



PTT Global Chemical Public Company Limited

Management Discussion and Analysis Q1/2022

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1. Executive Summary

In Q1/2022, PTT Global Chemical Public Company Limited (“the Company”) had total sales revenue of Baht 175,554 million, increased by 26% from Q4/2021 and increased by 72% from Q1/2021. The revenue has grown continuously supported by the rise of petroleum products tracking with crude oil price and the demand recovery from lockdown restriction of COVID-19 ease. Moreover, the tensions between Russia and Ukraine escalated into a wider energy and economic sanction from many countries. Petrochemical products prices also increased, following soaring feedstock costs as well as maintenance shutdown and the slowdown in production of some producers in the region. In term of sales volume, in this quarter, the Company’s sales volume increased mainly from the volume realized after the completion of the allnex acquisition in Q4/2021. As a result, in Q1/2022, the Company had Net Operating Profit Recurring (excluding Stock Gain Net NRV, Foreign Exchange Gain and Gain from financial derivative, Loss from commodity hedging, and Extraordinary items) of Baht 6,236 million, increased from Q4/2021 by 80% but decreased from Q1/2021 by 29%. The Company had Adjusted EBITDA of Baht 14,273 million in this quarter, increased by 40% from Q4/2021, and stable from Q1/2021. After considering the results of Stock Gain Net NRV of Baht 4,884 million, Loss from commodity hedging of Baht 8,568 million which consists of realized loss of Baht 2,573 million and Unrealized loss of Baht 5,996 million, Foreign Exchange Gain of Baht 595 million, Gain from financial derivatives of Baht 1,066 million, as well as the Company, in this quarter, reviewed the assets useful life by the Company’s group of engineer which led to slightly increased depreciation and amortization even though allnex’s performance has been consolidated, the Company reported Net Profit in Q1/2022 of Baht 4,212 million (Baht 0.93/share), increased by 30% from Q4/2021.

Table 1 : Performance Summary

(Unit: Million Baht)	Q1/2021	Q4/2021	Q1/2022	YoY % +/-	QoQ % +/-
Sales Revenue	101,864	139,298	175,554	72%	26%
EBITDA	16,404	12,675	10,588	-35%	-16%
EBITDA Margin (%)	16%	9%	6%	-10%	-3%
Share of profit of investments in JV and Associates	1,900	1,472	1,150	-39%	-22%
Net Profit	9,695	3,248	4,212	-57%	30%
EPS (Baht/Share)	2.16	0.72	0.93	-57%	30%
Adjusted EBITDA*	14,335	10,173	14,273	-0%	40%
Adjusted EBITDA Margin (%)	14%	7%	8%	-6%	1%

Note: * Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item

In Q1/2022, Olefins and Derivatives Business Unit’s performance was stable compared to previous quarter as the price of Polyethylene (PE) increased due to the increase in Naphtha and LPG prices, following an increasing of crude oil price. This resulted to Adjusted EBITDA Margin of Olefins and Derivative Business Unit in this quarter at 11%, stable from the previous quarter, but declined from 26% in Q1/2021. For the Aromatics business, the BTX P2F was at 48 USD per ton, decreased from the previous quarter and Q1/2021, due to the decrease in the By products spreads, especially the decrease in LPG and the increase in Condensate premium following the increasing of crude oil price, even Paraxylene product spread increased due to tightening supply from the slowdown in production of many producers in the region. Performance Materials & Chemicals Business Unit’s performance increased due to revenue

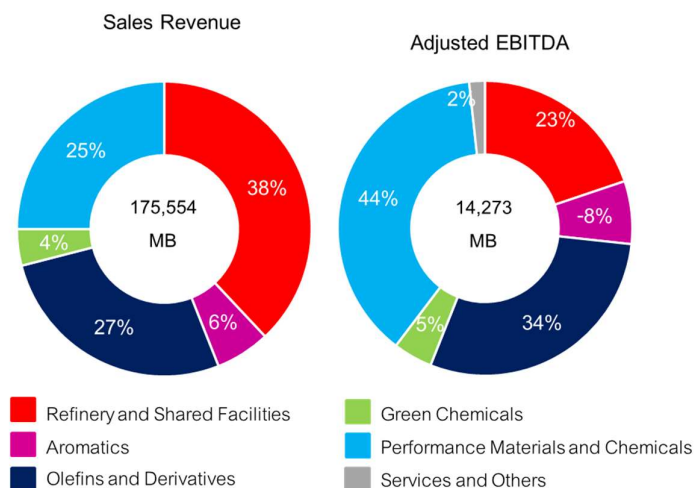
recognition after the success of the allnex acquisition, and Phenol Business Unit's performance grow steadily even the decrease in Bisphenol-A price as increasing supply in the market. For Refinery Business Unit, in Q1/2022, the Market GRM was at 7.60 USD per barrel, increased from the previous quarter and Q1/2021, followed the increase in products spread and demand recovery from lockdown restriction of COVID-19 ease. Other factors included Economic sanctions on Russia to boycott of Russian gas and oil supplies from many countries, China's export growth slowed, and some power generation plants in North Asia switched from Liquefied Natural Gas (LNG) to Low Sulphur Fuel Oil (LSFO) as LNG prices significantly increased. The Company had Share of Profit from Investments in JV and associates of Baht 1,150 million, decreased from Q4/2021, mainly driven by the decrease in petrochemical products spread.

