



IRPC Public Company Limited

Management Discussion and Analysis

**Operating Results for the Third Quarter
and the Nine-Month Period of 2022**



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Management Discussion and Analysis (MD&A)

IRPC Public Company Limited and its subsidiaries

Operating Results for the Third Quarter and the Nine-Month Period of 2022

Executive Summary

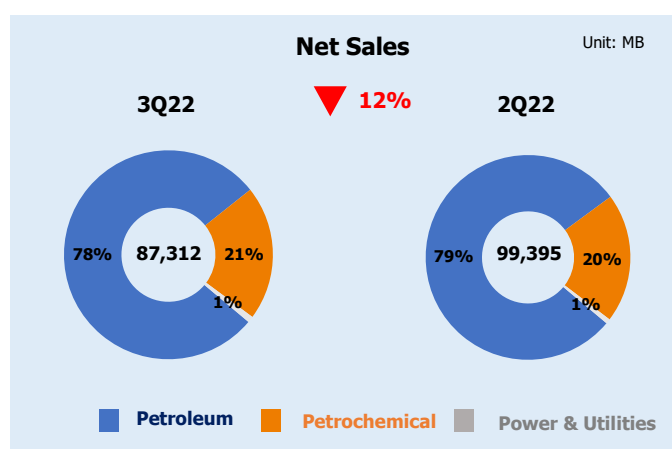
	Unit	Quarter			Change		9M		YoY
		3Q22	2Q22	3Q21	QoQ	YoY	2022	2021	
Crude Intake	Million bbl	17.40	18.03	17.58	(3%)	(1%)	52.89	51.96	2%
Sales ^[1]	Million Baht	89,410	98,951	67,017	(10%)	33%	267,793	182,670	47%
Net Sales ^[2]	Million Baht	87,312	99,395	62,088	(12%)	41%	263,314	167,334	57%
Market GIM	Million Baht	4,485	12,562	7,216	(64%)	(38%)	21,152	22,908	(8%)
	USD/bbl ^[3]	7.05	20.15	12.40	(65%)	(43%)	11.50	13.92	(17%)
Accounting GIM	Million Baht	465	11,264	9,544	(96%)	(95%)	21,620	33,745	(36%)
	USD/bbl	0.73	18.07	16.40	(96%)	(96%)	11.75	20.51	(43%)
EBITDA	Million Baht	(2,798)	8,021	6,190	(135%)	(145%)	11,823	23,868	(50%)
Net Profit	Million Baht	(2,549)	3,833	2,155	(167%)	(218%)	2,785	12,310	(77%)

Note: ^[1] **Sales** include (1) Petroleum Sales (2) Petrochemical Sales (3) Power and Utilities Sales
(4) Sales of tank farm and port service, etc

^[2] **Net Sales** include (1) Petroleum Sales (excluding excise tax) (2) Petrochemical Sales (3) Power and Utilities Sales

^[3] **Market GIM per bbl** : [(Market GIM / Crude Intake)/Exchange Rate]

The operating results in the third quarter of 2022 (3Q22) compared to those in the second quarter of 2022 (2Q22): In 3Q22, the Company reported net sales of Baht 87,312 million decreasing by Baht 12,083 million or 12% from that in 2Q22. This attributed to a 8% decrease in average selling prices following lower crude oil price as well as a 4% decrease in sales volume. The average crude intake was 189,000 barrels per day, which dropped by 5%.



The Market Gross Integrated Margin (Market GIM) was Baht 4,485 million (USD 7.05 per barrel) decreasing by Baht 8,077 million or 64%, mainly from a drop in almost all products spreads, especially Gasoline and Diesel spreads, plus an increase in crude premium.

The crude oil price in 3Q22 declined from USD 108.05 per barrel in 2Q22 to USD 96.88 per barrel as a result of recession concerns following inflation issues rising up around the world. Moreover, Zero-COVID policy in China affected the oil demand so it pressured crude oil price. The Company had the net stock loss of Baht 4,020 million or USD 6.32 per barrel including the stock loss of Baht 2,163 million, Lower of Cost or Market (LCM) of Baht 496 million and realized loss on oil hedging of Baht 1,361 million. These resulted in the Accounting Gross Integrated Margin (Accounting GIM) of Baht 465 million or USD 0.73 per barrel, which decreased by 96%. Meanwhile, the operating expenses were Baht 3,085 million decreasing by 1%. As a result, the Company reported the loss before interest, tax, depreciation and amortization (EBITDA) amounted to Baht 2,798 million compared to EBITDA of Baht 8,021 million in the previous quarter.

The Company recorded the depreciation expenses amounting to Baht 2,014 million being close to those in the previous quarter. The net financial cost was Baht 496 million, which rose by 16%. Furthermore, there was a loss on foreign exchange from US Dollar – borrowings of Baht 312 million increasing by 11% owing to the Thai Baht depreciation. The Company had outstanding USD debt of 120 million at the end of 3Q22. There was a gain on investments of Baht 67 million, down by 63%. In addition, the Company recorded unrealized gain on oil hedging amounting to Baht 2,426 million versus unrealized loss on oil hedging amounting to Baht 548 million in 2Q22. Meanwhile, loss on financial derivatives was amounting to Baht 81 million, dropped by 50%. Moreover, the Company had a corporate income tax benefit of Baht 655 million compared to a corporate income tax of Baht 927 million in 2Q22, mainly because of the decreasing operating results. All previously mentioned resulted in the net loss of Baht 2,549 million versus the net profit of Baht 3,833 million in 2Q22.

The operating results in the third quarter of 2022 (3Q22) compared to those in the third quarter of 2021 (3Q21): The Company's net sales was up by Baht 25,224 million or 41% attributing to a 44% increase in average selling prices following the higher crude oil price versus a 3% drop in sales volume. The average crude intake was 189,000 barrels per day decreasing by 1%. The Market GIM decreased by Baht 2,731 million or 38% mainly from a drop in Petrochemical products spreads. There was the net stock loss of Baht 4,020 million in 3Q22 compared with the net stock gain of Baht 2,328 million in 3Q21. These led to the lower Accounting GIM of Baht 9,079 million or 95%. Meanwhile, the operating expenses reduced by Baht 205 million or 6%. Therefore, the loss on EBITDA was Baht 2,798 million compared with EBITDA of Baht 6,190 million in 3Q21.

The Company recorded a decrease in the depreciation by Baht 116 million and a loss on financial derivatives decreased by Baht 144 million or 64%. However, a rise in the net financial cost of Baht 67 million or 16% and a rise in the loss on foreign exchange from US Dollar – borrowings of Baht 50 million or 19% because the Thai Baht was weaker than that in 3Q21. Also, there was a decrease in the gain on investments by Baht 94 million. Meanwhile, the Company recorded unrealized gain on oil hedging amounting to Baht 2,426 million versus unrealized loss on oil hedging amounting to Baht 685 million in 3Q21 and recorded a corporate income tax benefit of Baht 655 million against a corporate

income tax of Baht 460 million in 3Q21. These resulted in the net loss of Baht 2,549 million versus the net profit of Baht 2,155 million in 3Q21.

The operating results in the nine-month period of 2022 (9M22) compared to those in the nine-month period of 2021 (9M21): The Company registered net sales of Baht 263,314 million in 9M22 increasing by Baht 95,980 million or 57% from that in 9M21. This attributed to a 57% increase in average selling prices following higher crude oil price. The average crude intake was 194,000 barrels per day, up by 2%. The Market GIM was Baht 21,152 million (USD 11.50 per barrel) declining by 8% following a drop in most Petrochemical products spreads as well as an increase in crude premium versus a significant rise in Diesel and Gasoline spreads.

