Management's Discussion and Analysis (MD&A)

Thai Oil Public Company Limited

For The First Quarter of 2023

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Management's Discussion and Analysis (MD&A)

Thai Oil Public Company Limited and Subsidiaries

For the First Quarter of 2023

1. Company and its Subsidiaries' Operating Results

Table 1: Summary of Consolidated Financial

(Million Baht)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Integrated Intake (kbd)	312	285	27	303	9
Gross Integrated Margin (GIM)[1] (US$/bbl)					
: excluding Stock Gain/(Loss)	11.8	11.1	0.7	7.6	4.2
: including Stock Gain/(Loss)	8.3	1.5	6.8	23.6	(15.3)

(Million Baht)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Sales Revenue	115,943	123,132	(7,189)	114,506	1,437
Net Realized Loss on Financial Instruments	329	369	(40)	(5,727)	6,056
EBITDA	**8,182**	**2,398**	**5,784**	**13,034**	**(4,852)**
Net Gain/(Loss) on Fair Value Measurement of Financial Instruments	158	(1,247)	1,405	(1,625)	1,783
Net Foreign Exchange Gain/(Loss) [2]	571	2,652	(2,081)	311	260
Finance Costs	(922)	(994)	72	(961)	39
Reversal of Income Tax (Expense)	(1,805)	108	(1,913)	(1,672)	(133)
Net Profit/(Loss)	**4,554**	**147**	**4,407**	**7,183**	**(2,629)**
Basic Earnings/(Loss) per Share (Baht)	**2.04**	**0.07**	**1.97**	**3.52**	**(1.48)**
Stock Gain/(Loss)	(3,339)	(9,178)	5,839	14,472	(17,811)
Reversal/ (Write-Down) on Crude and Petroleum Product Inventory[3]	(207)	2,104	(2,311)	(2,609)	2,402

Exchange Rate (Baht: 1 US$)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Average FX	34.08	36.50	(2.42)	33.23	0.85
Ending FX	34.26	34.73	(0.47)	33.46	0.80

Remark (1) Gross integrated margin is the integrated gross margin among Thaioil refinery, Thai Paraxylene Co., Ltd., LABIX Co., Ltd. and Thai Lube Base Plc.

(2) Including net foreign exchange gain / (loss) on foreign currency assets and liabilities in Q1/23, Q4/22, and Q1/22 of Baht 763 million, Baht 1,671 million, and Baht 167 million, respectively.

(3) Including reversal / (write-down) of allowance for decline in value of crude and petroleum product inventories adjusted to net realizable value and reversal / (write-down) of petroleum product at cost.

In Q1/23 compared with Q4/22, Thaioil and Subsidiaries reported a higher integrated intakes due to Thaioil refinery's planned major turnaround at its CDU2 and other units totaling of 26 days and major turnaround at Thai Lube Base Plc. (TLB) in Q4/22. However, our revenue from sales decreased by Baht 7,189 million to Baht 115,943 million due to lower selling prices of jet/kero and gasoil following ongoing supply of Russian products in the market. Nevertheless, we reported GIM excluding stock gain / (loss) of 11.8 US$/bbl or an increase of 0.7 US$/bbl, mainly due to an increase in gasoline spread over Dubai. Furthermore, Murban and Arab Light spreads over Dubai, which were our main feedstocks, decreased. In addition, for aromatics, PX spread and BZ spread over ULG95 improved, primarily due to increased demand in the Asian region after China relaxed its COVID-19 measures. However, surfactant business profit contribution was weaker due to the reduced domestic demand situation, as well as the decreased base oil spread over fuel oil from higher fuel price as Chinese refineries imported fuel oil as their feedstocks. Additionally, bitumen spread over fuel oil in Q1/23 decreased due to the pressure from the delayed road infrastructure improvements in the main regions of the country, but TLB reported better performance due to significant uplift in its base oil production rate. Furthermore, crude oil prices in Q1/23 decreased from Q4/22 due to concerns over crude oil supply after Russia redirected its oil exports from Europe to other countries. Moreover, the market faced pressure from the economic downturn caused by the global central banks' policy of accelerating interest rate hikes, as well as concerns over bank liquidity crunch in both of the United States and Europe. As a result, we reported a stock loss of Baht 3,339 million in Q1/23, lower stock loss of Baht 5,839 million than Q4/22. Thus, GIM including stock gain / (loss) of 8.3 US$/bbl was reported during the period, boosted by 6.8 US$/bbl from Q4/22. There was a write-down on crude and petroleum product inventory of Baht 207 million in Q1/23, compared with a reversal on crude and petroleum product inventory of Baht 2,104 million in Q4/22. Including realized net gain from financial instrument of Baht 329 million, we reported EBITDA of Baht 8,182 million, improved by Baht 5,784 million from previous quarter. Moreover, a gain on fair value measurement on financial instruments of Baht 158 million was booked, compared with a loss from the same measurement of Baht 1,247 million in Q4/22, but we reported a net gain from foreign exchange of Baht 571 million (Baht 763 million of which was from foreign exchange gain on foreign currency assets and liabilities), dropped by Baht 2,081 million from Q4/22 due to higher Thai Baht appreciation than at the end of the last quarter. Offsetting with depreciation, finance cost, and tax expenses, we booked a net profit of Baht 4,554 million in Q1/23, or Baht 2.04 Baht per share, an incline of Baht 4,407 million from the last quarter.

In Q1/23, compared with Q1/22, we reported higher integrated intakes. Thus, we reported higher sales of Baht 1,437 million and a higher GIM excluding stock gain/loss of 4.2 US$/bbl, mainly due to stronger jet/kero and gasoil spreads over Dubai after the COVID-19 situation began to improve in many countries. Additionally, base oil and bitumen spreads over fuel oil went up thanks to the lower prices of fuel oil than Q1/22. In addition, PX spreads over ULG95 increased due to increased demand in Asia after China eased its COVID-19 measures. Nevertheless, BZ spread over ULG95 reduced from additional supply in the market and the high level of benzene reserves in China. Moreover, profit contribution from surfactant business declined due to lower domestic demand, and with lower crude oil price and crude premiums, we unavoidably reported a stock loss of Baht 3,339 million in this quarter compared with a stock gain of Baht 14,472 million during the same period last year. We booked a lower decrease of a write-down on crude and petroleum product inventory of Baht 2,402 million than Q1/22. Including net realized gain from financial instrument, we reported lower EBITDA by Baht 4,852 million from Q1/22. We booked a gain on fair value measurement on financial instruments of Baht 158 million, whereas a loss of Baht 1,625 million was recognized during Q1/22. However, we booked a higher net gain on foreign exchange of Baht 260 million. Offsetting with depreciation, finance cost and tax expense, we reported a lower net profit of Baht 2,629 million from the same period last year.

