



**Management's Discussion and Analysis
(MD&A) Thai Oil Public Company Limited**

For The Third Quarter and The First Nine Month of 2023

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Management's Discussion and Analysis (MD&A)
Thai Oil Public Company Limited and Subsidiaries
For the Third Quarter and The First Nine Month of 2023

1. Company and its Subsidiaries' Operating Results

Table 1: Summary of Consolidated Financial

(Million Baht)	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
Integrated Intake (kbd)	305	315	(10)	288	17	311	301	10
Gross Integrated Margin (GIM) ⁽¹⁾ (US\$/bbl)								
: <u>excluding</u> Stock Gain/(Loss)	13.6	6.1	7.5	8.8	4.8	10.5	14.2	(3.7)
: <u>including</u> Stock Gain/(Loss)	23.3	4.2	19.1	(0.7)	24.0	12.0	18.7	(6.7)
(Million Baht)	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
Sales Revenue	119,656	108,467	11,189	124,174	(4,518)	344,066	382,571	(38,505)
Net Realized Gain/(Loss) on Financial Instruments ⁽²⁾	(2,490)	449	(2,939)	(220)	(2,270)	(1,713)	(16,210)	14,497
EBITDA	18,973	4,618	14,355	(568)	19,541	31,772	34,789	(3,017)
Net Gain/(Loss) of Financial Instruments	(2,028)	(187)	(1,841)	5,090	(7,118)	(2,057)	1,082	(3,139)
Net Foreign Exchange Gain/(Loss) ⁽³⁾	(517)	(1,017)	500	(1,710)	1,193	(962)	(2,717)	1,755
Gain from disposal of investment in an associate	-	-	-	-	-	-	10,038	(10,038)
Gain from reclassification of investment	-	-	-	-	-	-	7,297	(7,297)
Finance Costs	(1,032)	(1,081)	49	(940)	(92)	(3,036)	(2,866)	(170)
Reversal of Income Tax (Expense)	(2,680)	523	(3,203)	156	(2,836)	(3,961)	(9,026)	5,065
Net Profit/(Loss)	10,828	1,117	9,711	12	10,816	16,499	32,521	(16,022)
Basic Earnings/(Loss) per Share (Baht)	4.85	0.50	4.35	0.01	4.84	7.39	15.92	(8.53)
Stock Gain/(Loss)	9,638	(1,929)	11,567	(9,238)	18,876	4,370	12,791	(8,421)
Reversal/ (Write-Down) on Crude and Petroleum Product Inventory ⁽⁴⁾	(1,773)	15	(1,788)	236	(2,009)	(1,966)	(2,114)	148
Exchange Rate (Baht: 1 US\$)	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
Average FX	35.34	34.66	0.68	36.58	(1.24)	34.69	34.81	(0.12)
Ending FX	36.72	35.75	0.97	38.07	(1.35)	36.72	38.07	(1.35)

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 only derivative instruments for commodity hedging.

(3) Including net foreign exchange gain / (loss) on foreign currency assets and liabilities in Q3/23, Q2/23, Q3/22, 9M/23, and 9M/22 of Baht (379) million, Baht (705) million, Baht (1,524) million, Baht (321) million, and Baht (2,655) million, respectively.

(4) 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 Q3/23, Thaioil and Subsidiaries reported lower integrated intakes from Q2/23 due to an incident of crude oil leakage at single buoy mooring (SBM-2) in September 2023. However, sales revenue was reported at Baht 119,656 million, an increase of Baht 11,189 million following higher product selling prices thanks to the tight supply of many products. Moreover, we reported GIM excluding stock gain / (loss) of 13.6 US\$/bbl or an increase of 7.5 US\$/bbl, mainly due to better spread jet/kero and gasoil over Dubai. Moreover, profitability of surfactant manufacturing business slightly went up. Nevertheless, aromatic market softened from lower PX and BZ spreads over ULG95 primarily due to high raw material costs and slower-than-expected economic growth in China. Similarly, lube base oil spread over fuel oil declined owing to economic slowdown in China and lower base oil demand following the rainy season in the region. Additionally, bitumen spread over fuel oil in decreased due to lower demand during the rainy season and limited fiscal budget for road improvement. However, crude oil prices in Q3/23 rose from Q2/23 thanks to tightened crude oil supply, resulting from additional production cut by Saudi Arabia, along with lower export from Russia. As a result, we reported a stock gain of Baht 9,638 million in Q3/23, compared with a stock loss of Baht 1,929 million in Q2/23. Thus, GIM including stock gain / (loss) of 23.3 US\$/bbl was reported in Q3/23, improved by 19.1 US\$/bbl from Q2/23. However, there was a write-down on crude and petroleum product inventory of Baht 1,773 million in Q3/23, compared with a reversal on crude and petroleum product inventory of Baht 15 million in Q2/23. Including realized net loss from financial instrument of Baht 2,490 million including only derivative instruments for commodity hedging, we reported EBITDA of Baht 18,973 million, rose by Baht 14,355 million from the previous quarter. In contrast, a loss on financial instruments of Baht 2,028 million in Q3/23 was booked, representing an increased loss of 1,841 million Baht compared to Q2/23. However, we reported a net loss from foreign exchange of Baht 517 million (Baht 379 million of which was from foreign exchange loss on foreign currency assets and liabilities), smaller loss by Baht 500 million than Q2/23. Offsetting with depreciation, finance cost, and tax expenses, we booked a net profit of Baht 10,828 million in Q3/23, or Baht 4.85 Baht per share, an incline of Baht 9,711 million from the last quarter.

In comparison to Q3/22, we reported higher integrated intakes because of scheduled maintenance of some upgrading units in Q3/22. Nevertheless, lower selling prices resulted in a decline of revenue from sales by Baht 4,518 million while we reported significantly better GIM excluding stock gain/loss by 4.8 US\$/bbl. The main reason was the significant increase in product spreads, particularly that of gasoline spread over Dubai due to tight supply. In addition, PX spread over ULG95 increased thanks to higher PX demand. However, lube base oil spread over fuel oil went down following Chinese economy slowing down while bitumen spread over fuel oil due to reduced demand resulting from budget constraints in maintaining the road infrastructure. Moreover, gross margin from surfactant business declined due to lower domestic demand. Nevertheless, an increase in crude oil prices led to a stock gain of Baht 9,638 million, compared with a stock loss of Baht 9,238 million during the same period last year. We also booked a write-down on crude and petroleum product inventory of Baht 1,773 million in Q3/23, compared with a reversal on crude and petroleum product inventory of Baht 236 million in Q3/22. Including net realized gain from financial instrument including only commodity hedging, we reported EBITDA of Baht 18,973 million in Q3/23, compared with negative EBITDA of Baht 568 million in Q3/22. Nevertheless, we booked a loss on financial instruments of Baht 2,028 million in Q3/23, compared with a gain on financial instruments of Baht 5,090 million in Q3/22. At the same time, we booked a lower net loss on foreign exchange of Baht 1,193 million. Offsetting with depreciation, finance cost and tax expense, we reported a higher net profit of Baht 10,816 million from the same period last year.