The crude oil price surged in accordance with the tight crude oil supply which was driven by the conflict between Russia and Ukraine and the continuing output cut from OPEC and allies. This led to the net stock gain of Baht 468 million or USD 0.25 per barrel including the stock gain of Baht 8,210 million against LCM of Baht 442 million as well as realized loss on oil hedging of Baht 7,300 million. The net stock gain dropped by Baht 10,369 million from that in the same period last year. Therefore, the Accounting GIM was Baht 21,620 million or USD 11.75 per barrel decreasing by Baht 12,125 million or USD 8.76 per barrel. The operating expenses were Baht 9,220 million decreasing by 7%. These resulted in EBITDA of Baht 11,823 million decreasing by Baht 12,045 million or 50%.

The Company recorded the depreciation expenses amounting to Baht 6,037 million declining by 7%. The net financial cost was Baht 1,321 million increasing by 2%. There was a loss on foreign exchange from US Dollar - Borrowings of Baht 573 million increasing by 5% as Thai Baht was weaker than that in the same period last year. Gain on investments amounted to Baht 375 million declining by 25%. However, a loss on financial derivatives amounted to Baht 43 million declining by 89% from that in 9M21. Furthermore, there was an unrealized loss on oil hedging of Baht 821 million, down by 32%. The Company had a corporate income tax amounting to Baht 610 million decreasing by 70% because of the declining operating results. All previously mentioned resulted in the net profit of Baht 2,785 million dropping by 77% when compared to that in the same period last year.

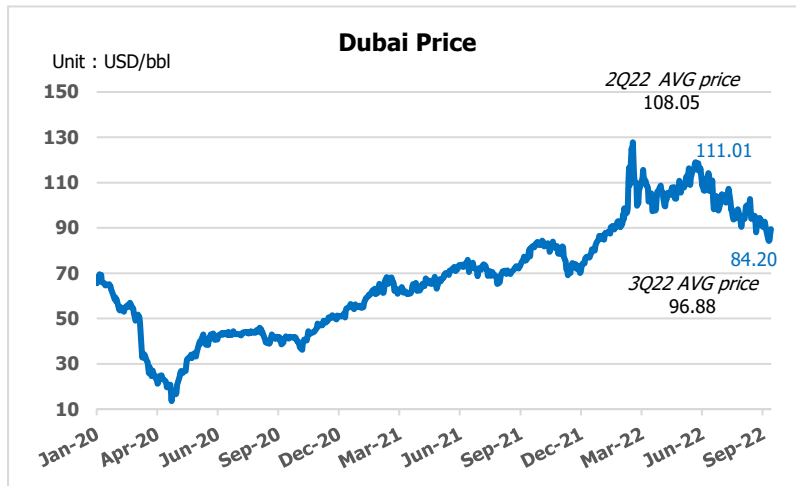
Operating Performance

1. Operating Performance by Business Units

1.1 Petroleum business unit

1.1.1 Petroleum Market Overview

Crude oil situation in the third quarter of 2022 (3Q22): The global oil consumption was 101.5 million barrels per day rising by 2.8 million barrels per day from 2Q22 oil consumption of 98.7 million barrels



per day. The Dubai price in 3Q22 moved between USD 84.20 per barrel and USD 111.01 per barrel, with an average of USD 96.88 per barrel that declined by USD 11.17 per barrel from USD 108.05 per barrel in 2Q22. This was because of recession concerns following inflation and economic issues rising up around the world. This

induced The Federal Reserve (FED) to raise a benchmark interest rate. In 3Q22, the benchmark interest rate was announced to hike in July and September by 0.75% each time, thus the escalating benchmark interest rate from 1.50 – 1.75% to 3.00 – 3.25%. Additionally, China’s Zero-COVID policy pressured the crude oil price as well since the policy curbed China’s economic activities affecting the oil demand.

Crude oil outlook in the fourth quarter of 2022 (4Q22): Dubai crude oil price in 4Q22 tends to stay at a high level thanks to energy demand that is likely to have a seasonally upward trend, while there may be an energy shortage during winter in Europe following an energy sanction of Europe on Russian energy in late 2022. Plus, OPEC and allies’ decision to cut their production by 2.0 million barrels per day from November 2022 to December 2023 also tends to support the crude oil price. Meanwhile, the actual cut may be around 0.7 - 1.2 million barrels per day being less than the announced figure as the current production is still below the announced production quota.



In 3Q22, net sales of Petroleum businesses decreased by 12%, QoQ, as average selling prices declined by 9% following the lessened crude oil price and sales volume was down by 3%.



In 3Q22, net sales of Petroleum businesses were Baht 68,345 million decreasing by Baht 9,653 million or 12% from that in 2Q22. This was mainly because of a 9% decline in average selling prices following the lessened crude oil price and a 3% downturn in sales volume, from 15.87 to 15.33 million barrels. The decrease in sales volume was mainly from Diesel and Gasoline, while sales volume

of Fuel Oil increased.

By comparing YoY, the net sales of Petroleum businesses escalated by Baht 26,611 million or 64%, mainly from a 62% increase in average selling prices following the rising crude oil price and a 2% improvement in sales volume being mainly from Fuel Oil and Diesel. Still, sales volume of Naphtha slumped.

For 9M22, net sales of Petroleum businesses were Baht 202,601 million, up by Baht 90,632 million or 81% from that in 9M21, owing to a 77% increase in average selling prices following the rising crude oil price as well as a 4% enhancement in sales volume being mainly from Diesel and Gasoline. However, sales volume of Naphtha dropped.

1.1.4 Petroleum Sales Breakdown

Products	Quarter						9M			
	3Q22		2Q22		3Q21		2022		2021	
	Local	Export	Local	Export	Local	Export	Local	Export	Local	Export
Refinery	68%	32%	66%	34%	59%	41%	67%	33%	61%	39%
Lube Base Oil	40%	60%	51%	49%	36%	64%	46%	54%	42%	58%
Total	65%	35%	65%	35%	55%	45%	65%	35%	58%	42%

In 3Q22, the proportion of domestic and export of Petroleum products was 65:35 equaling to that in the prior quarter. Still, by comparing YoY, the percentage of domestic sales improved by 10% thanks to alleviated domestic COVID-19 situations. The increase of which was mainly from Diesel and Gasoline. The export products in 3Q22 were mostly shipped to Singapore, Cambodia and Laos respectively.

For 9M22, the proportion of domestic and export of Petroleum products was 65:35. The percentage of domestic sales rose by 7% compared with that of the same period last year thanks to the ease of domestic lockdown restrictions. Such increase was mainly from Diesel and Gasoline.

1.1.5 Crude Price and Petroleum Products Spread

	Quarter			% Change		9M		YoY
	3Q22	2Q22	3Q21	QoQ	YoY	2022	2021	
Dubai Crude Oil (USD/bbl)	96.88	108.05	71.67	(10%)	35%	100.16	66.20	51%
Petroleum (USD/bbl)								
Naphtha – Dubai	(23.4)	(16.2)	2.1	(44%)	N.A.	(12.8)	0.6	N.A.
ULG95 – Dubai	13.2	35.0	11.8	(62%)	12%	22.0	9.6	129%
Gas Oil 0.05%S - Dubai	35.2	43.1	5.4	(18%)	552%	32.6	5.1	539%
FO 180 3.5%S - Dubai	(22.3)	(3.2)	(3.4)	(597%)	(556%)	(11.3)	(4.2)	(169%)
Lube Base Oil (USD/MT)								
500SN - FO 180 3.5%S	798	608	895	31%	(11%)	643	903	(29%)
150BS - FO 180 3.5%S	901	762	1,356	18%	(34%)	819	1,283	(36%)
Asphalt - FO 180 3.5%S	94	(98)	(43)	196%	319%	(28)	(5)	(460%)

The spread between Petroleum products and raw material in 3Q22

The spread between Petroleum products and Dubai

- Naphtha Spread - Lower:** Naphtha - Dubai spread in 3Q22 was USD -23.4 per barrel declining by 44% from USD -16.2 per barrel in 2Q22. This was due to growing Naphtha supply following rising Refinery operating rates for capturing favorable Petroleum margins. Meanwhile, Naphtha demand was limited by sluggish Petrochemical products spreads being caused by China's Zero-COVID policy as well as inflation that hiked globally. By comparing with 3Q21 of USD 2.1 per barrel, the spread declined by USD 25.5 per barrel.

