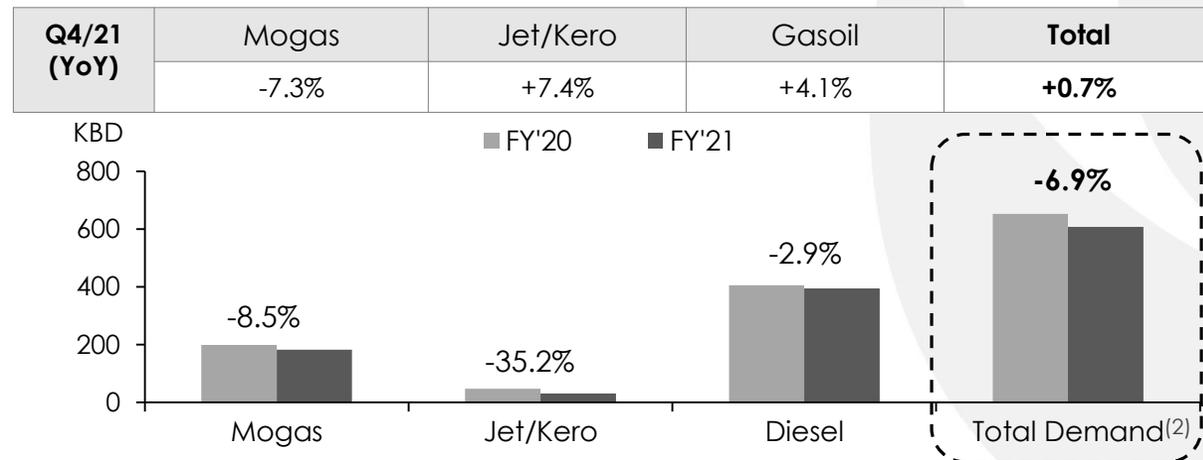
Refinery: Higher Utilization to Capture Strong Product Margins

TOP/ Domestic Refinery Utilization Rate

Unit: % Utilization Rate

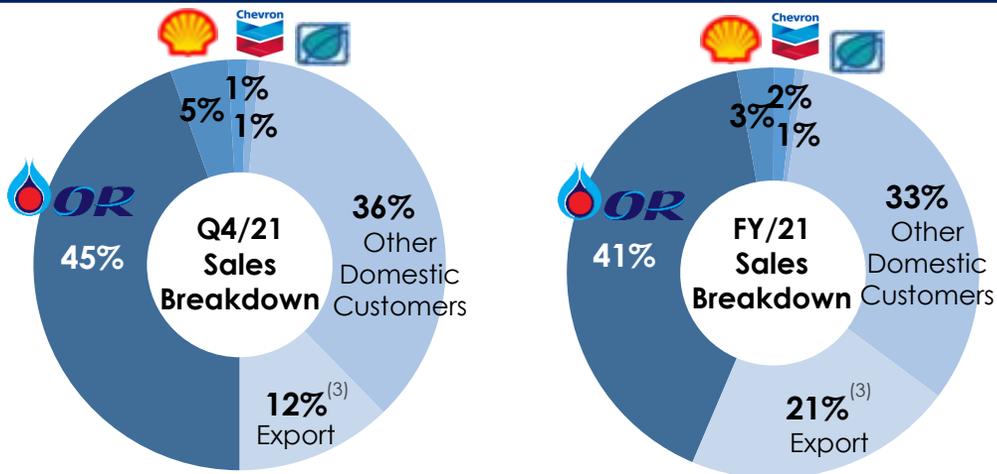


Domestic Oil Demand



(2) excluding fuel oil & LPG demand

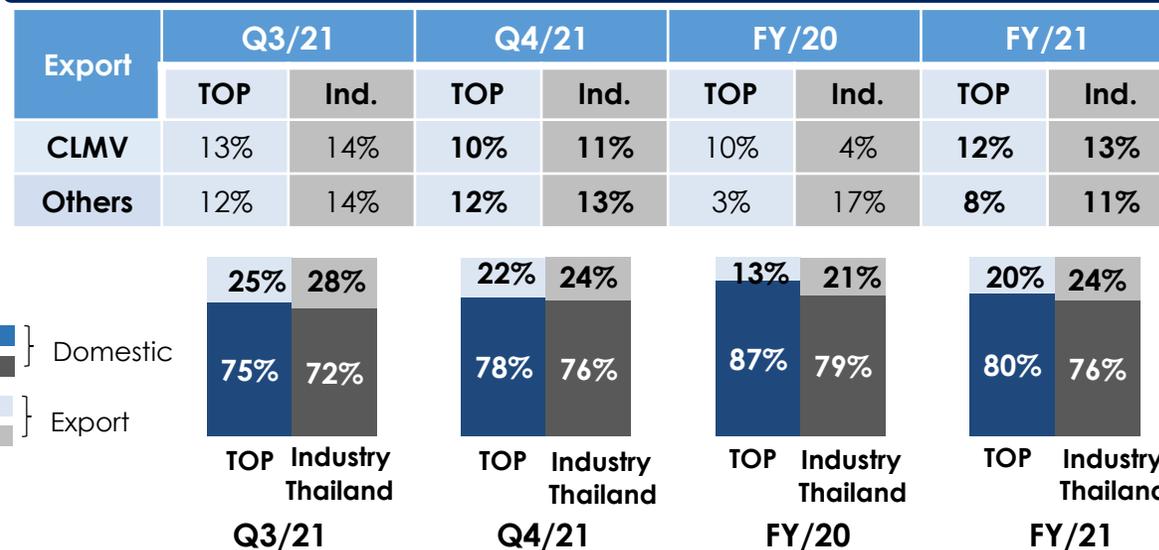
Sales Breakdown by Customers



(3) Excluding export sale through PTT

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

TOP's Domestic Sales vs Industry



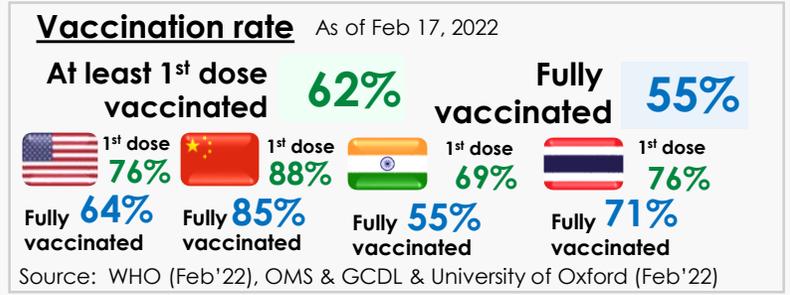


KEY HIGHLIGHTS

2021 – A Continue Challenging Year

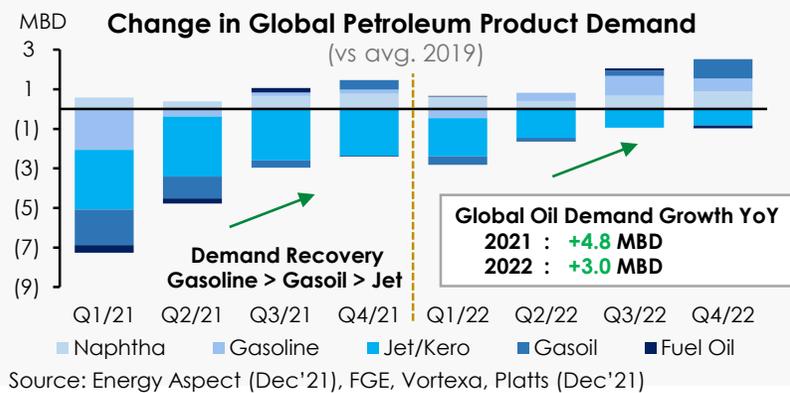
COVID-19 Recovery

- **Accelerated widespread immunization**, 62% of the world population has received at least 1 dose of COVID-19 vaccine
- **Easing COVID border restrictions** in many country including the U.S. , Europe and Asia



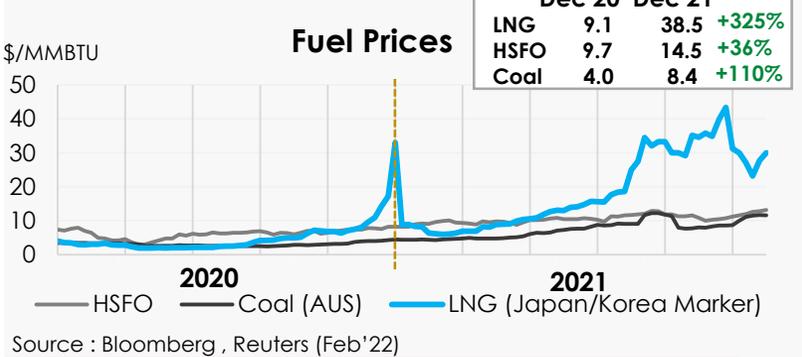
Improving Global Oil Demand

- **Improving gasoline demand** after easing lockdown in major economies
- **Recovering jet demand** on reopening borders



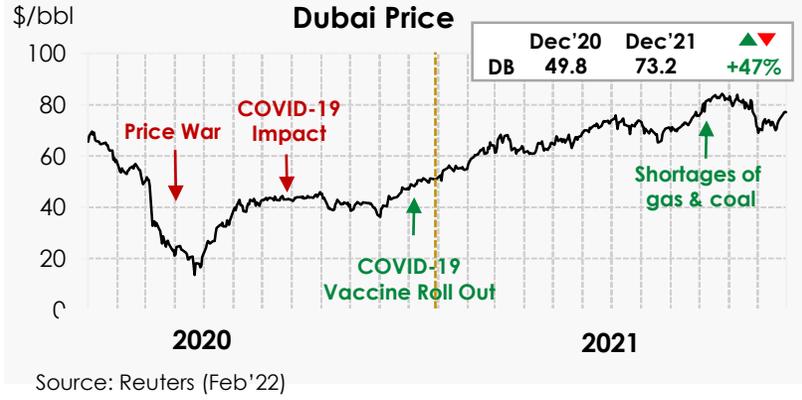
Energy Crisis

- **Natural gas and coal prices skyrocket and reach record level**, reflecting a sharp increase in demand for electricity generation amid constrained supply



Rising Crude Oil Prices

- **Crude oil prices hit multi-year high** as increasing gas to oil substitution amid limited OPEC production increase



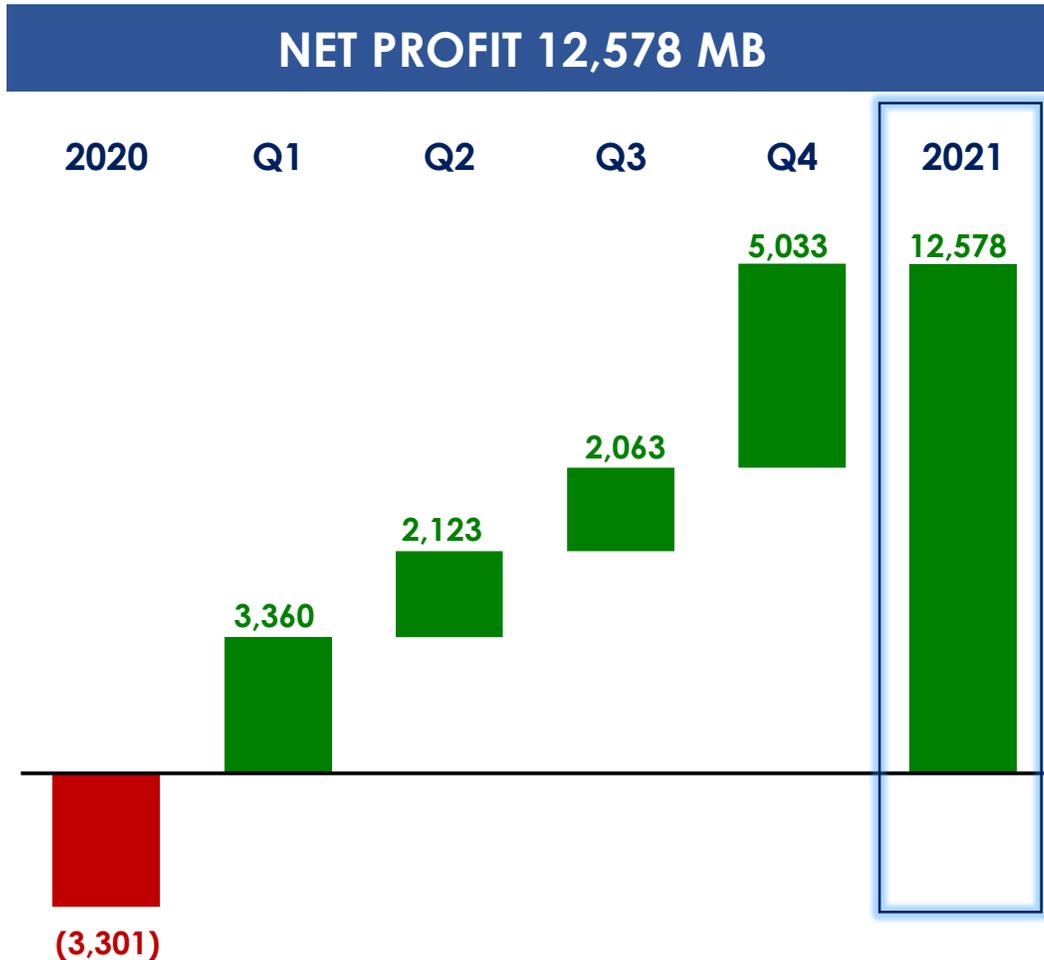
Geopolitical Risks

- Russia & US on Ukraine Invasion**
Potential oil & gas supply disruption
- Houthi Attack in Middle East**
Drone & missiles attacked near oil storage tanks and downtown
- The Kirkuk-Ceyhan Pipeline Explosion**
Explosion at key export pipeline from Iraq to the Turkish port
- Libyan Political Uncertainty**
Libyan oil output reduction due to blockage at oil fields caused an armed forces

Potential Impact on Energy Market

- **Continue rising crude prices** on fears that a possible invasion of Ukraine by Russia could trigger U.S. and European sanctions that would disrupt exports from one of the world's top producers
- With current geopolitical tensions continue and OPEC+ members cannot deliver on their 400 KBD increase, could see oil prices push toward triple figure prices

Extraordinary Achievement - Biggest Profit Turnaround



Biggest net profit comeback 12,578 MB
from net loss of ~ THB 3.3 bn in 2020



Optimization Flexibility

- Minimize jet production
- Maximize subsidiaries and HVP



Crude optimization

- Feedstock optimization



Operation & Commercial optimization

- Capture market opportunity to manage product sale



Stringent cost reduction

- Cost management



Innovative Financial Instrument

- Revenue hedge accounting

Extraordinary Effort : 3-Pronged Strategy

1 People First COVID-19 Response

Employee & Family Protection

- **Vaccination and booster dose** for staffs and staff's family members
- Comprehensive **preventive, proactive & response** measures

✓ **Achievement : 99% of staff are vaccinated**

Business Continuity Protection

- **Working area clustering** for MCA staff
- **Active case finding** with Antigen Test Kit (ATK)
- **Safehouse** for operators
- Enforcing **๑๓ - ๑๕ - ๑๖** for all staffs

✓ **Achievement : No Business Discontinuity**



2 Short-term Maximize Profitability

Operational & Commercial

- **Optimized** overall value-chain utilization & production
- Stretched **operational boundaries**
- Capture **high margin markets**
- **Crude & feedstock optimization**
- Excellent **productivity improvement**

Financial

- Proactive **financial liabilities & FX management**
- **Cost management**
- **Funding readiness**

3 Long-term Strategy Execution

Value Maximization

- **CFP on progress 81%** amid COVID-19 situation



- Completed **olefins investment** in Indonesia (CAP)



Value Enhancement

- **Regional expansion** Singapore & India (JSKem, TSCChem)



Value Diversification

- Successful **restructuring power business and marine**
- Successful **UBE IPO**
- Invested in **2 startups and 1 VC**



Favorable 2022 On Promising Fundamental Recovery

2022 Key Market Highlights

- **Synchronising recovery** from economic re-opening across all regions as well as increasing vaccination rate, boosts up demand to pre-COVID levels
- Increasing oil prices amid rising **global political risks** tightening supplies
- Energy crisis encouraging **Gas-to-Oil switching** and providing upside potential
- Border re-opening is expected to **refuel jet demand**
- **Continuing expanding economic growth** driving fuel demand amid supply tightness



Q1/22 Expected Stronger on Core Business

- **Stronger market GRM** on robust product spreads from improving oil demand amid supply tightness



Source: Reuters (Feb'22)

- **Maintain high utilization rate** to capture recovering domestic & CLMV demand
- **Improving domestic sale** from reopening country and resuming economic activities

Towards Net Zero

Strategy to Achieve Net Zero

Business Portfolio Transformation

- Seek investment opportunities in renewable energy and environmentally friendly businesses
- Increase green revenue growth to 25% of all sales revenue



Decarbonization Operation

- Improve energy efficiency
- Control the proportion of low-emission fuels in production
- Implement highly efficient technology and stop operating older units
- Study carbon capture and storage technology

Low Carbon Society

- Support natural rehabilitation through nature-based solutions



Net Zero GHG emission by 2060

Through Decarbonization and Nature Based Solution



25% Green Revenue



Recapitalization Plan

Transaction	<p>Recapitalization plan for CAP investment funded by bridging loan, will consist of:</p> <ol style="list-style-type: none">GPSC Share Sale at 10.78% or 304,098,630 shares to PTT and/or Siam Management Holdings Company Limited (“SMH”) (100% subsidiary of PTT)Equity Offering of up to 239.2 mm shares with Greenshoe of up to 35.9 mm shares (if any)
Objectives	<ul style="list-style-type: none">✓ Main objective is to repay bridging loan for the strategic investment in CAP✓ Maintain optimal capital structure with expected net debt/equity of less than or equal to 1 time✓ Maintain investment grade of company crediting rating
Completion	<p>Within 2022</p>
Timeline	<p>The timeline diagram features a horizontal blue line with four key milestones marked by colored dots and labeled with dates and descriptions:</p> <ul style="list-style-type: none">17 Feb 22: BoD Approval for Recap Plan (marked with a green checkmark icon)7 Apr 22: AGM Approval for Recap planTarget Completion By Q2/22: GPSC Share Sale Execution (marked with a yellow star icon)Target Completion By Q3 - Q4/22: Equity Offering Execution (marked with a yellow star icon) <p>Below the timeline, two processes are detailed:</p> <ul style="list-style-type: none">Approval Process: Represented by a grey arrow pointing right, spanning from the BoD approval to the AGM approval.GPSC Share Sale Process: Includes the sub-point: GPSC share transfer to PTT and/ or SMH.Public Offering Process: Includes sub-points: Filing submission: after AGM; Offering & subscription process; Newly issued shares to be listed in the SET.

Recapitalization Plan

Equity Offering

Offering Structure

1. Structure

1. **Existing shareholders tranche**
to eligible domestic & foreign existing shareholders
2. **New investors tranche**
to new retail (domestic) and institutional investors (domestic and international - RegS & 144A)
3. **Greenshoe** (if any) for price stabilization. (PTT will be shares lender)



2. Minimum % of PPO PPO > 80%

3. Maximum number of shares up to 275.12 mm shares, inclusive of Greenshoe (if any)

Key Benefits of Structure



Highest fund-raising certainty through PO's extensive investor reach and allocation flexibility



Optimal offering price determination through concurrent offering and book building



Minimize dilution to existing shareholders

Target Completion

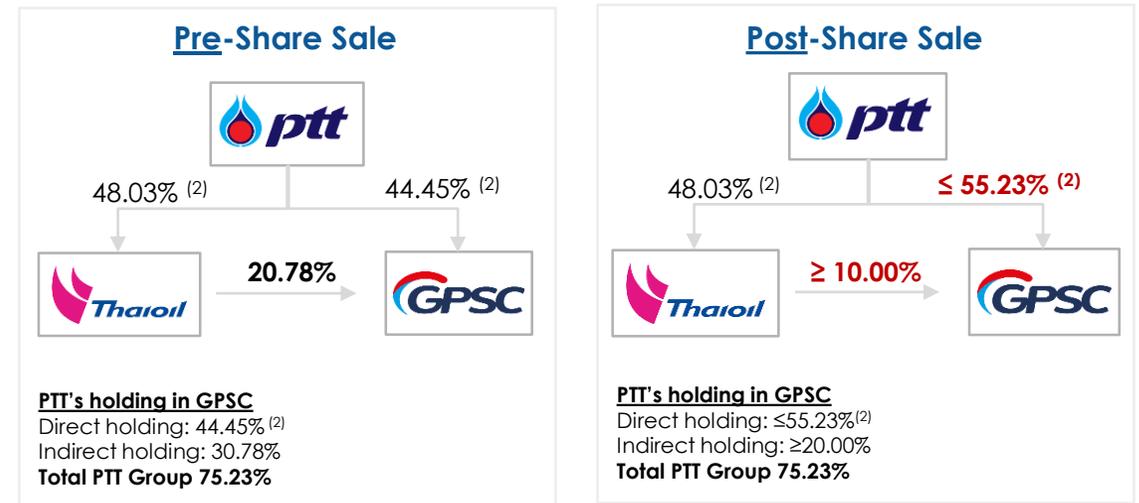
Q3 - Q4/22

GPSC Share Sale

Transaction Details

- TOP sells GPSC shares 10.78% or 304.1 million shares to PTT and /or SMH (100% subsidiary of PTT)
- Total proceeds from GPSC share sale of ~ 22,351 MB⁽¹⁾
- Book gain from share sale and reclassification on P&L

Holding Structure in GPSC



Target Completion

Q2/22

(1) Before deduction of GPSC's dividend

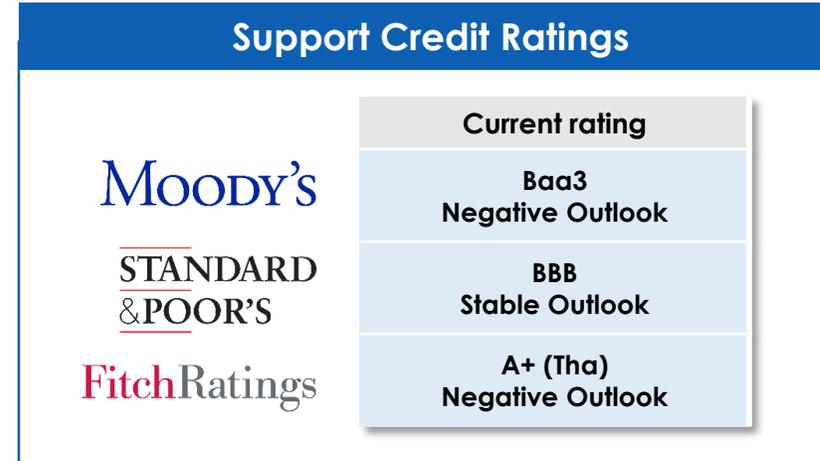
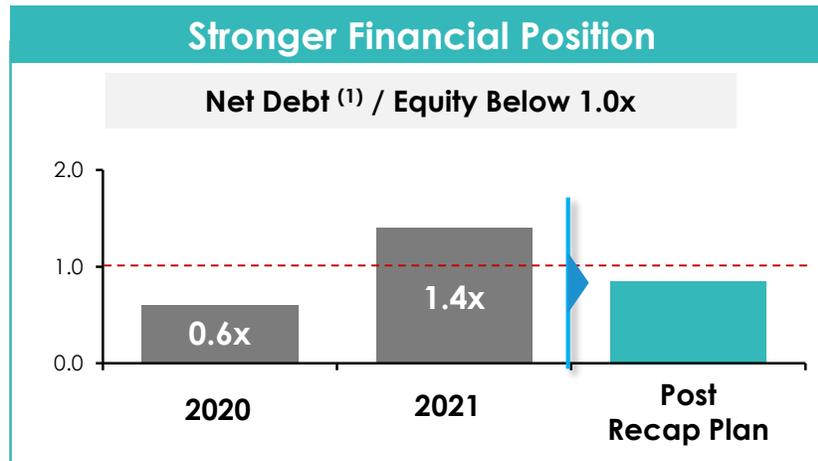
(2) Include shares held via Siam Management Holding Company Limited (SMH)

Key Benefits of Recapitalization Plan



Stronger Financial Position

- Maintain optimal capital structure with expected net debt/equity of less than or equal to 1.0x post recapitalization
- Maintain investment grade of company credit rating



Positive financial impact of P&L from GPSC Shares Sale



Allows TOP to be in the best position to achieve strategic direction of future business expansion plans

(1) Net debt includes lease liabilities



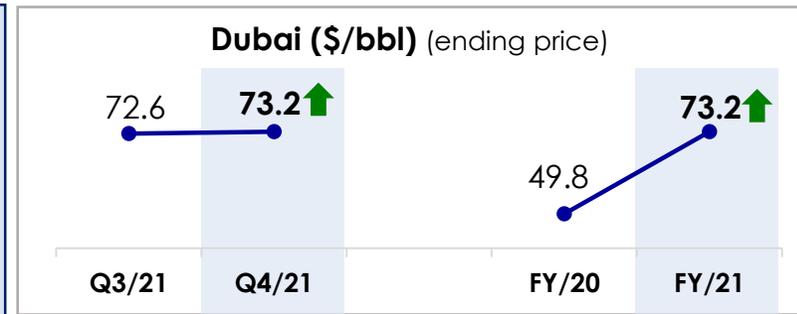
FINANCIAL HIGHLIGHTS

Key Performance Highlight

Crude

QoQ *Dubai rose from \$72.6/bbl to \$73.2/bbl*
 YoY *Dubai rose from \$49.8/bbl to \$73.2/bbl*

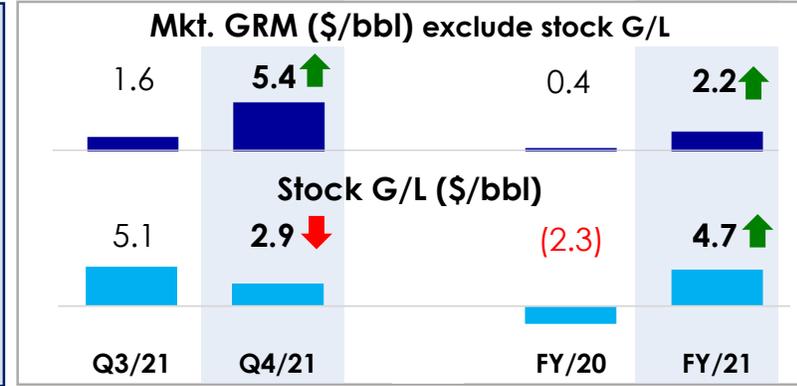
- Shortages of natural gas and coal driving demand for oil in power generation
- Oil demand recovery on easing concern over COVID-19 boosting economic activities
- Limited OPEC+ production tightening crude market



Refinery

QoQ *Mkt GRM improved from \$1.6/bbl to \$5.4/bbl*
 YoY *Mkt GRM improved from \$0.4/bbl to \$2.2/bbl*

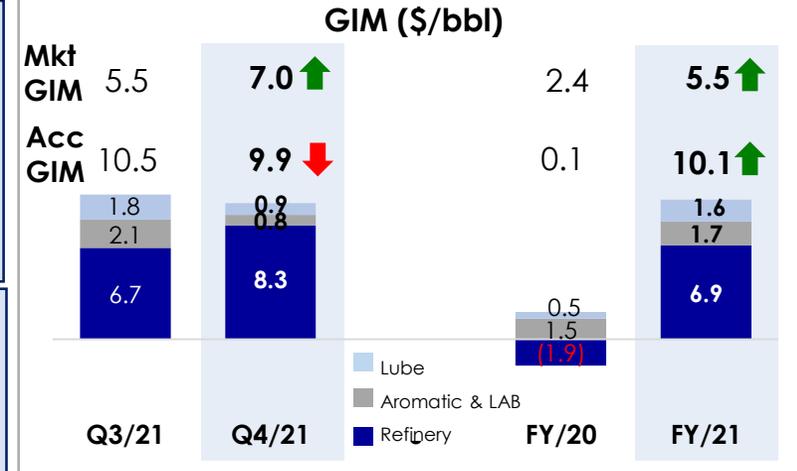
- Improving Gasoline spread due to improving demand on easing restrictions in many countries amid supply tightness and low inventory in the US
- Strong Middle Distillate spreads on improving demand from the reopening of economies especially in Asia and seasonal heating oil demand during winter
- Increasing LSFO spread from tight supply following unplanned maintenance SD in Kuwait
- Softening HSFO spread following higher supply from increasing refinery production



Aromatic & LAB

QoQ *Contributions softened from \$2.1/bbl to \$0.8/bbl*
 YoY *Contributions improved from \$1.5/bbl to \$1.7/bbl*

- Softening PX and BZ margins from weakening downstream (PTA, polyester, SM) demand from power rationing amid new supply addition in China
- Robust LAB Contribution due to improving regional demand after monsoon season amid limited supply from LAB plant unplanned SD in North Asia

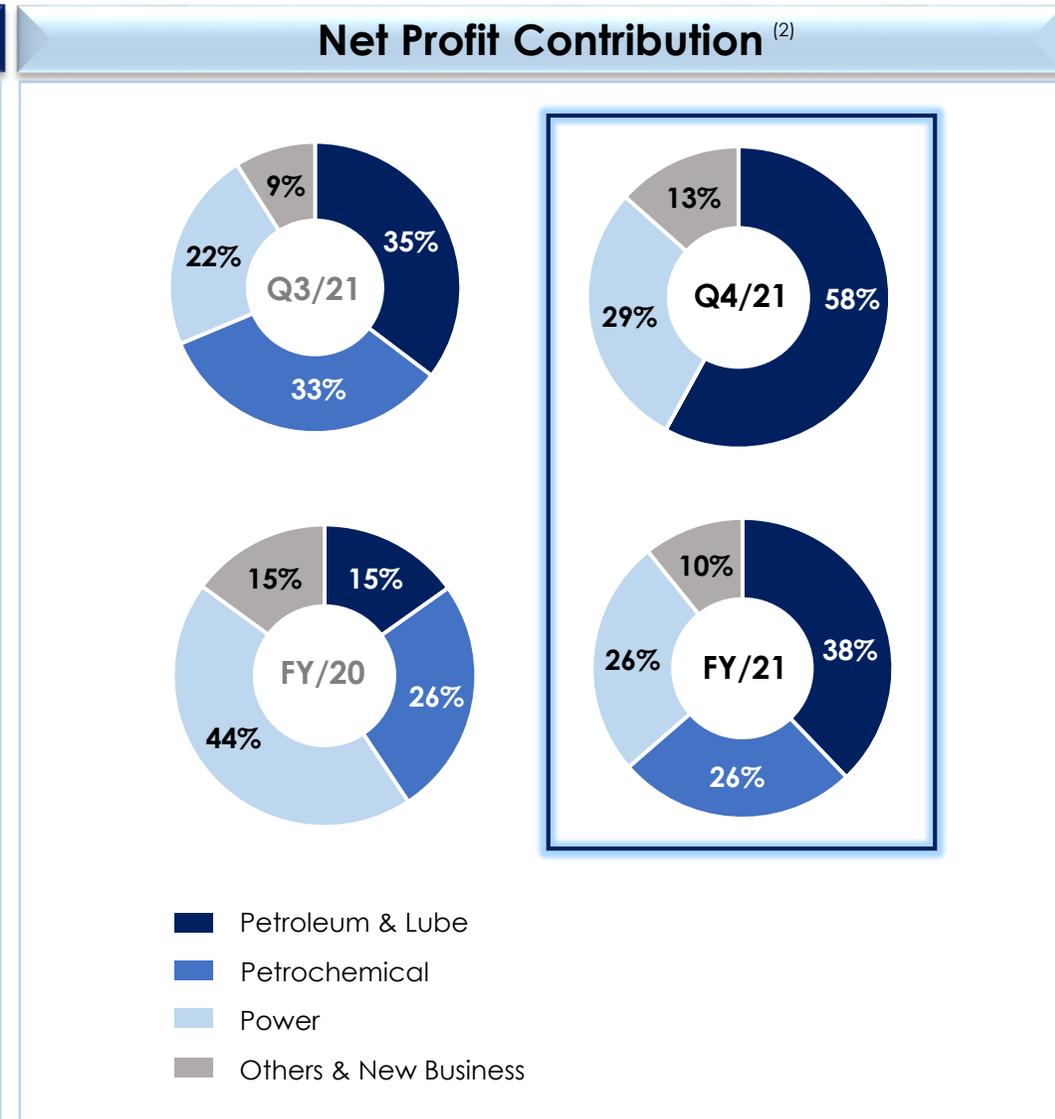
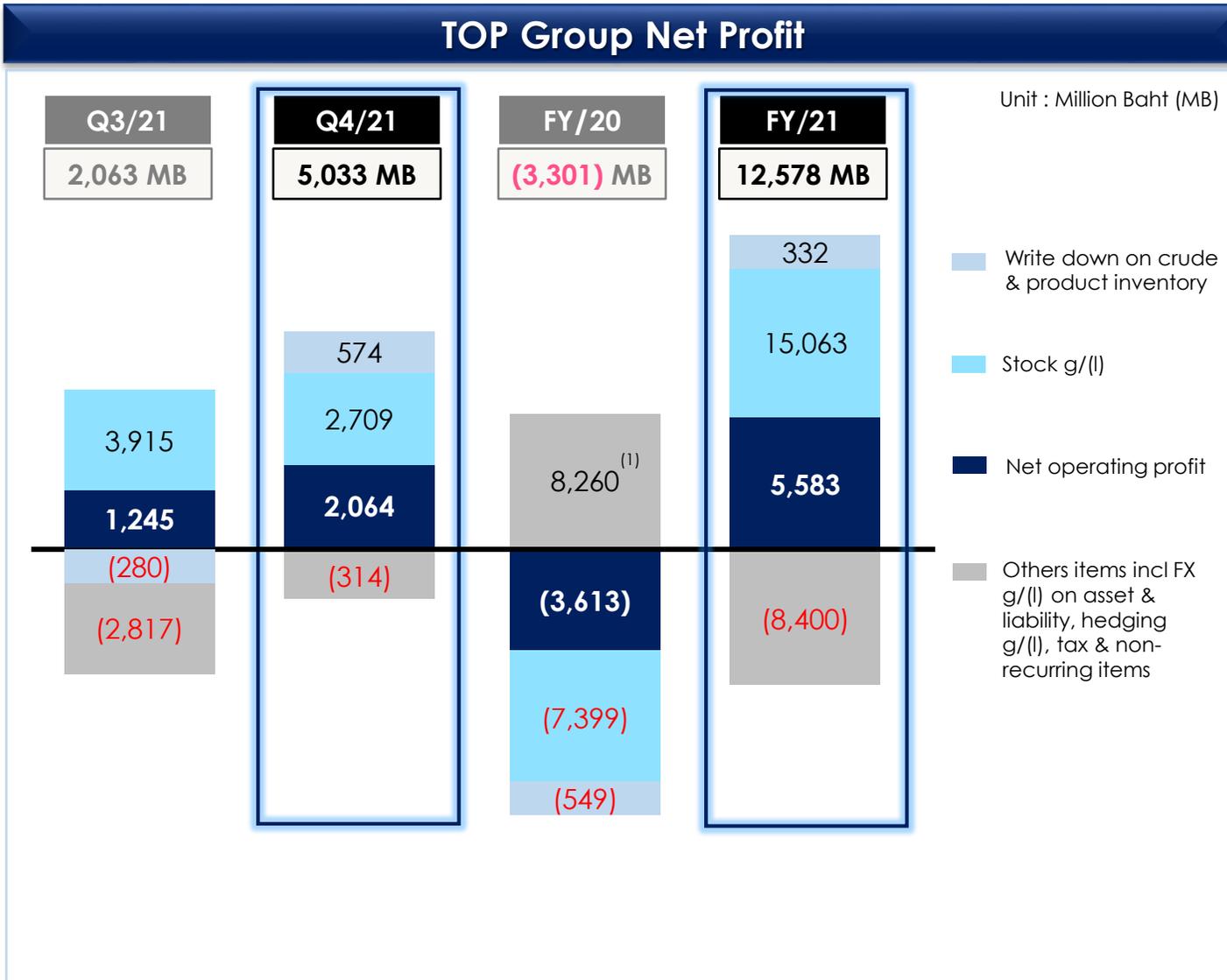