2. Summary of Financial Result by Business

Table 2: Financial Result by Business (Million Baht)

Sales Revenue	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Consolidated	**115,943**	**123,132**	**(7,189)**	**114,506**	**1,437**
Refinery	123,767	130,665	(6,898)	122,928	839
Aromatics and LAB[(1)]	19,002	20,485	(1,483)	19,304	(302)
Lube Base Oil	6,268	4,790	1,478	6,808	(540)
Power Generation	2,859	3,327	(468)	2,480	379
Solvent and Chemicals[(2)]	4,758	5,848	(1,090)	4,246	512
Ethanol[(3)]	470	514	(44)	398	72
Others[(4)]	1,557	1,745	(188)	1,579	(22)

EBITDA	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Consolidated	**8,182**	**2,398**	**5,784**	**13,034**	**(4,852)**
Refinery	5,555	846	4,709	11,313	(5,758)
Aromatics and LAB	780	598	182	532	248
Lube Base Oil	1,141	637	504	455	686
Power Generation	584	567	17	433	151
Solvent and Chemicals	232	141	91	351	(119)
Olefins	(3)	(1)	(2)	(2)	(1)
Ethanol	44	77	(33)	61	(17)
Others	50	(282)	332	50	0

Net Profit / (Loss)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Consolidated	**4,554**	**147**	**4,407**	**7,183**	**(2,629)**
Refinery	2,942	279	2,663	6,326	(3,384)
Aromatics and LAB	181	(444)	625	62	119
Lube Base Oil	886	471	415	329	557
Power Generation [(5)]	473	359	114	288	185
Solvent and Chemicals	135	(59)	194	226	(91)
Olefins [(6)]	32	(201)	233	(66)	98
Ethanol	(15)	15	(30)	8	(23)
Others [(7)]	92	(123)	215	128	(36)

Remark

(1) Thai Paraxylene Co., Ltd. invested 75% of total investment in LABIX Co., Ltd. which produces an intermediate for the production of surfactants (LAB).

(2) Including Thaioil Solvent Co., Ltd., having respective interests in TopNEXT international Co., Ltd. (Former name: TOP Solvent Co., Ltd.), Sak Chaisidhi Co., Ltd., TOP Solvent (Vietnam) LLC., PT Tirta Surya Raya, and JSKEM Private Limited

(3) Including Thaioil Ethanol Co., Ltd., having respective interests in Sapthip Co., Ltd. (Investment in subsidiary), and Ubon Bio Ethanol Plc (Financial asset measured at fair value through other comprehensive income).

(4) Including Thaioil Energy Services Co., Ltd. (TOP holds 99.99% shares) which provides human resources management service and Thaioil Treasury Center Co., Ltd. (TOP holds 99.99% shares) which conducts the business in the area of International Business Center (IBC) and Treasury Center (TC) for Thaioil and Subsidiaries.

(5) Since 7 June 2022, Thaioil and Subsidiaries reduced share proportions in the investments in Global Power Synergy Plc. (GPSC) to 10.0% and reclassified the remaining investment as Financial assets measured at fair value through other comprehensive income. Therefore, Thaioil booked share of profit from GPSC of Baht 58 million in the first half of 2022 and booked interim dividend income of Baht 56 million on 21 September 2022.

(6) PT TOP Investment Indonesia holds 15% shares in PT Chandra Asri Petrochemical Tbk, which is the major integrated petrochemical company in Indonesia.

(7) Including net profit / (loss) from Thaioil Energy Services Co., Ltd. and Thaioil Treasury Center Co., Ltd. and share of profits / (loss) from the investments in PTT Digital Solutions Co., Ltd., PTT Energy Solutions Co., Ltd. and Thai Petroleum Pipeline Co., Ltd. On 29 August 2022, The Extraordinary General Meeting of PTT Energy Solutions Co., Ltd shareholders No.1/2022 pass a resolution to liquidate the company, the process was completed on 29 December 2022.

2.1 Market Condition and Financial Result of Refinery Business

Table 3: Average Crude Oil Price, Petroleum Product Prices, Crude Premiums, and Crack Spreads

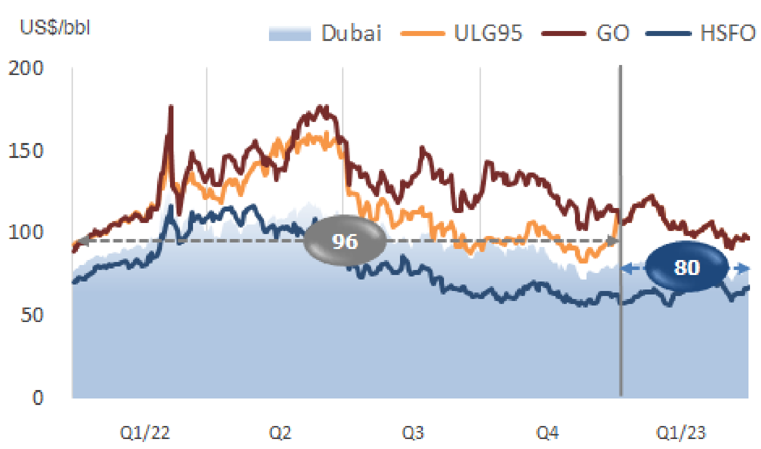
Average Prices (US$/bbl)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Dubai Crude Oil (1)	80.3	84.8	(4.5)	95.6	(15.3)
Unleaded Gasoline (ULG95)	99.0	94.2	4.8	113.3	(14.3)
Jet/Kero	106.8	118.3	(11.5)	111.8	(5.0)
Gasoil (GO)	105.5	124.2	(18.7)	115.1	(9.6)
Fuel Oil (HSFO)	64.0	62.4	1.6	87.2	(23.2)
Crude Premiums (US$/bbl)	**Q1/23**	**Q4/22**	**+/(-)**	**Q1/22**	**+/(-)**
Murban(2)	5.0	7.0	(2.0)	4.0	1.0
Arab Light(3)	2.4	5.7	(3.3)	2.8	(0.4)
Spreads over Dubai (US$/bbl)	**Q1/23**	**Q4/22**	**+/(-)**	**Q1/22**	**+/(-)**
Unleaded Gasoline (ULG95)	18.6	9.4	9.2	17.8	0.8
Jet/Kero	26.5	33.5	(7.0)	16.2	10.3
Gasoil (GO)	25.2	39.3	(14.1)	19.5	5.7
Fuel Oil (HSFO)	(16.3)	(22.5)	6.2	(8.3)	(8.0)
Very Low Sulfur Fuel Oil (VLSFO)	5.0	6.5	(1.5)	11.8	(6.8)

Remark (1) Closing Dubai crude oil price at the end of Q1/23, Q4/22, and Q1/22 were calculated from average Dubai prices in the last month in the respective period. The prices were 78.5 US$/bbl, 77.2 US$/bbl, and 110.9 US$/bbl, respectively.

(2) Murban crude premium (compared with market price) since June 2021 was calculated from the difference between average Murban price for loading month (month "M") and Dubai forward price for month "M" which was announced daily in two months before. The formula is based on ADNOC's new pricing structure.

(3) Arab Light crude premium is announced by the producer and is priced as a differential to the Oman/Dubai average

Graph 1: Prices of Crude Oil and Petroleum Product



Crude oil price in Q1/23 went down compared with Q4/22 and Q1/22 due to the fact that concerns over crude oil supply subsided after Russia exported its oil to other nations instead of Europe such as China, India and Türkiye (formerly Turkey) while oil market was pressured by 1) concerns over economic recession as various central banks were still raising their policy rates in 2H/22 and Q1/23, and 2) fears over bank liquidity/bank runs. However, the market was partially supported by Russian crude cut run of 0.5 million barrels per day from March until the end of the year. Meanwhile, suspension of usage at a pipeline of an OPEC member impacted crude transportation of 0.45 million barrels per day. Moreover, Chinese demand continuously improved after China reopening.