In 9M/23 compared with 9M/22, Thaioil and Subsidiaries generated revenue of Baht 344,066 million, a decrease of Baht 38,505 million. This decline was attributed to lower product prices, which were in line with lower crude oil prices. Additionally, there was a decrease in gasoline spread over Dubai due to higher Chinese export. Moreover, jet/kero and gasoil spread over Dubai went down from 9M/22 due to supply from Russia. Furthermore, lube base oil spread over fuel oil dropped from tight supply while gross margin of surfactant manufacturing business decreased. However, PX spread over ULG95 expanded from higher PX demand than 9M/22 and bitumen

spreads over fuel oil expanded. Overall, GIM excluding stock gain / (loss) decreased by 3.7 US\$/bbl, amounting to 10.5 US\$/bbl. Additionally, in 9M/23, there was a stock gain of Baht 4,370 million, reduced by Baht 8,421 million from 9M/22. On the other hand, there was a write-down on crude and petroleum product inventory of Baht 1,966 million, lower loss than 9M/22 by Baht 148 million. Including realized net gain from financial instrument of Baht 1,713 million, smaller loss by Baht 14,497 million than the same period of the previous year including only derivative instruments for commodity hedging, we reported EBITDA of Baht 31,772 million, dropped by Baht 3,017 million. Moreover, we had a loss on financial instruments of Baht 2,057 million, and we reported a net loss from foreign exchange of Baht 962 million due to Thai Baht depreciation (Baht 321 million of which was from foreign exchange loss on foreign currency assets and liabilities). Moreover, in 9M/22, there was gain from investment reclassification and disposal of our investment in GPSC of Baht 17,334 million (before tax), or Baht 12,880 million (after tax). Offsetting with depreciation, finance cost, and tax expenses, we booked a net profit of Baht 16,499 million in 9M/23, a decline of Baht 16,022 million from the same period of the previous year.

2. Summary of Financial Result by Business

Table 2: Financial Result by Business

(Million Baht)

Sales Revenue	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Consolidated	119,656	108,467	11,189	124,174	(4,518)	344,066	382,571	(38,505)
Refinery	128,365	115,127	13,238	134,614	(6,249)	367,260	414,127	(46,867)
Aromatics and LAB ⁽¹⁾	20,121	19,005	1,116	23,255	(3,134)	58,127	68,452	(10,325)
Lube Base Oil	6,413	6,572	(159)	7,774	(1,361)	19,254	22,983	(3,729)
Power Generation	2,906	3,658	(752)	3,269	(363)	9,423	8,388	1,035
Solvent and Chemicals ⁽²⁾	5,626	3,688	1,938	6,452	(826)	14,072	16,737	(2,665)
Ethanol ⁽³⁾	433	408	25	516	(83)	1,310	1,282	28
Others ⁽⁴⁾	1,698	1,629	69	1,710	(12)	4,884	4,901	(17)
EBITDA	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Consolidated	18,973	4,618	14,355	(568)	19,541	31,772	34,789	(3,017)
Refinery	17,013	2,272	14,741	(3,037)	20,050	24,839	29,294	(4,455)
Aromatics and LAB	582	684	(102)	31	551	2,046	320	1,726
Lube Base Oil	367	772	(405)	1,654	(1,287)	2,281	2,844	(563)
Power Generation	769	841	(72)	621	148	2,193	1,573	620
Solvent and Chemicals	305	157	148	171	134	694	902	(208)
Olefins	(2)	(2)	0	(2)	0	(7)	(7)	0
Ethanol	30	1	29	67	(37)	76	129	(53)
Others	68	47	21	58	10	165	161	4
Net Profit / (Loss)	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Consolidated	10,828	1,117	9,711	12	10,816	16,499	32,521	(16,022)
Refinery	9,814	(179)	9,993	(1,261)	11,075	12,577	30,608	(18,031)
Aromatics and LAB	104	361	(257)	(313)	417	646	(739)	1,385
Lube Base Oil	254	576	(322)	1,302	(1,048)	1,716	2,180	(464)
Power Generation ⁽⁵⁾	567	349	218	476	91	1,388	1,097	291
Solvent and Chemicals	177	121	56	105	72	433	584	(151)
Olefins ⁽⁶⁾	(116)	(47)	(69)	(351)	235	(132)	(613)	481
Ethanol	(9)	(6)	(3)	11	(20)	(30)	3	(33)
Others ⁽⁷⁾	115	100	15	86	29	308	305	3

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. Thaioil booked dividend income of Baht 85 million both in Q1/23 and Q3/23, led to be equal to Baht 170 million in 9M/23.
- (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.

2.1 Market Condition and Financial Result of Refinery Business

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

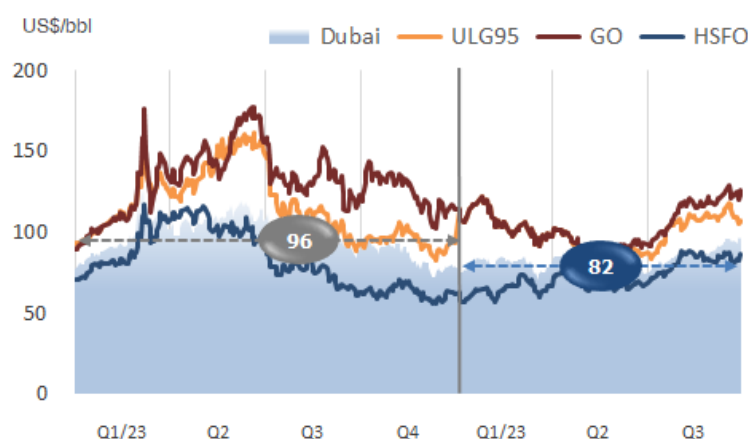
Average Prices (US\$/bbl)	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Dubai Crude Oil ⁽¹⁾	86.7	77.8	8.9	96.9	(10.2)	81.6	100.2	(18.6)
Unleaded Gasoline (ULG95)	105.6	94.4	11.2	110.1	(4.5)	99.7	122.2	(22.5)
Jet/Kero	112.8	91.7	21.1	129.3	(16.5)	103.8	129.4	(25.6)
Gasoil (GO)	113.6	92.3	21.3	132.1	(18.5)	103.8	132.8	(29.0)
Fuel Oil (HSFO)	81.4	69.1	12.3	74.6	6.8	71.5	88.9	(17.4)
Crude Premiums (US\$/bbl)	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Murban ⁽²⁾	1.8	2.8	(1.0)	10.5	(8.7)	3.2	7.3	(4.1)
Arab Light ⁽³⁾	3.2	2.6	0.6	8.5	(5.3)	2.7	5.8	(3.1)
Spreads over Dubai (US\$/bbl)	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Unleaded Gasoline (ULG95)	18.9	16.6	2.3	13.2	5.7	18.0	22.0	(4.0)
Jet/Kero	26.1	14.0	12.1	32.4	(6.3)	22.2	29.3	(7.1)
Gasoil (GO)	26.9	14.6	12.3	35.2	(8.3)	22.2	32.6	(10.4)
Fuel Oil (HSFO)	(5.4)	(8.7)	3.3	(22.3)	16.9	(10.1)	(11.3)	1.2
Very Low Sulfur Fuel Oil (VLSFO)	1.3	3.7	(2.4)	11.7	(10.4)	3.3	15.1	(11.8)

Remark (1) Closing Dubai crude oil price at the end of Q3/23, Q2/23, and Q3/22 were calculated from average Dubai prices in the last month in the respective period. The prices were 93.3 US\$/bbl, 75.0 US\$/bbl, and 90.0 US\$/bbl, respectively.

(2) Murban crude premium (compared with market price) 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 Q3/23 increased from Q2/23 thanks to tight supply since Saudi Arabia and Russia extended their oil production cut of 1.0 million barrels per day and export cut of 0.3 million barrels per day, respectively, through the end of 2023 in addition to oil production cuts of OPEC+ of 1.66 million barrels per day from May 2023 to the end of 2024. However, crude oil price in Q3/23 and 9M/23 declined from the same period last year due to concerns over sluggish oil demand following economic recession fears after central banks hiked up their interest rates to

cool inflation.

Murban over Dubai spread shrank in Q3/23 compared with Q2/23 and Q3/22 as well as that in 9M/23 which dipped from 9M/22 as they were suppressed by shutdowns for maintenance of North Asian refineries and higher US crude oil exports, which was more than 4.0 million barrels per day in Q3/23. The aforementioned reasons led Arab light spread over Dubai and Oman in Q3/23 and 9M/23 dropped from that of the same period of prior year. On the other hand, the Arab light spread in Q3/23 slightly increased from Q2/23 owing to Saudi Arabia voluntary oil cut in addition to OPEC+.