Lube

QoQ *Contribution softened from \$1.8/bbl to \$0.9/bbl*
 YoY *Contribution improved from \$0.5/bbl to \$1.6/bbl*

- Softening Base Oil margins due to higher regional supply from increasing refinery run and resumption from maintenance SD

TOP Group Net Profit



(1) Including gain on GPSC share sale 5,801 MB

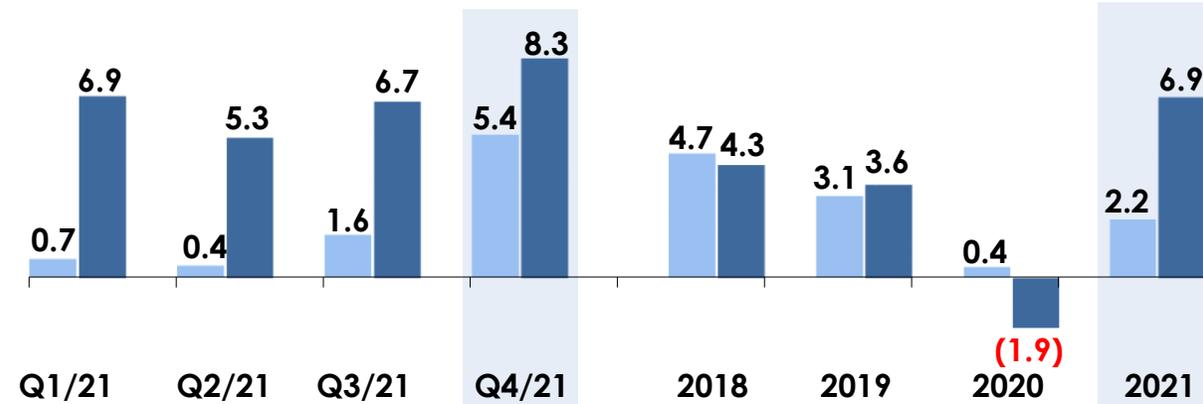
(2) excluding stock g/(l) and one-time item

Integrated Margin & Competitive Cash Cost

Gross Refining Margin

(Unit: US\$/bbl)

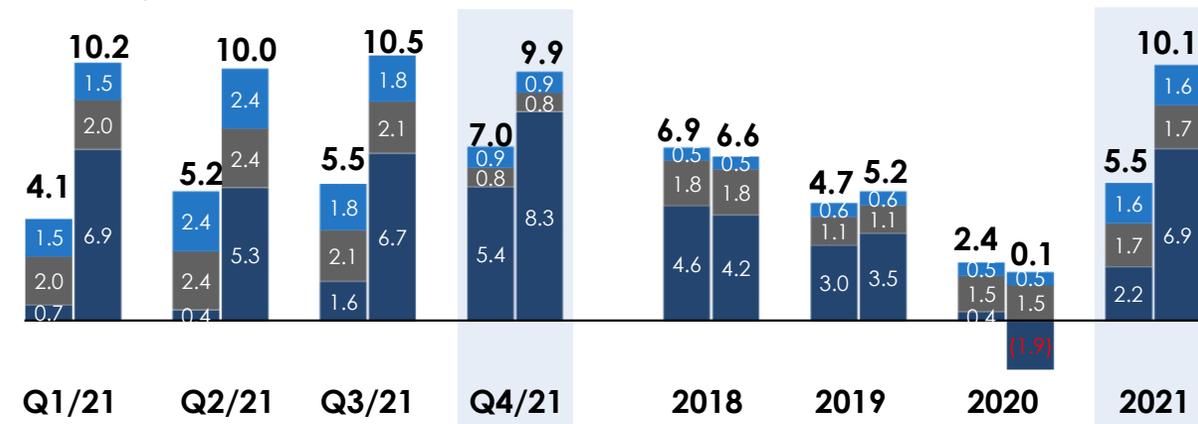
■ Market GRM ■ Accounting GRM (Market GRM + Stock G/L)



Gross Integrated Margin

(Unit: US\$/bbl)

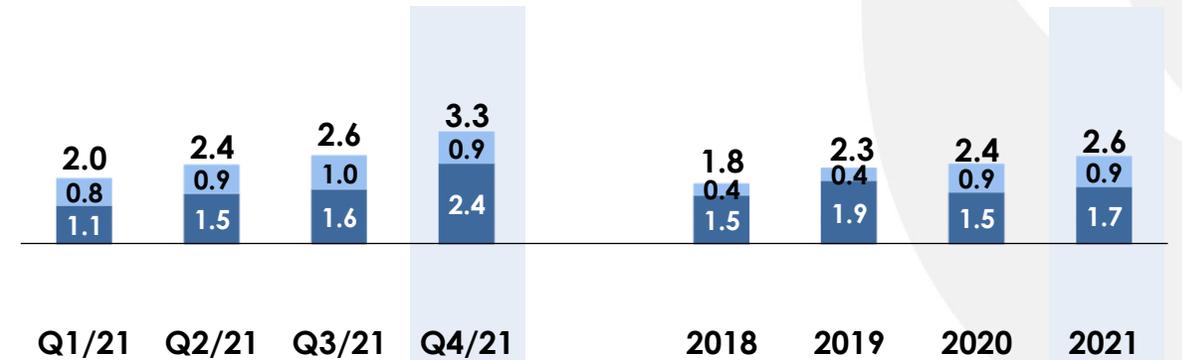
■ Market GRM ■ Accounting GRM (Market GRM + Stock G/L)
 ■ Refinery ■ Aromatic & LAB ■ Lube Base



Refinery's Cash Cost

(Unit: US\$/bbl)

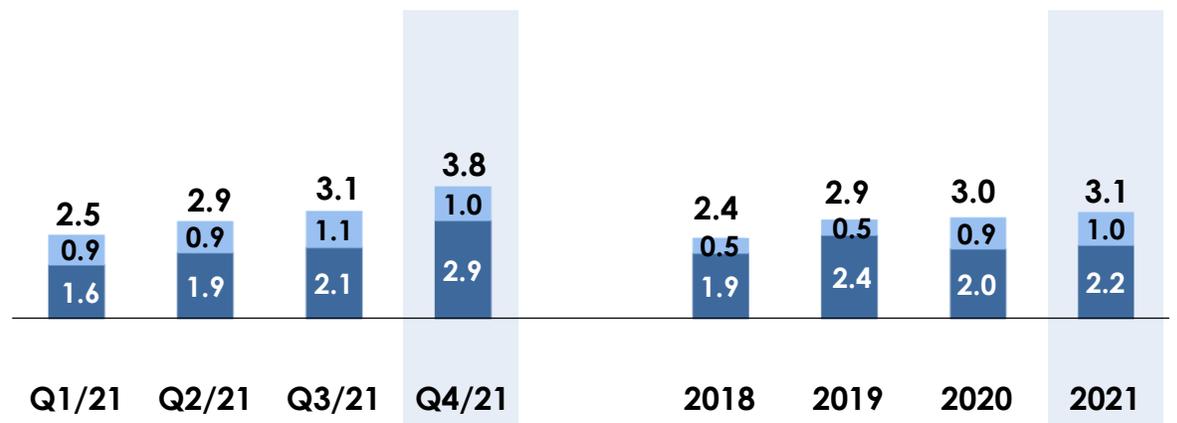
■ Operating Cost ■ Interest Expense (net)
 (excl. one-time non-operating item)



Group's Cash Cost

(Unit: US\$/bbl)

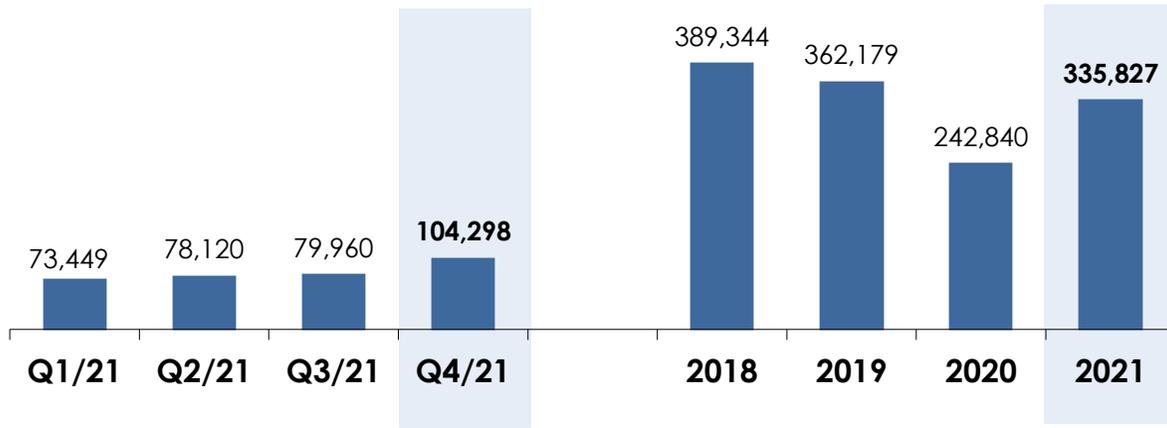
■ Operating Cost ■ Interest Expense (net)
 (excl. one-time non-operating item)



Financial Performance

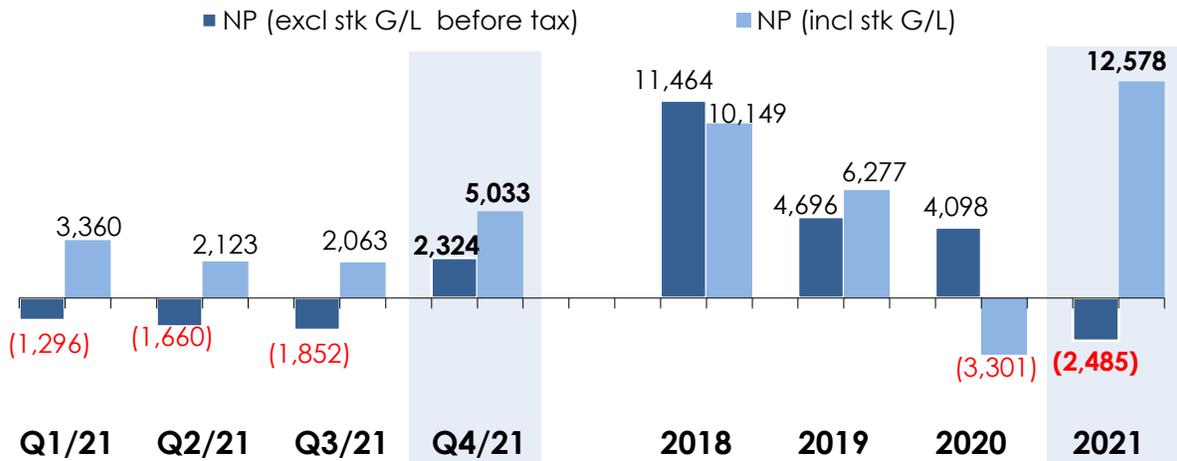
Sales Revenue

Unit: Million THB



Net Profit

Unit: Million THB

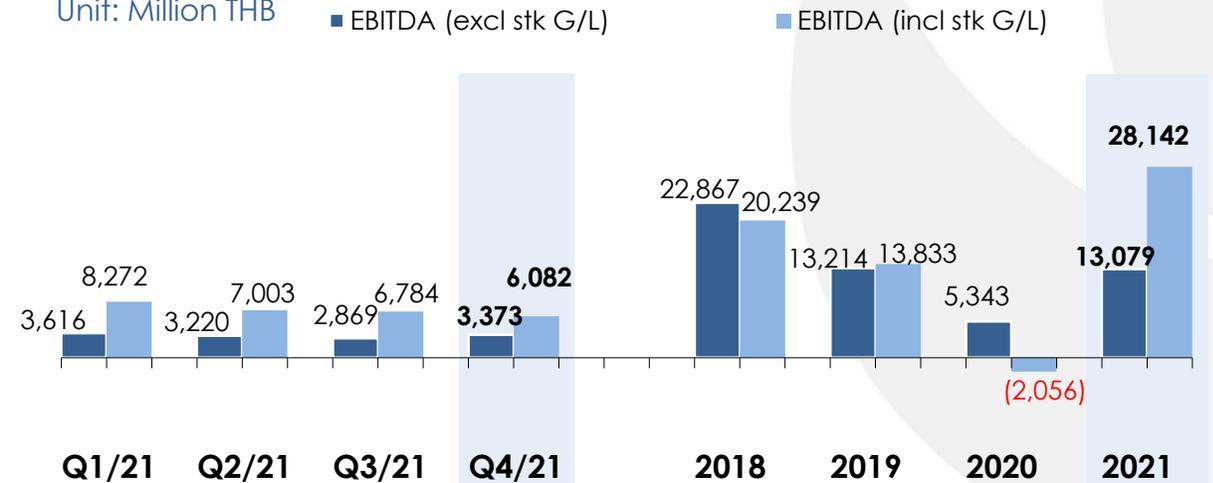


^R Restated financial statement

* Free Cash Flow (FCF) = Operating cash flow – Net CAPEX(PP&E)

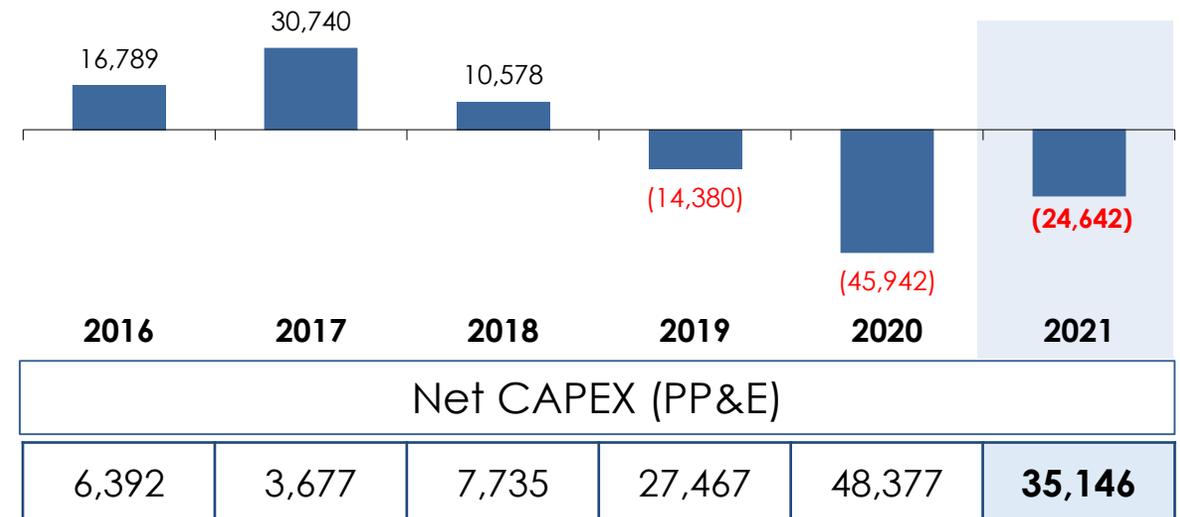
EBITDA

Unit: Million THB



Free Cash Flow*

Unit: Million THB



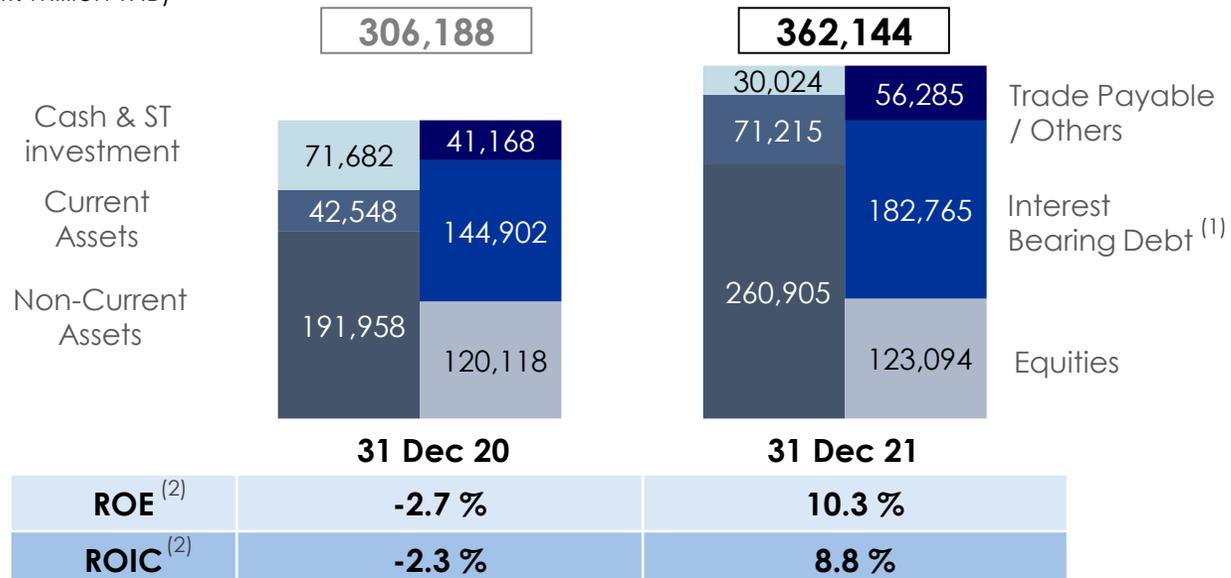
Net CAPEX (PP&E)

6,392	3,677	7,735	27,467	48,377	35,146
-------	-------	-------	--------	--------	---------------

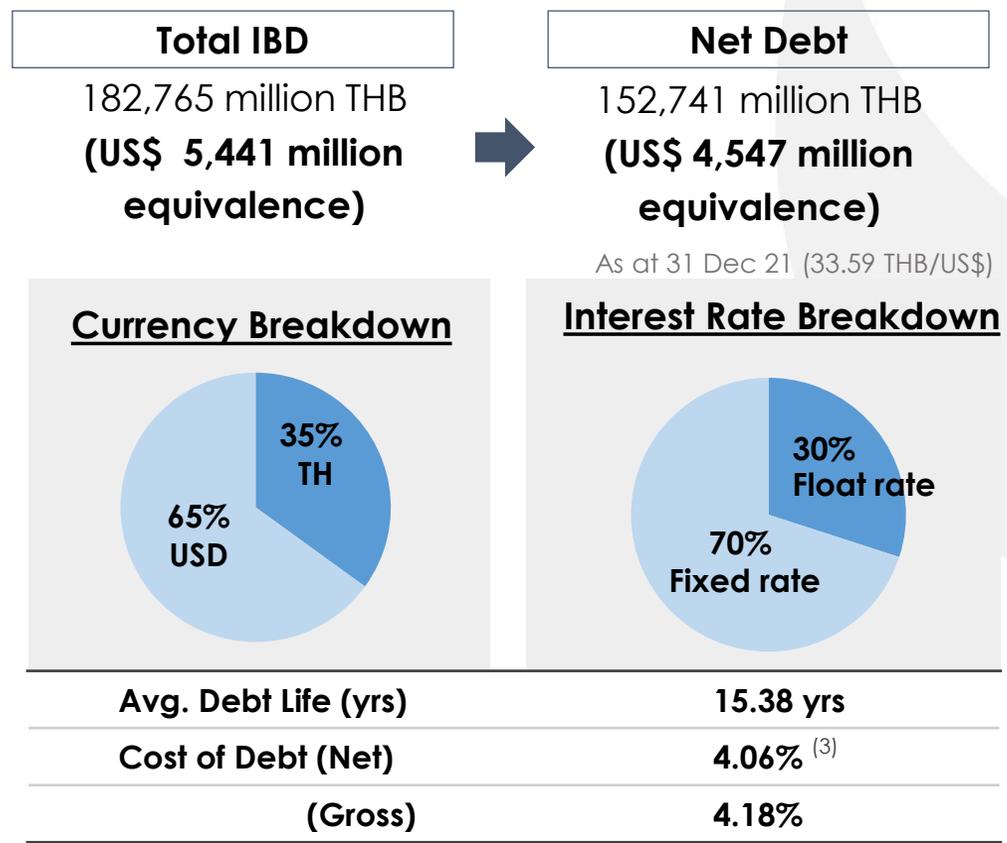
Q4/21 TOP Group Financial Position & Financial Ratios

Statements of Financial Position

(Unit: million THB)

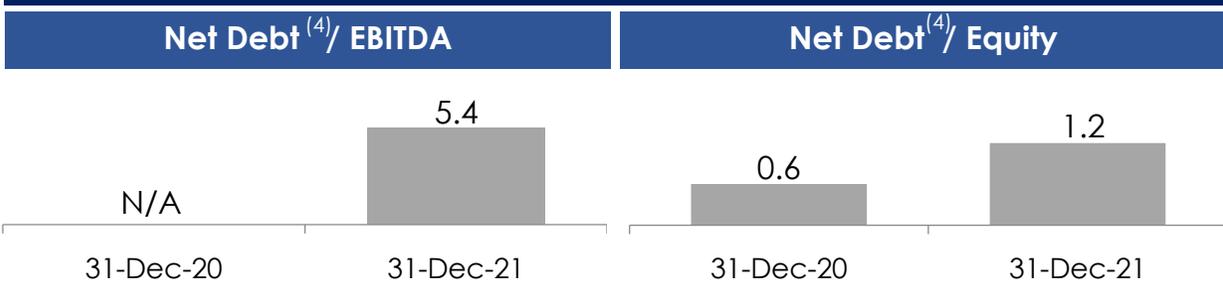


Consolidated Long-Term Debt as at 31 Dec 21



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

Financial Ratios



(4) As of 31 Dec 21 Net Debt 152,741 MB excluding lease liabilities 14,135 MB

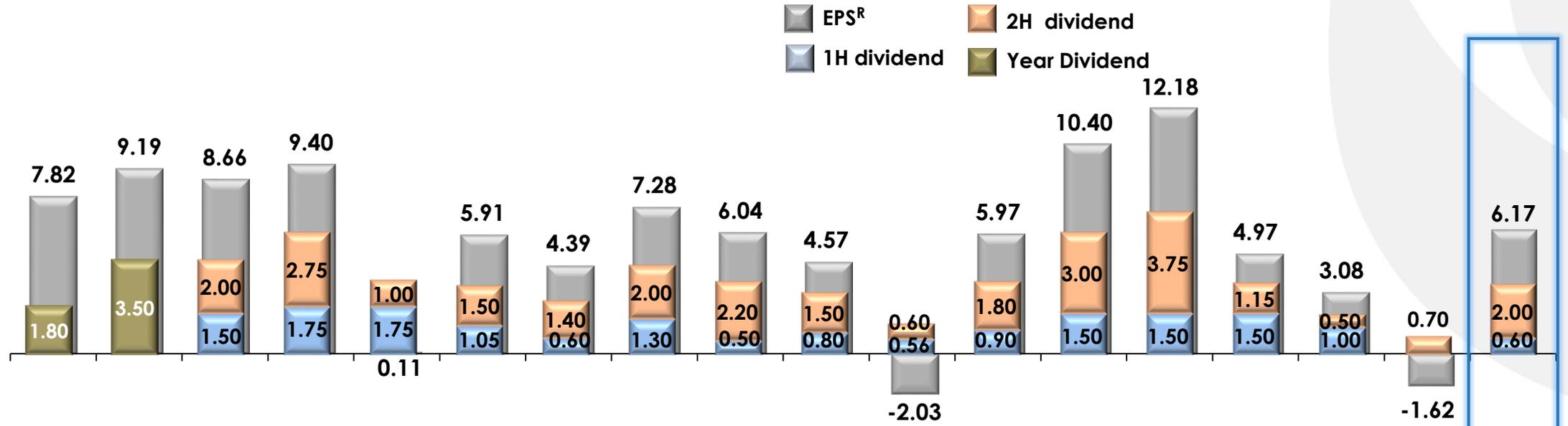
(3) Due to yield enhancement

	MOODY'S	STANDARD & POOR'S	FitchRatings
Final rating	Baa3	BBB	A+(Tha)
	Negative Outlook	Stable Outlook	Negative Outlook

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



	FY/04	FY/05	FY/06	FY/07	FY/08	FY/09	FY/10	FY/11	FY/12	FY/13	FY/14	FY/15	FY/16	FY/17	FY/18	FY/19	FY/20	FY/21
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	2.60
Dividend Payout	23% ^{**}	38%	40% ^{**}	48%	N/A	43%	45%	45%	45%	50%	N/A	45%	43%	43%	53%	49%	N/A	42%
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%	4.8%
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	54.4

^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 January 2022

Project	Actual 2021	Estimated Budgeting for Investment Plan 2022 - 2024
CFP project *	1,015	887
Total Ongoing CAPEX	56	145
Reliability, Efficiency and Flexibility Improvement	10	37
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)	27	45
Other Investments (i.e. Corporate Venture Capital - CVC , Digital Transformation)	19	63
TOP SPP Expansion	45	100
Olefins Investment	913	270
Total CAPEX	2,029	1,402

* 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



STRATEGIC INVESTMENT PLANS

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

Vision



Empowering Human Life
through Sustainable Energy and Chemicals

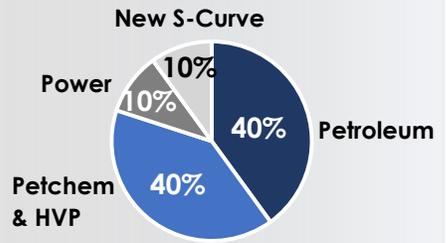
Strategic Objective

To be a competitive Energy & Chemicals company that
delivers sustainable returns & better quality of life to all stakeholders

Measurement

Growth / Earnings Diversity / Returns / Sustainability / Stakeholders

Portfolio Strategic
Direction



Effective Execution

People + Patronage + Partnership + Platform

Drive for Sustainability

Environment + Social + Governance

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”

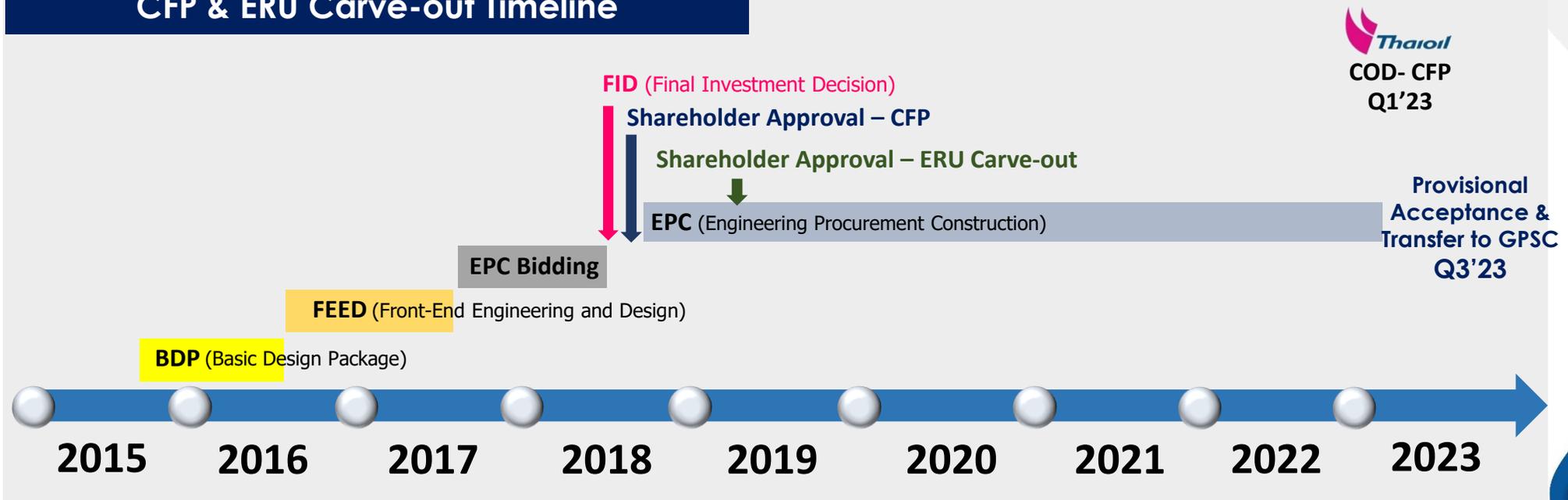
- Power to provide stable earnings
- Step up effort on New Ventures
- Window to identify new S-curve opportunities & diversity sources of earnings

CFP Rationale & Timeline

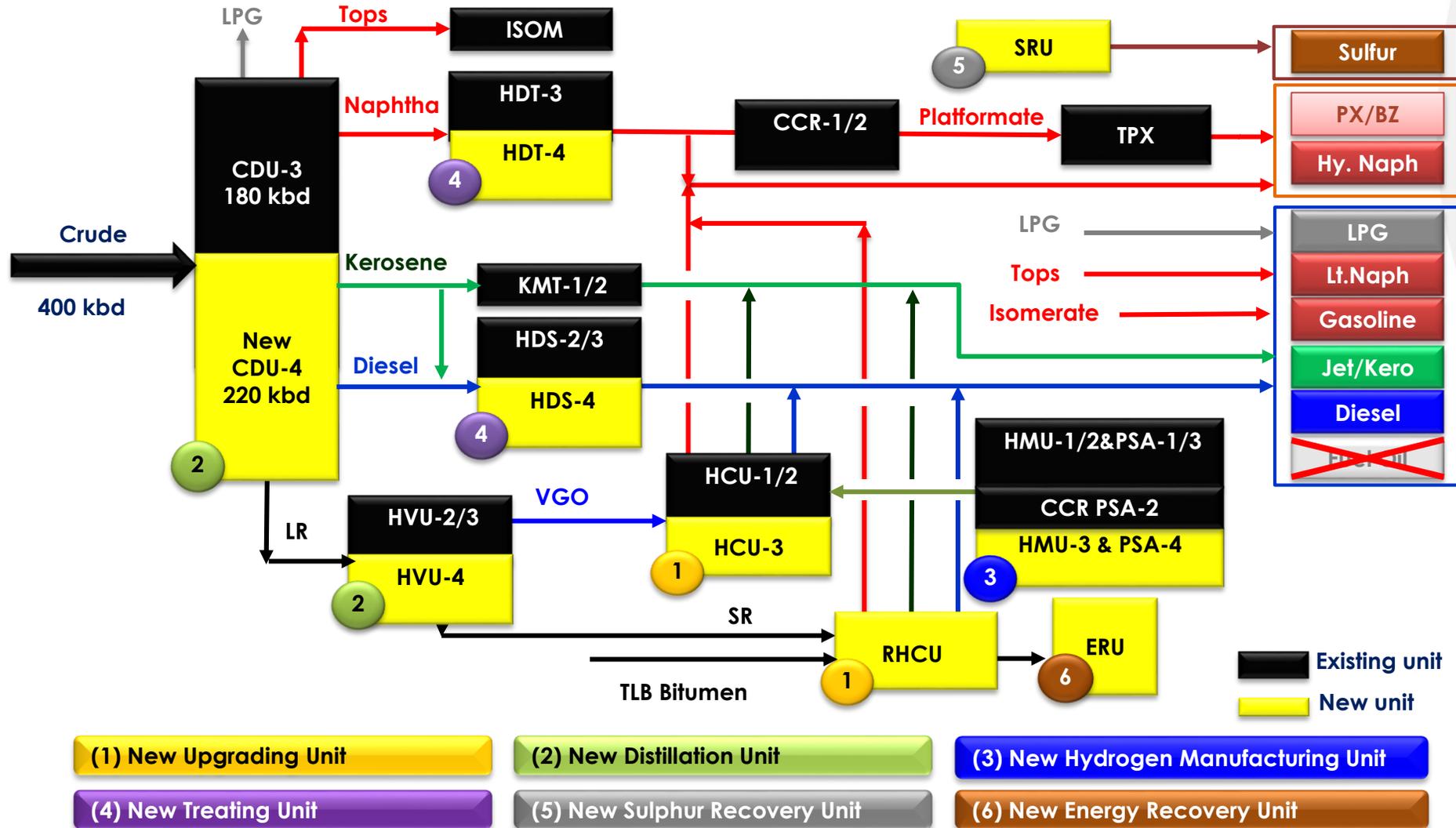
Project Rationale

- Risk of losing competitiveness to others regional refineries as more new refineries with higher capacity and more advanced technologies are on stream.
- Adjust product portfolio by producing high demand and clean product to serve customer needs and country's energy stability.
- Replace units i.e. CDU 1,2 which have been operating more than 50 and 40 years respectively.