Murban premium in Q1/23 went down from Q4/22 and Arab Light premiums drops from Q4/22 and Q1/22 as supply shortage eased up. However, Murban crude premium remained higher than that of Q1/22 owing to Russia-Ukraine unrest.

Gasoline spread over Dubai in Q1/23 rose compared with Q4/22 and Q1/22 after the fact that driving activities rose in many countries including China since many countries had eased its COVID-19 policy. Additionally, imports to Indonesia and Malaysia rose ahead of

Ramadan festival. The spread was further supported by lower supply as some U.S. refiners suspended their production. Meanwhile, jet/kero and gasoil spreads over Dubai went down compared with Q4/22 because Russian supply was partially impacted from gasoil ceiling at 100 $US/bbl; therefore, supply from Russia came out to the market. Additionally, extraordinary warm weather in Europe and North Asia suppressed natural gas price and demand for oil for electricity production. Compared with Q1/22, gasoil spread over Dubai improved following higher gasoil demand from China following its COVID-19 lockdown easing. Likewise, jet/kero spread also went up following higher aviation activities globally especially in China. High sulfur fuel oil spread over Dubai also rose in Q1/23 compared with Q4/22 after Chinese economic recovery and higher import. However, the spread went down from Q1/22 as supply from Russia had continued to come out to Asian region. Low sulfur fuel oil in Q1/22 fell from Q4/22 and Q1/22 after supply expanded and a new refinery in Kuwait came into operation.

Table 4: Financial Result of Refinery Business

	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Throughput[1] (%)	112%	103%	9%	109%	3%
Intake (kbd)	308	283	25	299	9
Gross Refining Margin (GRM) (US$/bbl)					
: excluding Stock Gain/(Loss)	10.0	9.3	0.7	6.4	3.6
: including Stock Gain/(Loss)	6.4	(0.3)	6.7	22.6	(16.2)

Remark (1) Throughput (%) calculated based on 275,000 barrels per day

In Q1/23, the refinery reported better EBITDA and net profit than those of the prior quarter thanks to lower stock loss and gain from fair value measurement on financial instruments.

Compared with Q1/22, the refinery recorded lower EBITDA and net profit due to stock loss from a drop in crude oil price.

In Q1/23, Thaioil refinery reported utilization rate of 112%, which was higher than Q4/22 as there was a major turnaround at CDU-2 (Crude Distillation Unit) and other related units for 26 days. Additionally, sales volume rose slightly from the previous quarter. Sales were made up of 87% domestic, 10% Indochina, and 3% export to other nations. Thaioil refinery reported sales revenue of Baht 123,767 million, a decline of Baht 6,898 million following lower jet/kero and gasoil prices as the market was in a surplus stage from Russian oil export. However, GRM excluding stock gain/loss of 10.0 US$/bbl was reported. This was higher than Q4/22. However, with a decline in crude oil price, the refinery reported stock loss of 3.5 US$/bbl or Baht 3,339 million, which was a decline of Baht 5,839 million from the previous quarter. Meanwhile, there was a write-down on crude and product inventory of Baht 207 million in Q1/23 while there was a reversal of this transaction of Baht 2,104 million in Q4/22. Altogether with net realized gain from financial instruments of Baht 326 million, EBITDA of Baht 5,555 million was recorded, which was an increase of Baht 4,709 million from Q4/22. The refinery reported gain from fair value measurement on financial instruments of Baht 296 million, whereas there was a loss of Baht 1,344 million in Q4/22 which was mainly a result of fair value measurement on commodity derivative. Likewise, there was net foreign exchange gain of Baht 535 million (Baht 305 million of which came from foreign currency denominated assets and liabilities). Offsetting with depreciation, finance cost and tax expenses, net profit of Baht 2,942 million was reported, which was an increase of Baht 2,663 million from Q4/22 (or Baht 3,034 million of net profit, with dividend income).

Compared with Q1/22, the refinery reported higher utilization rate by 3%, and higher sales volume of 4%. Thus, sales revenue went up by 839 million. GRM excluding stock gain/loss rose by 3.6 US$/bbl following increases in jet/kero and gas oil spreads following COVID-19 situation which had subsided. Meanwhile, stock loss of Baht 3,339 million was reported as crude oil price went down while there was a stock gain of Baht 14,472 million in Q1/22. During the period, a write-down on crude and product inventory declined by Baht 2,402 million, compared with the same period last year. Net realized gain on financial instruments of Baht 326 million was recorded, while it was a realized loss of Baht 5,749 million. Thaioil refinery booked lower EBITDA by Baht 5,758 million. However, in Q1/23, there was net gain on fair value measurement on financial instruments of Baht 296 million compared with net loss of Baht 7,388 million in Q1/22, this was mainly a result of the commodity derivative. Offsetting with depreciation, finance cost and tax expenses, net profit went down by Baht 3,384 million from the same period last year.

2.2 Market Condition and Financial Result of Aromatics Business

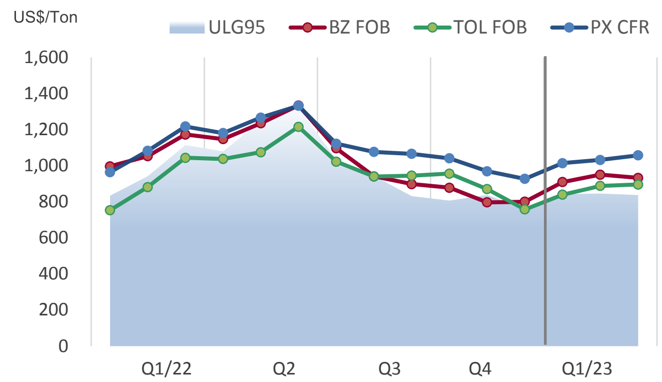
Table 5: Average Prices and Spreads of Aromatics Products

Average Prices (US$/Ton)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Paraxylene (PX)[1]	1,034	979	55	1,087	(53)
Benzene (BZ)[2]	930	825	105	1,074	(144)
Toluene (TL)[2]	874	861	13	892	(18)
Spreads over ULG95 (US$/Ton)	**Q1/23**	**Q4/22**	**+/(-)**	**Q1/22**	**+/(-)**
Paraxylene (PX)	193	178	15	124	69
Benzene (BZ)	89	24	65	110	(21)
Toluene (TL)	33	60	(27)	(71)	104

Remark (1) Based on CFR Taiwan price

(2) Based on FOB Korea price

Graph 2: Prices of Aromatics Products and ULG95



In Q1/23, PX price dropped from Q1/22, as a decrease in crude oil price from concerns over the economic recession and bank crisis in USA and Switzerland. However, PX price rose from Q4/22 and PX spread over ULG95 improved from Q4/22 and Q1/22 following the reopening of China after the relaxation of the zero COVID measure, which supported recovering demand in Asia. Howerver, PX supply continued growth from the new production plant.

BZ price and BZ spread over ULG95 in Q1/23 were higher than Q4/22 following the reopening of China and the new Styrene Monomer Plant, which supported an increase in BZ demand. However, BZ inventories in China remain at a high level and supply increased from new capacities in China, which still pressure on the market. As a result, BZ prices and the spread in Q1/23 decreased from Q1/22.

TL price in Q1/23 rose from Q4/22 following the reopening of China. As a result, manufacturers in Asia increased production capacity, which led to an increase in TL demand. However, the TL spread decreased from an increase in price of ULG95. In addition, toluene prices dropped from Q1/22 following the decline in Dubai crude oil prices, while TL spread increased from Q1/22 due to the decline in price of ULG95.