Gasoline over Dubai spread in Q3/23 rose from Q2/23 and Q3/22 because of tight supply from planned and emergency shutdowns for maintenance of the US and European refineries. However, the spread in 9M/23 dropped from that in 9M/22 due to higher Chinese exports. Jet/kero spread over Dubai and Gasoil spreads over Dubai in Q3/23 increased from Q2/23 because of tight supply from emergency shutdowns as well as lower Russian exports after Russia's government temporarily forbade its gasoil and gasoline exports since 21 September 2023. However, the spreads in Q3/23 and 9M/23 dipped from the same period of last year because concerns over tight supply eased after Russian oil could be exported to other countries instead of Europe. Low sulphur fuel oil spread over Dubai in Q3/23, on the other hand, fell from Q2/23 and Q3/22 as well as that in 9M/23 compared to 9M/22 due to additional supply from a new Kuwait refinery. High sulphur fuel oil spread over Dubai in Q3/23 improved from Q2/23 and Q3/22 as well as that in 9M/23 compared to 9M/22. This was supported by tight supply from OPEC+ production cuts leading to lower flow of medium and heavy crude oil in the market, and healthy demand for fuel oil for electricity production in the Middle East in summer.

Table 4: Financial Result of Refinery Business

	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Throughput ⁽¹⁾ (%)	110%	113%	(3%)	104%	6%	112%	108%	4%
Intake (kbd)	302	311	(9)	286	16	307	297	10
Gross Refining Margin (GRM) (US\$/bbl)								
: <u>excluding</u> Stock Gain/(Loss)	12.4	4.5	7.9	6.7	5.7	9.0	12.9	(3.9)
: <u>including</u> Stock Gain/(Loss)	22.2	2.5	19.7	(2.9)	25.1	10.5	17.5	(7.0)

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

In Q3/23, Thaioil refinery reported significant increases in EBITDA and net profit from the prior quarter. This was because of higher GRM including stock gain/loss tracking better petroleum product spreads higher crude oil price.

In Q3/23, Thai Oil Refinery reported utilization rate of 110% which decreased from Q2/23 due to oil spill incident around the Single Buoy Mooring (SBM-2) in September 2023. The refinery booked sales revenue of Baht 128,365 million, or an increase of Baht 13,238 million following higher product selling prices due to tight supply. Sales volume comprised of 85% domestic, 11% Indochina, and 4% export. The company reported GRM excluding stock gain/loss of 12.4 US\$/bbl, a rise of 7.9 US\$/bbl from the previous quarter mainly due to greater jet/kero and gasoil spreads over Dubai crude oil. Additionally, a hike in crude oil price resulted in stock gain of 9.8 US\$/bbl or Baht 9,638 million, compared with stock loss of Baht 1,929 million in Q2/23. However, there was a write-down on crude and product inventory of Baht 1,773 million, compared to a reversal of this transaction of Baht 15 million in the previous quarter. Besides, the company recorded the oil spill expenses of Baht 155 million in this quarter. Altogether with net realized loss on financial instruments of Baht 2,588 million, the company booked EBITDA of Baht 17,013 million, an increase of Baht 14,741 million from the previous quarter. Furthermore, there was a loss from fair value measurement on financial instruments of Baht 1,915 million that was higher than Q2/23 by Baht 1,706 million, which was mainly attributable to commodity derivatives. Meanwhile, net foreign exchange loss of Baht 628 million was also booked during the period (mainly from foreign currency denominated assets and liabilities worth Baht 678 million), which was smaller than the previous quarter by Baht 550 million. Offsetting with depreciation, finance cost, and tax expenses, net profit of Baht 9,814 million was posted compared to net loss of Baht 179 million in Q2/23 (net profit with dividend income in Q3/23 was Baht 12,806 million).

Compared 9M/23 to 9M/22, the refinery posted decreases in EBITDA and net profit since GRM including stock gain/loss was dipped and there was gain on GPSC reclassification and disposal in 9M/22.

Compared to Q3/22, the company reported an increase in utilization rate by 6% because there were shutdowns for maintenance of some upgrading unit in Q3/22. The refinery booked a drop in sales revenue of Baht 6,249 million following lower product selling prices. However, GRM excluding stock gain/loss considerably went up by 5.7 US\$/bbl from healthier gasoline spread and lower crude premiums. Moreover, an increase in crude oil price led to a stock gain of Baht 9,638 million compared to a stock loss of Baht 9,238 million during the same period last year. Altogether with higher net realized loss on financial instruments by Baht 2,350 million, EBITDA of Baht 17,013 million was recorded, compared with loss on EBITDA of Baht 3,037 million in Q3/22. Nevertheless, the refinery reported a loss from fair value measurement on financial instruments of Baht 1,915 million, compared with a gain of Baht 5,206 million in Q3/22, mainly owing to commodity derivatives. However, lower net foreign exchange loss of Baht 1,246 million was also booked during the period. Offsetting with depreciation, finance cost and tax expenses, net profit of Baht 9,814 million was reported compared to net loss of Baht 1,261 million in Q3/22.

Compared 9M/23 to 9M/22, the company reported a rise in utilization rate with a slight increase in selling volumes while average selling prices considerably declined. Thus, sales revenue went down by Baht 46,867 million, totaling to Baht 367,260 million. GRM excluding stock gain / loss of 9.0 US\$/bbl was booked, this represented a decline of 3.9 US\$/bbl. Furthermore, stock gain of Baht 4,370 million was reported during the period, a decrease of Baht 8,422 million from 9M/22. Meanwhile, there was a write-down on crude and inventory product of Baht 1,966 million, or a decrease of Baht 148 million compared to 9M/22. Altogether with net realized loss on financial instruments of Baht 1,828 million, a smaller loss by Bath 14,462 million, EBITDA went down by Baht 4,455 million, totaling to Baht 24,839 million. Futhermore, the company booked a loss from fair value measurement on financial instruments of Baht 1,829 million, compared to a gain of Baht 1,213 million in 9M/22. There was a net foreign exchange loss of Baht 1,270 million, which was lower by Baht 1,763 million from the same period last year. Nevertheless, a partial disposal of GPSC led to reclassification gain and gain from disposal totaling of Baht 18,026 million, before tax, or Baht 13,572 million, net of tax in 9M/22. Offsetting with depreciation, finance cost and tax expenses, net profit of Baht 12,577 million was realized, or Baht 18,031 million lower from the same period last year (net profit with dividend income in 9M/23 was Baht 19,403 million).

2.2 Market Condition and Financial Result of Aromatics Business

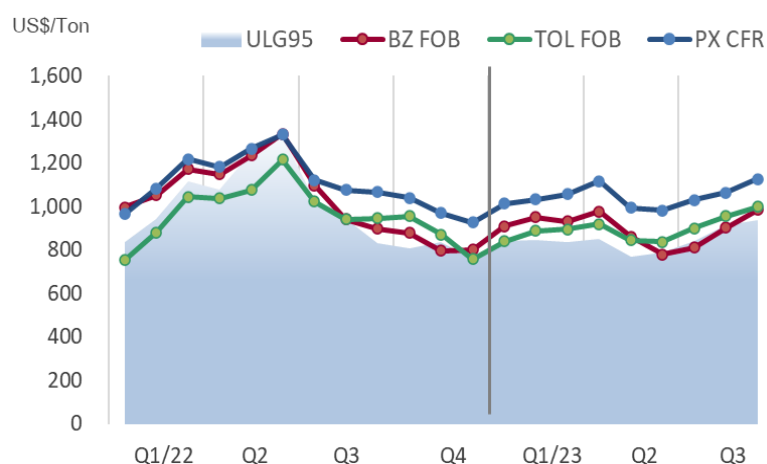
Table 5: Average Prices and Spreads of Aromatics Products