CFP & ERU Carve-out Timeline



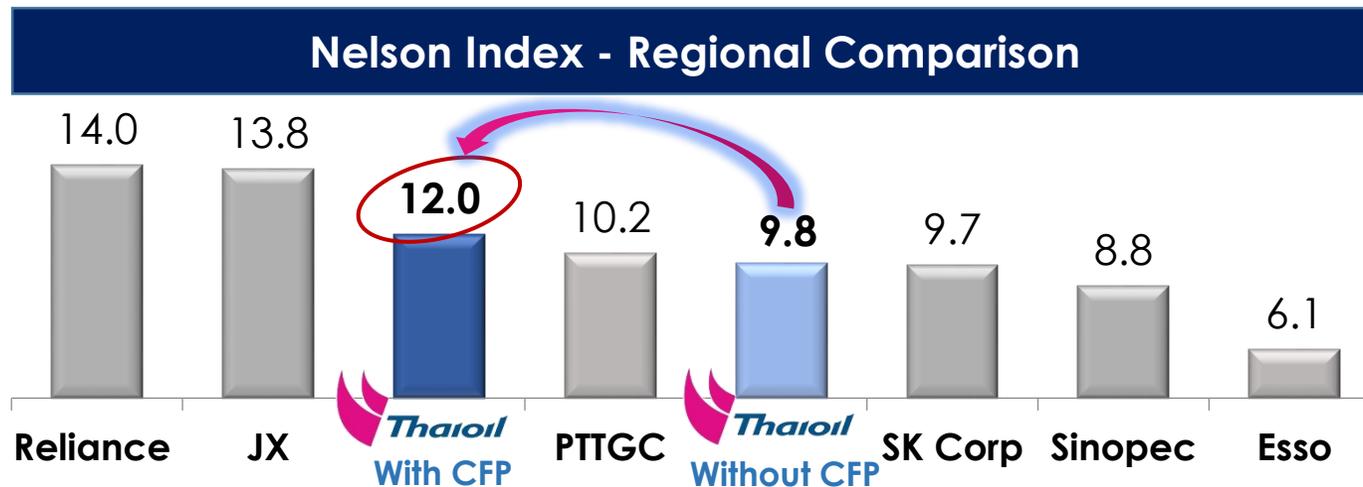
Scope of CFP & Technical Aspect



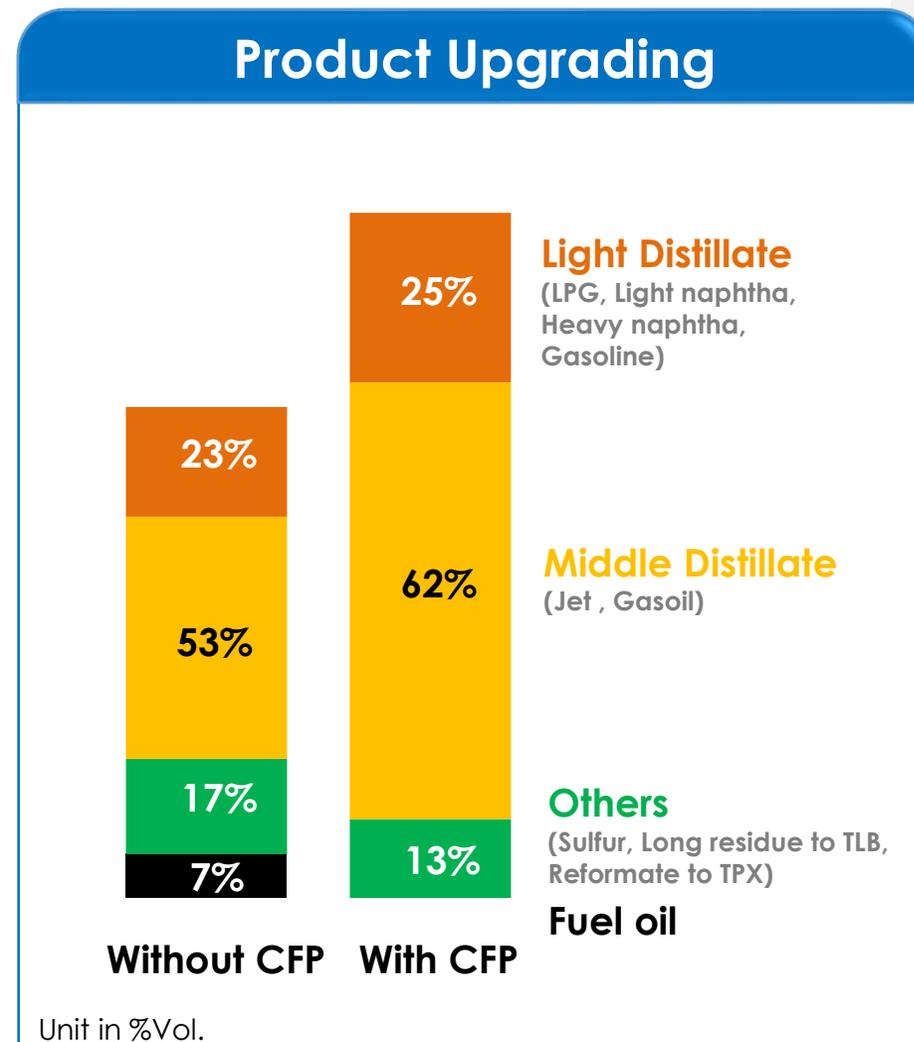
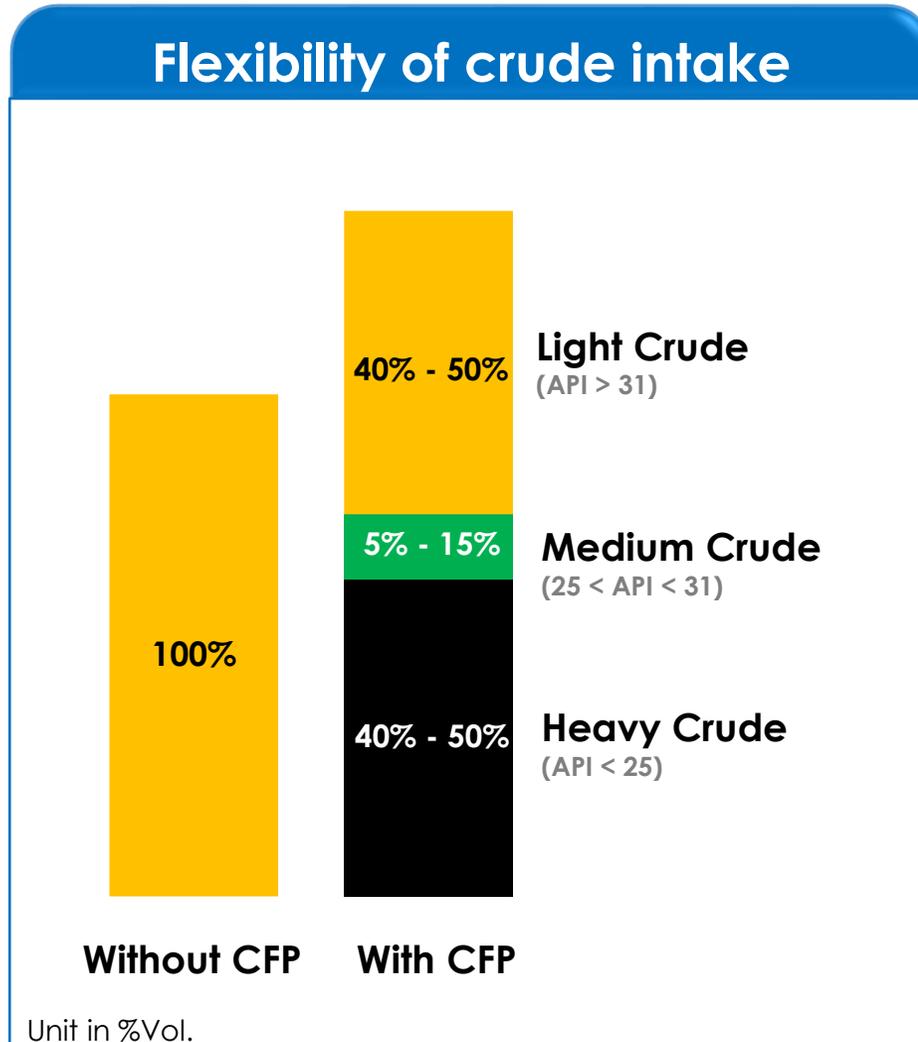
CFP Competitiveness

Without CFP	With CFP
<ul style="list-style-type: none">• CDU Capacity 275,000 bbl per day• Upgrading Ratio 28 % (upgrading capacity⁽¹⁾ over CDU capacity)	<ul style="list-style-type: none">• CDU Capacity 400,000 bbl per day• Upgrading Ratio 50% (upgrading capacity⁽²⁾ over CDU capacity)• Power Plant 250 MW

Remark : (1) including HCU 1/2, FCCU, TCU (2) including HCU 1/2/3, RHCU



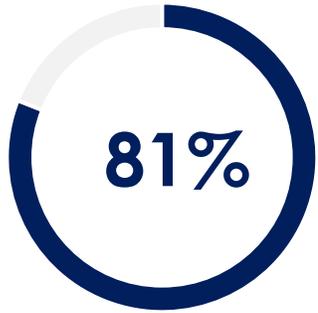
CFP Value Proposition



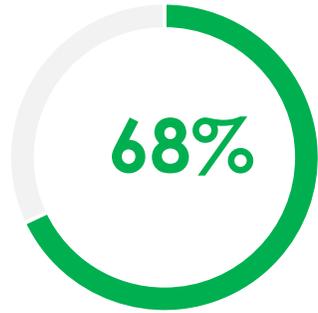
Note : After CFP, all products based on average data 2023-2043

Clan Fuel Project (CFP)

Overall CFP Progress



Project Progress
As of end Dec'21



Budget Utilization
As of end Dec'21

2021 Progress

- Continuing equipment and module arrival to Thailand
- Massive progress of heavy lifting work for critical equipment and module installation
- Completed main substation structure construction for energization by 2022
- Maximized manpower in critical construction area and balanced personnel in non critical area to control COVID-19 situation
- Continuing construction at site amid strict COVID-19 control measures

Going Forward in 2022

- Focus on construction at site i.e. equipment and module installation work
- Most of equipment and module will be arrived Thailand and ready to be installed in 2022



Olefins Investment

Transaction Summary



15.38% stake in CAP



Chandra Asri



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



Achieving TOP's Strategic Objectives: Integrated Crude to Chemicals



TOP's Strategic Direction

Strategic Objectives Achieved

Value Maximization



Further extend Hydro-Carbon value chain to Olefins PetChem, in addition to existing Aromatics

- ✓ A jumpstart into Olefins value chain
- ✓ Minimum investment in existing facilities & growth plan
- ✓ Avoid adding new capacity
- ✓ Instant upgrade of LPG & Naphtha value from CFP
- ✓ Partner with reputable & experienced local Indonesian & Thai

Value Enhancement



Geographic expansion



Platform for international growth

- ✓ Strategic market location – supply shortfall & growing
- ✓ Opportunity to expand to other businesses
- ✓ Gateway to Indonesia

CAP2 Expansion is a Transformative Project for CAP

CAP2 Project Overview



Approx. USD 5 bn new plant to double CAP's Petrochemical Capacity



Flexible Feedstock Configuration



Synergy with Existing Plant

- 93% of Land has been secured adjacent to the existing plant



Strong Support From the Government

- 20+2 year Corporate Income Tax Holiday (even pre-FID)⁽¹⁾
- EIA approved



Rights issue

- Expected primary proceeds of USD1.1bn
- Doesn't expect another capital increase to develop CAP2



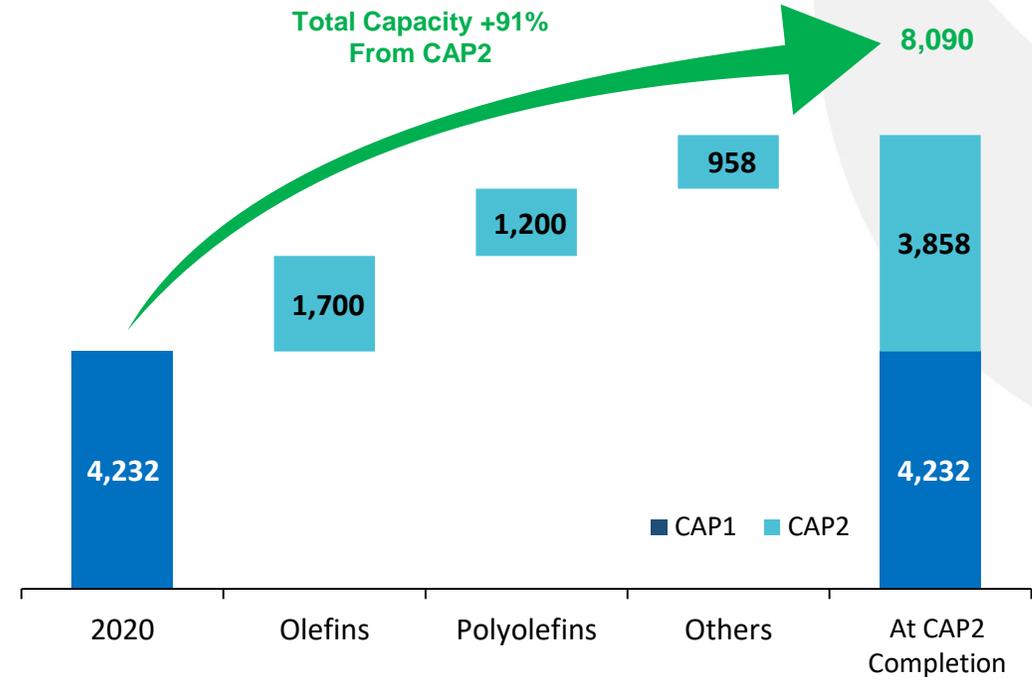
Expected Final investment decision (FID) in 2022

Expected COD in 2026



CAP2 Will Double The Capacity of CAP

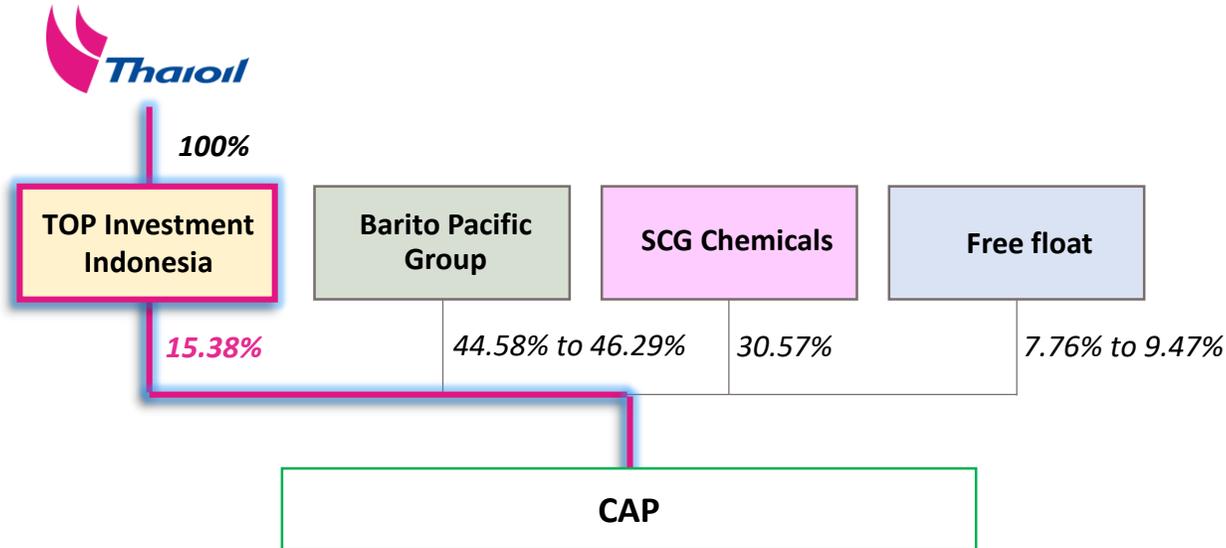
Unit '000 tons



Note: (1) 20 years at 100% off corporate income tax and 2 years at 50% off corporate income tax
Source: CAP's Presentations



Details of Investment



Investment for 15.38% in CAP split into 2 tranches		
	Payment (US\$ mm)	% Share
1 st Tranche	913	15.0%
2 nd Tranche (when CAP2 FID in 2022)	270	0.38%
Total	1,183	15.38%

Use of Proceeds



All primary proceeds to CAP will be used for the development and construction of CAP2 Project

Condition Precedents



All necessary approvals including approval from the OJK are obtained

Timing



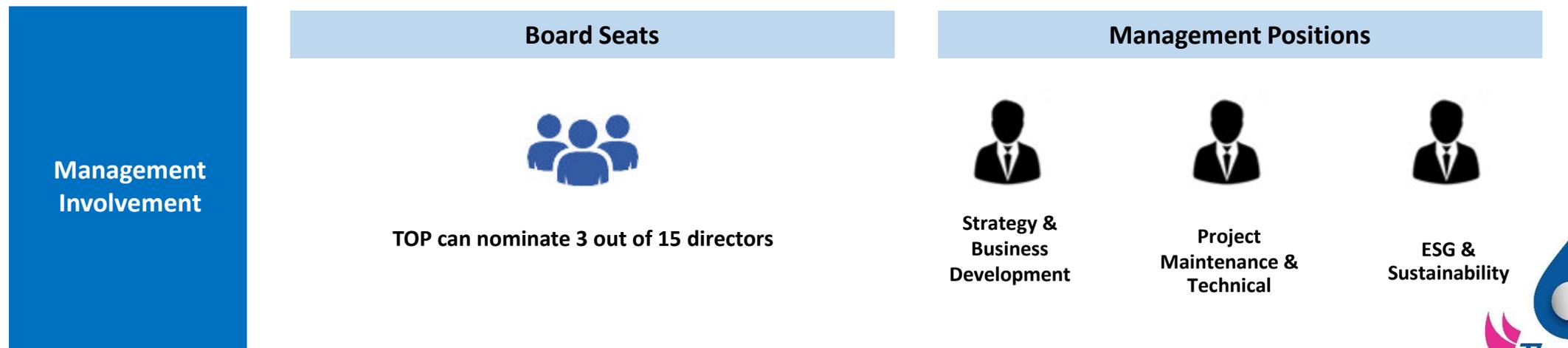
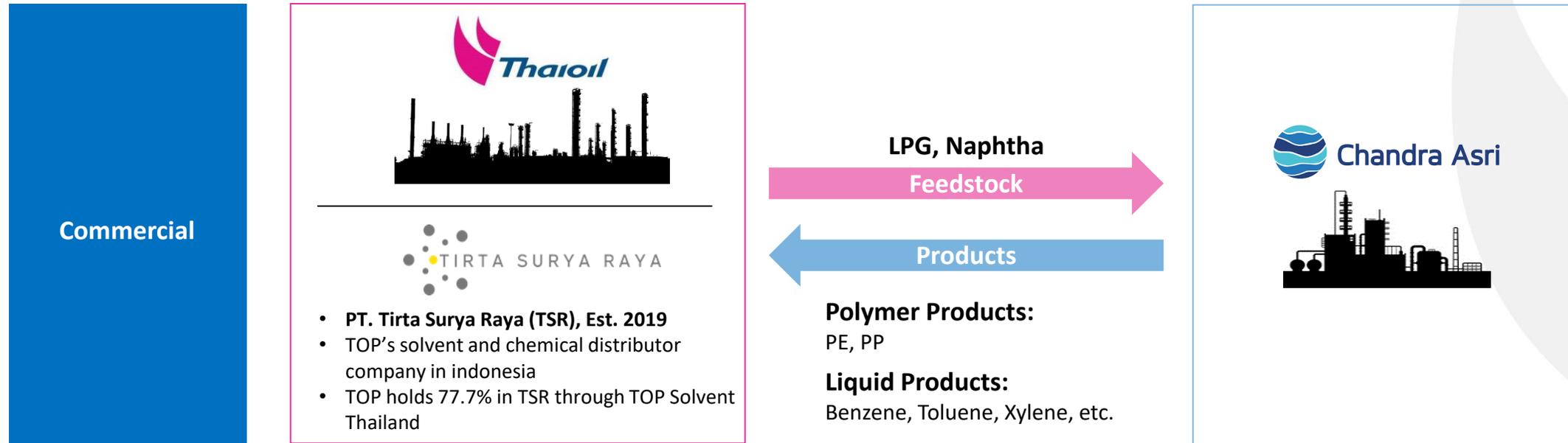
Closing for the 1st transaction is expected within 30 September 2021

Equity Accounting

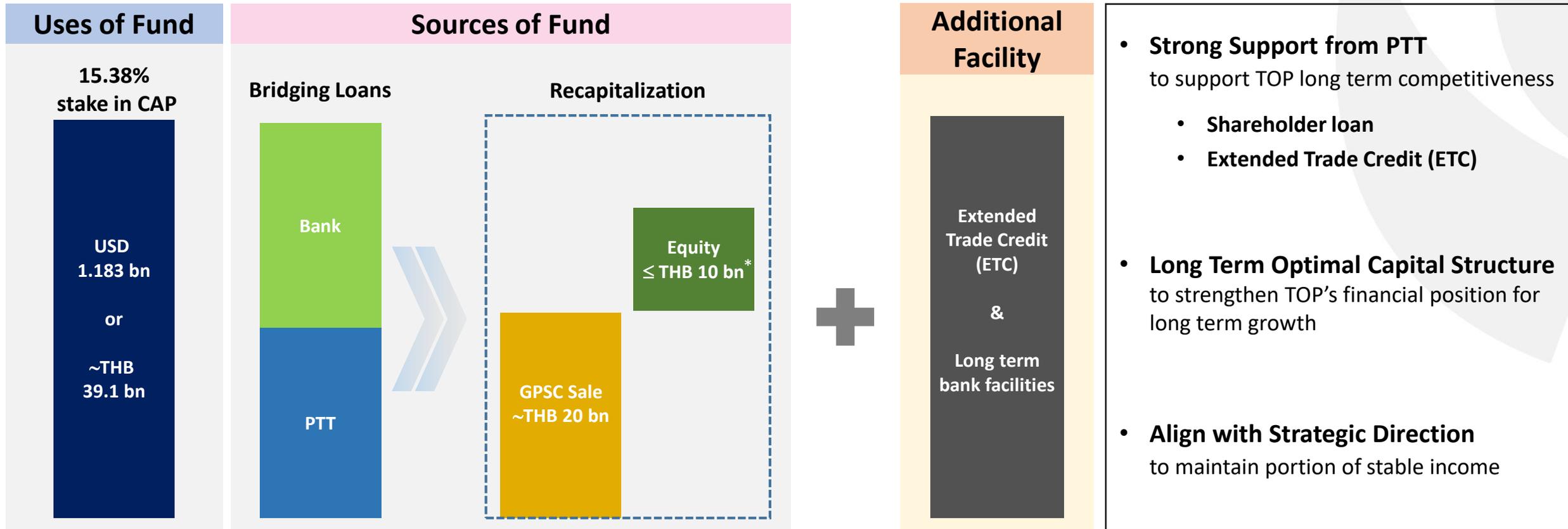


TOP can apply equity accounting method after the 1st transaction

Key Partnership Arrangements



Funding Plan for the Transaction



*Excluding greenshoes

Long-Term Recapitalization Plan and Short-term Liquidity Support

Objectives

- ✓ Return **Optimal Capital Structure** With Net D/E ~ 1.0x ⁽¹⁾
- ✓ Maintain **Investment Grade Credit Rating** in Short-term and **Credit Rating Upgrade** in Long-term ⁽²⁾
- ✓ Minimize **Impact to Shareholders**

Recapitalization

-  Sale of up to **10.8% GPSC Shares**⁽³⁾
-  Equity Offering of up to **~ THB 10,000 mm**⁽⁴⁾

Short-term Liquidity Support

-  **90-Day Extended Trade Credit Term from PTT**

Recapitalization Plan will Strengthen TOP's Capital Structure and Provide a Strong Foundation for the Next Stage of TOP's Growth Journey

(1) In line with internal policy and refinery and petrochemical peers

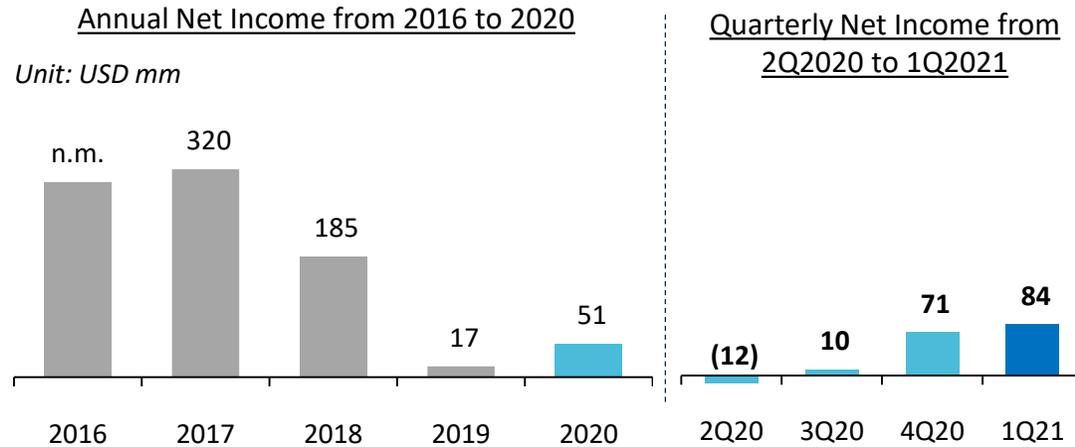
(2) RCF net debt to recover to over 10% after CFP COD

(3) Further details of the transaction to be announced and approved by the board of directors meeting and EGM (if required)

(4) Further details of the offering structure to be announced and approved by the board of directors meeting and EGM

Expected Financial Benefits From the Transaction

Share of Profit from CAP to Enhance TOP's Performance

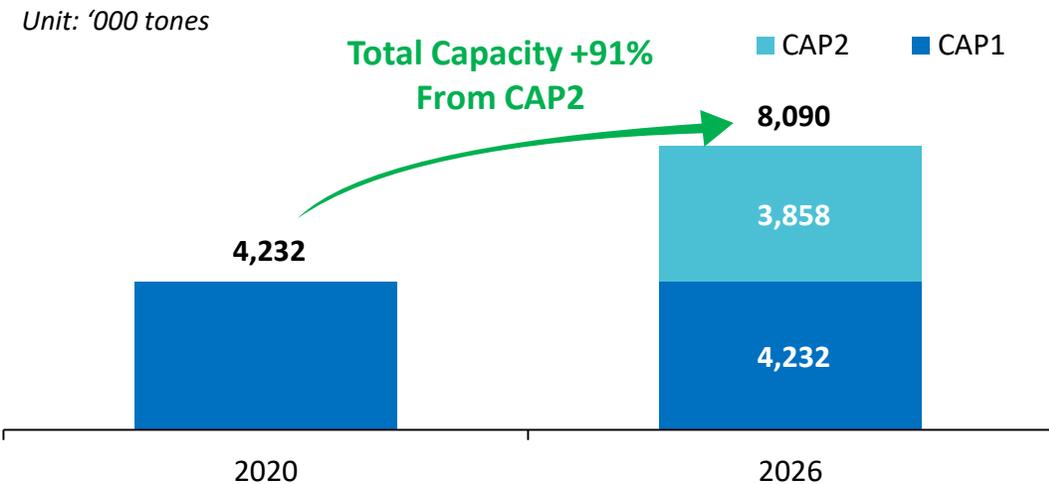


Higher income stability
from more diversified income source



Secured Demand
from feedstock supply agreement

Performance Expected to Increase Significantly From CAP2 Operations



Production capacity to increase over 90%
from CAP2 operations could result in double share of profit



Expected margin improvement
from operational synergy between CAP1 and CAP2 to enhance share of profit from CAP



New S-Curve “Discover New S-Curve and Green Trend”



To generate more than 10% of TOP Group net profit in 2030

Strategic Direction

Step-out

Green driven

- Supporting Core Business , Green trend & CO2 reduction target

Examples



Hydrogen



Biofuel
Biochemicals
Bioplastics

New Quick win

- To diversify business for another growth

Examples



Cleaning/Hygiene Technology



Digital Technology

TOP Ventures

- Discover new trend via investing in VC and startup
- Flow back to enhance BAU/ existing business

Key focus area



Manufacturing Technology



Better-Living Technology



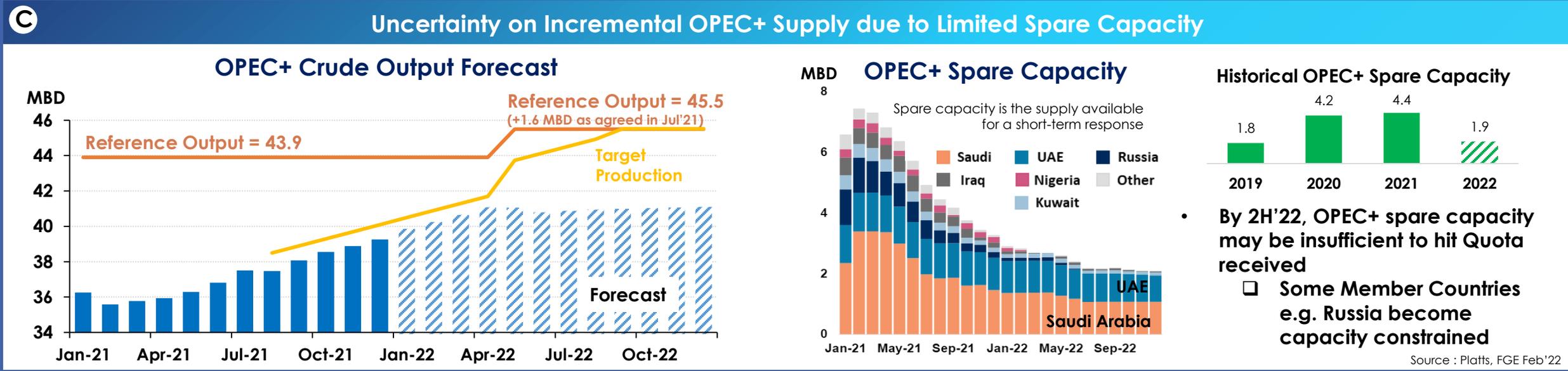
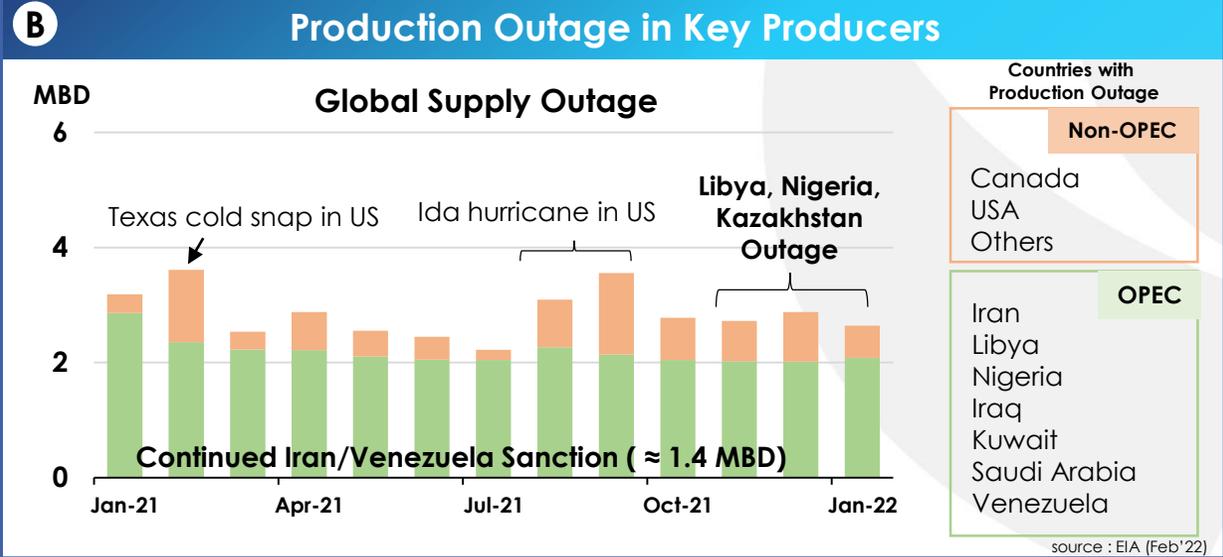
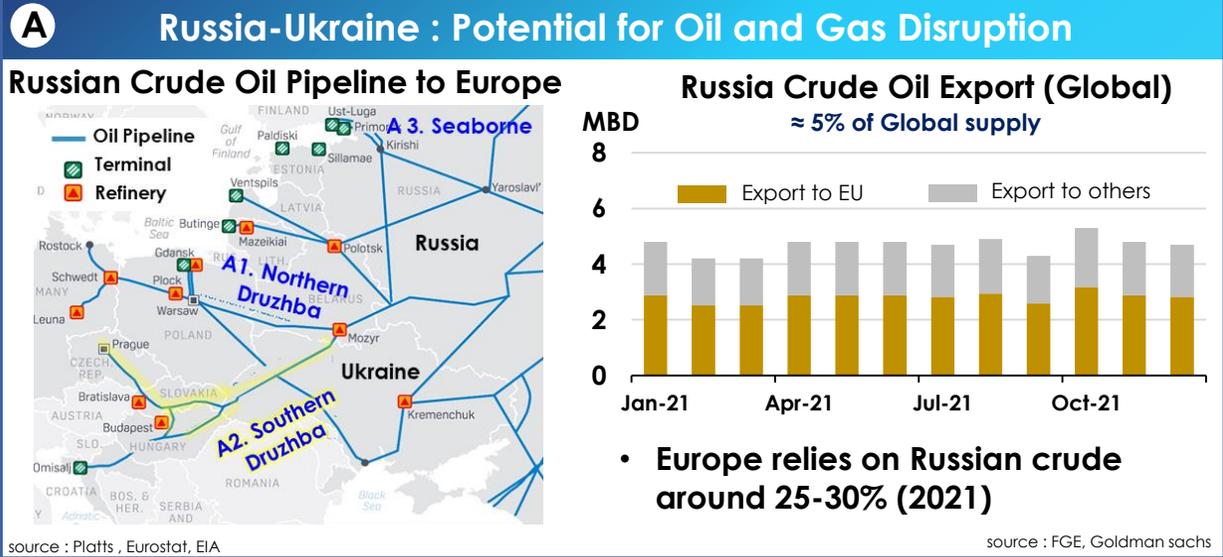
Mobility and New Energy