Table 6: Financial Result of TPX

	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Aromatics Production Rate (1) (%)	67%	67%	-	73%	(6%)
Aromatics Production (kTon)	138	141	(3)	151	(13)
Product-to-feed Margin(2) (US$/Ton)	65	45	21	27	38

Remark (1) Based on a nameplate capacity of 838,000 Tons/year (527,000 tons of paraxylene per year, 259,000 tons of benzene per year and 52,000 tons of mixed xylene per year)

(2) Calculated from gross margin divided by feedstock volume (Ton)

In Q1/23, TPX had a higher product-to-feed margin from increased aromatics spreads following reopening of China after zero COVID which supported recovering demand in Asia, as a result, TPX had better performance from the previous quarter.

Compared with Q1/22, TPX had a higher product-to-feed margin from increased aromatics spreads due to recovering demand from reopening China, which led to a rise in TPX performance.

In Q1/23, compared with Q4/22, Thai Paraxylene Co., Ltd. (TPX) had an aromatics production rate of 67%, and TPX had sales revenue of Baht 12,530 million, dropped by Baht 260 million due to decreases in average selling prices. However, Paraxylene and Benzene spreads over ULG95 improved following reopening of China after the relaxation of the zero COVID measure which support recovering demand in Asia, resulted in a higher product-to-feed margin of 21 US$/ton from the previous quarter. However, TPX had a net realized gain on financial instruments of Baht 3 million, a decrease by Baht 72 million from the previous quarter. Thus, TPX recorded an EBITDA of Baht 419 million, higher EBITDA by Baht 250 million from the previous quarter. Besides, in this quarter, a loss on fair value measurement of financial instruments of Baht 112 million was recorded, compared with a net gain on fair value measurement of financial instruments of Baht 13 million in Q4/22. In addition, TPX had a net foreign exchange loss of Baht 14 million, a lower loss by Baht 72 million from the previous quarter. Offsetting with depreciation, finance costs and income tax expenses, In Q1/23, TPX posted a net profit of Baht 82 million, compared with a net loss of Baht 650 million in Q4/22.

Compared with Q1/22, TPX aromatics production rate decreased by 6%. TPX had a decrease in sales revenue by Baht 1,129 million due to decreases in average selling prices. However, TPX reported an increase in product-to-feed margin by 38 US$/ton due to higher Paraxylene and Toluene spread over ULG95. Combining with the net realized gain on financial instruments, TPX had an EBITDA of Baht 419 million, compared with an EBITDA loss of Baht 109 million in Q1/22. Besides, TPX had a loss on fair value measurement of financial instruments of Baht 112 million, higher loss of Baht 99 million from Q1/22, while TPX had a net foreign exchange loss of Baht 14 million, higher loss of Baht 11 million from Q1/22. Therefore, TPX posted a net profit of Baht 82 million in Q1/23, compared with a net loss of Baht 302 million from the same period last year.

In Q1/23, the aromatics group (TPX holds 75% shares of LABIX) had consolidated sales revenue of Baht 19,002 million, consolidated EBITDA of Baht 780 million and consolidated net profit of Baht 181 million.

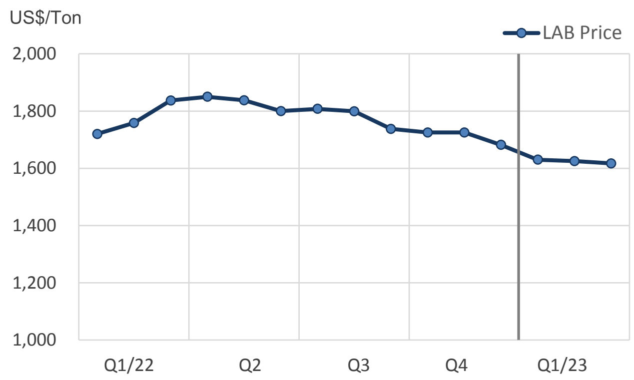
2.3 Market Condition and Financial Result of an Intermediate for the Production of Surfactants Business

Table 7: Average Price of LAB

Average Price (US$/Ton)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Linear Alkylbenzene (LAB)[1]	1,624	1,711	(87)	1,772	(148)

Remark (1) Based on ICIS price

Graph 3: Price of LAB



In Q1/23, LAB price and LAB spread over jet and benzene declined from Q4/22 and Q1/22 as crude oil prices decreased following Russia's lower crude oil supply than expected. In addition, the supply of LAB increased due to the resumption of operation of LAB plants in North Asia after the plant maintenance period in the previous quarter, which led to an increased in the export of LAB to India and Asia.

However, demand in Asia was supported by the New Year and Chinese New Year holidays, especially the relaxation of the zero COVID measure in China. In addition, the climate of most countries in Asia improves in the summer, which supports the utilization of LAB in cleaning products.

Table 8: LAB Production

	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
LAB Production Rate[1] (%)	121%	117%	4%	122%	(1%)
LAB Production (kTon)	36	35	1	36	-

Remark (1) Based on nameplate capacity of 120,000 Tons/year

In Q1/23, LABIX had pressure on lower domestic demand. It led LABIX had a drop performance from the prior quarter.

Compared with Q1/22, LABIX had a dropped on gross margin following pressure on lower domestic demand. LABIX then had a lower performance.

In Q1/23, LABIX Co., Ltd. (LABIX) had LAB production rate at 121% and LAB sales volume increased by 14% from Q4/22. However, a decrease in LAB price resulted in sales revenue decreased by Baht 1,232 million. Furthermore, LABIX had a lower gross margin due to a drop in domestic demand while there was more supply resume in the LAB market, LABIX then reported EBITDA of Baht 362 million, decreased by Baht 67 million. In addition, LABIX had a lower net foreign exchange loss of Baht 77 million compared with Q4/22. Offsetting with depreciation, finance costs and income tax expenses, LABIX posted net profit of Baht 132 million, a decreased by Baht 142 million from the prior quarter.

Compared with Q1/22, LABIX had a lower LAB production rate by 1% while sales volume increased by 1%, resulting in sales revenue increases by Baht 812 million. However, LABIX had a lower gross margin due to a drop in domestic demand while there was more supply resumption in the LAB market, LABIX then had lower EBITDA by Baht 280 million. Additionally, LABIX had a net foreign exchange loss of Baht 8 million, compared with a net foreign exchange gain of Baht 10 million in Q1/22. Offsetting with depreciation, finance costs and income tax expenses, LABIX reported a lower net profit by Baht 353 million from the same period of the previous year.