- ULG95 Spread - Lower:** ULG95 - Dubai spread in 3Q22 was USD 13.2 per barrel being down by 62% from USD 35.0 per barrel in 2Q22 as the demand in Asia was curbed by the monsoon season and the surged lockdowns in China according to Zero-COVID policy. In the meantime, Gasoline supply increased due to more active Naphtha use for Gasoline blending. By comparing with 3Q21 of USD 11.8 per barrel, the spread rose by 12%.

- Gas Oil Spread - Lower:** Gas Oil - Dubai spread in 3Q22 was USD 35.2 per barrel dropping by 18% from USD 43.1 per barrel in 2Q22. This was because of market concerns about an enlarged amount of Petroleum exports from China being in accordance with the country's additional export quotas announcement of which the main proportion was Diesel. Nevertheless, the conflict between Russia and Europe encompassed more Diesel flows from Asia to Europe lessening Europe's

barrel. This was mainly owing to the rise of most Refinery products spreads, especially Diesel and Gasoline.

In 3Q22, there was a net stock loss equaling Baht 4,390 million or USD 6.90 per barrel comprising of a stock loss of Baht 3,029 million and a realized oil hedging loss of Baht 1,361 million. This entailed the loss of Accounting Gross Refining Margin (Accounting GRM) equaling Baht 1,035 million or USD 1.63 per barrel compared to the Accounting GRM of Baht 7,351 million or USD 11.80 per barrel in 2Q22 and the Accounting GRM of Baht 4,543 million or USD 7.80 per barrel in 3Q21.

For 9M22, the Market GRM was Baht 16,060 million or USD 8.73 per barrel increasing by Baht 6,515 million or USD 2.93 per barrel from that in the same period last year. This was mainly owing to rising spreads of most Refinery products, especially Diesel and Gasoline. The Company recorded a net stock loss of Baht 3,195 million or USD 1.75 per barrel comprising of a stock gain of Baht 4,101 million and a reversal of Lower of Cost or Market (LCM) of Baht 4 million. Still, there was a realized oil hedging loss equaling Baht 7,300 million. These led to the Accounting GRM of Baht 12,865 million or USD 6.98 per barrel declining by Baht 4,019 million or USD 3.28 per barrel from that in the same period last year.

1.2 Petrochemical business unit

1.2.1 Petrochemical Market Overview

Petrochemical market situation in 3Q22: Petrochemical product demand continued to be soft. The market situation for Polyolefins declined from that in 2Q22 due to concerns about the economy as well as inflation rising globally. These might cause a global recession, which would drive several central banks to gradually increase benchmark interest rates encompassing weakened purchasing power and consumer confidence. China's Zero-COVID policy lessened the country's demand; besides, drought and extreme heat in China led to power shortages that forced several industrial operations to reduce their operating rates. In addition, Middle Eastern polymer producers reallocated their exports from China to Southeast Asia. These resulted in pressured regional prices.

The market situation for Styrenics continued to decline from that in 2Q22 owing to concerns about the global recession and the progressing China's Zero-COVID policy dampening demand for finished goods. Such factors affected the demand for Styrenics in key industries including electrical appliance and electronic as well as automotive components, although some Asian producers reduced production or delayed new capacity launching plans due to accumulating inventory and undesirable margins. Moreover, the shortage of semiconductor chips from the tension between China and Taiwan entailed a temporary halt in some semiconductor chip production; besides, the conflict between Russia and Ukraine interrupted exports of Neon gas, a key raw material for producing silicon wafers to serve semiconductor chip production. These incidents also dampened Styrenics product demand for electrical appliance and electronic equipment production.

Petrochemical market outlook in 4Q22: Petrochemical product demand is expected to improve thanks to the easing global COVID-19 situation following lockdown lifts in various areas that stimulate economic activities, along with the beginning of the petrochemical industry's traditional peak period supporting the demand for finished goods during the year-end festival. The New S-Curve business's steadily rising demand for key finished products such as EV cars and charging stations, combined with the demand for robotics to replace human-workers also tend to support the improvement. Additionally, there are some factors that are supposed to help allay concerns about oversupply condition. These include delays of some new capacity that was initially planned to materialize this year owing to economic mechanisms, gradual utilization rate reduction of many manufacturers, especially those in China, because of the unsatisfactory margins and several producers' announcements to arrange turnarounds earlier than their normal duration, which is the first quarter of the year.

1.2.2 Petrochemical Capacity

Products	Quarter			% Change		9M		YoY
	3Q22	2Q22	3Q21	QoQ	YoY	2022	2021	
Utilization Rate								
Olefins Group	92%	87%	98%	5%	(6%)	90%	94%	(4%)
Aromatics and Styrenics Group	85%	96%	105%	(11%)	(20%)	97%	100%	(3%)

In 3Q22, the utilization rate of Olefins group was 92% rising by 5% from that in 2Q22 of 87% as Polyolefins plant resumed its operation from a planned maintenance shutdown in 2Q22. Nevertheless, by comparing with 98% in 3Q21, the utilization rate declined by 6% along with the lower operation of RDCC plant.

The utilization rate of Aromatics and Styrenics group in 3Q22 was 85% decreasing by 11%, QoQ, and by 20%, YoY, because of weaker market situations.

1.2.3 Petrochemical Sales

Products	Sales Volume (KMT)					Sales Value (MB)				
	Quarter			9M		Quarter			9M	
	3Q22	2Q22	3Q21	2022	2021	3Q22	2Q22	3Q21	2022	2021
Olefins Group	247	265	276	778	806	10,334	12,200	10,964	33,813	31,303
Aromatics and Styrenics Group	162	168	207	513	557	7,529	8,140	8,558	23,840	21,473
Total	409	433	483	1,291	1,363	17,863	20,340	19,522	57,653	52,776

Remark : Included sales of Trading business (iPolymer) and New S-Curve business (Rakpasak)

Net sales of Petrochemical businesses in 3Q22 dropped by 12%, QoQ, due to a 6% decrease in average selling prices and a 6% drop in sales volume.

In 3Q22, the net sales of Petrochemical businesses amounted to Baht 17,863 million dropping by Baht 2,477 million or 12%, QoQ. This was mainly due to a 6% decrease in average selling prices and a 6% drop in sales volume equaling 24,000 tons. The declined sales volume was mainly from PS in Styrenics group.

By comparing YoY, the net sales of Petrochemical businesses were down by Baht 1,659 million or 8% due to a 15% slump in sales volume equaling 74,000 tons versus a 7% surge in average selling prices. The decreased sales volume was mainly from PS in Styrenics group and PP in Olefins group.

For 9M22, net sales of Petrochemical businesses were Baht 57,653 million increasing by Baht 4,877 million or 9% from that in the same period last year, mainly from a 14% upsurge in average selling prices aligning with enhancing market situations versus a 5% downturn in sales volume equaling 72,000 tons. The decreased sales volume was mainly from PP in Olefins group.