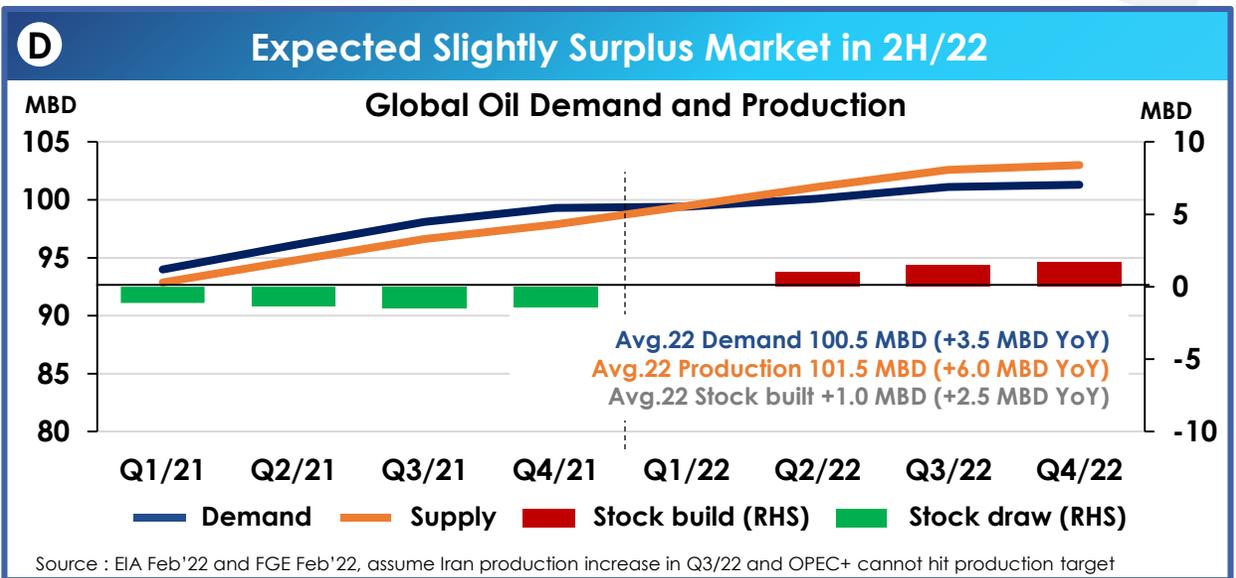
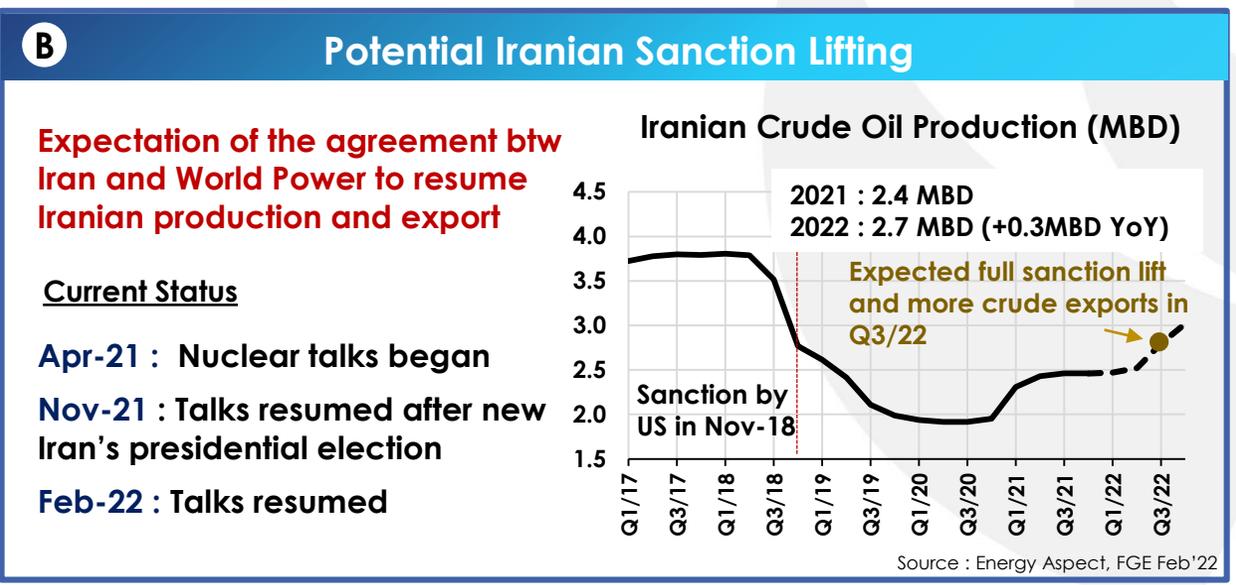
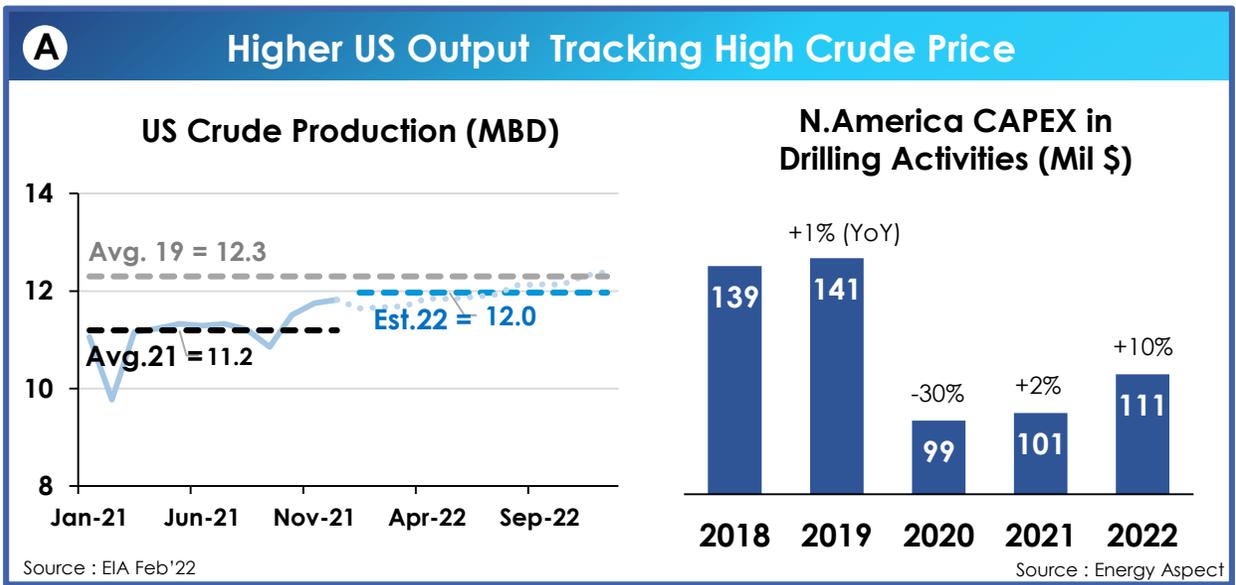
2022 OUTLOOK

- Crude Oil
- Refinery
- Petrochemical
- Base Oil & Bitumen

What is Happening : Supply Concern on Geopolitical Risk and Limited OPEC+ Spare Capacity

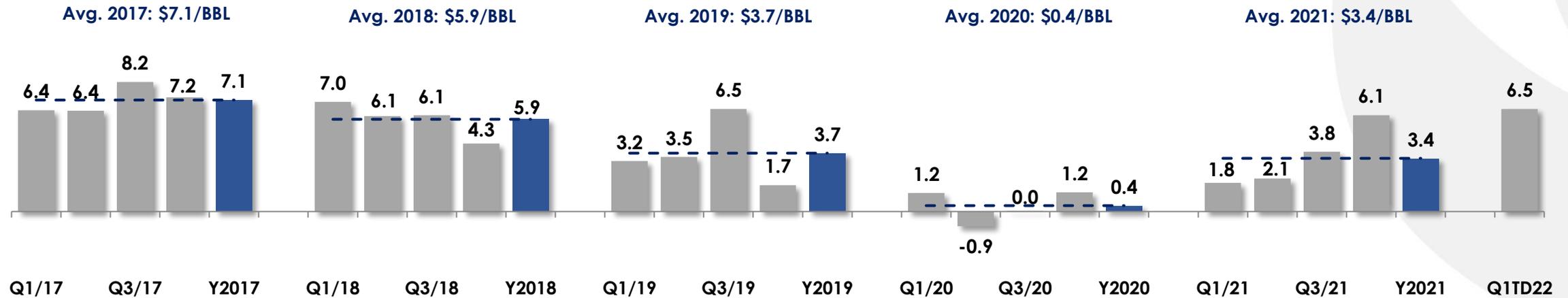


What will Happen : Slightly Surplus Market in 2H/22 due to Potential Non-OPEC+ Supply Increase



Refinery Margin Returns to Pre-COVID in 2022

Singapore Cracking GRM (\$/BBL)



Source : Reuters Feb'22, Exclude Fuel and Loss

Remark : QTD as of 22 Feb'22

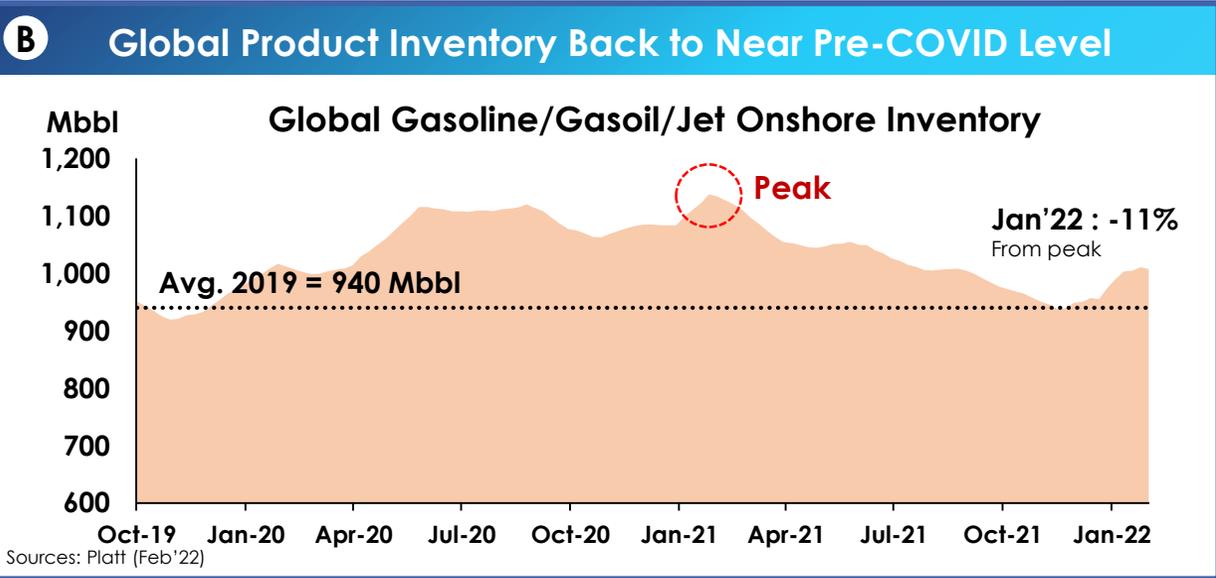
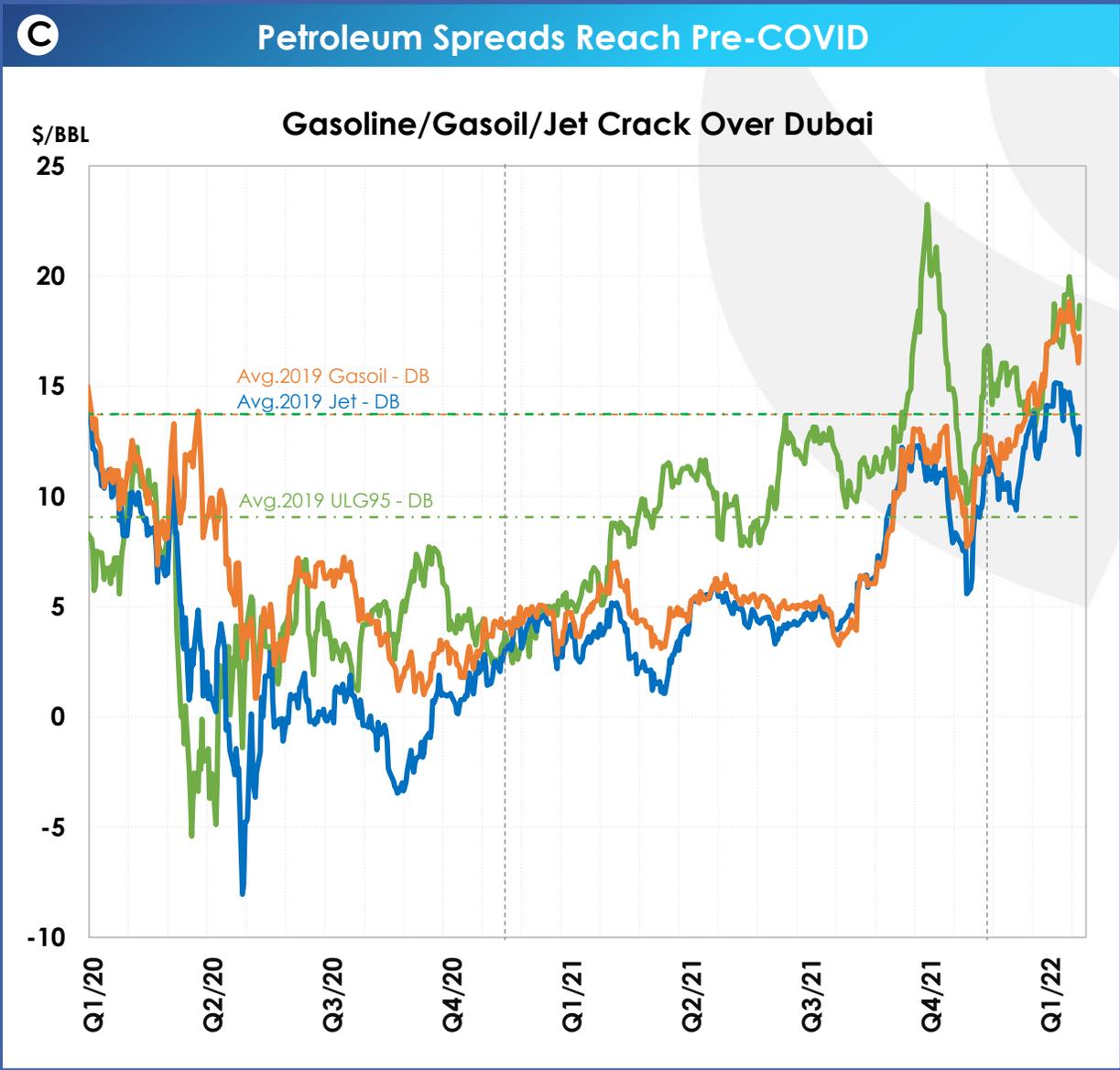
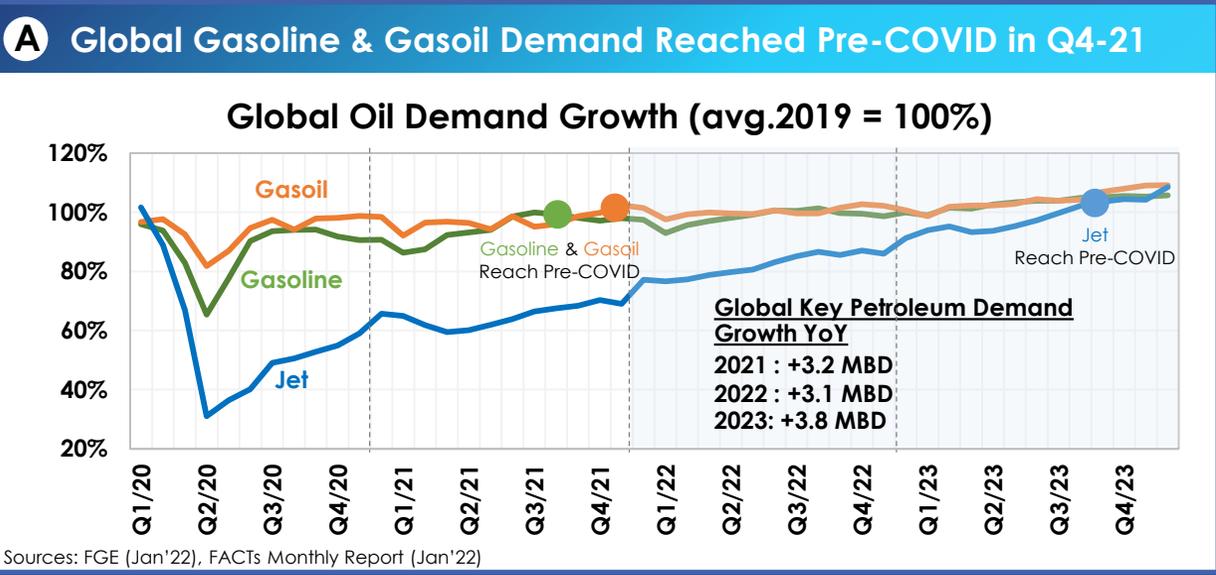
2022 Key Highlights: GRM Recovers to Pre-COVID on the Return of Petroleum Demand

Better Gasoline Demand Driven by Higher Mobility Globally

Resuming Jet Demand Recovery after Easing Restrictions

Improving Gasoil Demand on Continuing Expanding Economic Growth

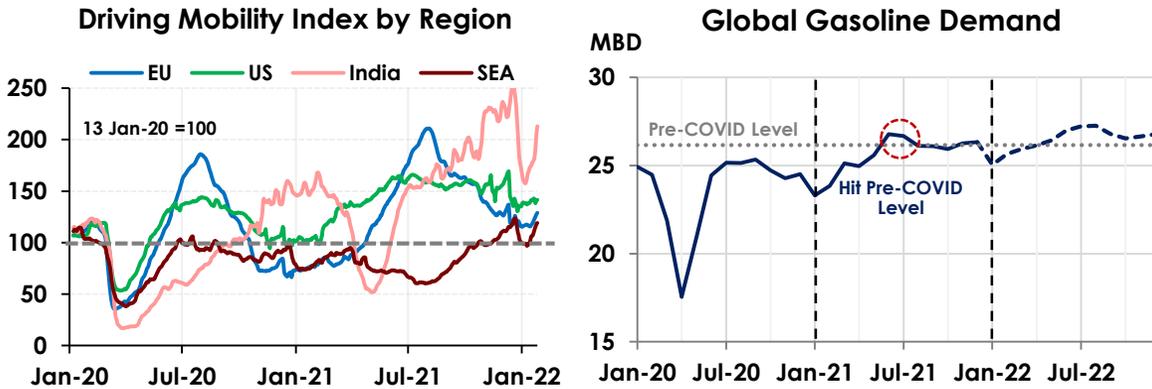
Firmer Fuel Oil Market Led by Rising Asian Demand



Better Gasoline Demand Driven by Higher Mobility Globally Resuming Jet Demand Recovery after Easing Restrictions

Rising Gasoline Demand Above Pre-COVID on Firm Mobility

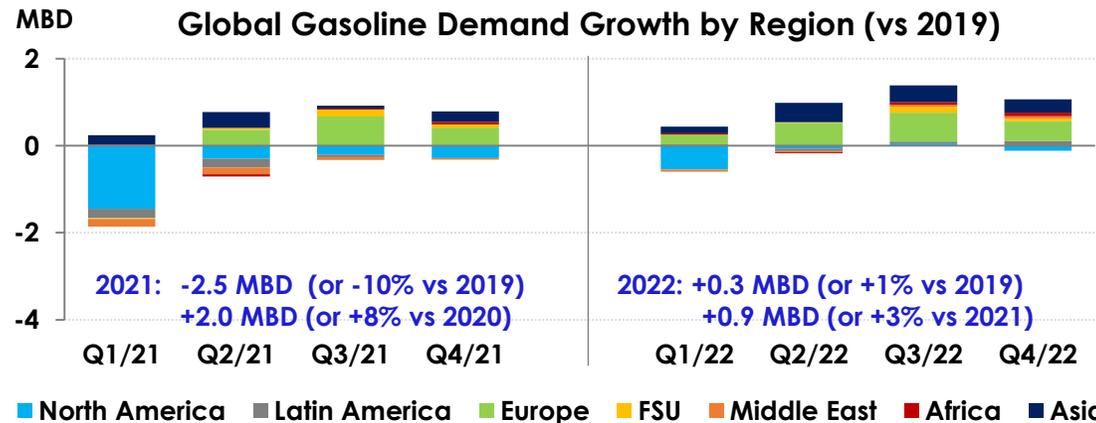
A Increasing Demand on Higher Driving Activities



Source: Apple Mobility (Feb'22)

Source: Energy Aspects (Jan'22)

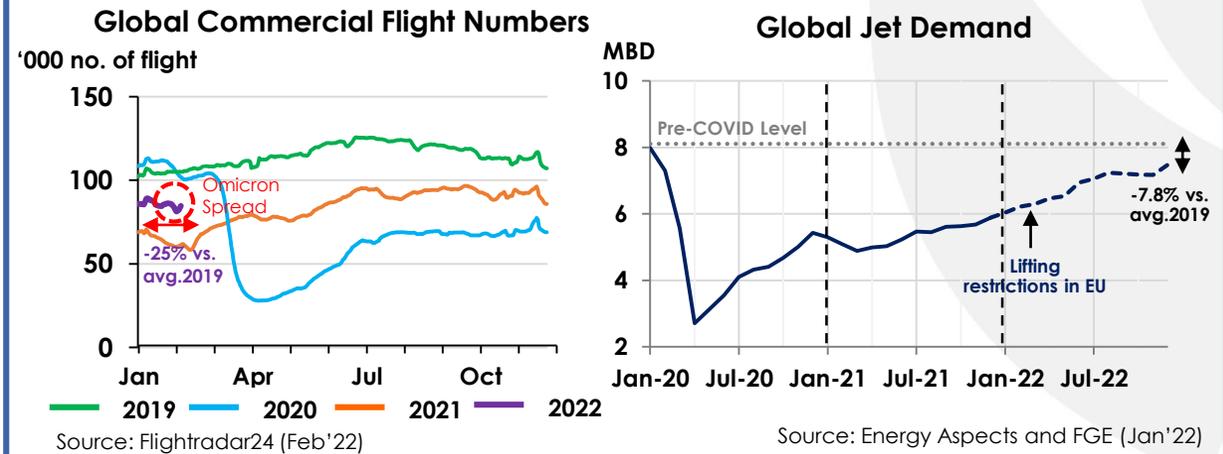
B Demand in All Regions to Hit Pre-COVID by Q3/22



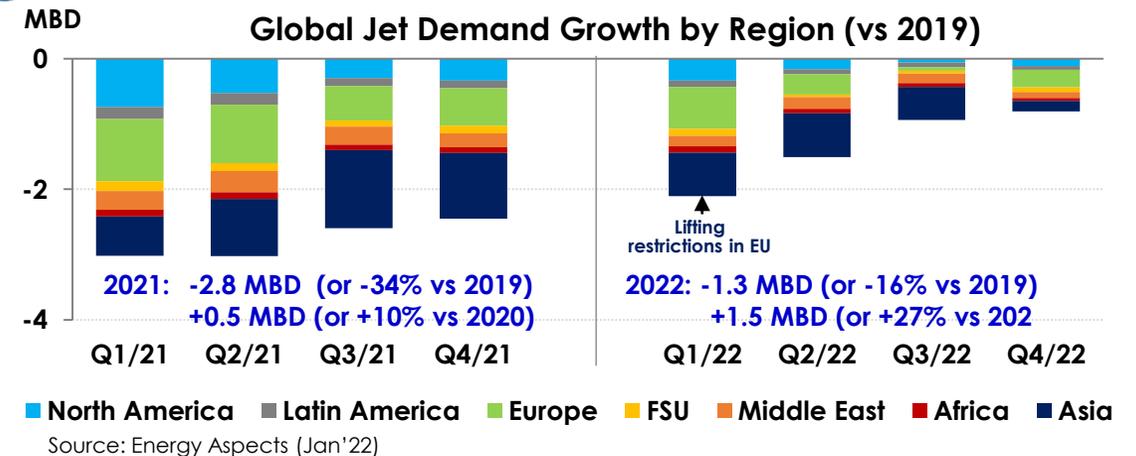
Source: Energy Aspects (Jan'22)

Faster Jet Demand Recovery after Easing Restrictions

A Recovering Jet Demand amid Omicron Concern during Early 2022



B Continuing Increase in Jet Demand on Easing Restrictions

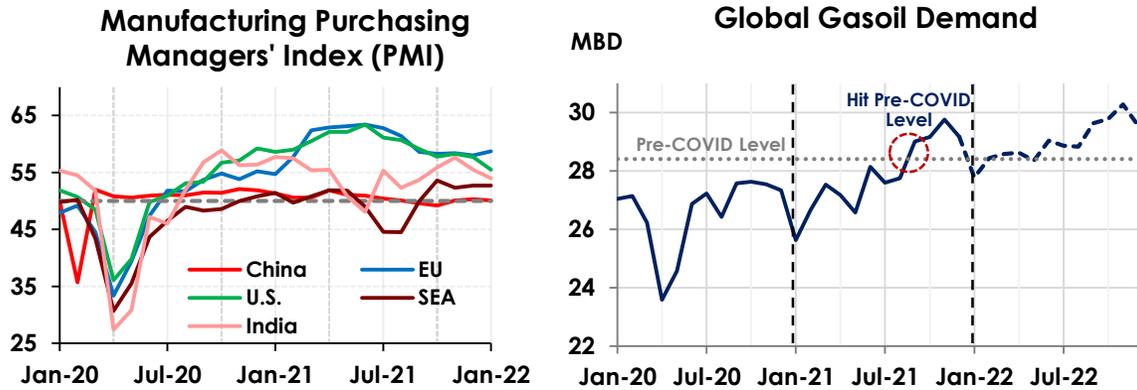


Improving Gasoil Demand on Continuing Expanding Economic Growth

Firmer Fuel Oil Market Led by Rising Asian Demand

Firm Economic Activities to Support Gasoil Demand Growth

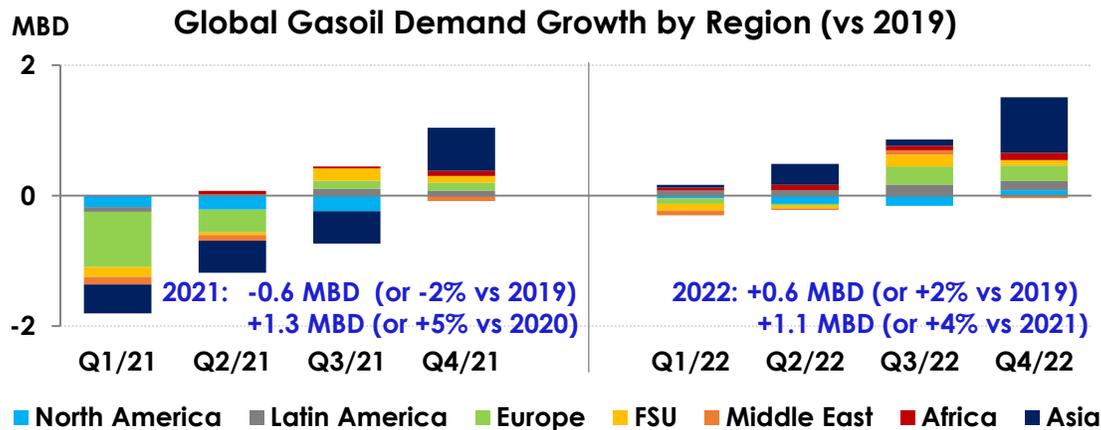
A Growing Gasoil Demand above Pre-COVID Level



Source: Markit economics (Jan'22)

Source: Energy Aspects (Jan'22)

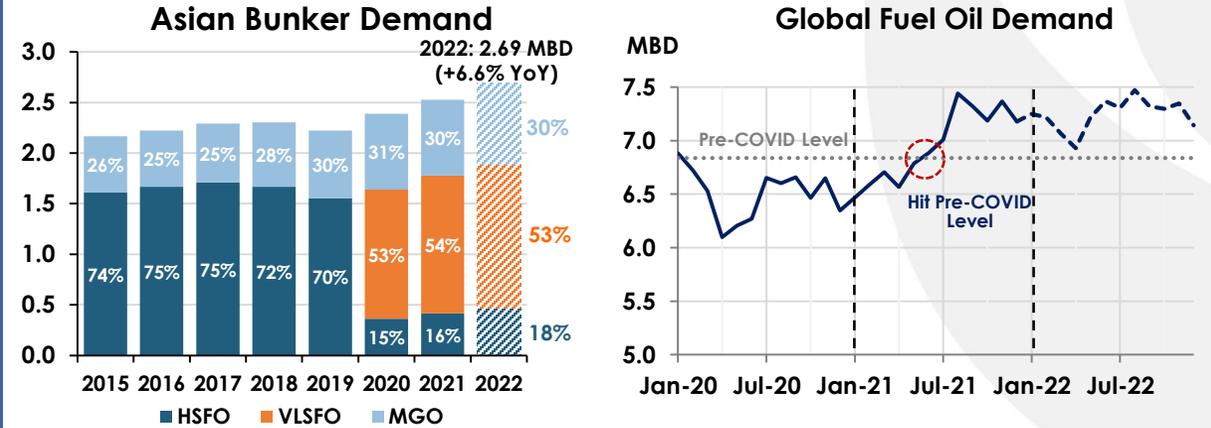
B Gasoil Market to Support from Firm Asian Demand



Source: Energy Aspects (Jan'22)

Higher Fuel Oil Demand from Bunker Sector in Asia

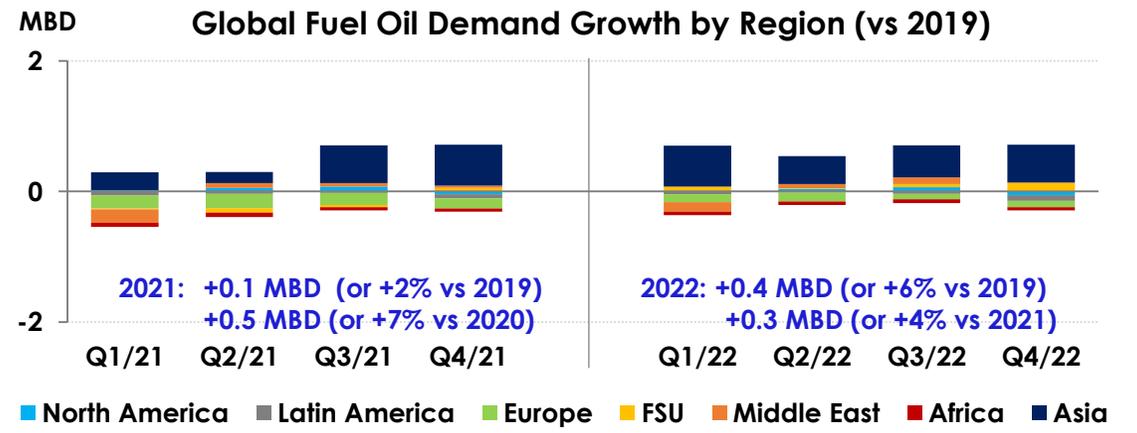
A Rising Bunker Demand on Economic Recovery to Support the Market



Source: FGE (Nov'21 and Jan'22)

Source: Energy Aspects (Jan'22)