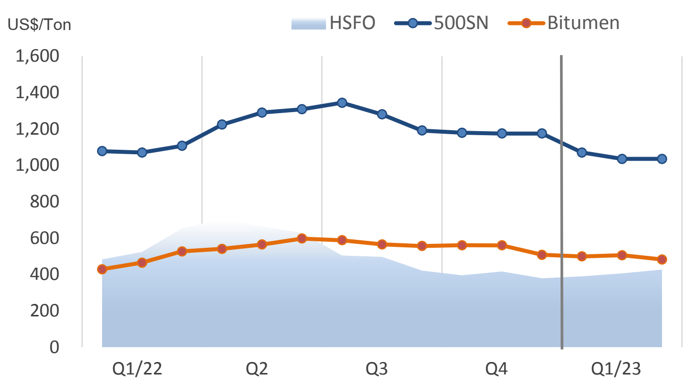
2.4 Market Condition and Financial Result of Lube Base Oil Business

Table 9: Average Prices and Spreads of Key Lube Base Oil Products

Average Prices (US$/Ton)	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
500SN[1]	1,047	1,176	(129)	1,076	(29)
Bitumen[2]	495	542	(47)	473	22
Spreads over HSFO (US$/Ton)	**Q1/23**	**Q4/22**	**+/(-)**	**Q1/22**	**+/(-)**
500SN	640	780	(140)	523	117
Bitumen	89	146	(57)	(81)	170

Remark (1) Based on Ex-tank Singapore price
(2) Based on FOB Singapore price

Graph 4: Prices of Lube Base Oil (500SN), Bitumen and Fuel Oil



Lube base oil (500SN) and its spread over fuel oil in Q1/23 dipped from Q4/22 and Q1/22 after the market was pressured from lower Group 2 base oil price which came down along with gas oil prices. Additionally, demands for base oil in winter and lunar new year were at low level. However, base oil price was supported by demand for base oil as Chinese economic was on the rise. On the other hand, base oil price over fuel oil declined in Q1/23 compared with Q4/22 as fuel oil price increased following additional demand for fuel oil as feedstock for Chinese refiners. The higher fuel oil price was still below the level in Q1/22; therefore, spread in Q1/23 was still above that of Q1/22.

Bitumen and its spread over fuel oil price in Q1/23 dipped from Q4/22 as they were both pressured by delay in road repair and maintenance in the region; especially in Indonesia and Vietnam. However, regional bitumen market was still uplifted by increases in Chinese economic activities after its border reopening. Bitumen spread over fuel oil, compared with Q1/22, was higher as economies in this region recovered while fuel oil price in Q1/23 was still below Q1/22 level.

Table 10: Financial Result of TLB

	Q1/23	Q4/22	+/-	Q1/22	+/-
Base Oil Production Rate[1] (%)	79%	43%	36%	89%	(10%)
Base Oil Production (kTon)	52	28	24%	59	(7)
Product-to-feed Margin[2] (US$/Ton)	172	184	(12)	97	75

Remark (1) Based on nameplate capacity of 267,015 Tons/year
(2) Calculated from gross margin divided by feedstock volume (Ton)

TLB reported higher production rate from Q4/22 However, significant lower product spreads sent down TLB EBITDA and net profit

In Q1/23, Thai Lube Base Public Company Limited (TLB) reported base oil production rate of 79% and sales revenue of Baht 6,268 million, rose by Baht 1,478 million from Q4/22 from significant higher base oil production rate as there was a planned maintenance resulting in lower production and sales volume in Q4/22 compared with Q1/23. Meanwhile, TLB product prices such as base oil, bitumen, and others declined while LR premium rose following long residue market in which long residue was a feedstock for base oil production. As such, TLB reported lower Product-to-feed margin by US$12/ton

Compared with Q1/22, TLB reported lower sales revenue from lower production rate. With higher spread, TLB reported higher EBITDA and net profit.

to US$172/tons. However, EBITDA of Baht 1,141 million was reported, this was an increase of Baht 504 million from Q4/22. Offsetting with depreciation, finance cost and tax expenses, TLB reported net profit of Baht 886 million, or an increase of Baht 415 from Q4/22.

Compared with Q1/22, TLB reported lower sales revenue of Baht 540 million due to 1) lower product selling prices and 2) lower production and sales volume in which TLB adjusted its plan in accordance to the market to achieve maximum group profit (group optimization). With lower fuel oil price which was what TLB feedstock price was linked to, TLB reported higher Product-to-feed Margin of US$ 75/tons and posted higher EBITDA of Baht 686 million, while net profit also rose by Baht 557 million compared with the same period last year.

2.5 Financial Result of Power Generation Business

Table 11: Sales Volume from Power Generation Business

TOP SPP	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Electricity Dispatched (GWh)	379	397	(18)	354	25
Steam Exported (kTon)	579	554	25	561	18

In Q1/23, TOP SPP had a drop in sales revenue from lower average selling prices and a dip in sales volume while a decreased in operating cost leading to TOP SPP earned higher net profit.

Compared Q1/23 with Q4/22, TOP SPP Co., Ltd. (TOP SPP) had sales revenue of Baht 2,859 million, which decreased by Baht 468 million due to a decrease in average selling prices and the volume of electricity decreased because of planned maintenance for gas turbines while TOP SPP had lower operating expenses. As a result, TOP SPP reported EBITDA of Baht 584 million, increased by Baht 17 million. In addition, TOP SPP had foreign exchange gain of Baht 1 million, compared with foreign exchange loss of Baht 8 million in Q4'22. Offsetting with depreciation, finance costs and income tax expense, TOP SPP recorded a net profit of Baht 388 million, increased by Baht 29 million from the prior quarter.

Compared with Q1/22, TOP SPP sales revenue increased from increases in average selling prices and sales volume leading to higher net profit.

Compared Q1/23 with Q1/22, TOP SPP sales revenue increased by Baht 379 million because of increases in average selling prices and a rise in sales volume following the number of planned maintenance days in Q1/23 which was lower than Q1/22. This led to a rise in EBITDA of Baht 151 million. Offsetting with depreciation, finance costs and income tax expense, TOP SPP net profit increased by Baht 152 million from the same period of last year. Besides, Thaioil and Subsidiaries reduced GPSC's shareholding from 20.78% to 10.0%. Therefore, Thaioil and Subsidiaries did not book share of profit from GPSC compared with the same period of last year. Furthermore, GPSC's annual general meeting on 31 March 2023 approved a dividend payment from the operating results of GPSC and its subsidiaries for the year 2022. Therefore, the dividend income of Baht 85 million was recorded.

2.6 Financial Result of Solvent and Chemicals Business

Table 12: Financial Result of Thaioil Solvent

	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Solvent Utilization Rate [1] (%)	124%	103%	21%	136%	(13%)
Solvent Production [1] (kTon)	44	36	7	48	(4)
Solvent and Chemical Sales Volume (kTon)	144	149	(5)	118	27

Remark (1) Produced solvent by Sak Chaisidhi Co., Ltd. (TopNEXT International Company Limited (Former name: TOP Solvent Co., Ltd.) holds 80.52% shares)

Compare with Q4/22, EBITDA and net profit increased in line with higher in gross margin and recognition of net foreign exchange and derivative gain.

Compared with Q1/22, sales revenue increased from sales volume but lower in selling price. This led business group had lower EBITDA and net profit.

Compared Q1/23 with Q4/22, Solvent and Chemicals Product Business under Thaioil Solvent Company Limited (TOS) reported 124% solvent utilization rate, which increased by 21%. Solvent and chemicals sales volume decreased by approximately 5 kTons from the prior quarter. This led TOS to record sales revenue of Baht 4,758 million, decreased by Baht 1,090 million because the average solvent selling price per unit decreased tracking average crude oil price. However, TOS reported EBITDA of Baht 232 million, increased by Baht 91 million in line with improving gross margin. Moreover, TOS had net foreign exchange gain and derivative of Baht 48 million compared with net foreign exchange loss and derivative of Baht 144 million in the previous quarter. Offsetting with depreciation of Baht 64 million, finance costs of Baht 39 million, income tax expense of Baht 31 million and non-controlling interests. Therefore, TOS posted net profit of Baht 135 million in Q1/23, improved by Baht 194 million from the prior quarter.