1.2.4 Petrochemical Sales Breakdown

Products	Quarter						9M			
	3Q22		2Q22		3Q21		2022		2021	
	Local	Export	Local	Export	Local	Export	Local	Export	Local	Export
Olefins Group	73%	27%	64%	36%	59%	41%	69%	31%	63%	37%
Aromatics and Styrenics Group	45%	55%	46%	54%	41%	59%	47%	53%	45%	55%
Total	62%	38%	57%	43%	51%	49%	59%	41%	56%	44%

Remark : Included sales of Trading business (iPolymer) and New S-Curve business (Rakpasak)

In 3Q22, the proportion of domestic and export Petrochemical sales was 62:38. The domestic sales proportion was up by 5% from that in 2Q22 being mainly from PP and HDPE in Olefins group. In addition, by comparing with 3Q21, the domestic sales proportion increased by 11%, mainly from PP in Olefins group and PS in Styrenics group. The Petrochemical exports in 3Q22 were mainly shipped to Singapore, Indonesia and Hong Kong respectively.

For 9M22, the proportion of domestic and export Petrochemical sales was 59:41. The domestic sales improved by 3% by comparing with that in the same period last year, mainly from PP in Olefins group and PS in Styrenics group.

1.2.5 Naphtha Price and Petrochemical Products Spread

Unit: USD/MT	Quarter			%Change		9M		YoY
	3Q22	2Q22	3Q21	QoQ	YoY	2022	2021	
Naphtha	714	875	676	(18%)	6%	822	613	34%
Olefins								
Ethylene - Naphtha	228	322	316	(29%)	(28%)	282	367	(23%)
HDPE – Ethylene	193	195	248	(1%)	(22%)	180	300	(40%)
HDPE – Naphtha	421	517	564	(19%)	(25%)	462	667	(31%)
Propylene – Naphtha	181	231	254	(22%)	(29%)	229	362	(37%)
PP – Propylene	186	219	306	(15%)	(39%)	206	325	(37%)
PP – Naphtha	367	450	560	(18%)	(34%)	435	687	(37%)
Aromatics								
BZ - Naphtha	266	368	317	(28%)	(16%)	277	291	(5%)
TOL - Naphtha	256	236	87	8%	194%	170	97	75%
MX – Naphtha	290	325	115	(11%)	152%	239	129	85%
Styrenics								
SM - Naphtha	442	529	502	(16%)	(12%)	458	573	(20%)
ABS - Naphtha	799	1,032	1,682	(23%)	(52%)	970	1,797	(46%)
PS (GPPS) - Naphtha	738	806	840	(8%)	(12%)	773	984	(21%)

The spread between Petrochemical products and raw material in 3Q22

The spread between Polyolefins group and Naphtha

- HDPE Spread – Lower:** HDPE - Naphtha spread was USD 421 per ton decreasing by 19% from USD 517 per ton in 2Q22 as the demand for finished goods, particularly for large construction projects, remained stagnant. Also, the rainy season impeded construction and pipe installation projects. Additionally, China's Zero-COVID policy led to increased lockdowns in many Chinese cities. Meanwhile, most Petrochemical producers reduced their operating rates to keep up with the dwindling demand. When compared with 3Q21 of USD 564 per ton, the spread decreased by 25%.

- PP Spread - Lower:** PP - Naphtha spread was USD 367 per ton decreasing by 18% from USD 450 per ton in 2Q22. This was caused by concerns about the economy as well as inflation rising globally bringing weakened consumer confidence and purchasing power, which forced Petrochemical producers to reduce their operating rates to maintain margins. Besides, Middle Eastern polymer producers put pressure on the market by reallocating their exports from China to Southeast Asia leading to an oversupply condition. When compared with 3Q21 of USD 560 per ton, the spread decreased by 34%.

The spread between Aromatics group and Naphtha

- **TOL Spread - Higher:** Toluene - Naphtha spread was USD 256 per ton increasing by 8% from USD 236 per ton in 2Q22 as a result of raw material supply shortage, which followed reduced operating rates of crackers for safeguarding their business margins, thus higher product prices. However, demand in India was still hampered because of the monsoon season, hence as-needed Toluene imports. When compared with 3Q21 of USD 87 per ton, the spread increased by 194%.

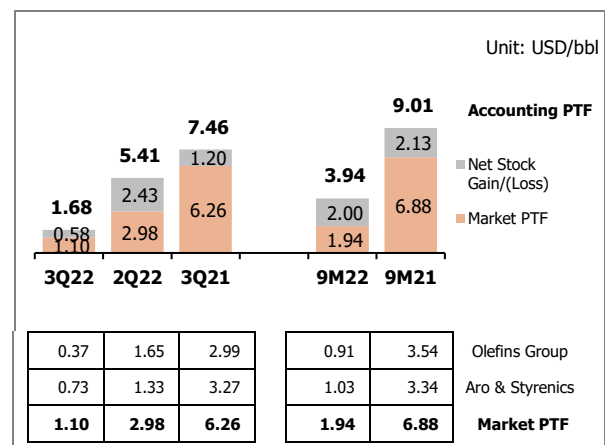
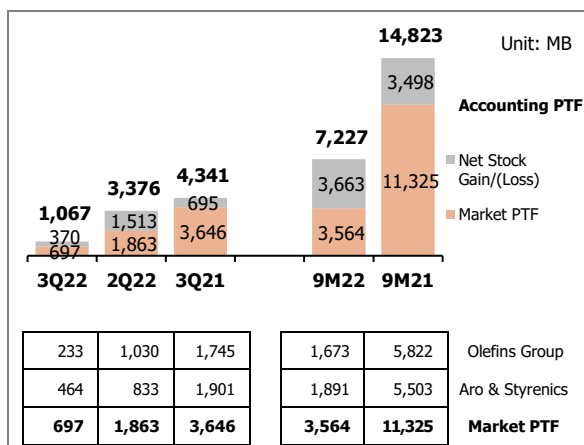
- **MX Spread - Lower:** Mixed Xylene - Naphtha spread was USD 290 per ton decreasing by 11% from USD 325 per ton in 2Q22. This was caused by relatively sluggish demand, particularly in China, where Zero-COVID policy has been implemented curbing purchase demand. When compared with 3Q21 of USD 115 per ton, the spread increased by 152%.

The spread between Polystyrenics group and Naphtha

- **ABS Spread - Lower:** ABS - Naphtha spread was USD 799 per ton decreasing by 23% from USD 1,032 per ton in 2Q22. This was caused by the continued sluggish demand for electrical appliance and electronic as well as automotive components, especially in China, where domestic demand was affected by the persisting Zero-COVID policy causing disruptions in domestic economic activities. Moreover, Chinese producers continuously released their exports to Southeast Asia leading to an oversupply condition. Such export release made manufacturers face issues about accumulated inventory and narrower margins, hence reduced operating rates of several Asian producers to maintain the price. When compared with 3Q21 of USD 1,682 per ton, the spread decreased by 52%.

- **PS Spread - Lower:** PS - Naphtha spread was USD 738 per ton decreasing by 8% from USD 806 per ton in 2Q22 because of the decreasing demand for finished goods, particularly in electrical appliance and electronic, according to consumer economic concerns. In the meantime, several producers reduced their operating rates in order to maintain the price. When compared with 3Q21 of USD 840 per ton, the spread decreased by 12%.

1.2.6 Product to Feed Margin (Product to Feed : PTF)*



Remark : * Included Trading business (iPolymer) and New S-Curve business (Rakpasak)

In 3Q22, the Market PTF was Baht 697 million being down by Baht 1,166 million ,QoQ, as most Petrochemical products spreads decreased.