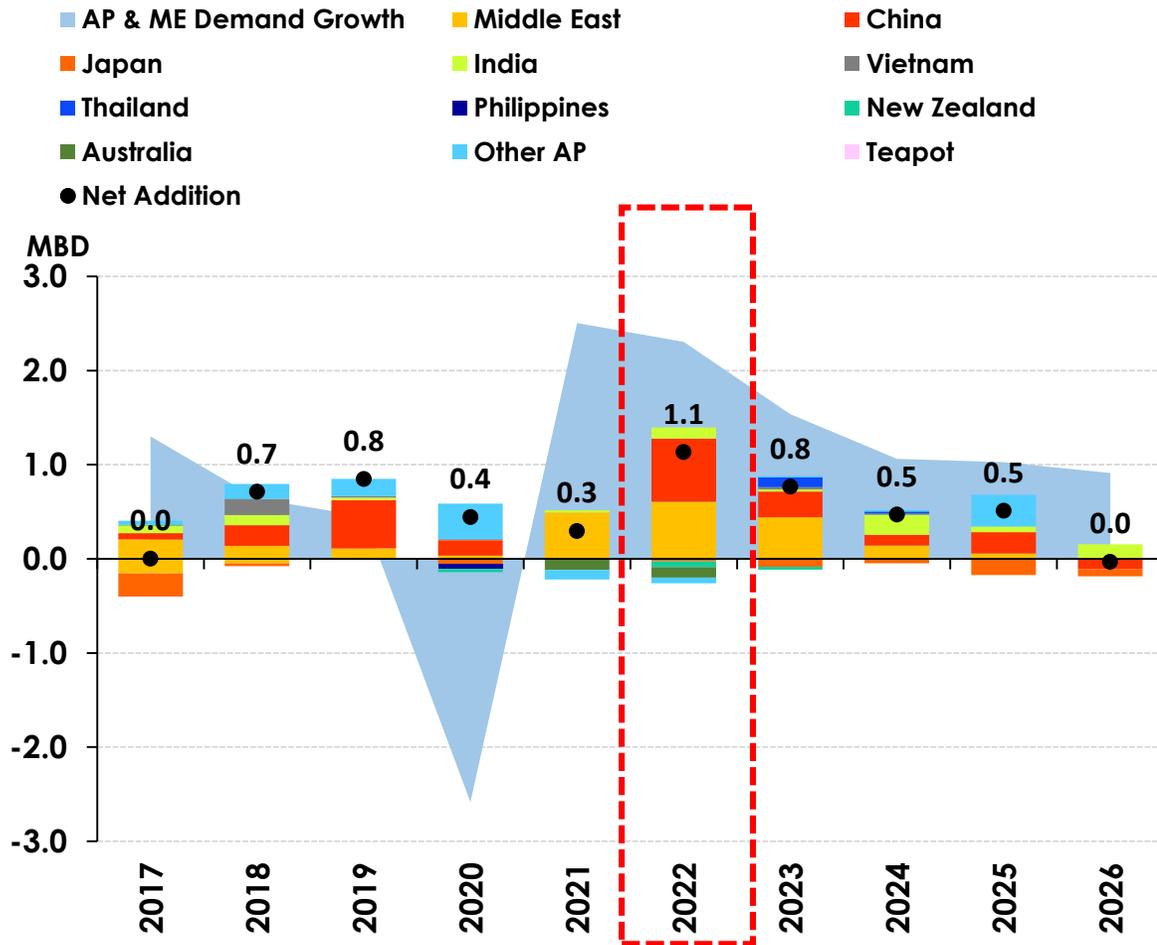
B Increasing Fuel Oil Demand Led by Asian Market



Source: Energy Aspects (Jan'22)

Demand Growth to Outpace Refining Capacity Addition in Medium Term

Asia Pacific and Middle East Effective CDU Addition VS Additional Demand



Note: Adjusted capacity based on start-up period (effective additional capacity)

Key Projects : New Addition

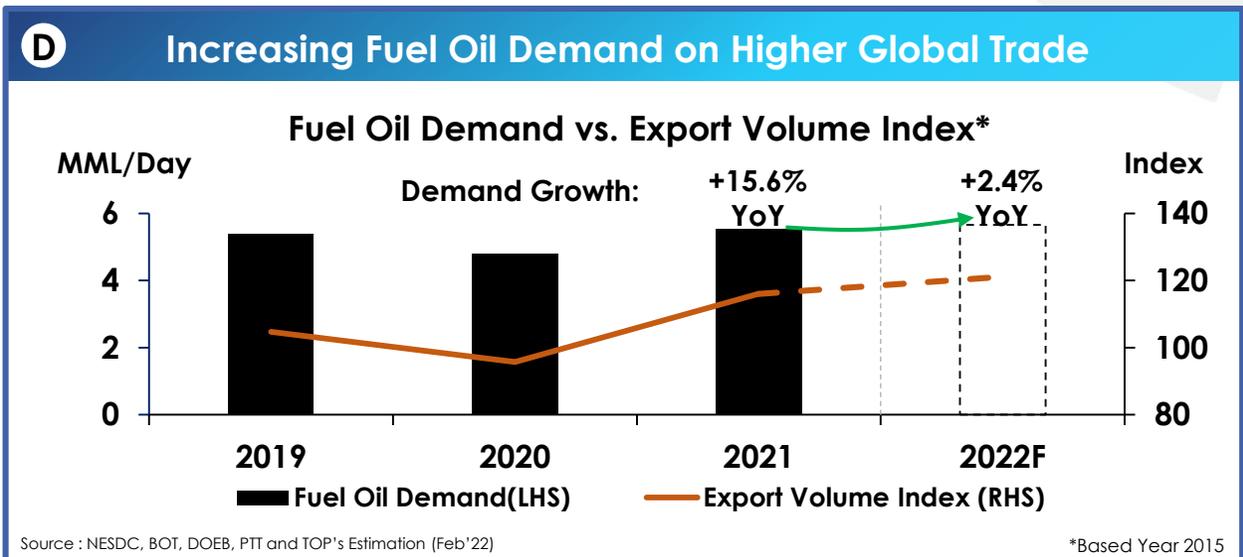
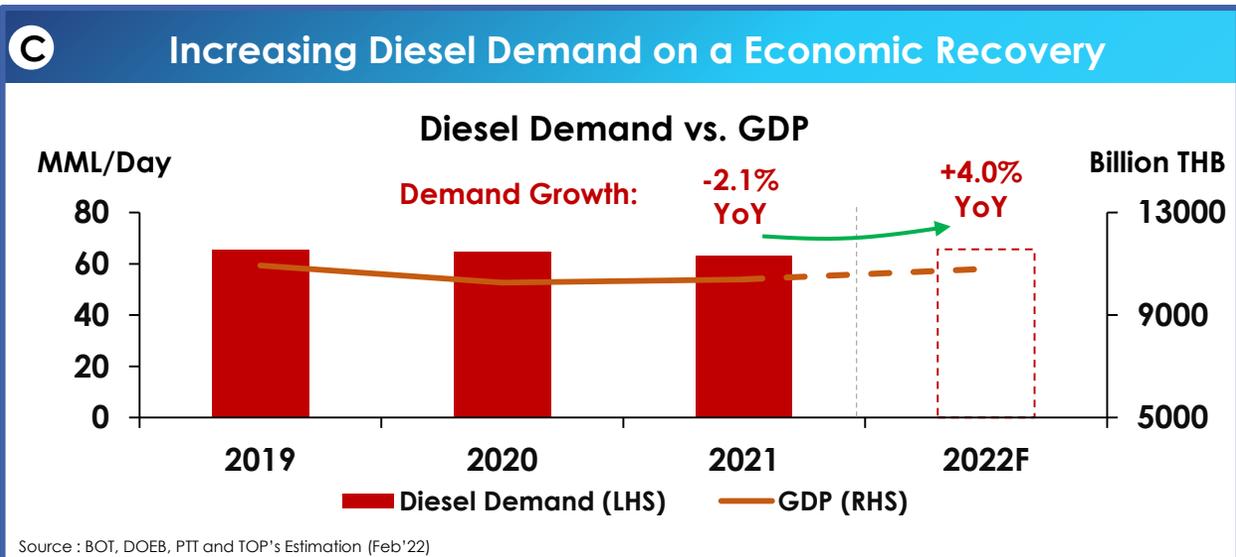
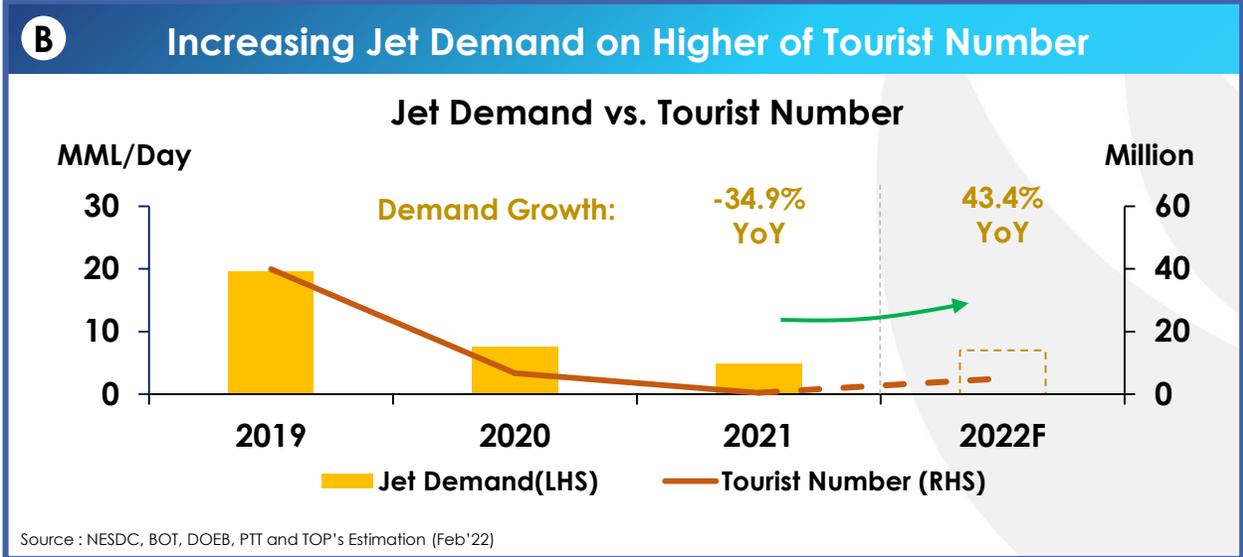
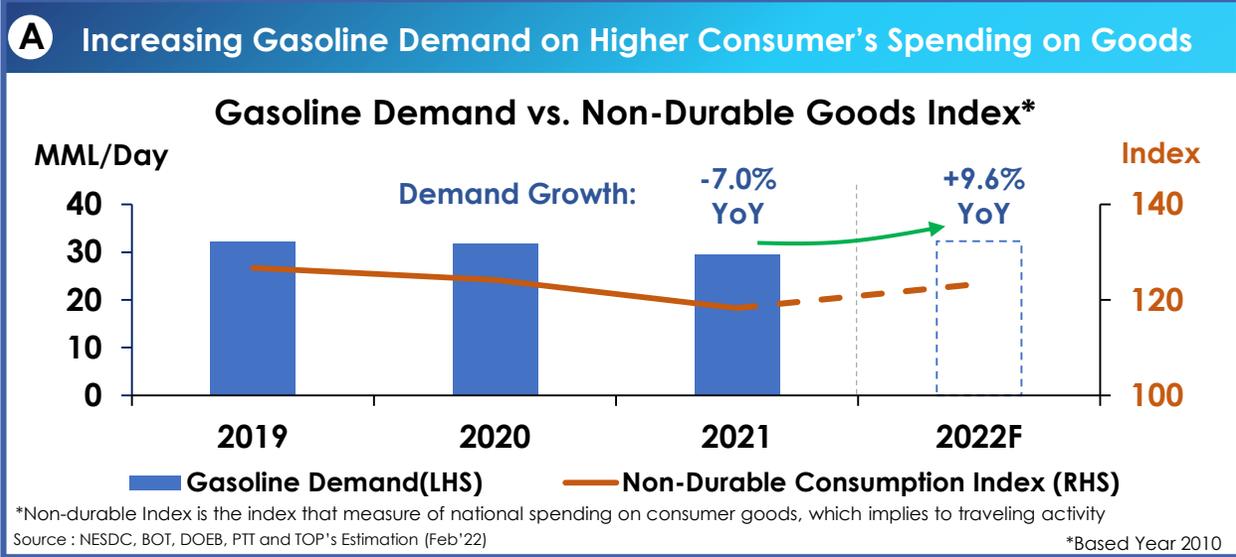
Country	Company	CDU (KBD)	Start-up
Saudi Arabia	Jizan ¹	400	Q2'21
China	Rongsheng II ²	400	Q1'22
China	Local Shenghong Petrochemical	320	Q1'22
Kuwait	Al Zour	615	Q2'22
China	CNPC/PDVSA	400	Q3'22
India	Hindustan Petroleum	125	Q3'22
Thailand	Thai Oil	125	Q1'23
Oman	Al-Duqm	230	Q1'23
China	Sinopec Hainan	100	Q3'23

- Jizan Refinery Complex is in final commissioning and refining is at 50% its full capacity
- Rongsheng II gradually increasing run after received crude quotas in Q4'21 and expected to run at full capacity in Q2'22.

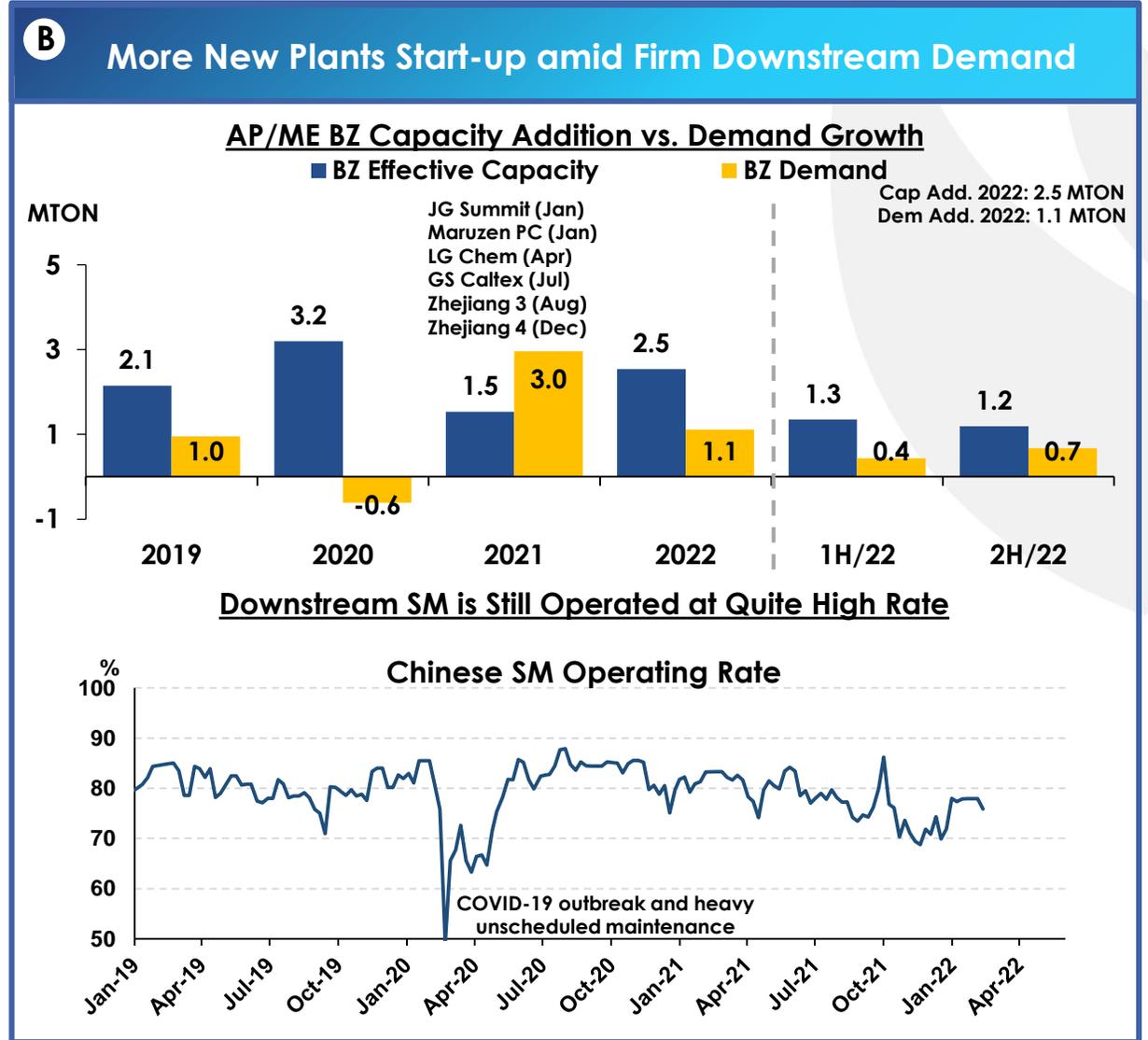
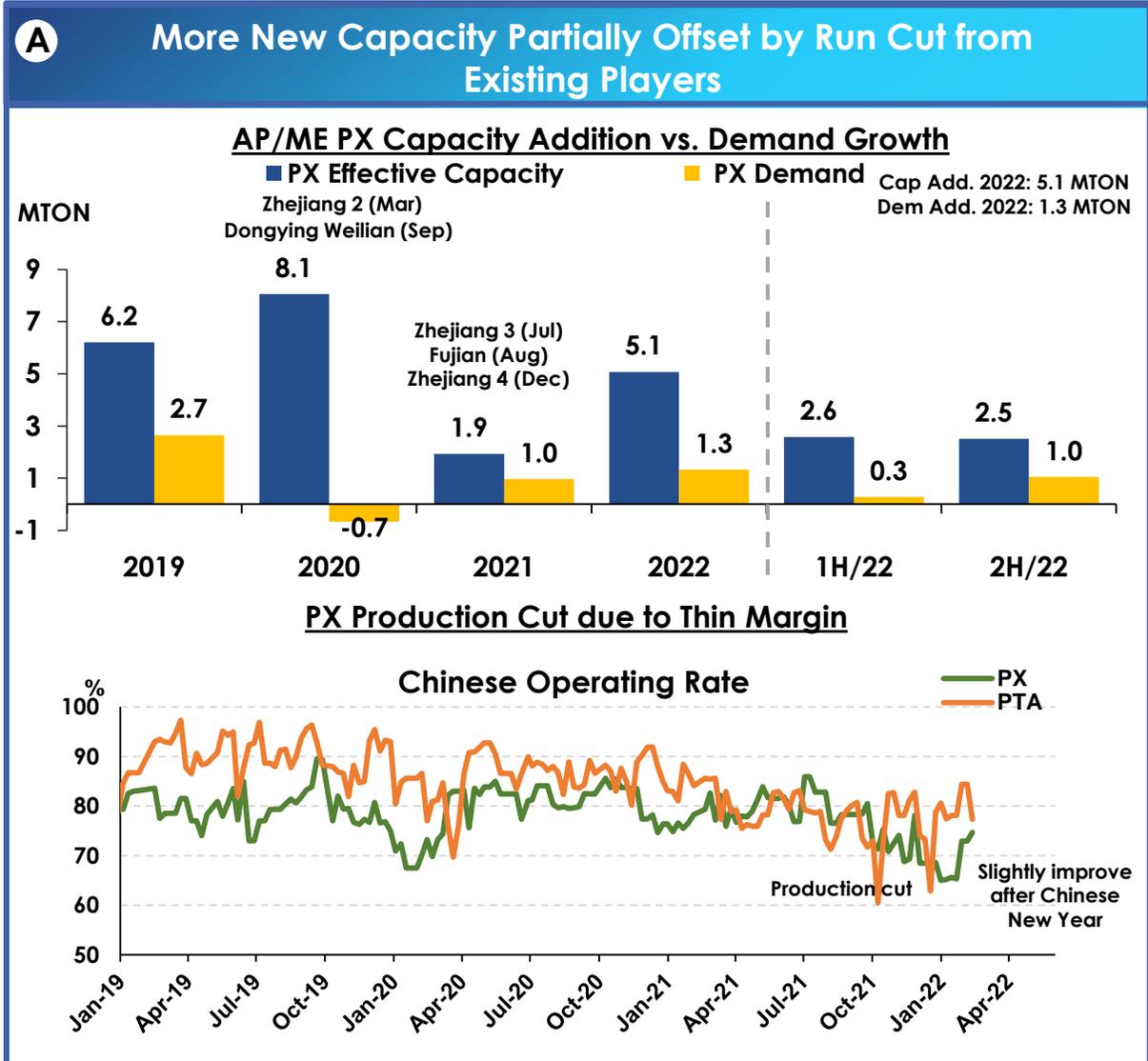
Key Projects : Closure

Country	Company	CDU (KBD)	Closure
China	Local Refineries	-100	Q3'22
Japan	ENEOS	-112	Q4'22
Iran	Abadan	-210	Q3'23
Japan	Various Refineries	-195	Q4'24

Recovering Domestic Demand Following Improving Economic Activities



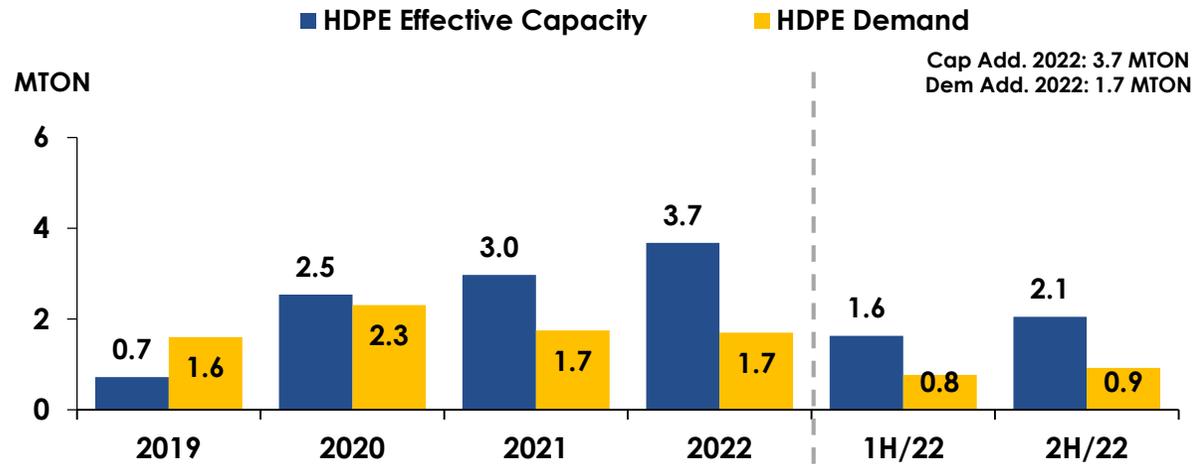
More Aromatics Supply from Mega Capacity amid Firm Demand Growth



More Olefins Capacity Addition in 2022 amid Firm Demand Growth

A More Capacity Addition from New Plant Start-up esp. China

AP/ME HDPE Capacity Addition vs. Demand Growth



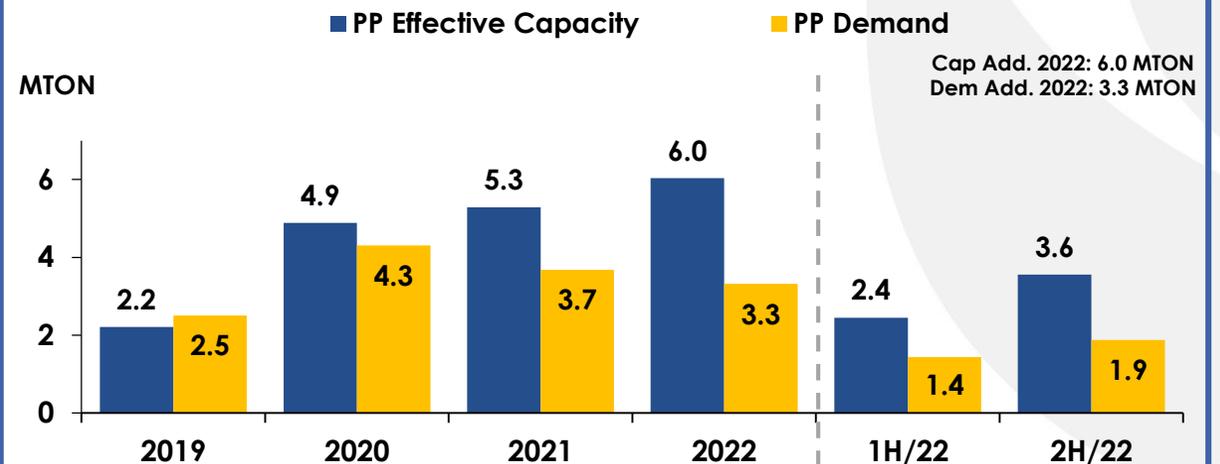
Major HDPE Plant Start-up in Dec'21 - 2022

Country	HDPE Company	Nameplate Capacity (KTON)	Startup Period
South Korea	Hyundai Chemical	550	Dec-21
Malaysia	Pengerang Petrochemical	400	Jan-22
China	Sinopec Zhenhai	600	Jan-22
Philippines	JG Summit Petrochemical	250	Feb-22
China	Zhejiang PC	350	Apr-22
China	Qinghai Damei Coal	150	Apr-22
China	CNPC Guangdong	400	Oct-22

Source: IHS Fall 2021 and TOP's Estimate

B More Capacity Addition from New Plant Start-up esp. China

AP/ME PP Capacity Addition vs. Demand Growth

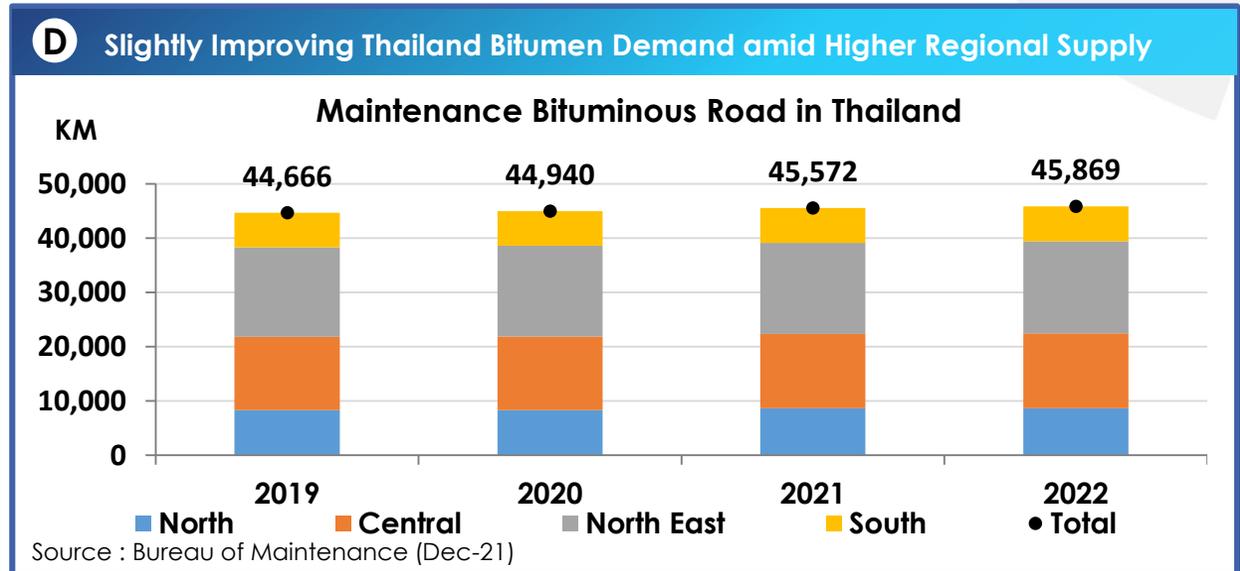
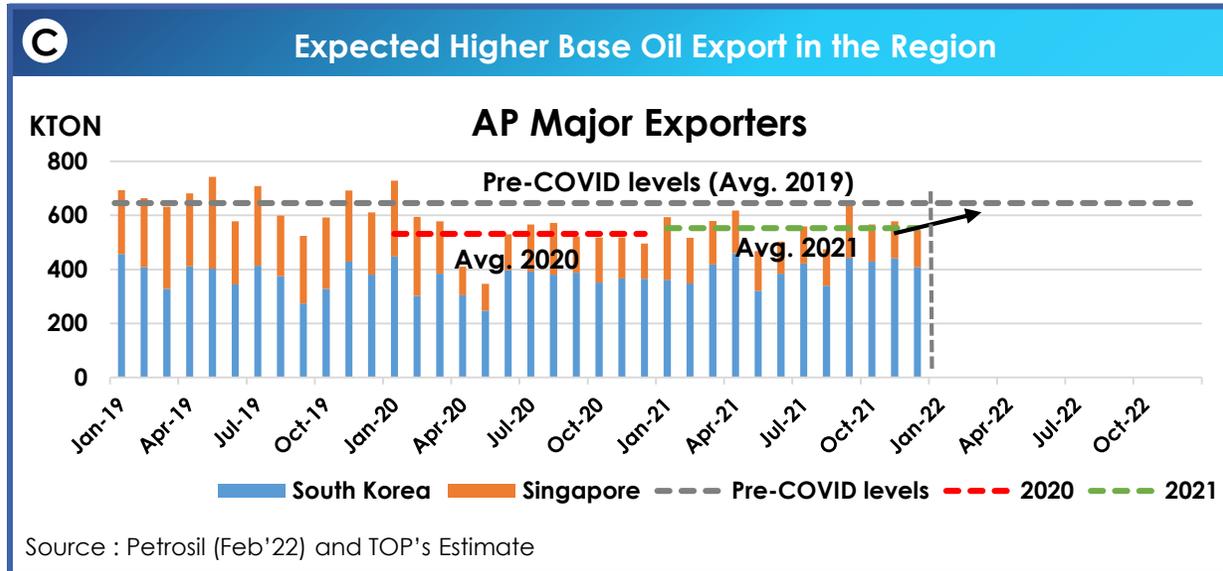
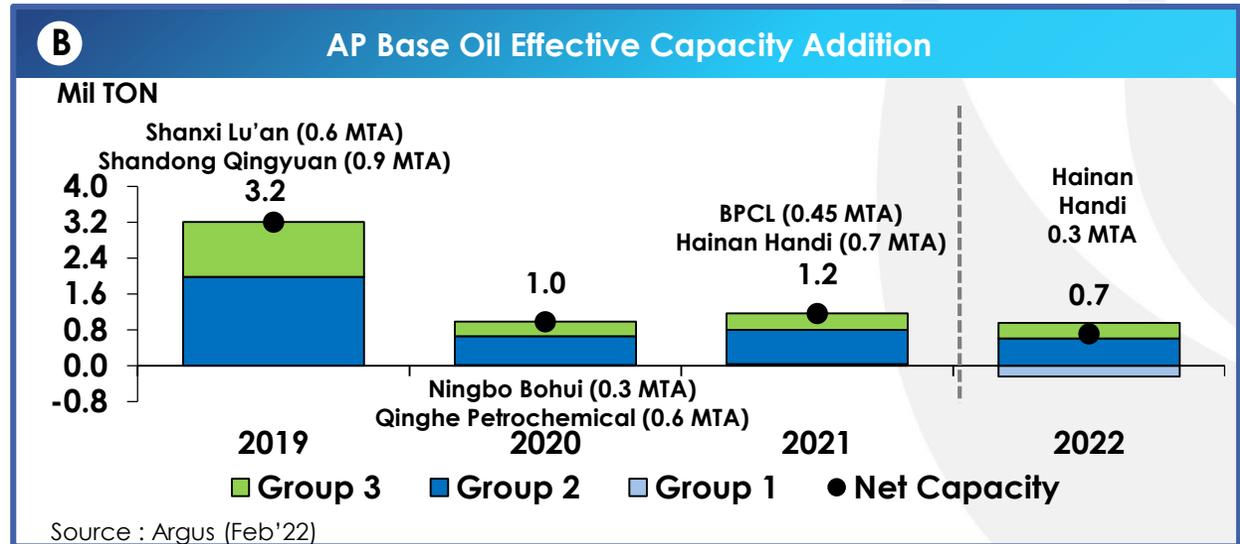
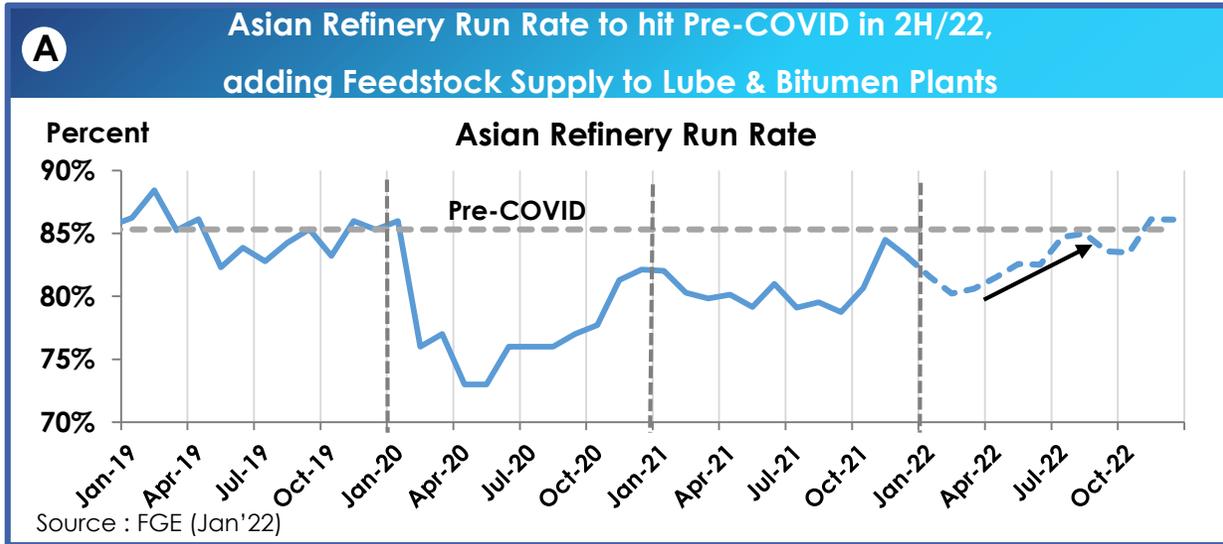