Compared Q1/23 with Q1/22, TOS utilization rate decreased by 13% from the same period last year. The average solvent and chemicals price per unit decreased tracking crude oil price, while sales volume increased by approximately 27 kTons. As a result, TOS had sales revenue increased by Baht 512 million. However, business group posted a decrease in EBITDA of Baht 119 million due to lower gross profit margin. This was because of incremental cost outpacing selling price. TOS recorded higher net foreign exchange gain and derivative by Baht 36 million than Q1/22. Offsetting with depreciation, finance costs, income tax expense and non-controlling interests, TOS, in Q1/23, recorded a decrease in net profit of Baht 91 million from the same period last year.

2.7 Financial Result of Olefin Business

Table 13: Spread of Olefin Products

หน่วย: US$/Ton	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
HDPE – Naphtha MOPJ[(1)]	396	361	35	453	(57)
LLDPE – Naphtha MOPJ[(1)]	385	326	59	468	(83)
PP – Naphtha MOPJ[(1)]	380	302	78	479	(99)

Remark: (1) Based on ICIS price

In Q1/23, TII had an increased net profit, compared with Q4/22 and Q1/22, mainly owing to improving petrochemical market and the recovery of demand after China's reopening.

In Q1/23, High density polyethylene (HDPE) spread over naphtha increased compared with Q4/22 to 396 $/ton, while Polypropylene (PP) over naphtha also increased to 380 $/ton because of improving demand from recovery of petrochemical market sentiment, driven by China's reopening amid heightened uncertainties over the global economic outlook and new additional capacities. Furthermore, in Q1/23, TII posted a share of the gain from the investment in CAP. Besides, TII itself had administrative expenses as well. Therefore, TII booked a net profit of Baht 32 million, compared with a net loss of Baht 201 million in the prior quarter.

Compared Q1/23 with Q1/22, TII realized an increase in share of gain from the investment in CAP mainly from healthy demand in petrochemical market, supported by China's easing of COVID lockdown restrictions and the relaxing between Russia and Ukraine war. This led to a rise in TII net profit of Baht 98 million in Q1/23, compared with a net loss of Baht 66 million in Q1/22.

2.8 Financial Result of Ethanol Business

Table 14: Utilization Rate of TET

	Q1/23	Q4/22	+/(-)	Q1/22	+/(-)
Ethanol Utilization Rate (%)					
- Sapthip	107%	106%	1%	106%	1%

In Q1/23, TET booked lower sales revenue from higher cost of sales. Thus, TET posted lower EBITDA and net profit than Q4/22.

Comparing with Q1/22, TET showed higher sales revenue following ethanol price and sales volume while higher cost of sales, TET's EBITDA, and net profit decreased.

In Q1/23, Thaioil Ethanol Co., Ltd. (TET) reported sales revenue from Sapthip Co., Ltd. (TET holds 50% shares) of Baht 470 million which decreased by Baht 44 million from previous quarter due to decreased ethanol sales volume and a rise in feedstock costs tracking with cassava prices. In Q1/23, TET had EBITDA of Baht 44 million, decreased by Baht 33 million and TET recorded net loss of Baht 15 million, compared with a net profit of Baht 15 million in the prior quarter.

In comparison with Q1/22, TET had an increase in sales revenue from Sapthip Co., Ltd. of Baht 72 million following an increase in ethanol selling price, coupled with higher sales volume. However, production costs increased following higher cassava prices. This led to a drop in EBITDA of Baht 17 million and net profit decreased by Baht 23 million from the same period of last year.

3. Analysis of Consolidated Financial Statement

3.1 Statement of Financial Position

The financial position of Thaioil and Subsidiaries can be summarized as follows:

Table 15: Condensed Consolidated Statements of Financial Position

(Million Baht)	31 March 2023	31 December 2022	+/(-)	+/(-) %
Assets				
Cash, cash equivalents and short-term investments[1]	47,444	43,919	3,525	8%
Other current assets	89,622	109,909	(20,287)	(18%)
Non-current assets	291,505	290,753	752	0%
Total assets	**428,571**	**444,581**	**(16,010)**	**(4%)**
Liabilities				
Current liabilities[2]	76,732	83,471	(6,740)	(8%)
Long-term borrowings and debentures (including current portion) [3]	158,921	171,860	(12,938)	(8%)
Other non-current liabilities	30,101	30,593	(491)	(2%)
Total liabilities	**265,754**	**285,923**	**(20,170)**	**(7%)**
Equity				
Equity attributable to owners of the company	160,150	156,034	4,116	3%
Non-controlling interests	2,667	2,623	44	2%
Total equity	**162,817**	**158,657**	**4,159**	**3%**
Total liabilities and equity	**428,571**	**444,581**	**(16,010)**	**(4%)**

Remark (1) Including deposits at a financial institution used as collateral (2) Including short-term loan (3) Including current portion and excluding lease liabilities

Total Assets

As of 31 March 2023, Thaioil and Subsidiaries reported total assets of Baht 428,571 million, declined from 31 December 2022 by Baht 16,010 million, or 4% due to

- Cash, cash equivalent and short-term investment rose by Baht 3,525 million mainly due cash flow from operation offsetting with debenture redemption, additional loan drawdowns, and other investing activities
- Current assets dropped by Baht 20,287 million from lower account receivables and inventory following lower crude oil price. Additionally, oil fuel fund receivables declined, in line with lower fuel prices. This was as a result of Royal Thai Government intervention on fuel prices.
- Non-current assets went up by Baht 752 million mainly form higher property, plant and equipment from project investment such as CFP project, offsetting with lower deferred tax assets and Right of Use assets which were normal parts of business operation

Total Liabilities

As of 31 March 2023, Thaioil and Subsidiaries had total liabilities of Baht 265,754 million, which went down by Baht 20,170 million or 7% from 31 December 2022, mainly due to

- Current liabilities rose by Baht 76,732 million primarily due to lower trade payables from lower average crude oil prices in addition to lower short term borrowing and lower other liabilities which decreased during the period
- Long-term borrowings and debentures (including current portions) declined by Baht 12,938 million due to debenture redemption of $500 million upon its maturity date. Additionally, additional long-term borrowing, net, of Baht 5,607 million was booked during the period.
- Other non-current liabilities rose by Baht 491 million due to lower lease liabilities and derivative liabilities in both CCS and commodity hedging valuation per relevant accounting standards

Table 16: Consolidated Borrowings

(Million Baht)	Thaioil	LABIX	TOP SPP	TS	TET	TTC	รวม
Debentures : US$-denominated(1)	26,488	-	-	-	-	97,956	124,444
: Baht-denominated	5,788	-	-	-	-	-	5,788
Borrowings : Baht-denominated	17,711	3,417	6,885	160	89	-	28,262
: Other currencies-denominated(1)	-	-	-	428	-	-	428
As of 31 March 2023	**49,986**	**3,417**	**6,885**	**588**	**89**	**97,956**	158,921
As of 31 December 2022	51,777	3,416	6,884	613	89	109,081	171,860
+ / (-)	**(1,791)**	**1**	**1**	**(25)**	**-**	**(11,125)**	**(12,939)**

Remark (1) Including foreign exchange gain/loss from foreign-currency-denominated liabilities revaluation

Total Equity

As of 31 March 2023, Thaioil and Subsidiaries reported consolidated equity of Baht 162,817 million, or an increase of Baht 4,159 million or 3% from 31 December 2022 mainly due to net profit from operation during the period.