Average Prices (US\$/Ton)	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Paraxylene (PX) ⁽¹⁾	1,073	1,030	43	1,088	(15)	1,046	1,145	(99)
Benzene (BZ) ⁽²⁾	899	873	26	978	(79)	901	1,097	(196)
Toluene (TL) ⁽²⁾	951	867	84	969	(18)	897	990	(93)
Spreads over ULG95 (US\$/Ton)	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Paraxylene (PX)	175	228	(53)	152	23	199	107	92
Benzene (BZ)	1	71	(70)	42	(41)	54	58	(4)
Toluene (TL)	53	65	(12)	33	20	50	(48)	98

Remark (1) Based on CFR Taiwan price

(2) Based on FOB Korea price

Graph 2: Prices of Aromatics Products and ULG95



In Q3/23, PX price increased from Q2/23 following the increase in crude oil price due to tighter supply after output cuts from Saudi Arabia and fewer exports from Russia. However, PX spread over ULG95 dropped from Q2/23 as raw material costs remained high, while high level of inflation was still pressuring purchasing power of consumers. Additionally, lower spread was also a result of fragile state of Chinese economy and higher supply as PX plants resumed their operations after maintenance in Q2/23. Despite the reasons above, PX spreads over ULG95 in Q3/23 and 9M/23

improved from Q3/22 and 9M/22, respectively from much higher growth of PX demand in 2023.

BZ price in Q3/23 improved from Q2/22 due to an increase in oil prices from tighter supply. However, BZ spread over ULG95 in Q3/23 dropped from Q2/23 and BZ spreads over ULG95 in Q3/23 and 9M/23 also declined from Q3/22 and 9M/22, respectively because BZ demand was weakened owing to low profit of downstream businesses and the slower than expected Chinese economy.

TL price in Q3/23 was higher than Q2/23 following the increase in oil prices from tighter supply. However, TL spread over ULG95 dropped from Q2/23 as weakened aromatics market in rainy season resulted in lower TL demand for aromatics production. Regardless of the rainy season, demand for TL as an additive for gasoline production remained high owing to strong gasoline market. Therefore, TL spread over ULG95 in Q3/23 and 9M/23 widened from Q3/22 and 9M/22, respectively.

Table 6: Financial Result of TPX

	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Aromatics Production Rate ⁽¹⁾ (%)	74%	71%	3%	70%	4%	71%	73%	-2%
Aromatics Production (kTon)	156	148	8	147	10	442	457	(15)
Product-to-feed Margin ⁽²⁾ (US\$/Ton)	31	49	(18)	7	24	48	1	47

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 Q3/23, TPX had lower product-to-feed margin due to a plummet of BZ spread and had a loss on fair value measurement of financial instruments. Thus, TPX had a worse performance than the previous quarter.

For 9M/23, TPX had better product-to-feed margin from less concerns about the Russia-Ukraine conflicts. Therefore, TPX performance was better.

In Q3/23, compared with Q2/23, Thai Paraxylene Co., Ltd. (TPX) had an aromatics production rate of 74%, higher than the previous quarter by 3%. TPX had sales revenue of Baht 14,232 million, increased by Baht 1,098 million due to higher sales volume. PX spread, TL spread over ULG95 decreased, and BZ spread over ULG95 plummeted significantly because BZ demand was weakened owing to low profit of downstream businesses and the Chinese economy grew less than expected. As a result, product-to-feed was lower by 18 US\$/ton from the previous quarter. However, TPX had a net realized gain on financial instruments of Baht 97 million, increased by Baht 82 million from Q2/23. Thus, TPX recorded an EBITDA of Baht 156 million, lower EBITDA by Baht 123 million. However, in this quarter, net loss on fair value measurement of financial instruments of Baht 47 million was recorded compared with gain on fair value measurement of financial instruments of Baht 166 million in the previous quarter. In addition, TPX had a net foreign exchange gain of Baht 20 million, compared with a net foreign exchange gain of Baht 25 million in the previous quarter. Offsetting with depreciation, finance costs and plus tax income tax, In Q3/23, TPX posted a net loss of Baht 50 million, compared to net profit of Baht 225 million from the former period.

Compared with Q3/22, TPX aromatics production rate increased by 4%. Sales revenue went down by Baht 755 million due to decreases in average selling prices. However, TPX reported a higher in product-to-feed margin by 24 US\$/ton since aromatics spreads over ULG95 were widened except BZ spread. Combining with net realized gain on financial instruments, TPX had an EBITDA Baht 156 million, compared with an EBITDA loss of Baht 475 million in Q3/22. However, TPX had a loss on fair value measurement of financial instruments of Baht 47 million, compared with net loss on fair value measurement of financial instruments of Baht 80 million, and net foreign exchange gain reduced by Baht 33 million. Therefore, TPX posted a net loss of Baht 50 million, compared with a net loss of Baht 584 million in the same period last year.

Compared 9M/23 with 9M/22, TPX had sales revenue of Baht 39,896 million, decrease by Baht 7,056 million as average selling prices (especially BZ) declined and total sales volume decreased. However, TPX reported better product-to-feed margin of 47 US\$/ton from higher aromatics spreads over ULG95 after concern over Russia and Ukraine tension subsided. Combining with net realized gain on financial instruments of Baht 114 million, TPX posted an EBITDA of Baht 854 million, compared with an EBITDA loss of Baht 1,528 million in 9M/22. Besides, TPX had net gain on fair value measurement of financial instruments of Baht 8 million, compared with net loss on fair value measurement of financial instruments of Baht 69 million in 9M/22, and had a net foreign exchange gain of Baht 31 million,

decreased in net foreign exchange gain by Baht 72 million. Therefore, TPX recorded net profit of Baht 258 million, compared with a net loss of Baht 1,761 million in the same period last year.

In Q3/23, aromatics group (TPX holds 75% shares of LABIX) had consolidated sales revenue of Baht 20,121 million, consolidated EBITDA of Baht 582 million and consolidated net gain of Baht 104 million. For 9M/23, aromatics group had consolidated sales revenue of Baht 58,127 million, consolidated EBITDA of Baht 2,046 million and consolidated net gain of Baht 646 million.

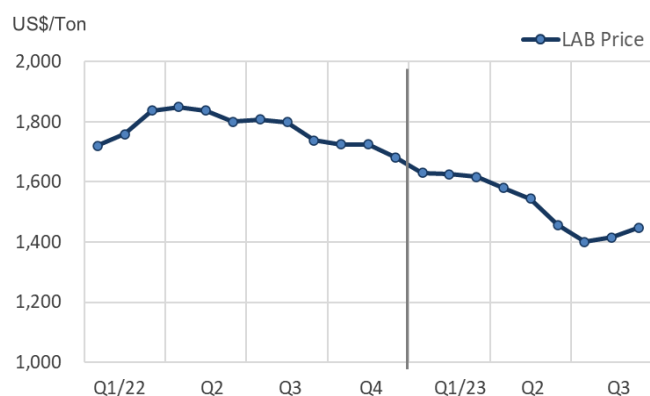
2.3 Market Condition and Financial Result of an Intermediate for the Production of Surfactants Business

Table 7: Average Price of LAB

Average Price (US\$/Ton)	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
Linear Alkylbenzene (LAB) ⁽¹⁾	1,421	1,528	(107)	1,781	(360)	1,524	1,794	(270)

Remark (1) Based on ICIS price

Graph 3: Price of LAB



In Q3/23, LAB price and LAB spread over jet and/or benzene dropped from that of Q2/23 and Q3/22. Additionally, LAB price and LAB spread over jet and/or benzene in 9M/23 was also lower than that of 9M/22 because of lower demand for cleaning products in wet weather season (June – September) in India and Southeast Asia. Moreover, a high level of interest rate and inflation led to a slowdown in both the industrial and service sectors. Also, China's real estate sector is still in a downturn.

Source : ICIS LAB Weekly Report, Sep 2023.