Major PP Plant Start-up in Dec'21 - 2022

Country	PP Company	Nameplate Capacity (KTON)	Startup Period
South Korea	Hyundai Chemical	400	Dec-21
China	Shandong Shouguang Luqing PC	350	Jan-22
Malaysia	Pengerang Petrochemical	450	Jan-22
China	Zhejiang PC	450	Apr-22
China	Ningxia Runfeng	300	May-22
China	Zhongjing Petrochemical	1,200	Jun-22
China	Huating Zhongxu Coal Chemical	200	Jul-22

Source: IHS Fall 2021 and TOP's Estimate

Softer Base Oil Market from Resuming Supply from Higher Refinery Run Rate in Asia



2022 Outlook Conclusion

	Crude Oil	Continuing Demand Recovery amid Potential Supply Increase from OPEC+/Non-OPEC+
	Refinery	Promising Refinery Margin on Easing Restrictions and Returning Petroleum Demand above Pre-COVID Level
	Aromatic	More Aromatics Supply from Mega Capacity amid Firm Demand Growth
	Olefin	More Olefins Capacity Addition amid Firm Demand Growth
	Lube Base	Softer Base Oil Spread on Higher Lube Supply from Recovering Refinery Run Rate



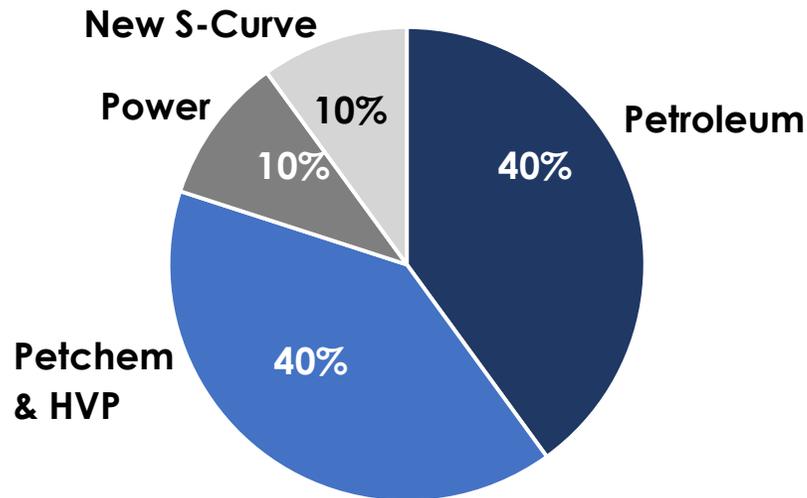
FINAL REMARK

2022 Stay Focused on Building on our Strong Foundation



Net Profit Contribution

Target 2030



Value Maximization

Integrated Crude to Chemicals

- Ensure **CFP** progress
- Execute **CAP1** to integrate to BAU & CAP2 project FID
- Expedite **HVP** roadmap



Value Enhancement

Integrated Value Chain Management

- Consolidate **TOP** group marketing, sales, distribution and logistics
- Ramp up sale to reach **market share** in target country



Value Diversification

- Step up effort on **new ventures**
- Window for **new S-curve opportunities** & diversity sources of earnings



APPENDIX

- Financial Performance
- Optimised & Flexible Operations...Superior Performance
- World GRM / Inventories
- Thailand petroleum demand by products

Refinery: Strong Mkt GRM on Improving Petroleum Demand

Dubai Crude Price & Key Petroleum Product Spreads

	2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1TD*
\$/bbl									
DUBAI (DB)	50.9	30.6	42.9	44.6	60.0	66.9	71.7	78.3 ↑	87.1
ULG95 - DB	6.7	2.6	4.4	4.1	7.1	9.9	11.8	15.5 ↑	16.5
JET - DB	8.6	(0.1)	(0.7)	2.4	3.3	4.5	5.4	10.2 ↑	13.2
GO - DB	11.1	5.7	4.2	3.7	4.7	5.3	5.4	11.4 ↑	16.1
VLSFO - DB	13.8	5.3	3.2	5.5	7.6	5.0	4.9	7.0 ↑	10.4
HSFO - DB	(7.5)	(1.6)	(2.5)	(0.6)	(3.5)	(5.8)	(3.4)	(6.9) ↓	(8.4)

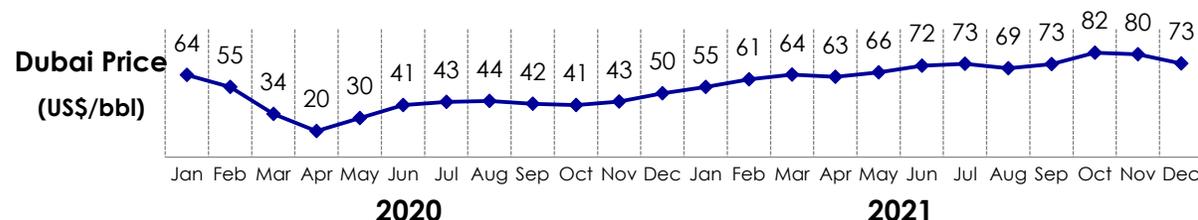
2020	2021
FY	FY
42.2	69.2 ↑
4.5	11.1 ↑
2.5	5.8 ↑
6.2	6.7 ↑
7.0	6.1 ↓
(3.0)	(4.9) ↓

Refinery Utilization			
Q3/21	Q4/21	FY/20	FY/21
92%	109%	101%	100%
% MB Intake/ MB-DB (\$/bbl)			
8%/2.5	4%/2.7	23%/(0.4)	9%/1.8
% Middle East Crude Intake			
67%	82%	57%	64%

Q4/21 Market GRM

- + **Improving Gasoline spread** due to improving demand on easing restrictions in many countries amid supply tightness and low inventory in the US
- + **Strong Middle Distillate spreads** on improving demand from the reopening of economies especially in Asia and seasonal heating oil demand during winter
- + **Increasing LSFO spread** from tight supply following unplanned maintenance SD in Kuwait
- **Softening HSFO spread** following higher supply from increasing refinery production

*Q1TD as of 21 Feb 22



Gross Refinery Margins - GRM

	2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
\$/bbl								
Market GRM	0.1	1.4	(1.1)	1.2	0.7	0.4	1.6	5.4
Stock G/(L)	(12.3)	(1.8)	4.0	2.3	6.2	4.9	5.1	2.9
Accounting GRM	(12.2)	(0.4)	2.9	3.4	6.9	5.3	6.7	8.3

2020	2021
FY	FY
0.4	2.2
(2.3)	4.7
(1.9)	6.9

Q4/21 Performance

- + **Higher refinery run rate to 109%** following domestic oil demand recovery to capture strong product margins

Aromatic: Softening Contribution from Weakening PX & BZ Margins

Aromatic Spreads and Margins

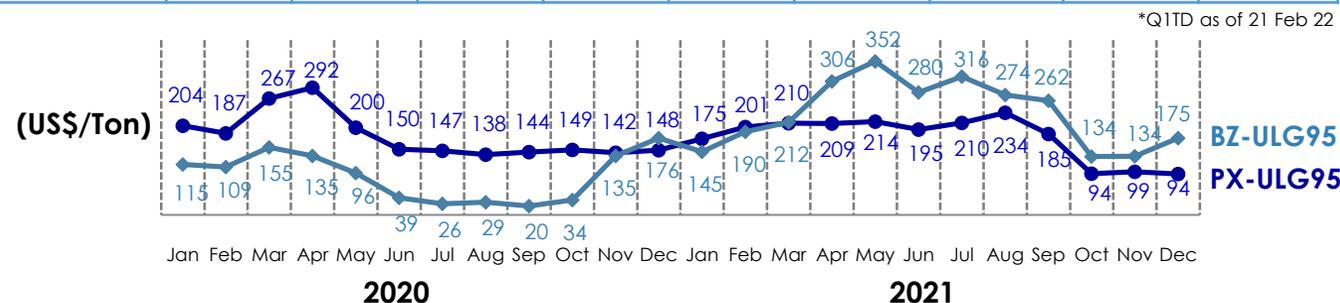
	2020				2021				2022
\$/ton	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1TD*
PX-ULG95	218	214	143	146	195	206	212	96 ↓	138
BZ-ULG95	126	90	25	115	182	313	287	148 ↓	137

2020	2021
FY	FY
180	177 ↓
89	232 ↑

Aromatics Production			
Q3/21	Q4/21	FY/20	FY/21
88%	81%	71%	87%

Q4/21 Market Highlight

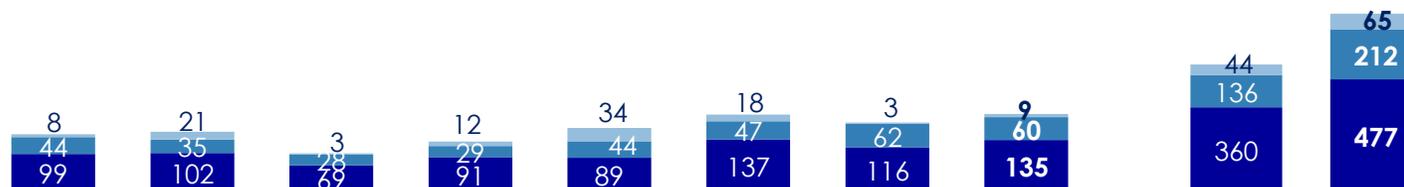
- **Softening PX & BZ margin** due to weakening downstream (PTA, polyester) demand from power rationing amid new supply addition in China
- + **Robust LAB Contribution** due to improving regional demand after monsoon season amid limited supply from LAB plant unplanned SD in North Asia



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

(Unit : KTon)

TL
BZ
PX



	2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
P2F -\$/ton	85	77	68	76	106	112	90	19
P2F -\$/bbl	11.1	10.0	8.9	9.9	13.9	14.8	12.1	2.5
GIM -\$/bbl ⁽¹⁾	1.5	1.6	1.2	1.6	2.0	2.4	2.1	0.8

2020	2021
FY	FY
77	80
10.0	10.6
1.5	1.7

Q4/21 Performance

- **Lower utilization rate at 81%** as weakening aromatic margins
- + **Increasing LAB utilization rate to 120%**

(1) Including LAB contribution

Base Oil: Softening Contribution Pressured by Lower Lube Spread

Base Oil & Bitumen Spreads & Margins

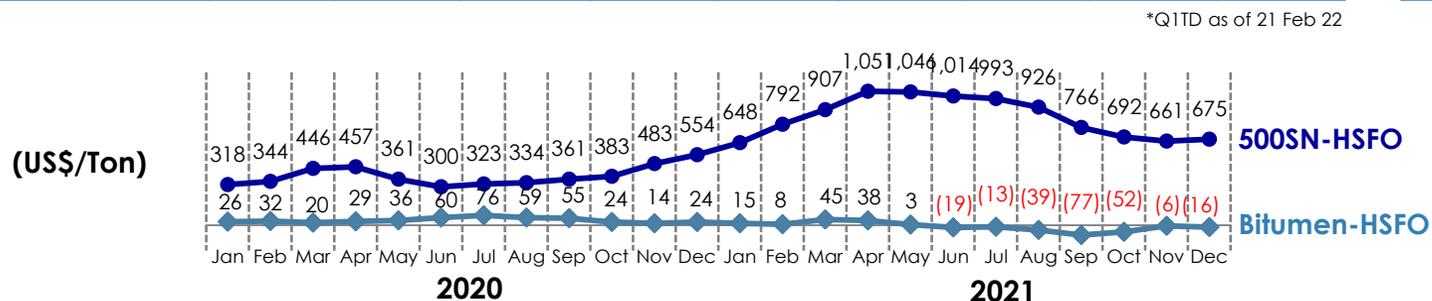
	2020				2021				2022
\$/ton	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1TD*
500SN-HSFO	369	372	340	474	783	1,037	896	673 ↓	575
BITUMEN-HSFO	26	42	63	21	23	7	(43)	(29) ↑	(54)

2020	2021
FY	FY
389	847 ↑
38	(10) ↓

Base oil Production			
Q3/21	Q4/21	FY/20	FY/21
88%	88%	88%	91%

Q4/21 Market Highlight

- **Softening Base Oil margins** due to higher regional supply from increasing refinery run and resumption from maintenance SD



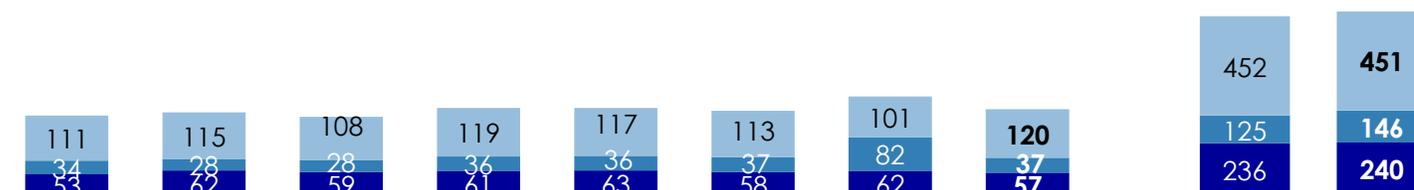
Q4/21 Performance

- + **Maintain utilization rate at 88%**

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

(Unit : KTon)

- Bitumen
- Specialty
- Base Oil



	2020				2021				2020	2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	FY	FY
P2F -\$/ton	86	24	100	105	170	231	187	118	79	176
P2F -\$/bbl	13.1	3.6	15.1	15.9	25.7	34.9	28.4	17.9	11.9	26.7
GIM -\$/bbl	0.6	0.0	0.8	0.8	1.5	2.4	1.8	0.8	0.5	1.6

Power Sector Performance...Stable Contribution to the Group

Power Business Sector

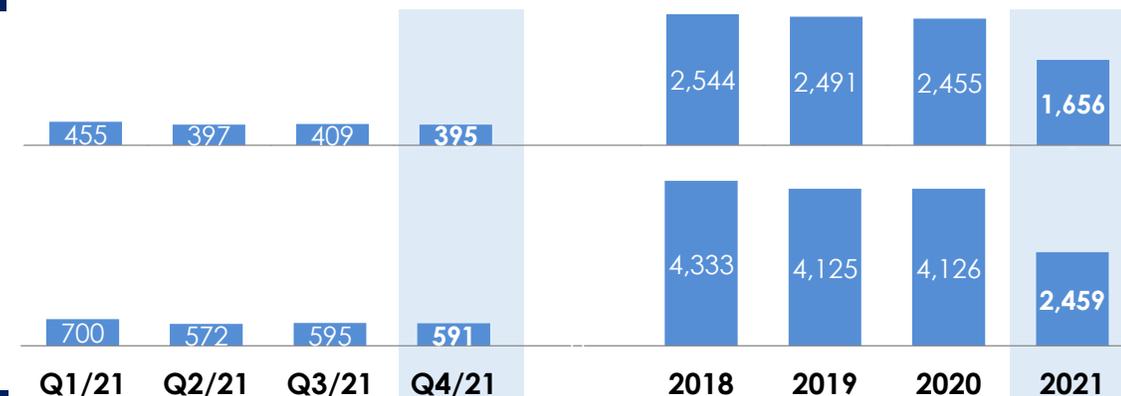


Power & Steam Sales

Electricity⁽¹⁾
(GWh)

Steam⁽¹⁾
(kton)

(1) 100% of TP and TOP SPP



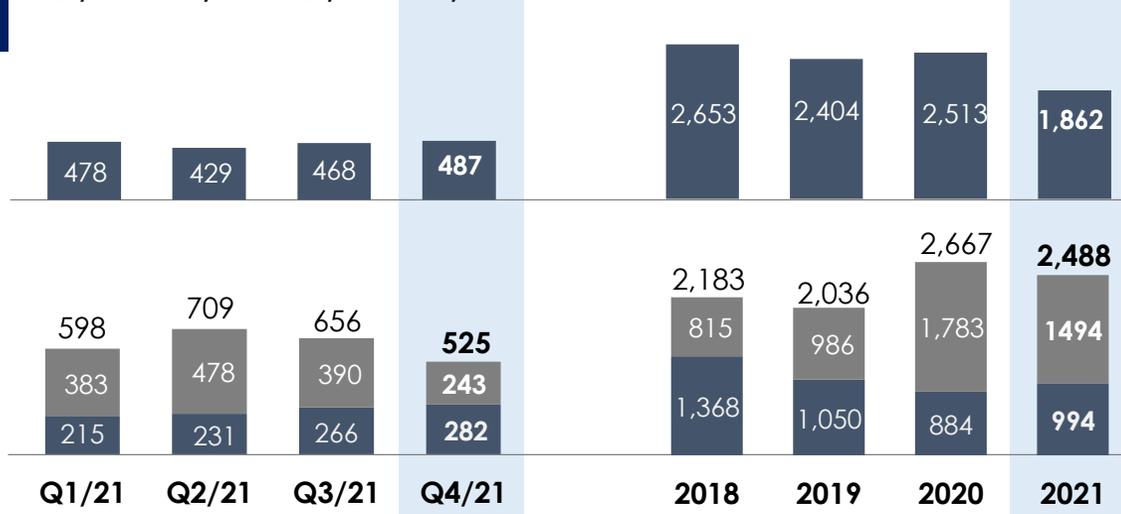
EBITDA & Net Profit

EBITDA⁽²⁾
(THB million)

(2) Consolidated EBITDA of TP and TOP SPP

Net Profit⁽³⁾
(THB million)

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



Q4/21 Performance Highlight

- **Lower power business contribution** mainly from the decrease in share profit from GPSC due to lower IU contribution
- + **Improving contribution from TOP SPP** due to higher average selling prices following rising natural gas prices

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

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

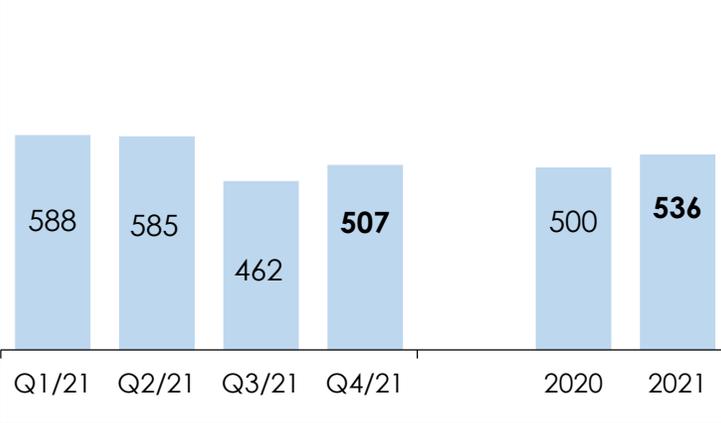
(5) TOP shareholding in GPSC decreased from 24.29% to 15.38% in Nov'20 – Jan'21, and increase to 20.78% in Feb'21 after TP's EBT completion

Olefins Business : Softening Petrochemical Contribution

Olefin Product Spreads

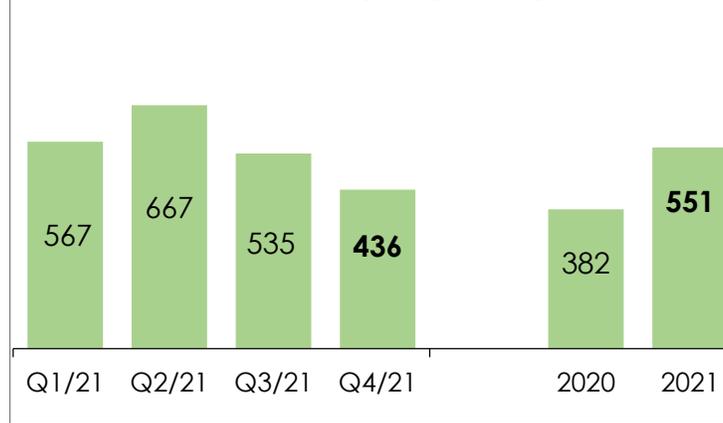
Polymer Spreads

HDPE CFR SEA - NaphJ (\$/TON)

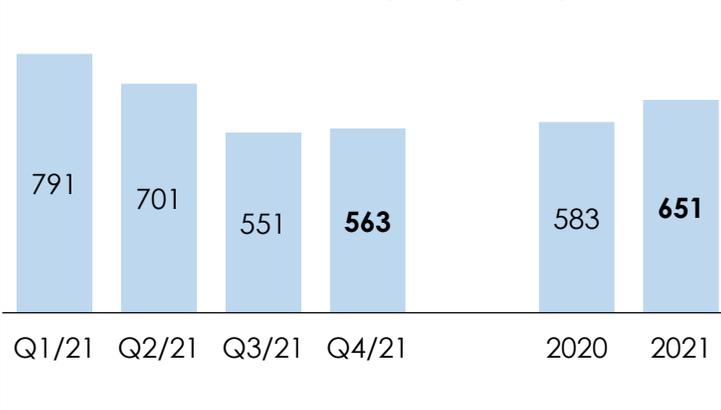


Monomer Spreads

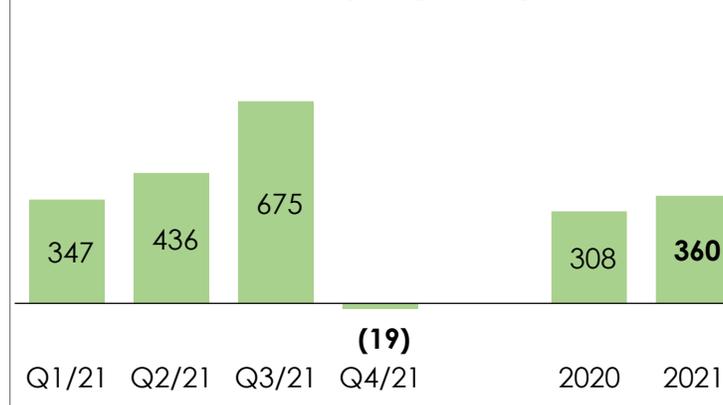
SM - NaphJ (\$/TON)



PP CFR SEA - NaphJ (\$/TON)

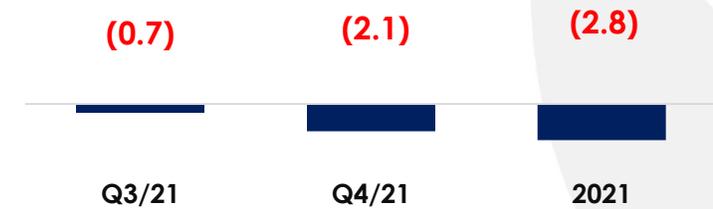


BD - NaphJ (\$/TON)



TOP Investment Indonesia (TII) Performance

Net Profit (million USD)



Q4/21 Performance Highlight

- + **Improving Polymer spread** due to delayed new Chinese capacities and supply shortage in China from power outage, amid pandemic concerns
- **Soften Butadiene spread** due to regional supply to increase from Philippines's JG Summit Petrochemical Group start-up and semiconductor shortage situation
- **Booked special items in Q4'21** i.e. deferred tax expense from the government of Indonesia has scrapped its plans to reduce their CIT to 20% from 2022 onwards and has opted the CIT to remain at 22% and bond buy back activity

Performance Breakdown

	Petroleum & Lube Base	Petrochemical ⁽¹⁾	Power ⁽²⁾	Others & New Business ⁽³⁾	Consolidated Net Profit
Q3/21	(274)	979	656	786	2,063
Q4/21	4,347	(32)	525	246	5,033
FY/20	(3,658)	1,535	2,667	897	(3,301)
FY/21	6,140	2,496	2,488	1,671	12,578
QoQ	<p>Petroleum Higher contribution from stronger GRM and stock gain as rising crude oil prices</p> <p>Lube Softening contribution pressured by weakening lube spread from higher regional supply from increasing refinery run</p>	<p>Aromatics & LAB Lower contribution pressured by softening PX and BZ margins due to weakening demand</p> <p>Olefins Softening contribution from CAP due to one-time expense i.e. deferred tax expense</p>	<p>TOP SPP Higher contribution due to higher average selling prices following rising natural gas prices</p> <p>GPSC Lower contribution from GPSC mainly from lower IU contribution from higher gas and coal cost</p>	<p>Solvent Slightly lower contribution due to narrower gross margin from abundant supply in the market</p> <p>Ethanol Lower contribution from higher expense in Q4/21</p>	
YoY	<p>Petroleum Stronger contribution from improving GRM and stock gain</p> <p>Lube Robust contribution supported by record high lube spread from limited supply due to lower refinery run</p>	<p>Aromatics & LAB Higher contribution supported by stronger BZ margin and robust LAB contribution</p>	<p>TOP SPP Higher contribution on increasing natural gas prices as well as higher sale volume</p> <p>GPSC Lower contribution from GPSC mainly from Glow incident and lower IU contribution</p>	<p>Solvent Higher contribution supported by improving gross margin from higher HVP and supply-shortage-product</p> <p>Ethanol Higher contribution mainly from gain on selling UBE shares during IPO and reclassification</p>	

(1) Including Olefin business from 15% of CAP net profit and 75% of LAB net profit

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

(3) Consisting of Solvent, Ethanol and other business

Q4 & FY/21 TOP Group Consolidated P&L

(Unit : million baht)	Q3/21	Q4/21	QoQ+/(⁻)	Q4/20 Represented	YoY+/(⁻)	2020 Represented	2021	YoY+/(⁻)
Sales Revenue	79,960	104,298	24,338 ^(A)	59,908	44,390	242,840	335,827	92,987 ^(C)
Net Realized G/(L) on Financial Instrument	(479)	(1,807)	(1,328)	(254)	(1,553)	(174)	(2,461)	(2,287)
EBITDA	6,784	6,082 ↓	(702) ^(B)	3,492	2,590	(2,056)	28,142 ↑	30,198 ^(D)
EBITDA excl. Stk G/(L) & NRV	3,149	2,799	(350)	1,618	1,181	5,892	12,747	6,855
Net G/(L) on FV of Financial Instrument	(1,429)	2,311	3,740	(50)	2,361	(5)	55	60
FX G/(L) & CCS	(1,228)	522	1,750	2,538	(2,016)	1,784	(4,595)	(6,379)
Financial cost	(934)	(958)	(24)	(1,039)	81	(4,292)	(3,595)	697
Tax Expense	(213)	(1,075)	(862)	(2,384)	1,309	647	(2,034)	(2,681)
Net Profit	2,063	5,033 ↑	2,970	7,257	(2,224)	(3,301)	12,578 ↑	15,879
EPS (THB/Share)	1.01	2.47	1.46	3.56	(1.09)	(1.62)	6.17	7.79
Stock G/(L) and NRV	3,635	3,283	(352)	1,874	1,409	(7,948)	15,395	23,343
THB/US\$ - average selling	33.10	33.54	0.44	30.79	2.75	31.46	32.17	0.71
THB/US\$ - ending	34.09	33.59	(0.50)	30.21	3.38	30.21	33.59	3.38

Analysis

QoQ

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

(B) Lower EBITDA from higher net realized loss on financial instrument

YoY

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

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

FY/21 Consolidated Cash Flow

(Unit: MB)

	2020	2021
Operating Cash Flow (CFO)	2,435	10,504
Net income	(2,669)	13,066
Depreciation & NRV	7,769	7,662
Other adj.	(7,188)	6,648
Change in working capital	4,522	(16,873)

Free Cash Flow (CFO +CFI) **(27,834)** **(51,995)**

	2020	2021
Investing Cash Flow (CFI)	(30,269)	(62,498)
Dividend income	1,281	1,110
Sell / (Invest) in a associate	16,757	(29,573)
CAPEX (PP&E) & others	(48,306)	(34,036)

	20,575	8,245
Financing (CFF)		
Loans proceeding	6,336	39,789
Loans repayment	(7,494)	(10,834)
Bond issue / (Paid)	31,120	(3,000)
Interest	(6,262)	(6,929)
Dividend & others	(3,124)	(10,780)

Beginning 2021

Cash + S/T Investment
71,681

+

Increase / (Decrease)
(43,749)

+

Effect of FX changes⁽¹⁾
2,092

=

Ending 2021

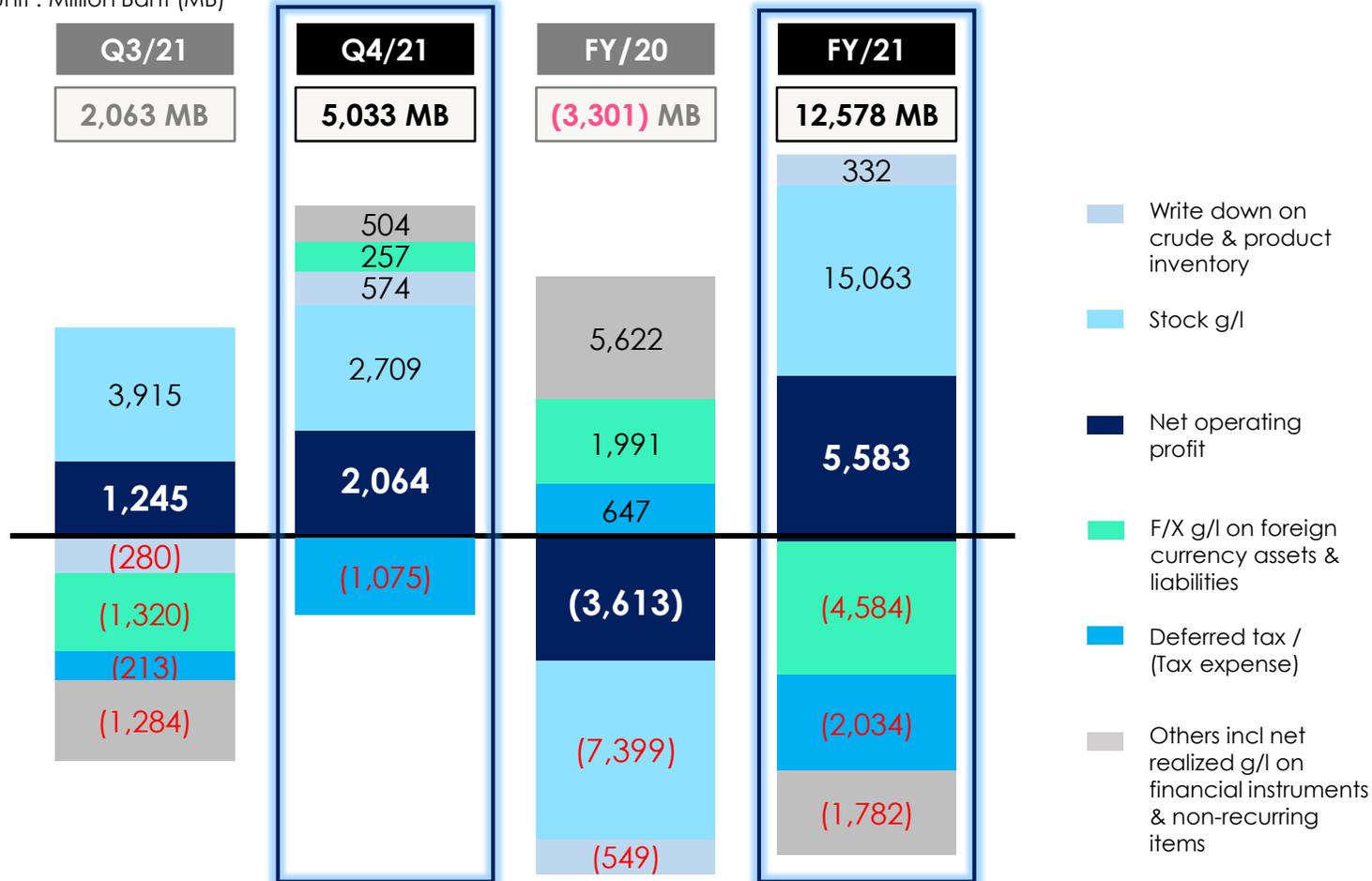
Cash
30,024

(1) Effect of FX changes mainly from the FX gain/loss of FCD

Q4 & FY/21 - Financial Performance

TOP Group Net Profit

Unit : Million Baht (MB)



Remark

- Stock gain/(loss) : Q3/21 3,915 MB, Q4/21 2,709 MB, FY/20 (7,399) MB, FY/21 15,063 MB
- Reversal/ (write-down) on crude and petroleum product inventory : Q3/21 (280) MB, Q4/21 574 MB, FY/20 (549) MB, FY/21 332 MB
- F/X gain/(loss) on gain on foreign currency assets & liabilities : Q3/21 (1,320) MB, Q4/21 257 MB, FY/20 1,991 MB, FY/21 (4,584) MB
- (Tax expense)/Reversal of Tax expense : Q3/21 (213) MB, Q4/21 (1,075) MB, FY/20 647 MB, FY/21 (2,034) MB
- Net realized gain/(loss) on financial instruments : Q3/21 (479) MB, Q4/21 (1,807) MB, FY/20 (174) MB, FY/21 (2,461) MB
- Other items: Net gain/(loss) on FV of financial instrument Q3/21 (1,429) MB, Q4/21 2,311 MB, FY/20 (5) MB, FY/21 55 MB . Gain on GPSC share sale : FY/20 5,801 MB, Gain on UBE shares sales & reclassification FY/21 624 MB