3.2 Statement of Cash Flows

On 31 March 2023, Thaioil and Subsidiaries reported cash and cash equivalent of Baht 47,101 million, Baht 39,343 million of which belonged to Thaioil alone (separated financial statement).

Statement of cash flows for the year 2022 of Thaioil and Subsidiaries was detailed as presented below:

Table 17: Condensed Statement of Cash Flows

(Million Baht)	Consolidated	Separated
Net cash flows from / (used in) operating activities	20,135	16,258
Net cash flows from / (used in) investing activities	(4,068)	(2,718)
Net cash flows from / (used in) financing activities	(12,545)	(9,023)
Net decrease in cash and cash equivalents	**3,523**	**4,517**
Cash and cash equivalents at the beginning of period	43,576	34,787
Effect of exchange rate changes on cash and cash equivalents	2	38
Cash and cash equivalents at the end of period [1]	**47,101**	**39,343**

Remark (1) Excluding deposits at a financial institution used as collateral

In 2023, Thaioil and Subsidiaries reported net operating cash flow of Baht 20,135 million, which was mainly a result of net operating profit, before tax, of Baht 6,404 million, higher non-cash adjustment, before tax, of Baht 2,032 million, and increases in working capital of Baht 11,767 million. During the period, there was a tax payment, net, of Baht 69 million. In term of investing activities, there was net cash flows used in investing activities of Baht 4,068 million. This was mainly attributable to capital expenditure in Clean Fuel Project.

Meanwhile, Baht 12,545 million was used in financing activities mainly owing to 1) net cash used in short term borrowing repayment of Baht 216 million, 2) net cash flow from long term borrowing drawdown of Baht 5,804 million, and 3) net cash used in debenture redemption of Baht 16,381 million.

As such, from 31 December 2022, there was a net decrease of Baht 3,523 million in cash and cash equivalent. Effect on exchange rate changes on cash and cash equivalents of Baht 2 million was booked. With beginning cash and cash equivalent of Baht 43,576 million, ending cash and cash equivalents of Baht 47,101 million was shown on 31 March 2023

3.3 Financial Ratios

Table 18: Financial Ratios (Consolidated)

Profitability Ratios	Q1/23	Q4/22	+/(-)
Quality of earnings ratio (%)	7%	2%	5%
Gross profit margin ratio (%)	6%	1%	5%
Net profit margin ratio (%)	4%	0%	4%

Liquidity Ratios	Q1/23	Q4/22	+/(-)
Current ratio (times)	1.6	1.5	0.1
Quick ratio (times)	0.8	0.7	0.1

Financial Policy Ratios	Q1/23	Q4/22	+/(-)
Total liability/ Total equity (times)	1.6	1.8	(0.2)
Net debt/ Equity (times)	0.8 / 0.7 1)	1.0 / 0.8 1)	(0.1)
Long-term loan/ Total equity (times)	1.1 / 1.0 1)	1.2 / 1.1 1)	(0.1)
Interest coverage ratio (times)	8.9	2.4	6.5
Long-term loan/ Total capitalization (%)	53%	55%	(2%)

Financial Ratios Calculation

Quality of Earnings ratio (%) = EBITDA / Sales Revenue

Gross Profit Margin ratio (%) = Gross Profit / Sales Revenue

Net Profit Margin ratio (%) = Net Profit for the period / Total Revenue

Current ratio (times) = Current Assets / Current Liabilities

Quick ratio (times) = (Cash and Cash equivalent + Short-term investments + Accounts Receivable) / Current Liabilities

Total Liabilities / Total Equity (times) = Total Liabilities / Total Equity

Net Debt/ Equity (times) = Net Debt / Total Equity

Long term loan/ Total Equity (times) = Long Term Loan / Total Equity

Long term loan = Long-term borrowings from financial institutions + Debentures (includes current portion) + Lease liabilities (includes current portion)

Interest Coverage ratio (times) = EBITDA / Interest Expenses (Finance costs)

Long term loan/ Total Capitalization (%) = Long Term Loan / Total Capitalization

Total Capitalization = Long Term Loan + Total Equity

Net Debt = Interest bearing debt + Lease liabilities - Cash and cash equivalent – Short-term investments

Remark (1) Excluding lease liability

4. Industry Outlook for the Second Quarter of Year 2023, and the First Half of Year 2023

Crude Oil & Refinery Market Outlook

In Q2/23 and 2H/23, crude oil prices are expected to increase from Q1/23 as OPEC+ and Russia announced voluntary cuts their production amounting to around 1.66 MDB (OPEC+ alliance on 2 April announced voluntary cuts 1.16 MDB and Russia 0.5 MBD) effective in May'23 until the end of 2023. The pledges bring the total volume of cuts by OPEC+ with Russia and other allies, to 3.66 MBD accounting for 3.6% of total global crude oil demand. In addition, oil demand is likely to grow mainly driven by China's recovery which is expected to support crude oil prices. However, concerns over the economic slowdown especially in the US and Europe. As a result of the acceleration of interest rate hikes by the Federal Reserve (FED) and central banks of many countries worldwide to response to rising inflation, potentially limit the increase of crude oil prices.

Gross Refinery Margin (GRM) in Q2/23 is expected to worsen from Q1/23, pressured by amply petroleum product supply from lower-than-expected drop in Russian exports, as well as larger China's oil refined exports. Other than that, the concerns over economic recession remain pressured global oil demand particularly Diesel and Jet fuel. However, the market is expected to be supported by lower product inventory despite an upward trend, are still below the 5-year average.

In 2H/23, Gross Refinery Margin (GRM) likely to be stable compared to 1H/23, as oil demand is expected to improve mainly from China's reopen, partially reduce its refined product exports coupled with low product inventory. However, the opening of new large-scale refineries in the Middle East and China potentially pressure GRM to increase to a limited level.

Aromatics Market Outlook

In Q2/23, Paraxylene (PX) market is expected to be slightly improve compared to Q1/23 from higher downstream demand particularly the production of drinking water bottles during late summer season in many countries in Asia, coupled with and lower supply during the maintenance shutdowns of PX producers in China and South Korea. However, crude oil and ULG95 prices are expected to remain high, which potentially pressure PX margin (Source: CMA Report, Mar'23)

In 2H/23, PX market is expected to be increase compared to 1H/23 as lower new PX supply coming into the market while demand continues to grow from synthetic fibers and textile industry (Source: CMA Report, Mar'23)

In Q2/23, Benzene (BZ) market is expected to be slightly higher compared to Q1/23 as BZ producers in Asia start their planned maintenance shutdowns. As a result, BZ supply is likely to tighten. However, downstream industry i.e., styrene monomer, continues to be pressured by low margin, which potentially limits upside in BZ market. (Source: CMA Report, Mar'23).

In 2H/23, BZ market is expected to improve compared to 1H/23 as lower new BZ supply coming into the market, However, concerns on the global economy are expected to impact on downstream industries i.e., automobiles and electronics devices, which potentially limits increase in BZ margin. (Source: CMA Report, Mar'23)

In Q2/23, Toluene (TL) market is expected to slightly increase compared to Q1/23 following higher ULG95 price resulting in stronger demand for TL as an octane booster in gasoline production especially during summer season. However, PX and BZ markets are likely to limit upside, TL demand for adding value is still limited as well (Source: CMA Report, Mar’23).