Table 8: LAB Production

	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
LAB Production Rate ⁽¹⁾ (%)	123%	125%	(2%)	113%	10%	123%	119%	4%
LAB Production (kTon)	37	37	-	34	3	110	107	3

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

In Q3/23, with a slightly increasing in gross margin, LABIX had a better performance compared to the prior quarter.

In Q3/23, LABIX Co., Ltd. (LABIX) had LAB production rate at 123% and LAB sales volume was same as Q2/23. However, an increase in LAB price tracking feedstock prices resulted in sales revenue was Baht 6,286 million, increased by Baht 11 million. Meanwhile, LABIX had a slightly higher gross margin, LABIX then reported EBITDA of Baht 426 million, increased by Baht 21 million. In addition, LABIX had a net foreign exchange gain of Baht 21 million, decreased by Baht 14 million. Offsetting with depreciation, finance costs and income tax expenses, LABIX posted net profit of Baht 205 million, an increased by Baht 24 million from the prior quarter.

Compared with Q3/22, LABIX had a higher LAB production rate and sales volume by 10% and 6% respectively from capacity expansion in Q2/23. However, a decrease in LAB price tracking feedstock

In 9M/22, LABIX had a dropped on gross margin following pressure on lower domestic demand and higher supply in the market. LABIX then had a lower performance.

prices resulted in sales revenue decline of Baht 2,442 million. While 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 80 million. Additionally, LABIX had a lower net foreign exchange gain of Baht 9 million compared with Q3/22. Offsetting with depreciation, finance costs and income tax expenses, LABIX reported a lower net profit by Baht 156 million from the same period of the previous year.

Compared 9M/23 with 9M/22, LABIX had a higher LAB production rate and sales volume by 4% and 3% respectively from capacity expansion in Q2/23. The sales revenue was Baht 19,408 million, decreased by Baht 3,426 million following the decrease in LAB price tracking feedstock prices. Furthermore, a decrease in gross margin from the drop in domestic demand while there was more supply resumption in the LAB market, LABIX then recorded lower in EBITDA of Baht 656 million. Meanwhile, LABIX had a net foreign exchange gain of Baht 48 million, decreased by Baht 9 million compared to 9M/22. Offsetting with depreciation, finance costs and income tax, LABIX then reported a lower net profit by Baht 846 million from the same period of the previous year.

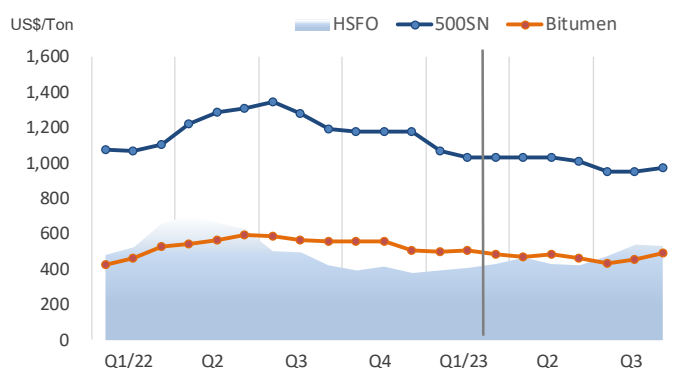
2.4 Market Condition and Financial Result of Lube Base Oil Business

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

Average Prices (US\$/Ton)	Q3/23	Q2/23	+ / (-)	Q3/23	+ / (-)	9M/23	9M/22	+ / (-)
500SN ⁽¹⁾	959	1,027	(68)	1,272	(313)	1,011	1,207	(196)
Bitumen ⁽²⁾	458	470	(12)	569	(111)	474	536	(62)
Spreads over HSFO (US\$/Ton)	Q3/23	Q2/23	+ / (-)	Q3/23	+ / (-)	9M/23	9M/22	+ / (-)
500SN	442	588	(146)	798	(356)	557	643	(86)
Bitumen	(59)	31	(90)	96	(155)	20	(28)	48

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



Base oil price (500SN) and its spread in Q3/23 went down compared to that of Q2/23 and Q3/22. Similarly, the price and the spread also declined in 9M/23 compared to the same period in the previous year. This decline was mainly attributable to stagnant Chinese economic activities and rainy season suppressing demand for lubricant in the region. Furthermore, supply also increased during the period as some refineries resumed their production in the region.

Meanwhile, bitumen price in Q3/23 also decreased from Q2/23 and Q3/22. Likewise, 9M/23 price also decreased from 9M/22 as the price was suppressed by 1) shrinking in demand from limited fiscal budget for road maintenance, and 2) limited road maintenance activities due to rainy season. Sluggish market following concerns over state of Chinese economy sent down bitumen spread over fuel

oil in Q3/23 compared to Q2/23 and Q3/22. However, average spread in 9M/23 was still above that of 9M/22 following plummeting in fuel oil price.

Table 10: Financial Result of TLB

	Q3/23	Q2/23	+/(-)	Q3/23	+/(-)	9M/23	9M/22	+/(-)
Base Oil Production Rate ⁽¹⁾ (%)	79%	83%	(4%)	86%	(7%)	80%	90%	(9%)
Base Oil Production (kTon)	53	55	(2)	58	(5)	160	176	(16)
Product-to-feed Margin ⁽²⁾ (US\$/Ton)	84	123	(39)	209	(125)	124	115	10

Remark (1) Based on nameplate capacity of 267,015 Tons/year

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

TLB reported lower base oil production rate and spreads. Thus, P2F, EBITDA and net profit declined during the period. 9M/23 performance, compared with 9M/22, TLB top line declined following lower product prices and lower production from group optimization. Thus, TLB reported lower, EBITDA, and net profit.

In Q3/23, Thai Lube Base Plc. (TLB) reported base oil production rate at 79% and sales revenue of Baht 6,413 million, a decrease of Baht 159 million from Q2/23 from lower base oil production rate following group optimization production planning. Product spreads declined following concerns over weakened demand and lower seasonal demand. Thus, TLB reported Product-to-feed Margin of 84 US\$/ton, declined by 39 US\$/ton. Consequently, EBITDA came down by Baht 405 million, totaling to Baht 367 million. Offsetting with depreciation, finance cost and tax expenses, TLB posted net profit of Baht 254 million, or a decrease of Baht 322 million from the previous quarter.

Compared to Q3/22, TLB revenue went down by Baht 1,361 million as product selling prices plummeted following a decline in global oil price. At the same time, base oil production rate reduced from group optimization. However, Product-to-feed Margin improved by 5 US\$/ton, owing to higher bitumen spread from large decline in fuel oil price. Thus TLB reported lower EBITDA and lower net profit of Baht 1,287 million and Baht 1,048 respectively.

Compared 9M/23 to 9M/22, TLB booked lower sales revenue by Baht 3,729 million from lower product selling prices in addition to lower production volume following group optimization. Similarly, spreads were mostly coming down during the period except for bitumen spread which was somewhat stronger in this year due to a temporary spike in bitumen price in early 2023. As a result, P2F in 9M/23 was slightly higher than that of 9M/22. Altogether with lower production volume, TLB reported lower net income in 9M/23 compared to 9M/22.