Gross Refining Margin - GRM

	\$/bbl	Q3/21	Q4/21	FY/20	FY/21
Market GRM		1.6	5.4	0.4	2.2
Stock Gain/(Loss)		5.1	2.9	(2.3)	4.7
Accounting GRM		6.7	8.3	(1.9)	6.9

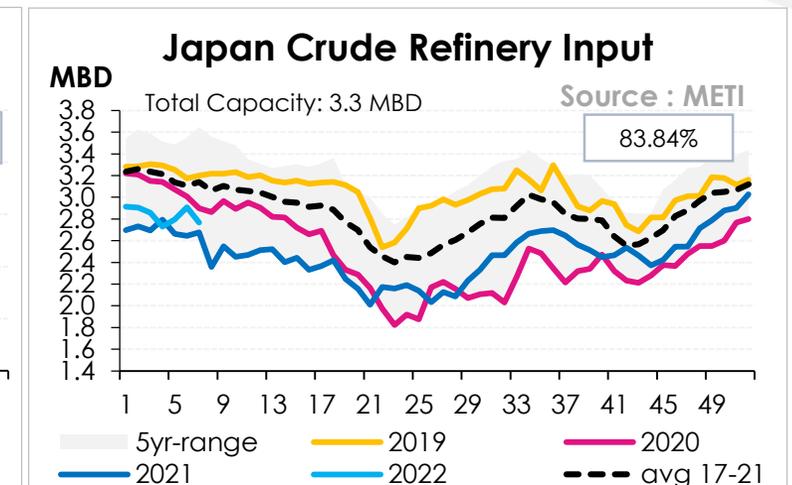
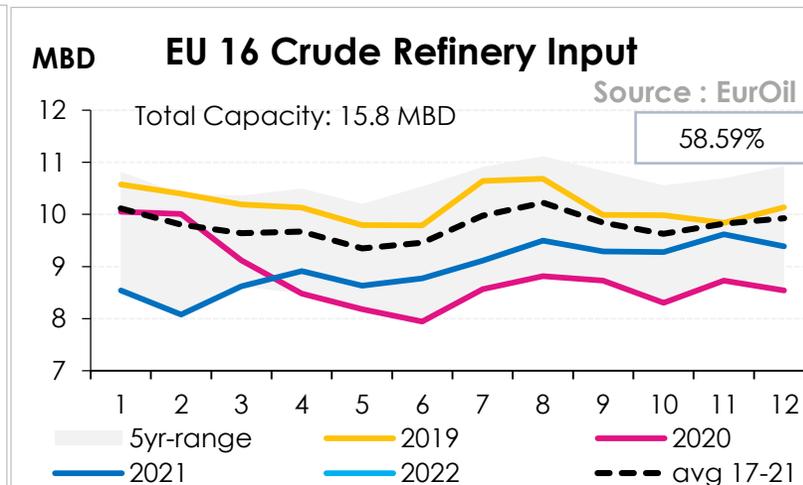
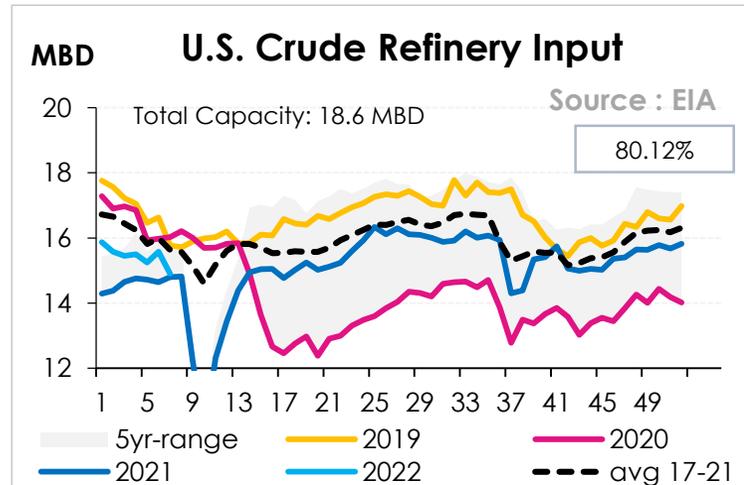
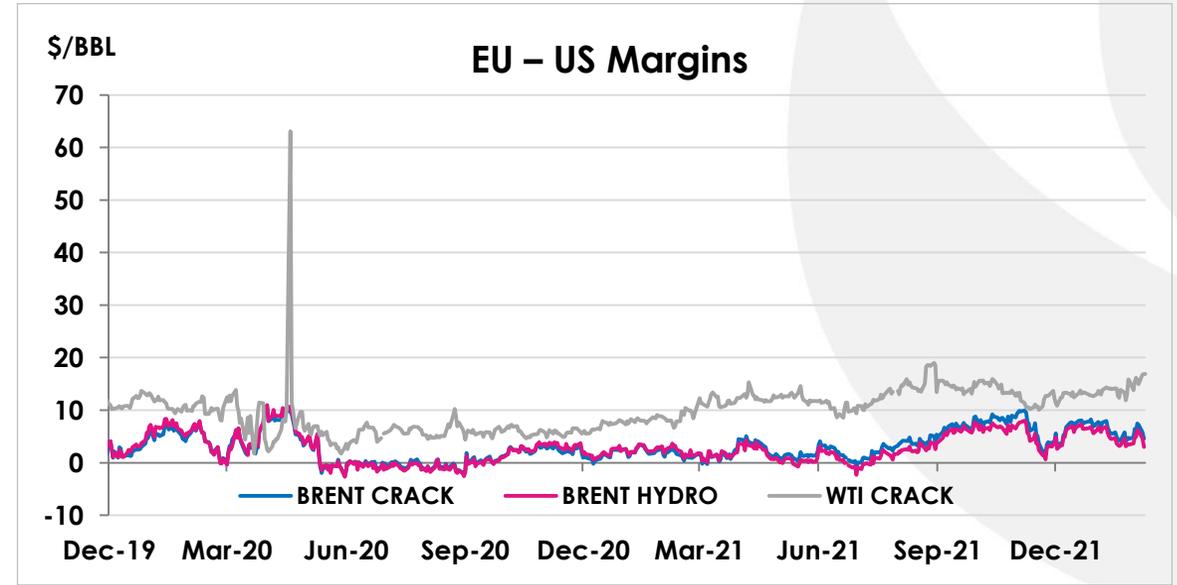
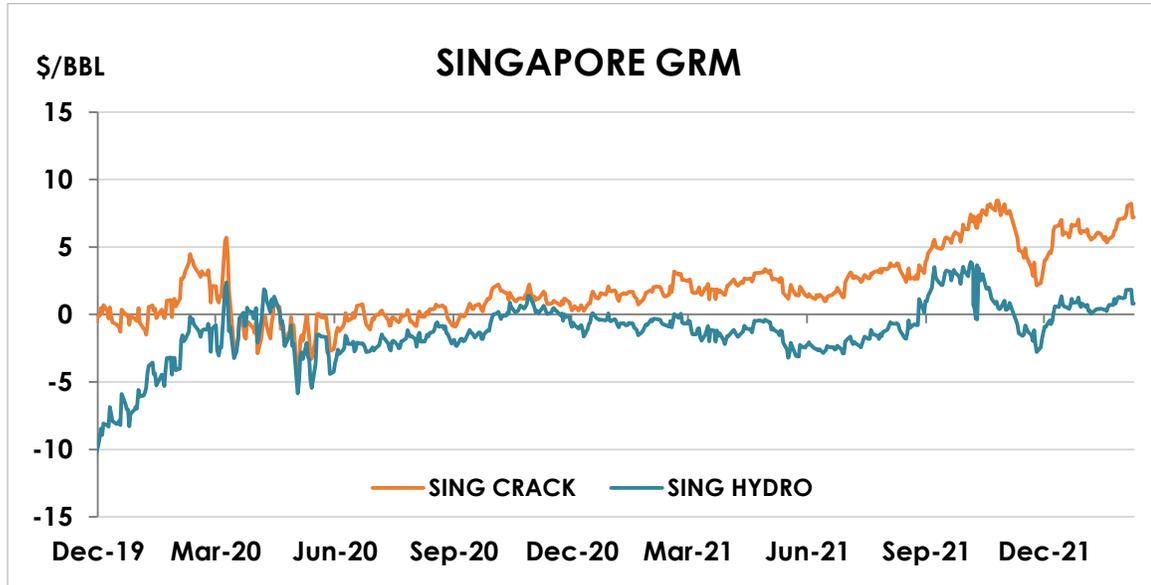
Gross Integrated Margin - GIM

Aromatics & LAB	2.1	0.8	1.5	1.7
Lube base	1.8	0.9	0.5	1.6
Market GIM	5.5	7.0	2.4	5.5
Accounting GIM	10.5	9.9	0.1	10.1

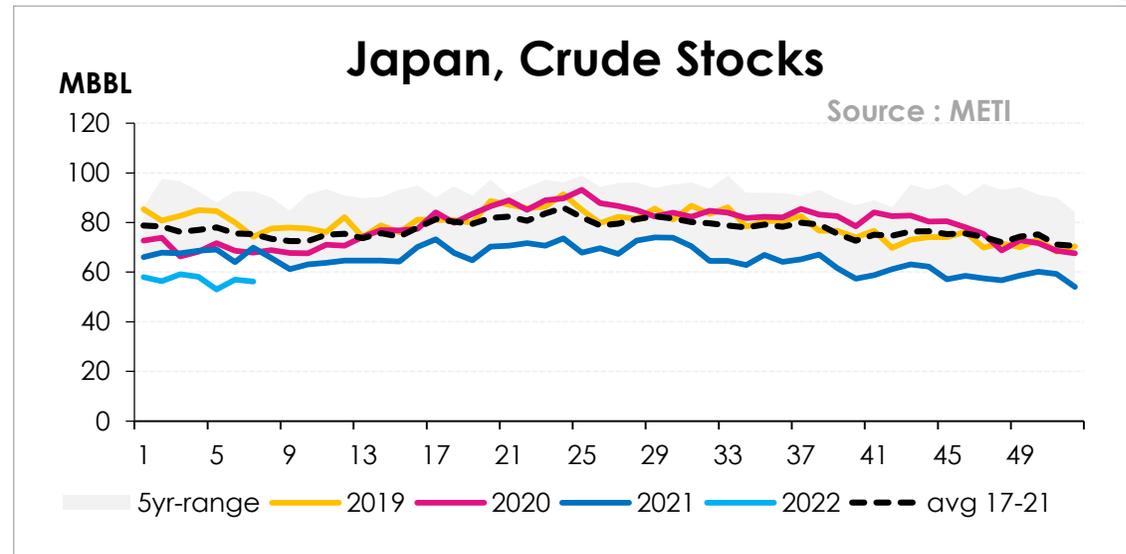
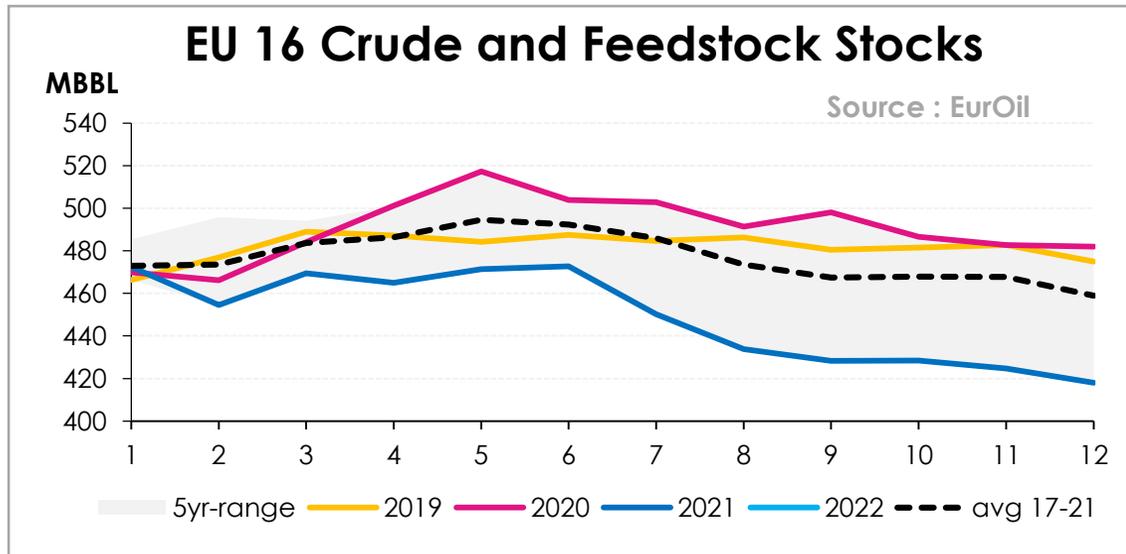
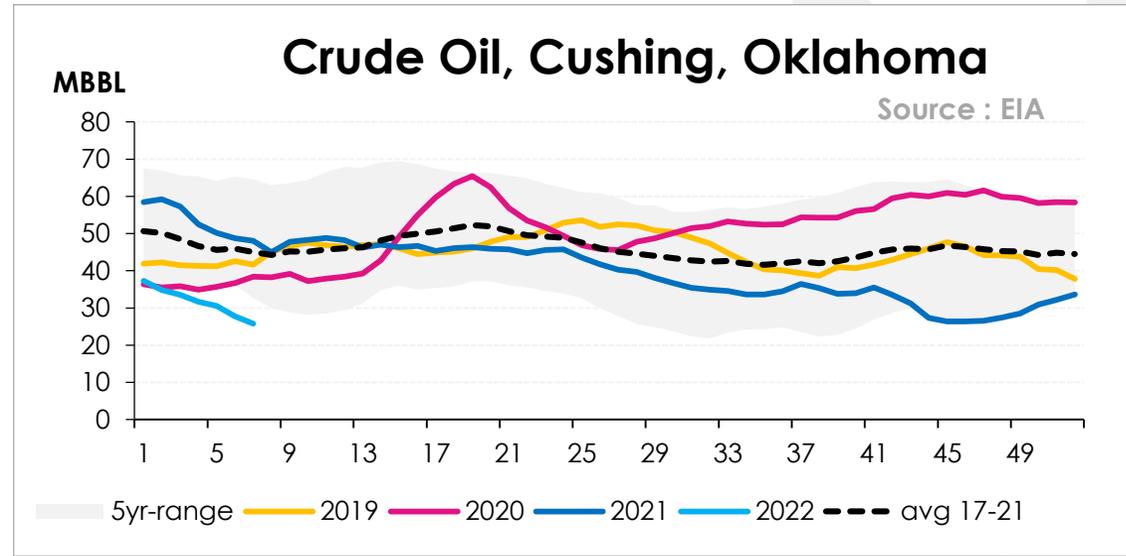
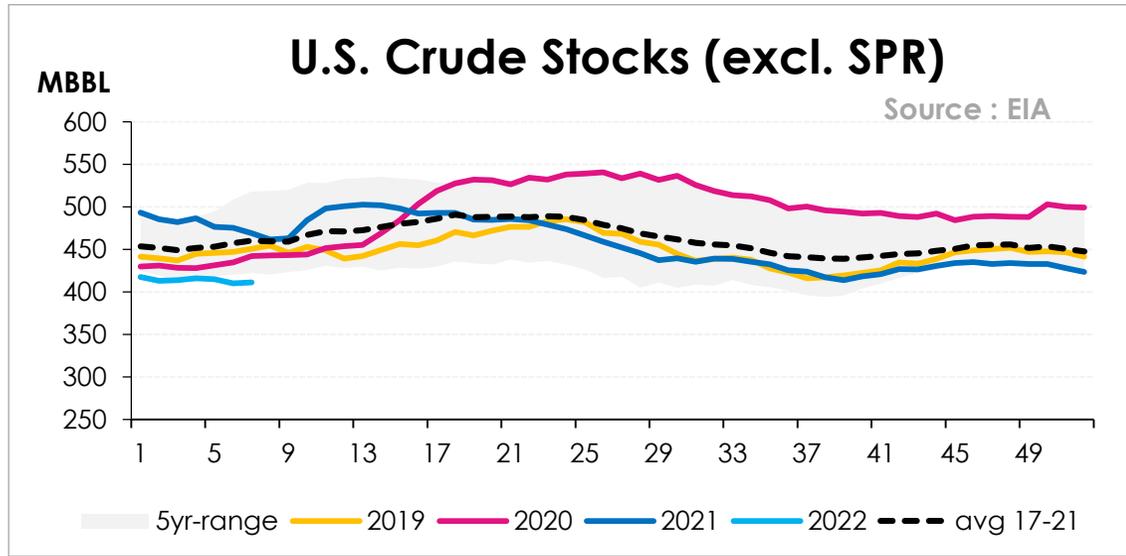
Utilization / Production Rate

Refinery	92%	109%	101%	100%
Aromatics	88%	81%	71%	87%
LAB	118%	120%	103%	112%
Base Oil	88%	88%	88%	91%

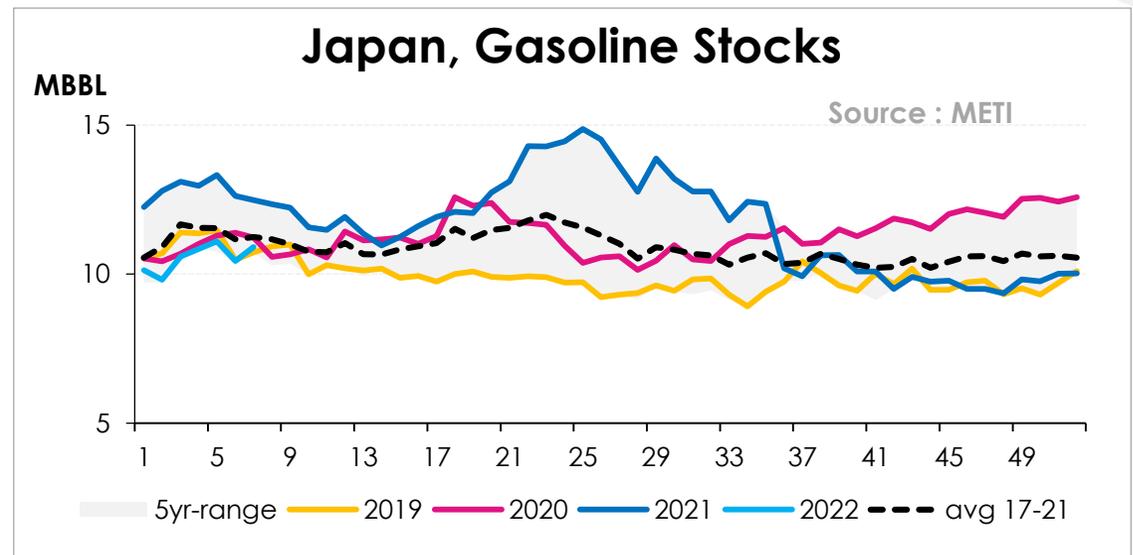
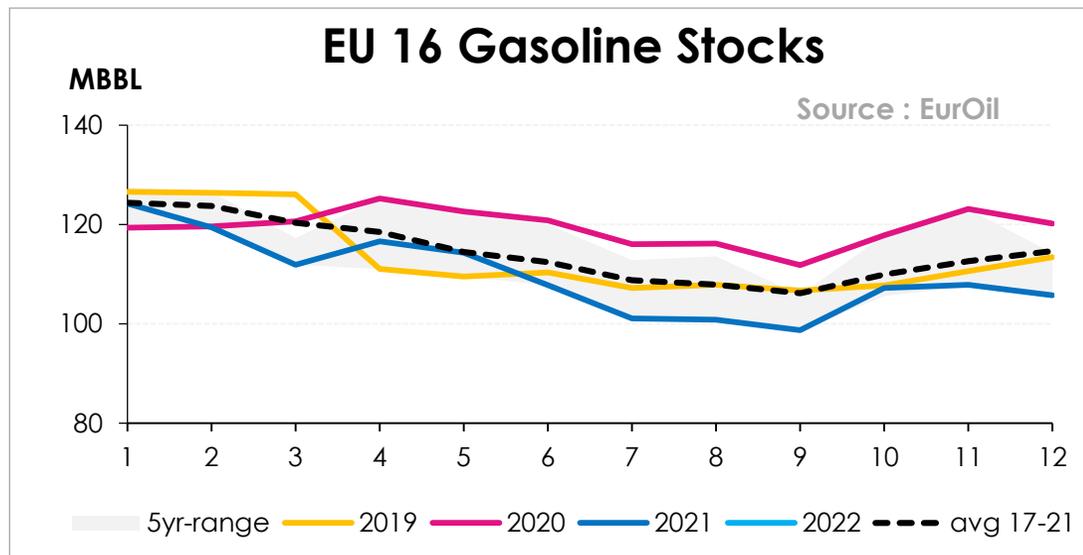
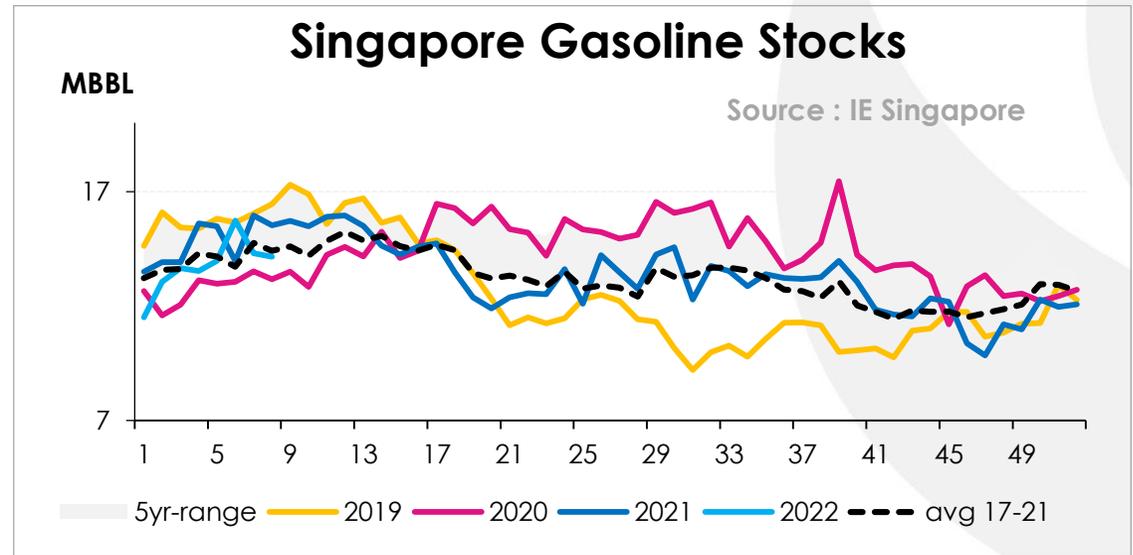
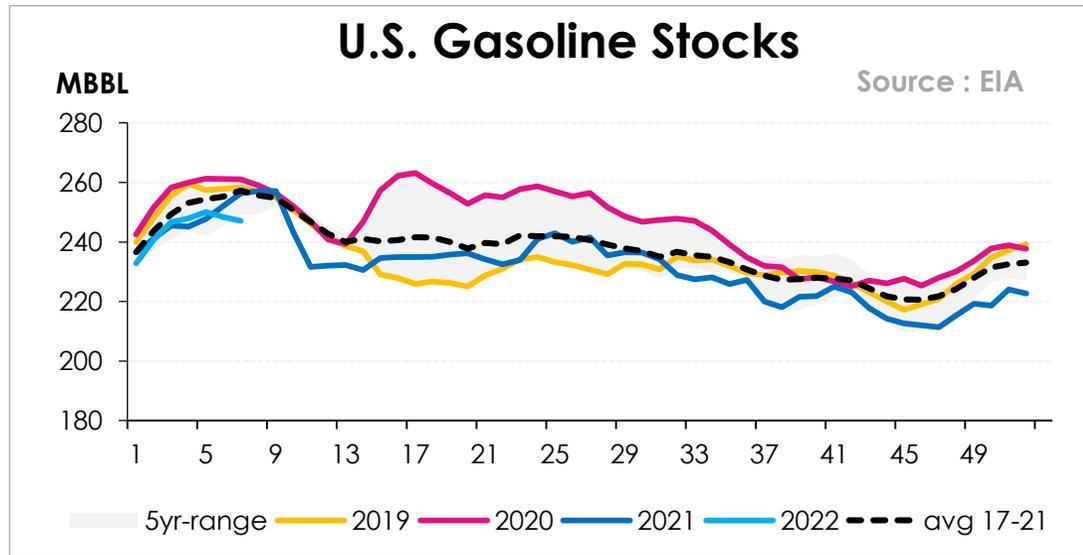
Asian Margin Vs. US-EU margin



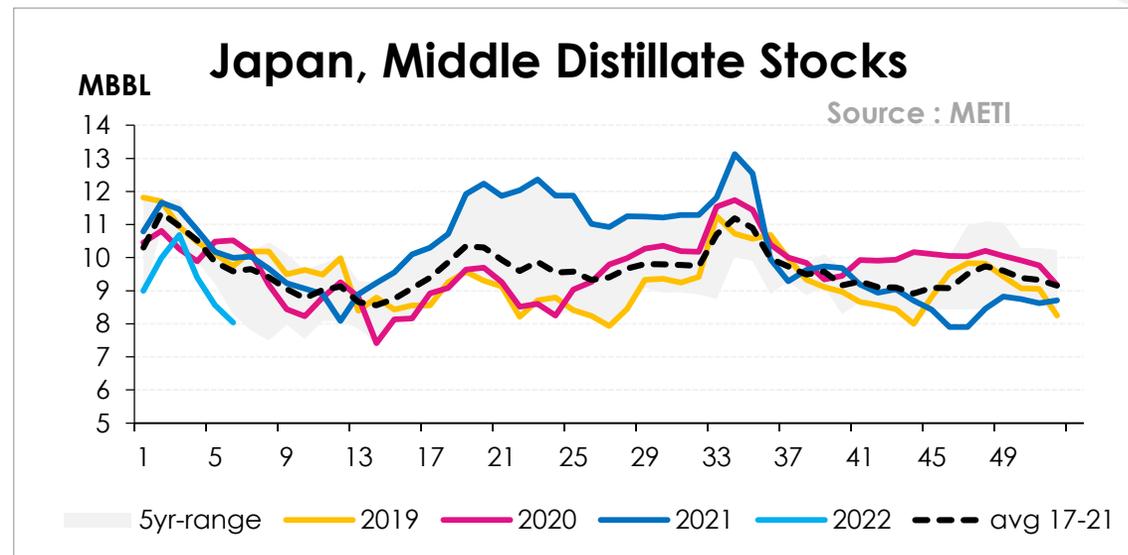
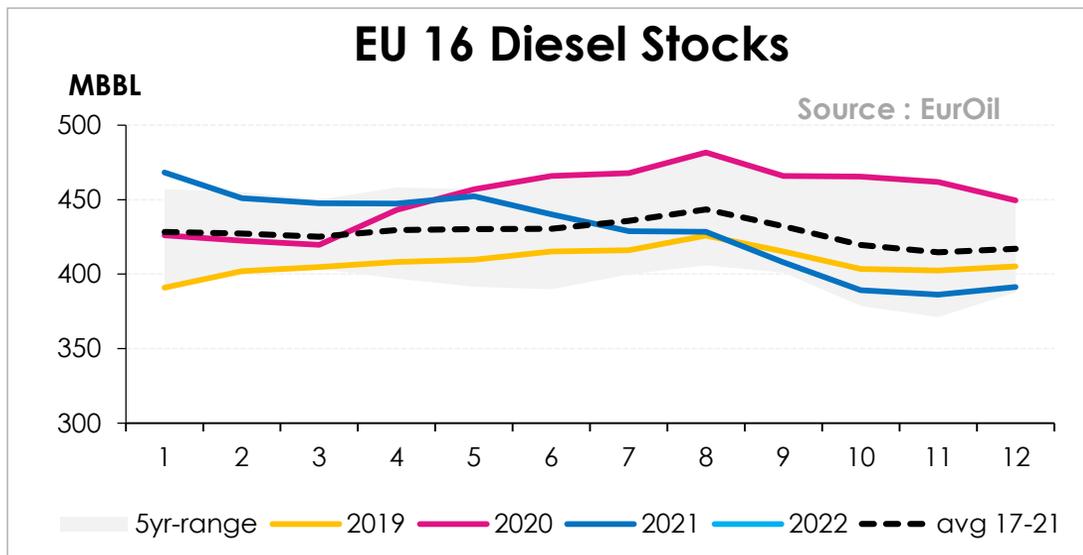
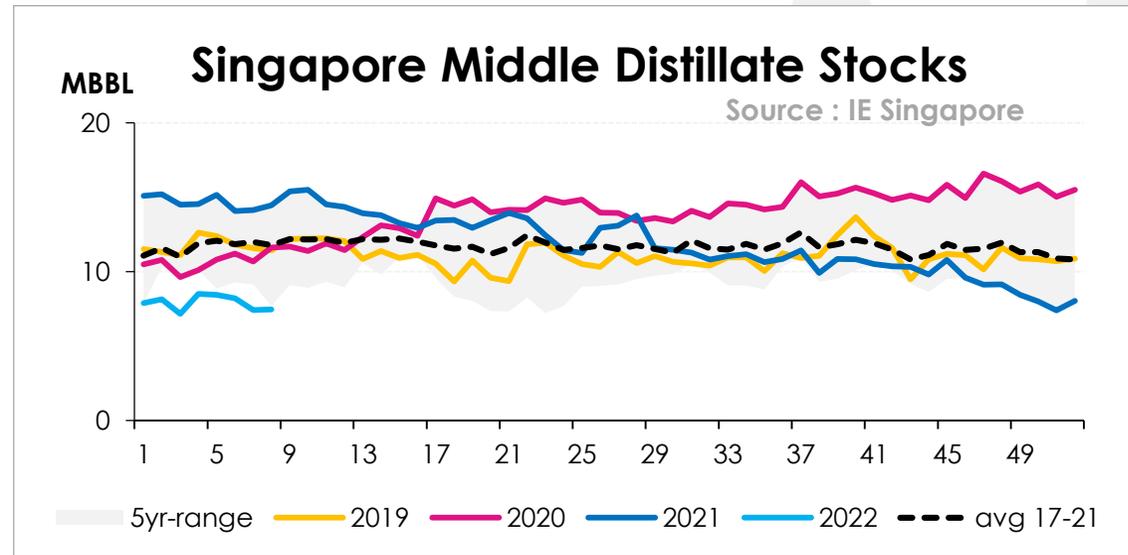
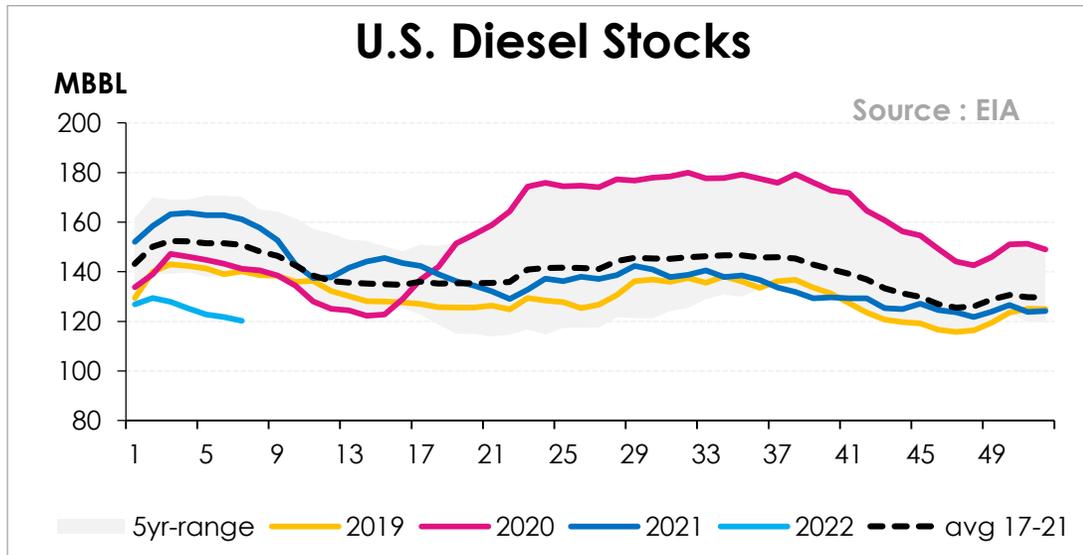
Global Crude Oil Inventories