In 3Q22, the Market Product to Feed Margin (Market PTF) was Baht 697 million or USD 1.10 per barrel being down by Baht 1,166 million or USD 1.88 per barrel from that in the prior quarter. Also, by comparing with 3Q21, the Market PTF decreased by Baht 2,949 million or USD 5.16 per barrel. This was mainly because most Petrochemical products spreads dropped following

recession concerns and lockdowns in several parts of China.

In 3Q22, the net stock gain of the Petrochemical businesses was Baht 370 million or USD 0.58 per barrel comprising of the stock gain of Baht 866 million against LCM of Baht 496 million. Hence, the Company obtained the Accounting Product to Feed Margin (Accounting PTF) equaling Baht 1,067 million or USD 1.68 per barrel, which was down by Baht 2,309 million or USD 3.73 per barrel, QoQ, and by Baht 3,274 million or USD 5.78 per barrel, YoY.

For 9M22, the Market PTF was Baht 3,564 million or USD 1.94 per barrel declining by Baht 7,761 million or USD 4.94 per barrel from that in the same period last year, mainly from the softened spreads of most Petrochemical products due to retarded end products demand as a result of the conflict between Russia and Ukraine, concerns about recession that might occur globally and lockdown measures in China being in accordance with Zero-COVID policy. The Company reported the net stock gain of Baht 3,663 million or USD 2.00 per barrel comprising of the stock gain equaling Baht 4,109 million against LCM of Baht 446 million. This led to the Accounting PTF of Baht 7,227 million or USD 3.94 per barrel being down by Baht 7,596 million or USD 5.07 per barrel from that in the same period last year.

1.3 Power Plant and Utility business units Capacity and Sales

	Quarter			% Change		9M		YoY
	3Q22	2Q22	3Q21	QoQ	YoY	2022	2021	
Utilization Rate								
Electricity	67%	66%	75%	1%	(8%)	67%	75%	(8%)
Steam	59%	61%	61%	(2%)	(2%)	61%	62%	(1%)
Sales (Baht million)								
Electricity	605	531	489	14%	24%	1,633	1,533	7%
Steam	438	457	286	(4%)	53%	1,238	794	56%
Others	61	69	57	(12%)	7%	189	262	(28%)
Total	1,104	1,057	832	4%	33%	3,060	2,589	18%

In 3Q22, the utilization rate of Electricity was 67% being approximate to that in 2Q22; however, by comparing with 3Q21, the rate was down by 8%. The utilization rate of Steam in 3Q22 was 59% down by 2% by comparing both QoQ and YoY.

In 3Q22, the net sales of Power and Utility businesses were Baht 1,104 million rising by Baht 47 million or 4%, QoQ, mainly from rising average selling prices of Electricity. Also, by comparing YoY, the figure surged by Baht 272 million or 33%, mainly from rising average selling prices of Electricity and Steam.

In 9M22, the Company recorded the net sales of Power and Utility businesses of Baht 3,060 million improving by Baht 471 million or 18% from that in the same period last year, mainly from increasing average selling prices of Electricity and Steam.

2. Total Operating Performance

Total Operating Performance of IRPC and its subsidiaries for 3Q22 and 9M22 are as follows;

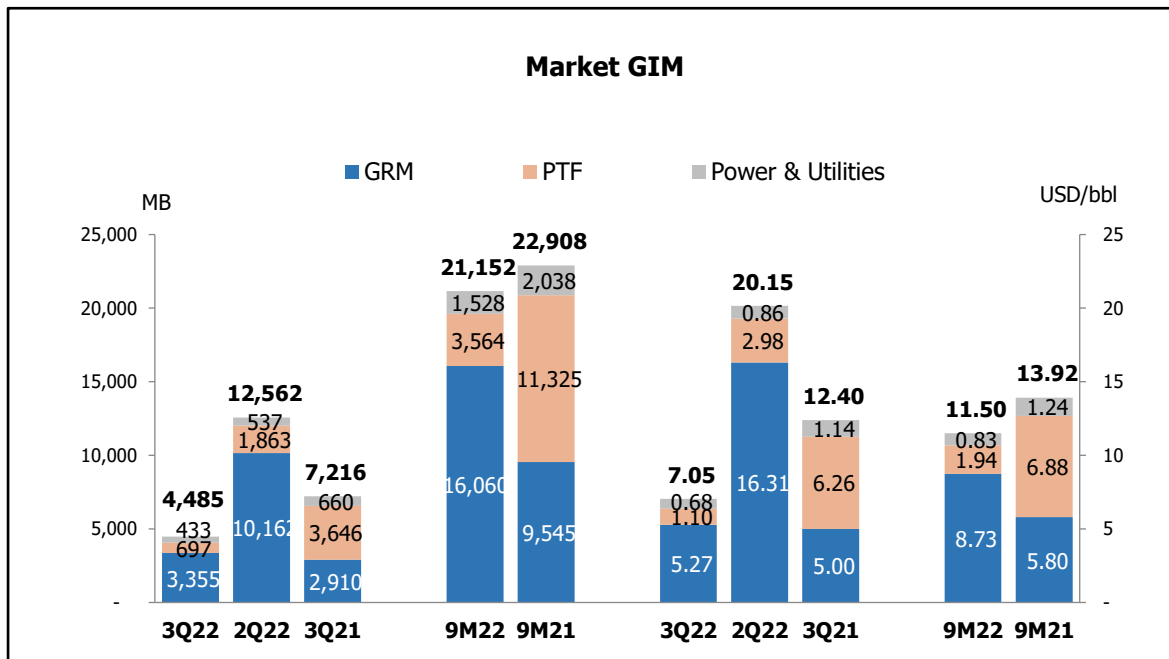
	Unit : Million Baht					Unit : USD per barrel				
	Quarter			9M		Quarter			9M	
	3Q22	2Q22	3Q21	2022	2021	3Q22	2Q22	3Q21	2022	2021
Average FX (THB/USD)	36.58	34.56	33.09	34.79	31.68					
Total Crude Intake (Mbbbl)	17.40	18.03	17.58	52.89	51.96					
Average Crude (USD/bbl) ⁽¹⁾	106.59	115.83	74.95	108.27	69.06					
Sales ⁽²⁾	89,410	98,951	67,017	267,793	182,670	140.47	158.80	115.20	145.54	110.97
Net Sales ⁽³⁾	87,312	99,395	62,088	263,314	167,334	137.18	159.51	106.73	143.10	101.66
Variable Cost (Raw Material - Market Price)	(82,827)	(86,833)	(54,872)	(242,162)	(144,426)	(130.13)	(139.36)	(94.33)	(131.60)	(87.74)
Market GIM	4,485	12,562	7,216	21,152	22,908	7.05	20.15	12.40	11.50	13.92
Stock Gain (Loss)	(2,163)	3,974	2,661	8,210	10,990	(3.40)	6.38	4.57	4.46	6.68
Lower of Cost or Market	(496)	-	-	(442)	-	(0.78)	-	-	(0.24)	-
Realized Gain (Loss) on Oil Hedging	(1,361)	(5,272)	(333)	(7,300)	(153)	(2.14)	(8.46)	(0.57)	(3.97)	(0.09)
Net Stock Gain (Loss)	(4,020)	(1,298)	2,328	468	10,837	(6.32)	(2.08)	4.00	0.25	6.59
(Accounting GIM)	465	11,264	9,544	21,620	33,745	0.73	18.07	16.40	11.75	20.51
Other Incomes ⁽⁴⁾	303	380	472	1,035	1,568	0.48	0.61	0.81	0.56	0.95
Selling Expenses	(481)	(506)	(536)	(1,612)	(1,521)	(0.76)	(0.81)	(0.92)	(0.88)	(0.92)
Accounting GIM and Other Incomes	287	11,138	9,480	21,043	33,792	0.45	17.87	16.29	11.43	20.54
OPEX	(3,085)	(3,117)	(3,290)	(9,220)	(9,924)	(4.85)	(5.00)	(5.65)	(5.01)	(6.02)
EBITDA	(2,798)	8,021	6,190	11,823	23,868	(4.40)	12.87	10.64	6.42	14.52
Depreciation	(2,014)	(2,015)	(2,130)	(6,037)	(6,519)	(3.16)	(3.23)	(3.66)	(3.28)	(3.96)
EBIT	(4,812)	6,006	4,060	5,786	17,349	(7.56)	9.64	6.98	3.14	10.56
Net Financial Cost	(496)	(427)	(429)	(1,321)	(1,298)	(0.78)	(0.69)	(0.74)	(0.72)	(0.79)
Gain (Loss) on Financial Derivatives	(81)	(162)	(225)	(43)	(409)	(0.13)	(0.26)	(0.39)	(0.02)	(0.25)
Gain (Loss) on Foreign Exchange from Borrowing	(312)	(280)	(262)	(573)	(544)	(0.49)	(0.45)	(0.45)	(0.31)	(0.33)
Unrealized Gain (Loss) on Oil Hedging	2,426	(548)	(685)	(821)	(1,213)	3.81	(0.88)	(1.18)	(0.45)	(0.74)
Gain (Loss) on Impairment and Disposal of Fixed Assets	-	(1)	-	(1)	(19)	-	-	-	-	(0.01)
Gain (Loss) on Investment	67	179	161	375	503	0.11	0.29	0.28	0.20	0.30
Other Expenses	6	(6)	1	(1)	(1)	0.01	(0.01)	0.00	(0.00)	(0.00)
Net Profit (Loss) before Income Tax	(3,203)	4,762	2,621	3,401	14,368	(5.03)	7.64	4.50	1.84	8.74
Income Tax	655	(927)	(460)	(610)	(2,032)	1.03	(1.49)	(0.79)	(0.33)	(1.23)
Gain (Loss) on non-controlling interests	(1)	(2)	(6)	(6)	(26)	-	-	(0.01)	-	(0.02)
Net Profit (Loss)	(2,549)	3,833	2,155	2,785	12,310	(4.00)	6.15	3.70	1.51	7.49
Earning per share (EPS) (Baht/Share)	(0.12)	0.19	0.11	0.14	0.60					