2.5 Financial Result of Power Generation Business

Table 11: Sales Volume from Power Generation Business

TOP SPP	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
Electricity Dispatched (GWh)	570	561	9	407	163	1,510	1,163	347
Steam Exported (kTon)	828	878	(50)	544	284	2,285	1,695	590

In Q3/23, TOP SPP had a rise in net profit comparing to Q2/23 due to refinancing activity

In 9M/23, TOP SPP had an increased in net profit from TOP SPP expansion after commercial operation (COD)

In Q3/23, TOP SPP Co., Ltd. (TOP SPP) had sales revenue of Baht 2,906 million, which decreased by Baht 752 million, primarily attributed to reduced lower selling prices resulting from a decline in natural gas price. In addition, there were adjustments to electricity selling price and natural gas costs from January to April 2023 to small power producer following the Energy Policy and Planning Office (EPPO) announcement. As a result of the situation mentioned, TOP SPP reported EBITDA of Baht 769 million, decreased by Baht 72 million. In Q2/23, TOP SPP incurred losses of Baht 202 million. This loss was a result of refinancing activity which had led to unwinding of IRS contract and other financing costs. Offsetting with depreciation and income tax expense, TOP SPP recorded a net profit of Baht 482 million, increased by Baht 133 million compared with the previous quarter. Besides, Thairoil and Subsidiaries had GPSC's shareholding 10.0%, and booked dividend income of Baht 85 million on 20th September 2023

Compared with Q3/22, TOP SPP sales revenue decreased by Baht 363 million mainly from lower selling price as a result of a lower natural gas price, although TOP SPP had an increase in sale volume from the startup of TOP SPP Expansion project since 1st April 2023 resulting in enhanced electricity efficiency. This led to a rise in EBITDA of Baht 148 million. Offsetting with depreciation and income tax expense, TOP SPP net profit increased by Baht 62 million from the same period of last year.

For 9M/23 compared with 9M/22, TOP SPP booked sales revenue of Baht 9,423 million, reflecting an increase of Baht 1,035 million mainly due to a rise in sales volume from commercial operation of TOP Expansion. This caused TOP SPP to post EBITDA of Baht 2,193 million, or an increase of Baht 620 million. In 9M/23, TOP SPP recorded a loss of Baht 202 million due to unwinding IRS and financing costs related to financing activity. Offsetting with depreciation and tax expenses, TOP SPP reported net profit of Baht 1,218 million, which increases by Baht 235 million from the same period of last year. Besides, Thairoil and Subsidiaries reduced GPSC's shareholding from 20.78% to 10.0%. Therefore, Thairoil and Subsidiaries did not book share of profit from GPSC compared with the same period of last year. Furthermore, GPSC 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 in Q1/23 and interim dividend income of Baht 85 million on 20th August 2023 were recorded.

2.6 Financial Result of Solvent and Chemicals Business

Table 12: Financial Result of Thaioil Solvent

	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
Solvent Utilization Rate ⁽¹⁾ (%)	83%	67%	16%	68%	15%	77%	80%	(3%)
Solvent Production ⁽¹⁾ (KT)	44	36	9	36	8	124	129	(5)
Solvent Sales Volume (KT)	162	109	53	160	3	415	419	(4)

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

Sak Chaisidhi Co., Ltd. changed capacity from 141 KT to 214 KT since April 2023

In Q3/23, Business group reported higher sales revenue from sales volume following demand. This led to EBITDA and net profit higher following gross profit margin improved.

For 9M/23, compared with 9M/22, Sales revenue reduced from selling price decreased tracking crude oil price and sales volume. This led to EBITDA and net profit lower from the same period of the previous year.

In Q3/23, Solvent and Chemicals Product Business reported 83% solvent utilization rate, increased by 16% from Q2/23. Solvent and chemicals sales volume increased by approximately 53 KT from the prior quarter. This led business group to record sales revenue of Baht 5,626 million, increased by Baht 1,938 million following demand of solvent and chemical. Therefore, business group reported EBITDA of Baht 305 million, rose by Baht 148 million because the gross profit margin improved. Moreover, business group recorded net foreign exchange gain and derivative of Baht 154 million, increased by Baht 62 million from the prior quarter. Offsetting with depreciation of Baht 65 million, finance costs of Baht 37 million, income tax expense of Baht 41 million, and non-controlling interests. In Q3/23, business group posted net profit of Baht 177 million, increased by Baht 56 million from the prior quarter.

Compared Q3/23 with Q3/22, Business group's utilization rate rose by 15% from the same period of prior year, sales volume increased by approximately 3 KT and the average solvent and chemicals selling price per unit decreased tracking crude oil price. As a result, Business group had sales revenue decrease by Baht 826 million. However, Business group posted an increase in EBITDA of Baht 134 million due to higher gross profit margin and lower selling and administration expenses. Business group recorded lower net foreign exchange gain and derivative by Baht 30 million than Q3/22. Offsetting with depreciation, finance costs, income tax expense and non-controlling interests, Business group, in Q3/23, recorded an increase in net profit of Baht 72 million from the same period last year.

For 9M/23, compared with 9M/22, Business group had a 77% solvent utilization rate and had lower average solvent and chemicals selling price per unit tracking crude oil price and decrease in sales volume of approximately 4 KT. This led business group to record sales revenue of Baht 14,072 million, decreased by Baht 2,665 million. Business group reported EBITDA of Baht 694 million, reduced by Baht 208 million. In 9M/23, business group had net foreign exchange gain and derivative of Baht 154 million which rose by Baht 55 million from 9M/22. Offsetting with depreciation, finance costs, income tax expense, and non-controlling interests. In 9M/23, business group posted net profit of Baht 433 million, decreased by Baht 151 million from the same period of the previous year.

2.7 Financial Result of Olefin Business

Table 13: Spread of Olefin Products

Spreads (US\$/Ton)	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)	9M/23	9M/22	+/(-)
HDPE – Naphtha MOPJ ⁽¹⁾	384	434	(50)	389	(5)	405	437	(32)
LLDPE – Naphtha MOPJ ⁽¹⁾	343	413	(70)	386	(43)	380	455	(75)
PP – Naphtha MOPJ ⁽¹⁾	305	376	(71)	359	(54)	354	427	(73)

Remark: (1) Based on ICIS price

In Q3/23, olefins product prices were pressured by new supply added to the market. In addition, demand decreased during the rainy season, as a result, TII recognized an increased share of losses in Q3/23 compared to the previous quarter.

The performance of 9M/23 improved compared to the same period as a result of lower production costs and increased demand from the relaxing of lockdown in China. CAP increased production capacity and sales volume in line with the recovery of the petrochemical market.

Olefins product prices in Q3/23 decreased from Q2/23 owing to increased supply in the market from the Philippines and decreased demand from end users during the rainy season. As a result, high-density polyethylene (HDPE) spread over Naphtha decreased to 384 \$/ton, linear low-density polyethylene (LLDPE) spread over Naphtha was at 343 \$/ton as well as the polypropylene (PP) spread over naphtha decreased to 305 \$/ton. From the situation, in Q3/23 TII recognized an increased share of losses in CAP, and when combined with TII's operating expenses, TII reported a net loss of Baht 116 million, compared to Q2/23 which had a net loss of Baht 47 million.

The olefins market in Q3/23 was still more depressed than that of Q3/22, as CAP had increased sales volume compared to Q3/22 to meet the customers' demand, as a result, Q3/23 TII reported a net loss of Baht 116 million compared to a net loss of Baht 351 million in Q3/22.

For TII's 9M/23 performance, there was a net loss of Baht 132 million, compared to a net loss of Baht 613 million from the same period last year. This was mainly due to the lower production costs and the relaxing of China's lockdown in the beginning of the year. As a result, demand in the petrochemical market increased. CAP increased production capacity and increased sales volume.

2.8 Financial Result of Ethanol Business

Table 14: Utilization Rate of TET

	Q3/23	Q2/23	+ / (-)	Q3/22	+ / (-)	9M/23	9M/22	+ / (-)
Ethanol Utilization Rate (%)								
- Sapthip	98%	67%	31%	119%	(21)%	91%	100%	(9)%

In Q3/23, TET recorded higher sales revenue from increased in sale volume and selling price of ethanol from Sapthip, TET reported higher EBITDA while consolidated net profit was lower than Q2/23 from no dividend income from UBE.

For 9M/23, TET reported higher sales revenue from higher selling price of ethanol. However, with higher feedstock costs, TET had lower gross profit margin, EBITDA, and net profit from the same period of the previous year.