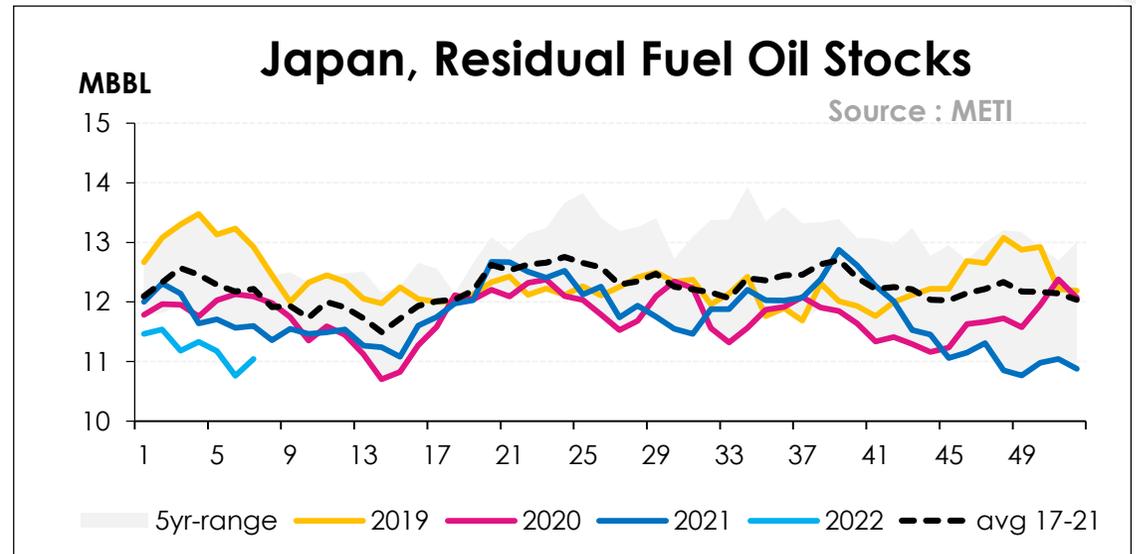
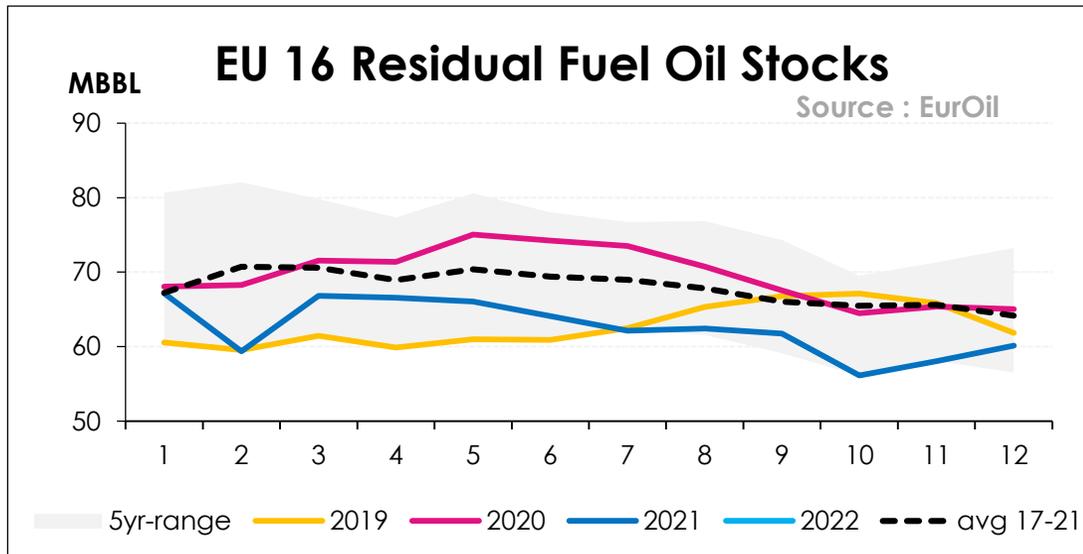
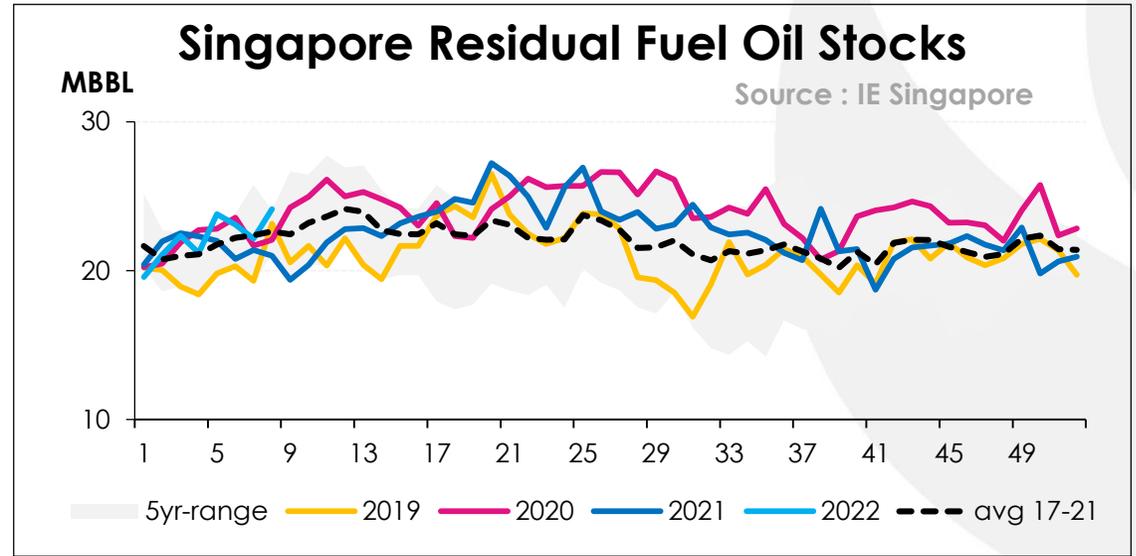
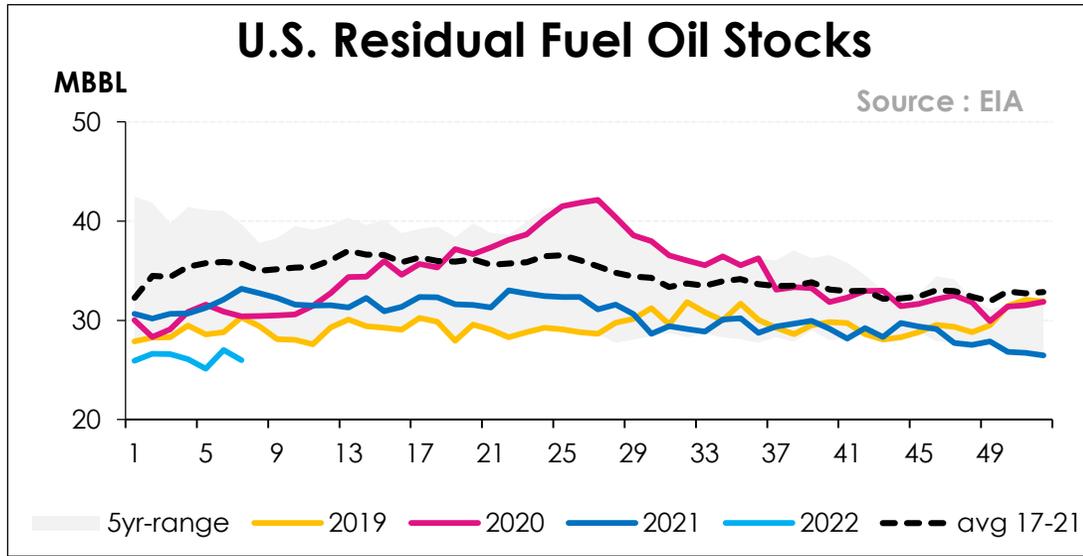
Global Gasoline Inventories



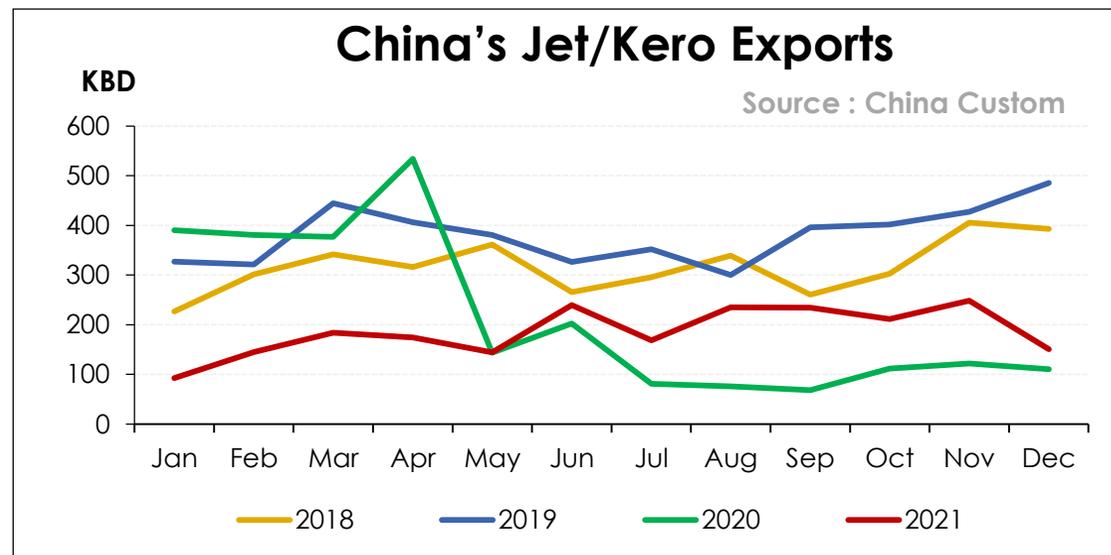
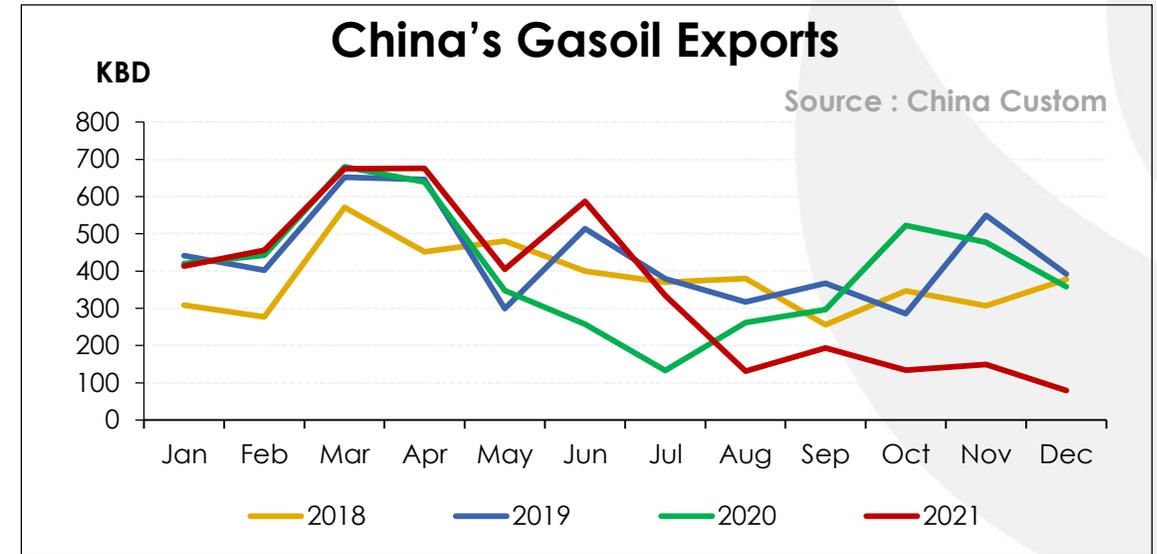
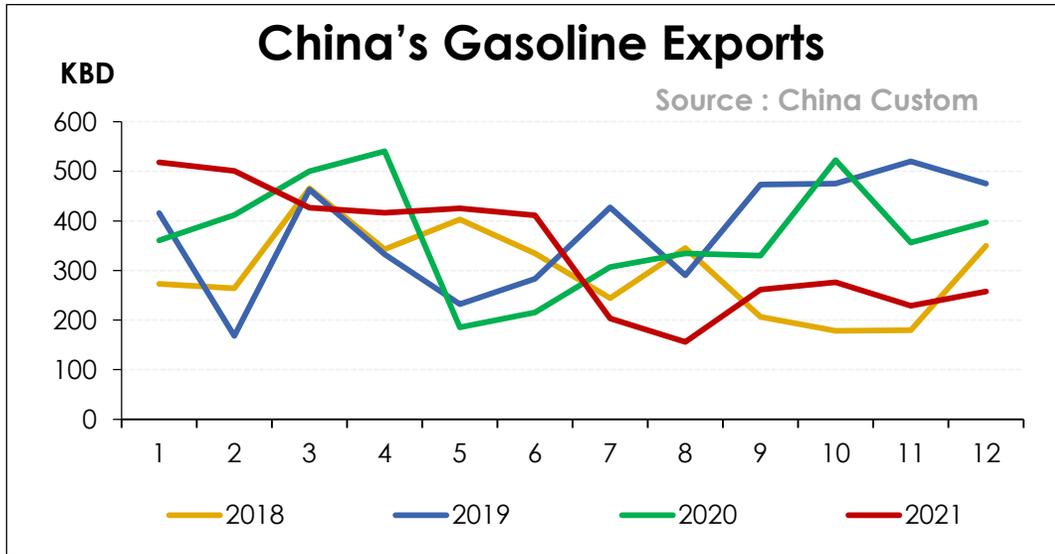
Global Middle Distillate Inventories



Global Fuel Oil Inventories

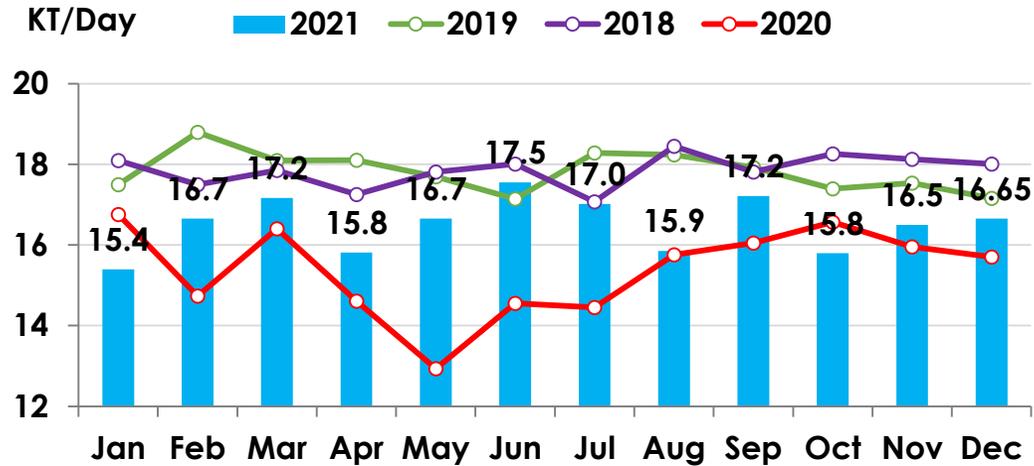


China's Refined Product Exports



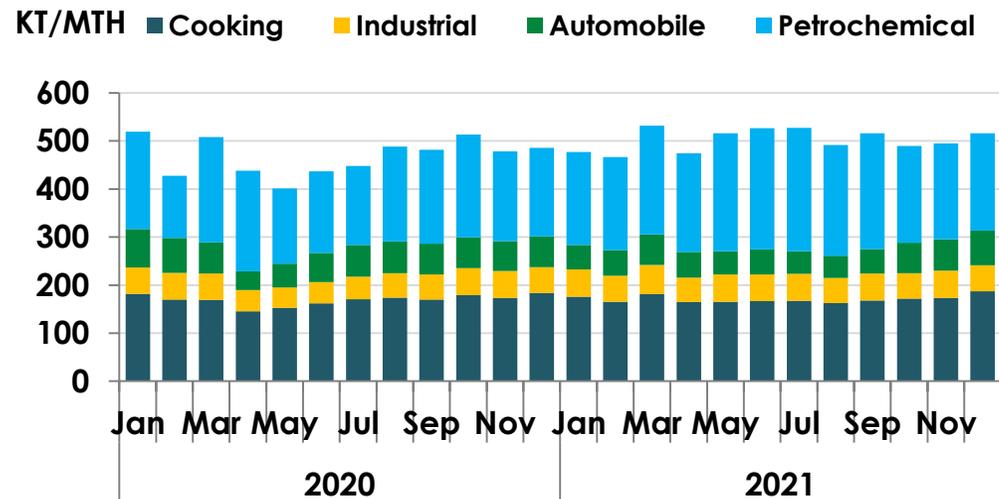
Domestic LPG Demand

Thailand LPG Demand



Remark : LPG demand includes Petrochemical consumption

LPG Demand by Sector



LPG Demand Highlight

- In 12M'21, LPG demand increased by 7.4% YoY mainly following the increase in petrochemical and industrial sectors. LPG demand in the petrochemical and industrial sector rose by 19.1% and 8.7% YoY, respectively as the manufacturing production started to be recovered following the reopening of factories. In addition, cooking demand also increased by 1.1% YoY from last year. However, the demand in the automobile sector still plunged by 11.0% YoY, as the COVID-19 pandemic pressured the transportation activities especially in Aug'21.

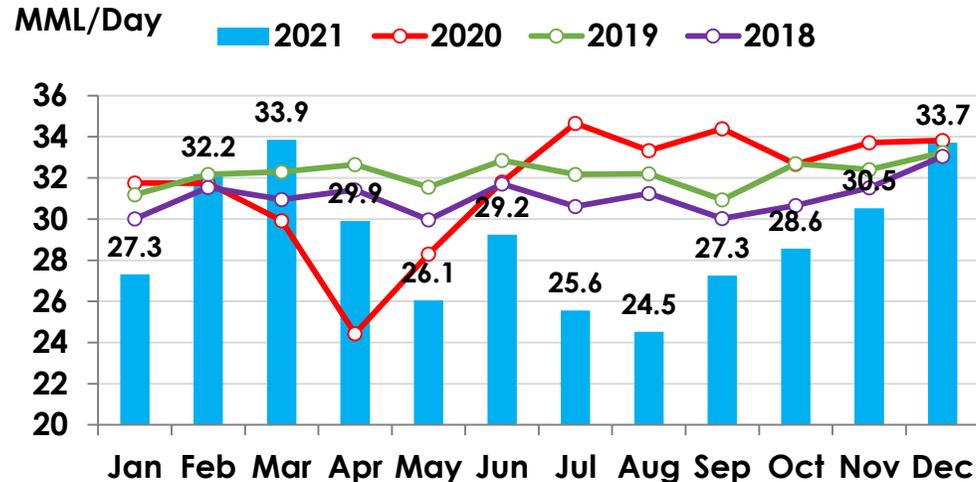
Outlook for 2022

- In 2022, LPG demand is expected to slightly decline by 0.2% YoY, mainly from the automobile demand. Automobile demand tends to decrease by 14.9% YoY as the demand will be pressured by the lower number of vehicles that run on LPG especially the Taxi. However, the Industrial demand tends to increase by 2.2% YoY as the demand will be supported by the reopening of factories as well as the higher production volume. Besides, Cooking demand tends to increase by 3.8% YoY as the demand would recover from the effect of the COVID-19 pandemic in 2021.

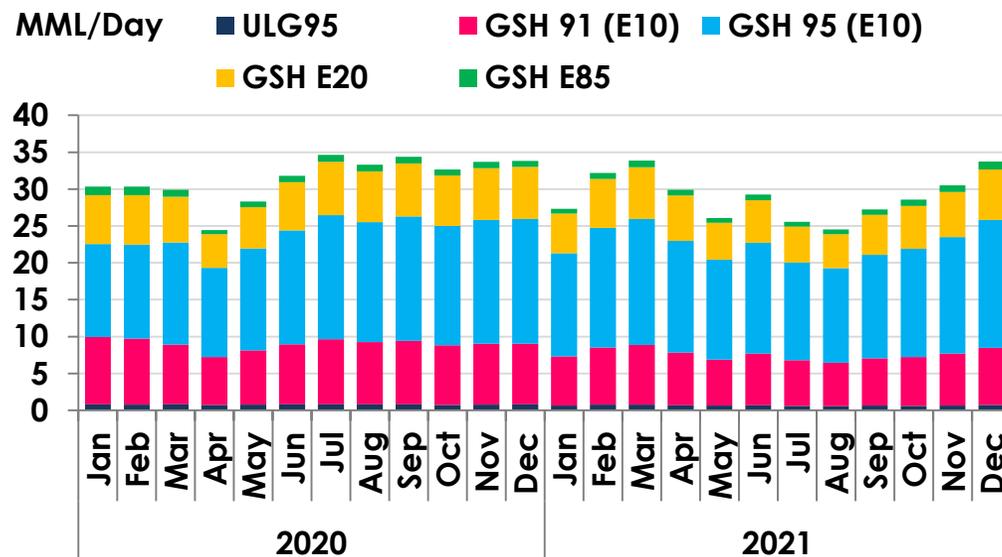
Source: EPPO, DOEB (As of Feb 2022)

Domestic Gasoline/Gasohol Demand

Thailand Gasoline/Gasohol Demand



Gasoline/Gasohol Demand by Grade



GASOLINE/GASOHOL Demand Highlight

- In 12M'21, Gasoline demand was decreased by 8.5% YoY to an average of 29.0 MML/day while Gasohol demand decreased by 8.9% YoY, settling at 28.4 MML/day. The demand was mainly pressured by the lower transportation activities in most sectors during the second and the third wave of COVID-19 (Jan and Apr'21) and especially in the fourth wave in Jul'21 which was the delta variant outbreak. Besides the effect of the pandemic, the narrow price gap between GSH95 and E20 partly supported the GSH95 demand to decline only by 1.7% YoY while E20 demand dropped by 10.7% YoY. In addition, E85 demand plunged by 9.0% YoY following the lower oil stations providing E85 compared to last year.

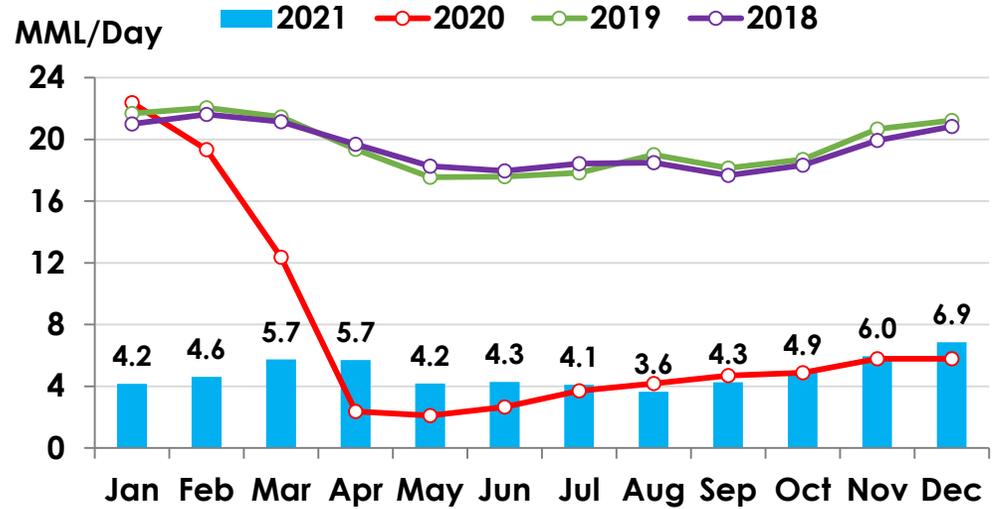
Outlook for 2022

- Gasoline consumption is expected to increase by 9.6% YoY which is mainly supported by the recovery of the transportation activities from milder COVID-19 impact and lockdown easing. Moreover, the economic recovery would encourage people spending resulting in higher passenger car sales.

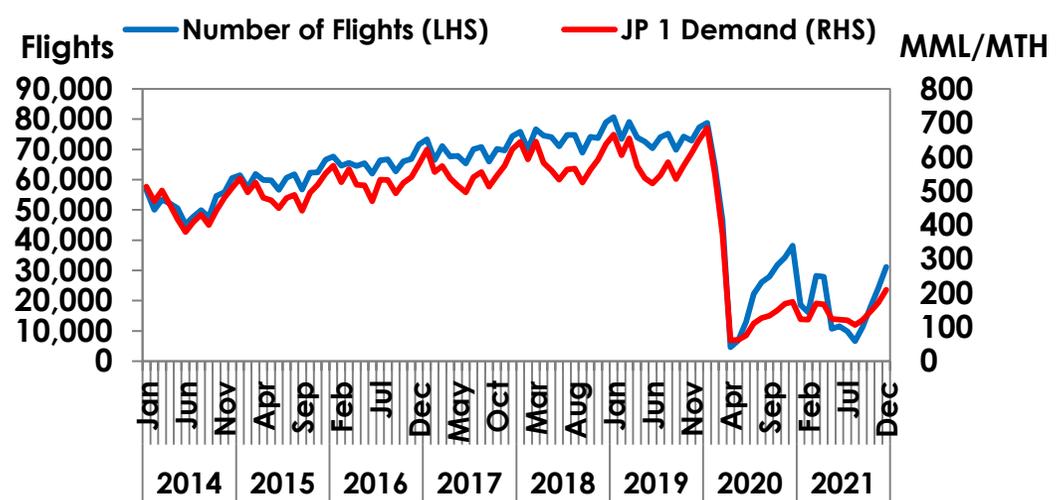
Source: DOEB (As of Feb 2022)

Domestic Jet Demand

Thailand JET Demand



JET-A1 Demand and Number of Flights



JET Demand Highlight

- In 12M'21, Jet consumption decreased by 35.2% YoY. The demand still decreased because of Covid-19 pandemic situation and also the new pressure from Omicron variant. However, Jet demand tended to be increased since Sep' 21 due to resuming on travelling on 1 Sep'21. In addition, the country reopening allowed fully vaccinated travelers from low-risk countries since 1 Nov'21, led to higher in both international and domestic flight movements.

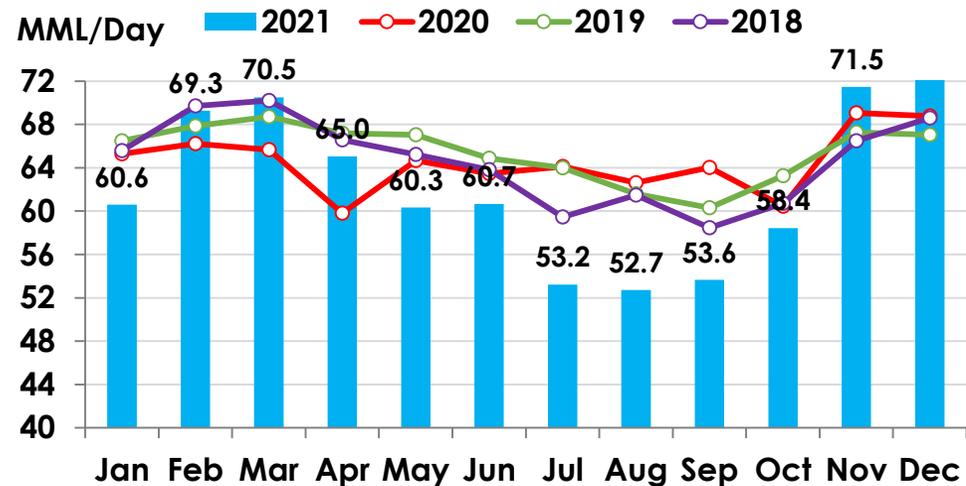
Outlook for 2022

- Jet-A1 demand growth is expected to increased by 43.4% YoY, since Thailand allowed vaccinated tourists from more than 60 low-risk nations to enter the country. In addition, from 11 Jan'22, International travelers from any country can enter Thailand under the Alternative Quarantine (AQ) entry scheme and also reopen 3 additional Sandbox destinations to all travelers.

Source: DOEB, AOT, Department of Tourism (As of Feb 2022)

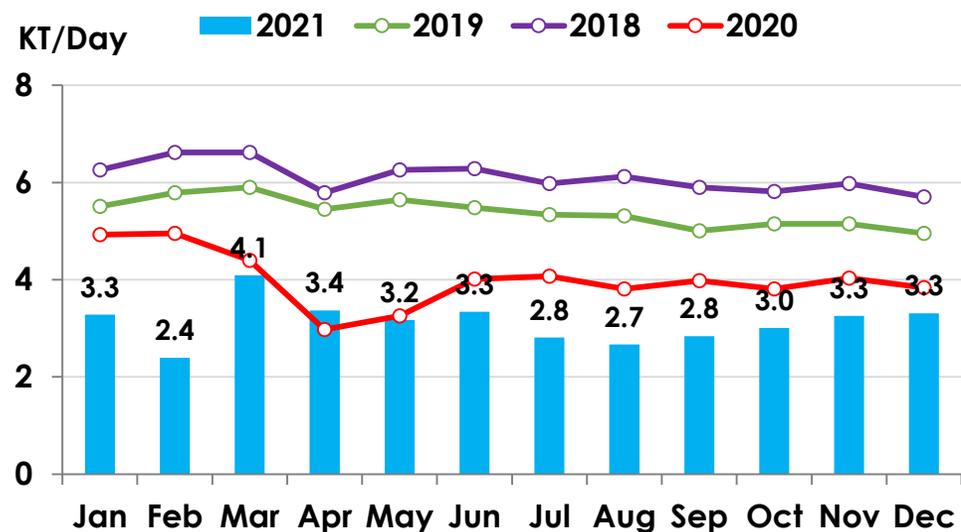
Domestic Gasoil and NGV Demand

Thailand Gasoil Demand



*Exclude Marine Gasoil

NGV Demand



Gasoil Demand Highlight

- In 12M'21, Gasoil demand decreased by 2.9% YoY. The demand was still impacted by Covid-19 pandemic situation. However, the restriction areas had been relaxed since Oct'21 and also, in Nov'21, the improve of economic activities and using more Gasoil to generate electricity, led to higher Gasoil demand.

Outlook for 2022

- Gasoil demand is expected to increased by 4.0% YoY as the demand has recovered after country re-opening since Nov'21 which resulting to higher economic activities and logistic movements.

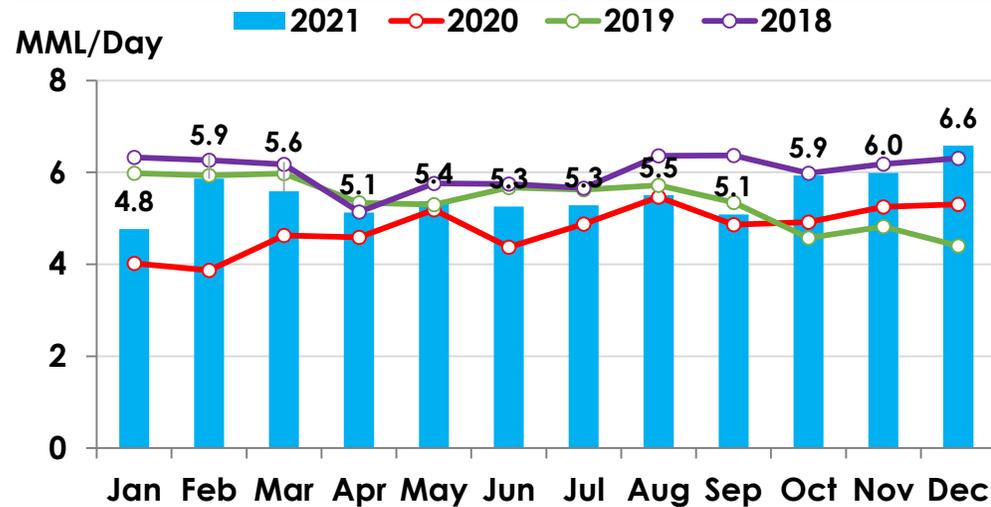
NGV Demand Highlight

- In 12M'21, NGV demand continually decreased by 22.2% YoY, due to the impact of Covid-19 pandemic since last year, together with the decrease of service stations and NGV vehicles.
- However, the Ministry of Energy plans to maintain NGV's retail price for taxi drives in Bangkok and Vicinity at 13.62 baht per kilogram for 1 month, effective from 16 Feb'22 until 15 Mar'22, which shall support NGV demand.

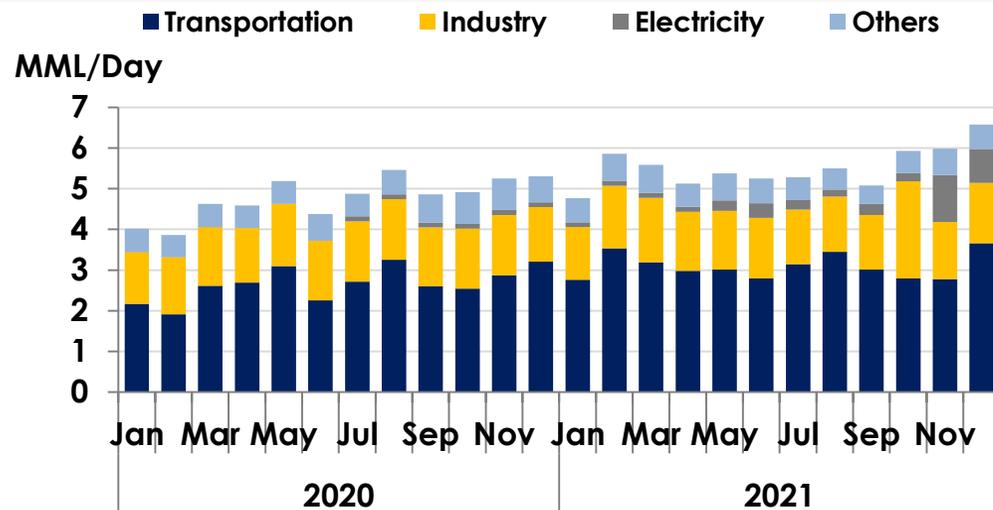
Source: EPPO, DOEB (As of Feb 2022)

Domestic Fuel Oil Demand

Thailand Fuel Oil Demand



Thailand Fuel Oil Demand by Sector



Fuel Oil Demand Highlight

- In 12M'21, Fuel Oil consumption rose by 15.6% YoY, as the demand in the transportation sector, which accounted for 55.9% of total Fuel Oil demand, rose by 16.2% YoY due to higher import and export volume. Moreover, the demand of the industrial sector accounted for 27.3% of total Fuel Oil demand, which increased by 5.7% YoY due to the global economic recovery.

Outlook for 2022

- Fuel Oil demand is expected to increase by 2.4% YoY. Fuel oil consumption level would surpass pre-pandemic 2019 level as Thai economy in 2022 tends to be increased from economic recovery from easing lockdown measures and reopening the country.

Source: DOEB (As of Feb 2022)

Thank You

Any queries, please contact:



at email: ir@thaioilgroup.com

Tel: 662-797-2999 / 662-797-2961

Fax: 662-797-2976