In 2H/23, TL market is expected to increase compared to 1H/23 due to the recovering PX and BZ markets. In addition, ULG95 demand is expected to be higher as travel demand remains strong. As a result, demand for TL to be added value and used as an octane enhancer in gasoline production potentially improve. (Source: CMA Report, Mar’23).

LAB Market Outlook

LAB in Q2/23 is expected to be pressured compared to Q1/23 from high feedstock cost resulting from crude oil production cuts by OPEC+ while demand for detergents remains strong in Asia during summer season. In addition, limited LAB supply due to planned maintenance shutdowns of LAB plants in China and Middle East will continue to support LAB market.

In 2H/23, LAB market is expected to be softer than 1H/23 as demand for detergents is likely to weaken during monsoon season (Jun – Sep) while feedstock costs i.e. BZ and Jet fuel are expected to remain high and continue to pressure LAB market (source ICIS LAB Weekly report, April’23).

Lube Base Oil Market Outlook

In Q2/23, lube base oil market is expected to remain under pressure compared to Q1/23 due to rising fuel oil prices amid global economic uncertainty. In addition, demand for lubricants in the region declined during the beginning of rainy season. However, lube base oil market is still driven by tighter supply as there will be planned maintenance shutdowns for lube base oil plants Group 2 in the region.

In 2H/23, lube base oil market is expected to weaken compared to 1H/23 due to the expansion of lube base oil plants Group 2 and 3 in the region which is expected to pressure the Group 1 market as well. However, lube base oil market is expected to be supported by the closure of Japan's Group 1 lube base oil plant at the end of the year.

Bitumen Market Outlook

In Q2/23, bitumen market is expected to be softer than Q1/23 and overall, in 2H/23 is also expected to decline compared to 1H/23 pressured by economic concerns and fuel oil prices are likely to increase. In addition, lower bitumen demand in the region due to the limited budget for repairing road structures and the delay in improving pavement structures due to inclement weather during the beginning of rainy season.

5. Appendix

5.1 Summary of Approved Investment Plan

From 2023 to 2026, Thaioil and Subsidiaries have outstanding approved capital expenditure of US$ 1,082 million, mainly consisting of CFP project (Clean Fuel Project) of US$ 556 million and an investment in PT Chandra Asri Petrochemical Tbk ("CAP") of US$ 270 million. An estimated budget for the investment during 2023-2026 is summarized in the table below.

TOP Group Strategic Investment Plan

CAPEX Plan (Unit US$ million)

Updated as of April 2023

Project	Estimated Budgeting for Investment Plan 2023 - 2026
CFP project *	**556**
Total Ongoing CAPEX	**245**
Reliability, Efficiency and Flexibility Improvement	141
Infrastructure Improvement (i.e. RHCU Phrase 2, New Bangphra Raw Water Line, New Fuel Oil Tank)	33
Other Investments (i.e. Corporate Venture Capital - CVC , Digital Transformation)	71
TOP SPP Expansion	**11**
Olefins Investment	**270**
Total CAPEX	**1,082**

* 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

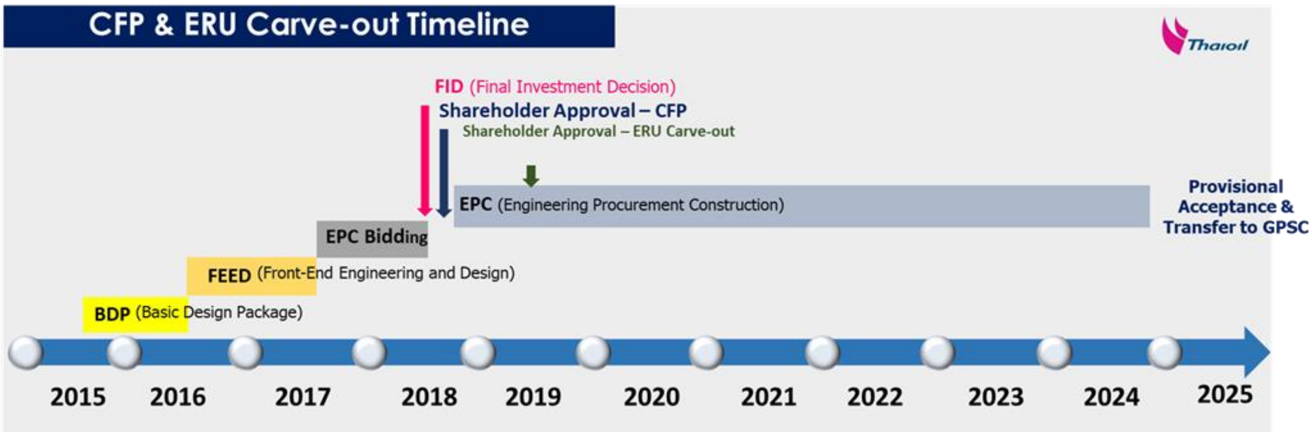
5.2 Summary of Key Project Investment: Clean Fuel Project (CFP)

The objective of CFP project is to enhance the competitiveness and efficiency and increase oil refining capacity to 1) upgrade low value product to higher value and more environmentally friendly products and 2) allow the refinery to handle more types and greater quantity of crude oils, which create economies of scale and a reduce raw material costs. Moreover, the project enhances the country's long-term energy stability and economic development, with the investment project value of approximately US$ 4,825 million. CFP was approved by the Company's Extraordinary General Meeting of Shareholders on 27 August 2018. The CFP timeline is shown as summarized below:

Clean Fuel Project (CFP)

Main objectives of CFP

- Enhance **competitive advantage** of the refinery and **maintain 1st quartile performer**
- Enhance capability to **upgrade lower value product** into higher value product and ability to **process heavier (cheaper) crude oil**



On 10 April 2019, the 2019 Annual General Meeting of Shareholders resolved to approve the disposal of assets to transfer ownership in the Energy Recovery Unit (ERU), which is a part of CFP, to and the execution of the Relevant Agreements including the asset sale and purchase agreement, fuel and utilities supply agreement, power purchase agreement, operation and maintenance services agreement and land sub-lease agreement as well as the novation agreement with Global Power Synergy Public Company Limited (GPSC) or wholly owned subsidiary of GPSC (ERU Project). The ERU Project aims to reduce total investment cost of CFP, enhance liquidity and support future investment. Furthermore, the transaction will boost the return on investment of CFP while the Company can continue to manage and oversee the implementation of CFP and ERU during the construction and operation phase while maintaining safety, reliability and plant optimization of the project as originally planned.

As of March 2023, the progress of the CFP was more than 91% complete and we had significant progress on the installation of material equipment and modules. However, the COVID-19 pandemic during the past two years affected most of the construction projects, including our CFP. As a result, the CFP has been delayed from its original schedules. Therefore, we have negotiated with the contractors to adjust the operation plan (New Project Execution Plan) and we have carried out CFP in accordance with various measures to accelerate the progress, which is expected to result in an increase of the total expenditure of the project. In addition, we have jointly implemented additional operating measures with the CFP's contractors to minimize the risks on future delay of CFP, for instance, adjustment of working structure to increase operating efficiency, adjustment of construction plan to accelerate the progress, increase of sub-contractors to support the work scopes and the adjusted timeframe, among others., and such measures have been conducted under strict COVID-19 control measure. We expect CFP to gradually start its commercial operation in 2024.