Note : ⁽¹⁾ Average market prices of crude used in the production process

⁽²⁾ Sales include (1) Petroleum Sales (2) Petrochemical Sales (3) Power and Utilities Sales (4) Sales of tank farm and port service, etc.

⁽³⁾ Net Sales include (1) Petroleum Sales (excluding excise tax) (2) Petrochemical Sales (3) Power and Utilities Sales

⁽⁴⁾ Other Incomes include land, tank farm and port service etc.

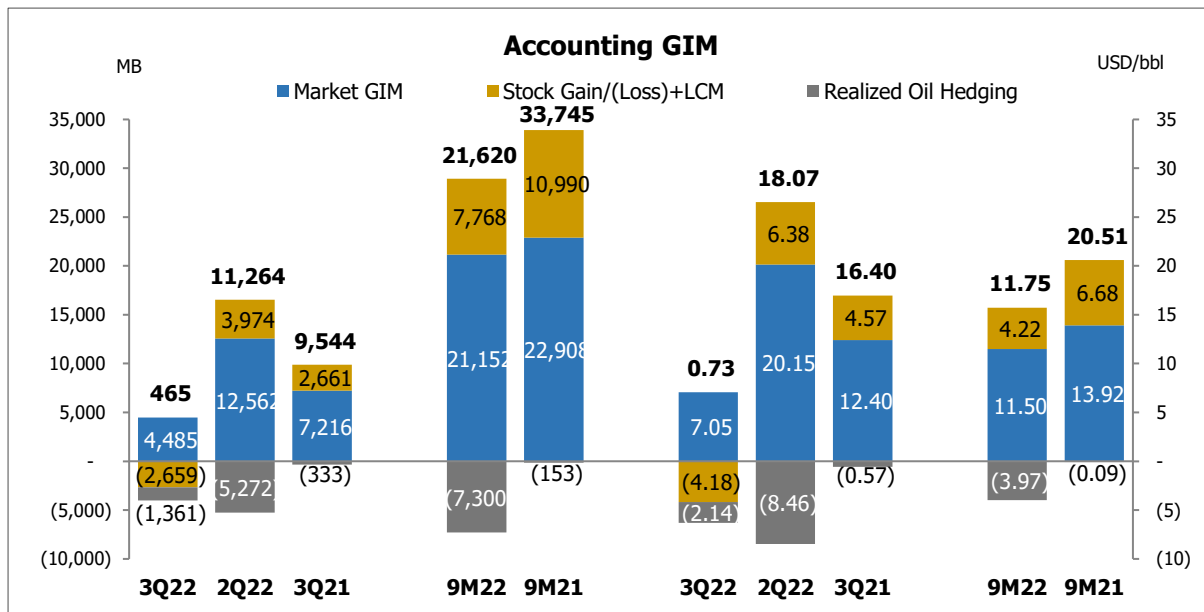
2.1 Market Gross Integrated Margin (Market GIM)


The Market Gross Integrated Margin (Market GIM) in 3Q22 was Baht 4,485 million or USD 7.05 per barrel dwindling by Baht 8,077 million or USD 13.10 per barrel, QoQ, mainly from diminished Refinery and Petrochemical products spreads being in accordance with weakened demand due to global economic uncertainties as well as China’s Zero-COVID policy. Plus, crude premium surged by USD 1.93 per barrel.

By comparing with 3Q21 of Baht 7,216 million or USD 12.40 per barrel, the Market GIM declined by Baht 2,731 million or USD 5.35 per barrel owing to softened Petrochemical products spreads, along with higher crude premium of USD 6.43 per barrel.

In 9M22, the Market GIM was Baht 21,152 million or USD 11.50 per barrel decreasing by Baht 1,756 million or USD 2.42 per barrel from that in the same period last year, mainly from dwindled spreads of most Petrochemical products due to curbed demand according to recession concerns. In addition, crude premium was up by USD 5.25 per barrel, while Petroleum products spreads hiked significantly.

2.2 Accounting Gross Integrated Margin (Accounting GIM)



The Accounting Gross Integrated Margin (Accounting GIM) in 3Q22 was Baht 465 million or USD 0.73 per barrel decreasing by Baht 10,799 million or USD 17.34 per barrel, QoQ. This was mainly owing to a drop in the Market GIM amounting to Baht 8,077 million or USD 13.10 per barrel and an increased net stock loss by Baht 2,722 million. Meanwhile, there was a net stock loss of Baht 4,020 million or USD 6.32 per barrel comprising of a stock loss equaling Baht 2,163 million or USD 3.40 per barrel, LCM amounting to Baht 496 million or USD 0.78 per barrel and a realized oil hedging loss of Baht 1,361 million or USD 2.14 per barrel.

By comparing with 3Q21 of Baht 9,544 million or USD 16.40 per barrel, the Accounting GIM was down by Baht 9,079 million or USD 15.67 per barrel as the Market GIM declined by Baht 2,731 million or USD 5.35 per barrel. In addition, there was a net stock loss of Baht 4,020 million or USD 6.32 per barrel in 3Q22 compared to a net stock gain of Baht 2,328 million or USD 4.00 per barrel in 3Q21.