In Q2/23, Thairoil Ethanol Co., Ltd. (TET) reported consolidated sales revenue from Sapthip Co., Ltd. (TET holds 50% shares) of Baht 433 million, rose by Baht 25 million from the prior period mainly came from higher sales volumes. Likewise, utilization rate went up to 98%, increased by 31% as there was a maintenance shutdown in Q2/23 and ethanol price went up. As a result, it had an increase in gross profit margin and reported EBITDA of Baht 30 million, increased by Baht 29 million. In Q3/23, TET did not receive dividend income from Ubon Bio Ethanol Plc. (UBE), while it had dividend income of Baht 19 million in Q2/23. Offsetting with selling and administrative expenses, depreciation, finance costs, and income tax expense, and non-controlling interests, TET reported consolidated net loss of Baht 9 million compared with consolidated net loss of Baht 6 million in the previous quarter.

In comparison with Q3/22, TET had a drop in consolidated sales revenue from Sapthip Co., Ltd., of Baht 83 million because sales volumes of ethanol declined due to lower utilization rate by 21% from planned maintenance for 11 days and rising feedstock cost. This led to a decrease in gross profit margin, while EBITDA decreased by Bath 37 million. After offsetting with selling and administrative expenses, depreciation, finance costs, and income tax expense, and non-controlling interests, TET reported lower net profit by Baht 20 million from the same period of last year.

For 9M/23 compared with 9M/22, TET recorded higher consolidated sales revenue of Baht 1,310 million, which increased by Baht 28 million from the same period of last year. This was due to an increase in ethanol selling price. However, due to significantly higher feedstock costs, the gross profit margin from ethanol dropped and sent TET reported EBITDA of Baht 76 million, decreased by Baht 53 million. This led to TET consolidated net loss of Baht 30 million, or higher loss of Baht 33 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)	30 September 2023	31 December 2022	+ / (-)	+ / (-) %
Assets				
Cash, cash equivalents and short-term investments ⁽¹⁾	36,698	43,919	(7,221)	(16%)
Other current assets	90,611	109,909	(19,298)	(18%)
Non-current assets	294,898	290,753	4,146	1%
Total assets	422,207	444,581	(22,374)	(5%)
Liabilities				
Current liabilities ⁽²⁾	62,033	83,471	(21,438)	(26%)
Long-term borrowings and debentures (including current portion) ⁽³⁾	168,096	171,860	(3,764)	(2%)
Other non-current liabilities	29,026	30,593	(1,566)	(5%)
Total liabilities	259,156	285,923	(26,768)	(9%)
Equity				
Equity attributable to owners of the company	160,318	156,034	4,284	3%
Non-controlling interests	2,733	2,623	110	4%
Total equity	163,051	158,657	4,394	3%
Total liabilities and equity	422,207	444,581	(22,374)	(5%)

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 30 September 2023, Thaioil and Subsidiaries had total assets of Baht 422,207 million, or a decline of Baht 22,374 million (or 5%) from 31 December 2022 owing to

- Lower cash and cash equivalent of Baht 7,221 million due to cash paid for annual dividend and interim dividend netting with performance from the first nine month the year, cash paid for \$500 million debenture redemption upon its maturity date, and cash paid for PPE acquisition which was mainly linked to Clean Fuel Project (CFP)
- Lower current assets of Baht 19,298 million due to lower trade receivables tracking lower crude oil price and lower product price while oil fuel fund receivables also plummeted significantly as per government policy on fuel price
- Higher non-current assets of by Baht 4,146 million mainly form higher property, plant and equipment from project investment such as CFP project, offsetting with lower deferred tax assets (DTA) and Right of Use assets (ROU) which were normal parts of business operation as per accounting standards

Total Liabilities

As of 30 September 2023, Thaioil and Subsidiaries had total liabilities of Baht 259,156 million, which went down by Baht 26,768 million or 9% from 31 December 2022, mainly due to

- Current liabilities dropped by Baht 21,438 million primarily due to lower trade payables from lower average crude oil prices while short term borrowings increased slightly from the need for working capital line by some subsidiaries
- Long-term borrowings and debentures (including current portions) declined by Baht 3,764 million mainly due to new debenture issued in late 2022 and debenture redemption upon its maturity in early 2023.
- Other non-current liabilities declined by Baht 1,566 million due to lower lease liabilities and derivative liabilities in both CCS and IRS valuation per relevant accounting standards.

Table 16: Consolidated Borrowings

(Million Baht)	Thaioil	LABIX	TOP SPP	TS	TET	TTC	รวม
Debentures : US\$-denominated ⁽¹⁾	6,213	-	-	-	-	105,040	111,253
: Baht-denominated	36,480	-	-	-	-	-	36,480
Borrowings : Baht-denominated	16,878	2,950	-	57	70	-	19,955
: Other currencies-denominated ⁽¹⁾	-	-	-	408	-	-	408
As of 30 September 2023	59,571	2,950	-	465	70	105,040	168,096
As of 31 December 2022	51,777	3,416	6,884	613	89	109,081	171,860
+ / (-)	7,794	(466)	(6,884)	(148)	(19)	(4,041)	(3,764)

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

Total Equity

As of 30 September 2023, Thaioil and Subsidiaries reported consolidated equity of Baht 163,051 million, or a decline of Baht 4,394 million, equivalent to 3% decline from year end 2022 due to net profit booked during the first nine of 2023 netting with dividend (both annual and interim) Additionally, there was a large drop in other comprehensive income which was mainly attributable to FVTOCI measurement of the investment in GPSC and UBE, whose share prices declined significantly during the year. Additionally, there was a loss on cash flow hedge from derivatives measurement such as forward, CCS and IRS during the period.

3.2 Statement of Cash Flows

As of 30 September 2023, Thaioil and Subsidiaries reported cash and cash equivalent of Baht 28,329 million, Baht 24,054 million of which belonged to Thaioil alone (separated financial statement).

Table 17: Condensed Statement of Cash Flows

(Million Baht)	Consolidated	Separated
Net cash flows from / (used in) operating activities	19,985	12,193
Net cash flows from / (used in) investing activities	(15,467)	(14,920)
Net cash flows from / (used in) financing activities	(19,698)	(7,927)
Net increase in cash and cash equivalents	(15,180)	(10,654)
Cash and cash equivalents at the beginning of period	43,576	34,787
Effect of exchange rate changes on cash and cash equivalents	(67)	(79)
Cash and cash equivalents at the end of period ⁽¹⁾	28,329	24,054

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

Thai Oil and Subsidiaries had net cash from operation of Baht 19,985 million owing to net profit before taxes of Baht 20,589 million, while it had higher non-cash adjustment of Baht 12,002 million, and net cash used in changes in working capital of Baht 10,566 million. At the same time, it paid tax totaling Baht 2,040 million. It also had net cash flows used in investing activities of Baht 15,467 million due to ongoing investing activities such as purchases of land, building and equipment especially for Clean Fuel Project (CFP) totaling Baht 8,370 million.

Additionally, it had net outflows from financing activities of Baht 19,698 million mainly due to net cash paid to financial institutions (loan repayment) of Baht 13,670 million, while it booked additional borrowing from financial institutions of Baht 11,467 million. During the period, it also issued a debenture with cash inflow of Baht 10,000 million, while it redeemed its maturing debentures of Baht 16,381 million. Furthermore, it paid dividend totaling of Bhat 5,249 million and paid finance cost of Baht 4,995 million.