In 9M22, the Accounting GIM was Baht 21,620 million or USD 11.75 per barrel decreasing by Baht 12,125 million or USD 8.76 per barrel from that in the same period last year. This was because the Market GIM was down by Baht 1,756 million or USD 2.42 per barrel; besides, the net stock gain dropped by Baht 10,369 million or USD 6.34 per barrel.

2.3 Other Incomes

Other incomes consist of port and tank farm services and other services. In 3Q22, the Company had other incomes of Baht 303 million dwindling by Baht 77 million from that in the previous quarter. Also, by comparing YoY, other incomes dropped by Baht 169 million. In 9M22, the Company recorded other incomes of Baht 1,035 million being down by Baht 533 million from that in the same period last year due to softened incomes from port and tank farm services.

2.4 Operating Expenses

In 3Q22, the Company had operating expenses of Baht 3,085 million being down by Baht 32 million, QoQ, and by Baht 205 million, YoY. In 9M22, the Company obtained operating expenses of Baht 9,220 million decreasing by Baht 704 million from that in the same period last year, mainly from employee expenses.

2.5 Depreciation

In 3Q22, the depreciation was Baht 2,014 million being approximate to that in the previous quarter and being down by Baht 116 million, YoY. In 9M22, the Company recorded the depreciation equaling Baht 6,037 million decreasing by Baht 482 million from that in the same period last year, mainly from fully depreciated assets.

2.6 Net Financial Cost

In 3Q22, the net financial cost was Baht 496 million rising by Baht 69 million, QoQ, and by Baht 67 million, YoY. In 9M22, the net financial cost was Baht 1,321 million rising by Baht 23 million from that in the same period last year. This was mainly from increasing interest rates.

2.7 Gain (Loss) on Financial Derivatives

In 3Q22, there was a loss on financial derivatives amounting to Baht 81 million, mainly from a loss on Cross Currency Swap (CCS) of Baht 174 million versus a gain on Interest Rate Swap (IRS) of Baht 70 million. By comparing QoQ, the loss decreased by Baht 81 million. Plus, by comparing YoY, the loss was down by Baht 144 million.

In 9M22, there was a loss on financial derivatives equaling Baht 43 million, mainly from a CCS loss of Baht 304 million while an IRS gain of Baht 215 million. The loss decreased by Baht 366 million from that in the same period last year.

2.8 Gain (Loss) on Foreign Exchange from Borrowing

In 3Q22, the Company recorded a loss on foreign exchange (FX) from U.S. dollar-borrowings of Baht 312 million, the loss increased by Baht 32 million, QoQ, due to relatively depreciated Thai Baht. The FX was weaker from 35.46 Baht per USD at the end of 2Q22 to 38.07 Baht per USD at the end of 3Q22. By comparing YoY, the loss increased by Baht 50 million due to the weaker Thai Baht. In any case, the Company had long-term liabilities in USD amounting to USD 120 million at the end of 3Q22.

In 9M22, the company had a loss on FX from U.S. dollar-borrowings of Baht 573 million. The loss was up by Baht 29 million from that in the same period last year owing to relatively depreciated Thai Baht.

2.9 Unrealized Gain (Loss) on Oil Hedging

In 3Q22, the Company recorded an unrealized gain on oil hedging of Baht 2,426 million compared to a loss of Baht 548 million in 2Q22 and a loss of Baht 685 million in 3Q21. In 9M22, there was an unrealized loss on oil hedging of Baht 821 million being down by Baht 392 million from that in the same period last year.

2.10 Gain (Loss) on Investments

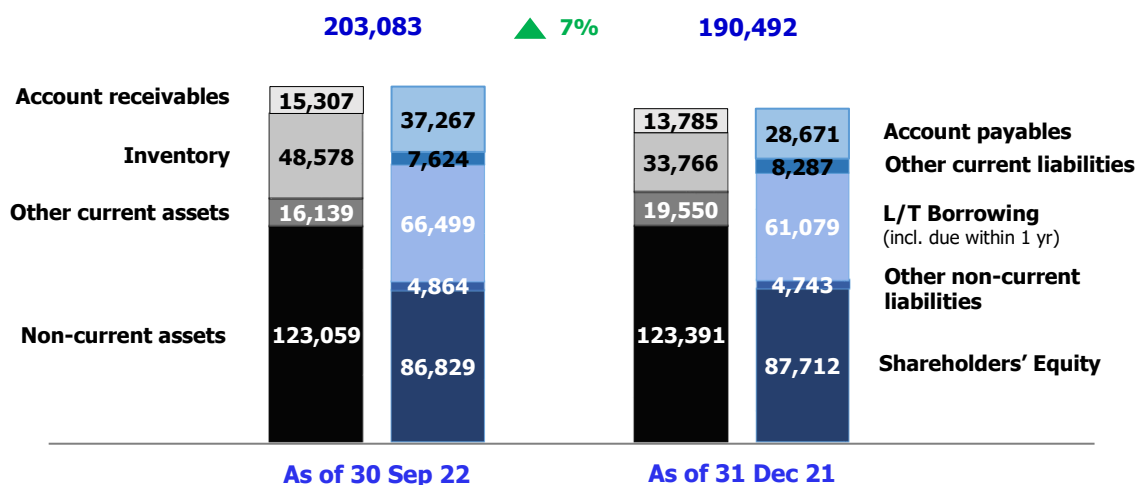
In 3Q22, there was a gain on investments of Baht 67 million decreasing by Baht 112 million, QoQ, and by Baht 94 million, YoY. In 9M22, there was a gain on investments of Baht 375 million being down by Baht 128 million from that in the same period last year, mainly from lower profit sharing from investments in associates and joint ventures.

2.11 Corporate Income Tax

In 3Q22, the Company recorded a corporate income tax benefit of Baht 655 million compared to a corporate income tax of Baht 927 million in 2Q22 and Baht 460 million in 3Q21. In 9M22, the Company recorded a corporate income tax of Baht 610 million declining by Baht 1,422 million from that in the same period last year due to softened performance.

Financial Positions as of 30 September 2022

(Unit: MB)


Assets

As of September 30, 2022, the Company had total assets of Baht 203,083 million increasing by Baht 12,591 million or 7% from that on December 31, 2021. It was due to the following reasons:

- Trade receivables:** increased by Baht 1,522 million or 11% from that at the end of 2021, mainly due to a rise in average selling prices following the hiked crude oil price. The Company's credit term policy is about 7 - 120 days and most customers made payment on schedule. As of September 30, 2022, there were trade receivables being overdue of over 3 months amounting to Baht 30 million, which incorporated in the Company's provision for doubtful debt of Baht 31 million. The average collection period for 3Q22 was 15 days decreasing by 2 days from that at the end of 2021.

Trade receivables by payment period are as follows;

(Unit : MB)	September 30, 2022			2021		
	Related parties	Other parties	Total	Related parties	Other parties	Total
Current	7,428	7,724	15,152	4,911	7,533	12,444
Overdue	11	175	186	36	1,335	1,371
- less than 3 months	11	145	156	22	1,303	1,325
- over 3 months but less than 12 months	-	5	5	14	4	18
- over 12 months	-	25	25	-	28	28
Total	7,439	7,899	15,338	4,947	8,868	13,815
Less Allowance for doubtful accounts	-	(31)	(31)	-	(30)	(30)
Total Account Receivables	7,439	7,868	15,307	4,947	8,838	13,785

- Inventory:** increased by Baht 14,812 million or 44% from that at the end of 2021, mainly due to a 19% increase in the crude oil price and products prices following market situations as well as a 12% increase in inventory volume. The average inventory period was 45 days increasing by 1 day from that at the end of 2021.

- **Other current assets:** decreased by Baht 3,411 million or 17% from that at the end of 2021. This was mainly attributed to a drop in cash and cash equivalents by Baht 6,904 million and a decrease in other receivables amounts due from related parties by Baht 1,665 million. Meanwhile, there was an increase in other receivables by Baht 4,618 million and an increase in prepaid corporate income tax by Baht 1,011 million.

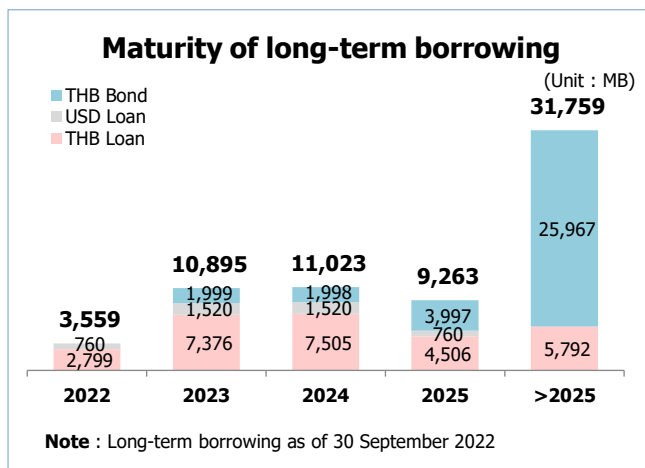
- **Non-current assets:** decreased by Baht 332 million from that at the end of 2021, mainly due to a decline in fixed assets and investment properties of Baht 1,197 million. Most of which dropped due to an increase in the accumulated depreciation. Meanwhile, there was a rise in investments in subsidiaries, joint ventures and associates by Baht 262 million, an increase in deferred tax assets by Baht 211 million and a rise in non-current derivative assets by Baht 179 million.

Liabilities

As of September 30, 2022, the Company had total liabilities of Baht 116,254 million increasing by Baht 13,474 million or 13% from what was stated as of December 31, 2021. It was due to the following reasons:

- **Trade payables:** increased by Baht 8,596 million or 30% compared to that at the end of 2021. It was mainly due to an increase in crude oil price following the market situations versus a decrease in accrued crude payable volume. The average payment period was 36 days decreasing by 6 days from that at the end of 2021.

- **Other current liabilities:** decreased by Baht 663 million or 8% compared to that at the end of 2021, mainly due to a decrease in accrued bonus expenses by Baht 1,255 million, a decrease in corporate income tax payable by Baht 589 million, while an increase in current derivative liabilities by Baht 943 million and a rise in other payables by Baht 247 million.



- **Long - term borrowing including current portion within one year:** increased by Baht 5,420 million compared to that at the end of 2021, mainly due to the issuance of unsubordinated and unsecured debentures in the amount of Baht 12,000 million and loss on foreign exchange of Baht 537 million, while loans repayment to financial institutions of Baht 7,157 million.

The details of long-term borrowings are shown below;

(Unit: MB)

	Sep 30, 2022	Dec 31, 2021	Change
Thai Baht Bonds	33,961	23,972	9,989
USD Loan	4,560	4,688	(128)
Thai Baht Loan	27,978	32,419	(4,441)
Total Long-term Borrowing	66,499	61,079	5,420
less current portion of long-term borrowing	(9,966)	(10,585)	619
Net Outstanding Long-term Borrowing	56,533	50,494	6,039

Note : As of September 30, 2022, the Company had Cross Currency Swap (CCS) in a total amount of USD 110 million.

Shareholders' Equity

As of September 30, 2022, shareholders' equity amounted to Baht 86,829 million, which decreased from what was stated as of December 31, 2021 by Baht 883 million or 1%. This was mainly from dividend paid by Baht 3,674 million against the net profit amounting to Baht 2,785 million.

Statement of Cash Flow

(Unit : MB)

	Jan – Sep 22	Jan – Sep 21
1 EBITDA	11,823	23,868
2 Change in operating assets and liabilities	(14,774)	(15,342)
3 Net cash flows from (used in) operating activities	(2,951)	8,526
4 Net cash flows from (used in) investing activities	(4,604)	(1,476)
5 Net cash flows from (used in) financing activities	650	(3,281)
6 Net increase (decrease)	(6,905)	3,769
7 Cash at beginning	11,236	8,851
8 Cash at ending	4,331	12,620

As of September 30, 2022, the ending cash was Baht 4,331 million. Net cash flow decreased by Baht 6,905 million, which was mainly contributed from the following items:

- **Net cash outflow from operating activities:** of Baht 2,951 million. The cash outflow was mainly from an increase in inventory of Baht 15,319 million, an increase in other receivables of Baht 4,617 million, a payment for net corporate income tax of Baht 2,423 million and an increase in trade receivables of Baht 1,413 million. Nevertheless, the cash inflow was mainly from EBITDA of Baht 11,823 million and an increase in trade payables of Baht 8,574 million.

- **Net cash outflow from investing activities:** of Baht 4,604 million, mainly from disbursement for the completion of the expansion and efficiency improvement projects as well as the equipment preparation for Turnaround of Baht 4,510 million.

- **Net cash inflow from financing activities:** of Baht 650 million, mainly from the issuance of debentures amounting to Baht 11,982 million. Nevertheless, the cash outflow mainly comprised of loans repayment of Baht 7,157 million, dividend payment of Baht 2,857 million and interest payment of Baht 1,268 million.

Key Financial Ratios

	Unit	Quarter		
		3Q22	2Q22	3Q21
Profitability Ratios				
EBITDA Margin	%	(3.13)	8.11	9.24
Net Profit Margin	%	(2.85)	3.87	3.22
Earnings Per Share	Baht/share	(0.12)	0.19	0.11
Return on Equity*	%	4.27	12.02	20.45
Liquidity Ratios				
Current Ratio	time	1.46	1.45	1.47
Quick Ratio	time	0.36	0.51	0.63
Financial Policy Ratios				
Net Interest Bearing Debt to Equity	time	0.72	0.61	0.60
Net Interest Bearing Debt to EBITDA*	time	3.57	1.79	1.64

Note: *Annualized

Liquidity and Capital Structure

In 3Q22, current ratio was 1.46 times being approximate to that in 2Q22 of 1.45 times. The Company has sufficient liquidity for its operations.

At the end of 3Q22, net interest bearing debt to equity ratio was 0.72 times increasing by 0.11 times from that in 2Q22 of 0.61 times. This was mainly due to a drop in cash and cash equivalents. The Company could complete all payments on due date and comply with all of the Financial Covenants.

Note:

Account Receivable Turnover	=	Sales / Average Account Receivable before Doubtful Account [average]
Collection Period	=	365 / Account Receivable Turnover
Inventory Turnover	=	Cost of Goods Sold / Average Inventory [average]
Inventory Period	=	365 / Inventory Turnover
Account Payable Turnover	=	Cost of Goods Sold / Average Account Payable [average]
Payment Period	=	365 / Account Payable Turnover
EBITDA Margin	=	EBITDA / Revenue from Sales
Profit Margin	=	Net Profit (Owner of the Parent) / Revenue from Sales
Return on Equity	=	Net Profit (Owner of the Parent) / Average Shareholders' Equity (Owner of the Parent)
Current Ratio	=	Current Assets / Current Liabilities
Quick Ratio	=	(Cash + Marketable Securities + Account Receivable) / Current Liabilities
Net Interest Bearing Debt to Equity	=	(Interest Bearing Debt – Cash) / Total Equity
Net Interest Bearing Debt to EBITDA	=	(Interest Bearing Debt – Cash) [average] / EBITDA