Consequently, cash ending declined by Baht 15,180 million from 31 December 2022. There was also an effect of exchange rate on cash totaling Baht 67 million. Summing up with beginning cash and cash equivalents at the beginning of the period, cash of Baht 28,329 million was reported on 30 September 2023

3.3 Financial Ratios

Table 18: Financial Ratios (Consolidated)

Profitability Ratios	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)
Quality of earnings ratio (%)	16%	4%	12%	0%	16%
Gross profit margin ratio (%)	16%	3%	13%	(1%)	17%
Net profit margin ratio (%)	9%	1%	8%	0%	9%

Liquidity Ratios	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)
Current ratio (times)	1.8	1.8	-	1.5	0.3
Quick ratio (times)	0.9	0.9	-	0.6	0.4

Financial Policy Ratios	Q3/23	Q2/23	+/(-)	Q3/22	+/(-)
Total liability/ Total equity (times)	1.6	1.6	-	1.8	(0.2)
Net debt/ Equity (times)	1.0 / 0.8 ¹⁾	1.0 / 0.8 ¹⁾	-	1.1 / 0.9 ¹⁾	(0.1)
Long-term loan/ Total equity (times)	1.2 / 1.0 ¹⁾	1.2 / 1.0 ¹⁾	-	1.2 / 1.1 ¹⁾	(0.1)
Interest coverage ratio (times)	18.4	4.3	14.1	(0.6)	19.0
Long-term loan/ Total capitalization (%)	54%	54%	(1%)	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 Third Quarter of Year 2023, and the Fourth Quarter of Year 2023

Crude oil and refinery market outlook

Crude oil market in Q4/23 and 2024 is expected to remain high following after OPEC+ announced voluntary cuts of their production amounting 1.66 MBD from May 2023 until the end of 2023. Moreover, Saudi Arabia and Russia keep voluntarily cuts until end 2023 to stabilize oil price. Non-OPEC production growth is expected to reduce, especially in the US, which is facing with high production cost and lack of drilling investment. However, crude oil price is expected to be pressured from potentially slower crude oil demand growth following concerns over global economic slowdown as a result of the acceleration of interest rate hikes from various central banks. Energy Information Administration (EIA) projected 2024 world demand growth of 1.6 MBD, declined from 1.8 MBD this year.

Refinery business in Q4/23 and 2024 is expected to be supported by heating demand during winter. Furthermore, Jet fuel is expected to continually elevate thanks to the growth of air transportation. Overall, demand growth is expected to remain similar to supply growth following new capacity addition in 2023 and 2024. Additionally, gross refining margin (GRM) is expected to be supported by low product inventories, which are still below the 5-year average despite the upward trend. However, Chinese exports potentially limit the upside of GRM.

Aromatics Market Outlook

In Q4/23, Paraxylene (PX) market is expected to be supported by increasing of textiles demand for winter season as well as higher PET demand during New Year festive season in the late year.

In 2024, PX market is expected to be supported as demand growth is expected to outpace regional supply growth. Demand is projected to grow at 1.5 MT following improving downstream demand, while regional supply is expected to grow at 0.9 MT. In addition, ULG95 price is expected to decrease which will support PX-ULG95 spread. However, there are concerns over China's economic growth, which could potentially impact the demand.

In Q4/23, Benzene (BZ) market is expected be supported by higher demand for electronic appliance and automotive industry in the late year from Chinese economic stimulus plan.

In 2024, BZ market is expected to be supported by high demand growth of 1 MT. However, additional supply of 1.5 MT will pressure BZ market. Nevertheless, ULG95 price is expected to decrease which will support BZ-ULG95 spread.

In Q4/23, Toluene (TL) market is expected to improve due to higher demand for solvent and limited TL supply from low production in the region, whereas, decreasing demand for the gasoline blending after U.S. driving season end.

In 2024, TL market is expected to be supported by increasing TL demand for feedstock producing PX and BZ around 0.8 million tons after more economic stimulus plan coupled with demand for solvent is likely to be improve.

LAB Market Outlook

In Q4/23, LAB market is expected to improve compared to Q3/23 because of increasing demand after end of the monsoon season in the region and limited supply from annual planned maintenance shutdown in South Korea (ISU 160,000 tons per year in Oct'23), China (GOC 160,000 tons per year in Nov'23), and Taiwan (FUCC 105,000 tons per year in Nov'23) amid concerns over global economic slowdown.

In 2024, LAB market is expected to improve compared to 2023 as demand for washing product is expected to remain healthy due to the growing awareness of hygiene. Besides, supply is expected to maintain due to no capacity addition in the region. (Source: ICIS LAB Weekly Report, Sep 2023)

Lube Base Oil market outlook

Lube base oil market in Q4/23 is expected to improve compared to Q3/23 from improving demand after end of the rainy season. Besides, the market will be supported by limited supply from the closure of lube base oil group 1 plant in Japan and softer fuel oil price in late of 2023. However, market will be pressured by concerns over economic slowdown, especially in China.

In 2024, lube base oil market is expected to be softer than 2023, pressured by weakening lube base oil group 1 demand in the region as well as rising supply due to capacity addition of base oil group 2 and 3 in India.

Bitumen market outlook

Bitumen market in Q4/23 is expected to improve compared to Q3/23 from higher demand after end of unfavorable weather conditions during rainy season in major consumers such as Indonesia and Malaysia and the beginning of summer season in Australia. On the other hand, market will be pressured by limited budget for road maintenance and the delayed road infrastructure improvements, especially in China and Vietnam.

In 2024, bitumen market is expected to be softer than 2023, due to the resumption of regional refineries with increasing production. However, the market is expected to be supported by improving demand for road construction due to economic recovery from reopening country.

5. Appendix

5.1 Summary of Approved Investment Plan

From 2023 to 2026, Thaioil and Subsidiaries have outstanding approved capital expenditure of US\$1,090 million, mainly consisting of CFP project (Clean Fuel Project) of US\$ 564 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 September 2023

Project	Estimated Budgeting for Investment Plan 2023 - 2026
CFP project *	564
Total Ongoing CAPEX	245
Reliability, Efficiency and Flexibility Improvement	141
Infrastructure Improvement (i.e. RHCU Phase 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	1,090

* 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



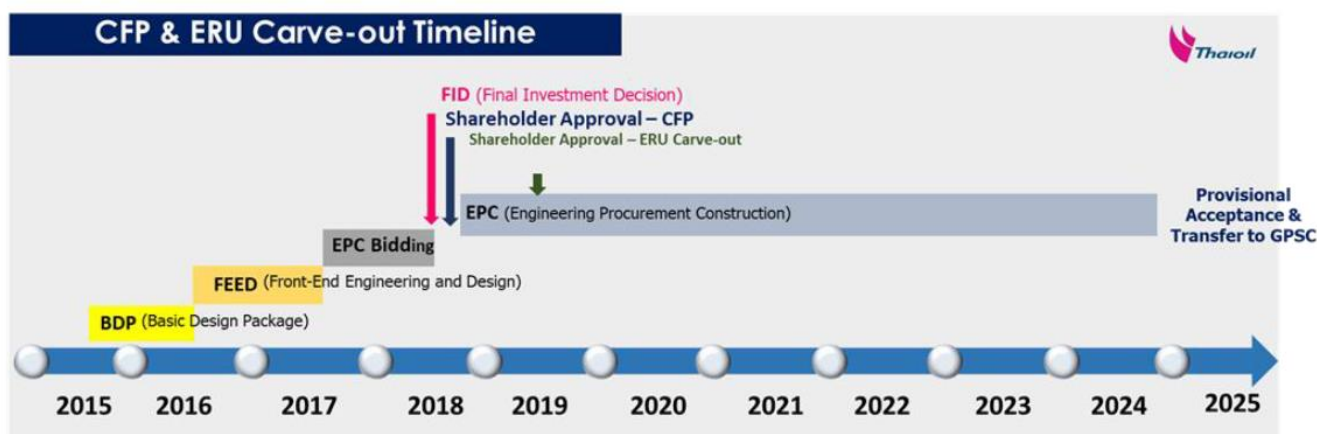
5.2 Summary of Key Project Investment: Clean Fuel Project (CFP)

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 September 2023, the progress of the CFP was more than 93.7% 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.

Additionally, the company planned to commission test the new Sulphur treating unit, called hydrodesulfurization unit (HDS-4), by early of 2024. This unit is under CFP project and brought forward from original plan to support company business of EURO-5 production which will be implemented in Thailand in 2024.