Table 2: Adjusted EBITDA Margin

% Adj. EBITDA Margin	Q1/2021	Q4/2021	Q1/2022
Business Unit:			
Refinery and Shared Facilities	2	4	5
Aromatics	7	1	-6
Olefins and Derivatives*	26	12	11
Green Chemicals	7	11	11
Performance Materials and Chemicals	28	22	15
Average	14	7	8

Note: *If included PTA, PET %Adj. EBITDA in Q1/21, Q4/21, Q4/21, and Q1/22 are 23,10, and 10 respectively.

Q1'2022



2. Performance Analysis by Business Unit

2.1 Refinery & Shared Facilities Business Unit

Table 3: Crude Price & Petroleum Product Spreads

(Unit: USD per bbl)	Q1/2021	Q4/2021	Q1/2022	YoY % +/-	QoQ % +/-
Dubai Crude Oil	60.01	78.35	95.56	59%	22%
Gasoline-Dubai	7.10	15.45	17.77	150%	15%
Jet-Dubai	3.28	10.21	16.21	>200%	59%
Diesel-Dubai	4.74	11.44	19.55	>200%	71%
HSFO-Dubai	-3.46	-6.88	-8.34	-141%	-21%
LSFO-Dubai	13.45	14.39	21.11	57%	47%

For Crude oil market situation in Q1/2022, Dubai crude oil price was higher compared with the previous quarter and the same period of last year. Crude oil price was supported by the war between Russia and Ukraine which led to a decline of market supply, while market demand was increased due to the COVID-19 infection in Asia was positive direction and the re-opening of cities in many countries resulting in the average Dubai crude oil price in Q1/2022 stood at 95.56 USD per barrel and closed at 97.61 USD per barrel at the end of the period, increased from 77.10 USD per barrel at the end of 2021.

For petroleum products spread over Dubai crude oil price in Q1/2022, petroleum products were supported by the sanctions on Russia which is a major exporter of petroleum and crude oil in the world, from the European Union and allies resulting in tight market supply. Also, China has decreased the export for reserves, and demand growth from the COVID-19 infection in Asia. The average Diesel over Dubai crude oil spread increased from Q4/2021 and Q1/2021 to 19.55 USD per barrel. While Average Jet over Dubai crude oil spread increased from Q4/2021 and Q1/2021 to 16.21 USD per barrel due to demand recovery from the re-opening of cities. Average Low Sulfur Fuel oil (LSFO) over Dubai crude oil spread increased from Q4/2021 and Q1/2021 to 21.11 USD per barrel supported by winter demand in North Asia and tight supply in Asia due to shortage from Western for substitute the import from Russia, and rising LNG price result in some consumers purchased LSFO for substitute.

Table 4: Gross Refinery Margin

(Unit: USD per bbl)	Q1/2021	Q4/2021	Q1/2022	YoY % +/-	QoQ % +/-
Market GRM	3.17	6.35	7.60	140%	20%
CDU GRM	2.34	6.02	7.21	>200%	20%
CRS GRM	8.05	7.72	9.64	20%	25%
Hedging Gain/(Loss)	-0.25	1.81	-16.61	<-200%	<-200%
Stock Gain/(Loss) net NRV	2.48	1.66	4.53	83%	173%
Accounting GRM	5.40	9.82	-4.48	-183%	-146%
Adjusted EBITDA (MB)	956	2,586	3,342	>200%	29%
Adjusted EBITDA (%)	2%	4%	5%	3%	1%
Utilization Rate	102%	101%	101%	-1%	0%

Note:*Adjusted EBITDA refers EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item

In Q1/2022, the Company had utilization rate at 101%, equal to the previous quarter. The overall Petroleum products spread over Dubai crude oil price increased from Q4/2021 and Q1/2021 which impact on Market GRM increased to 7.60 USD per barrel compared with 6.35 USD per barrel in the previous quarter. Also, the Company realized Stock Gain at 4.53 USD per barrel resulting from the ongoing increase in Dubai crude oil price. The Company realized Loss from commodity hedging of -16.61 USD per barrel, as there was a direction of crude oil price and products spread to higher prices compared to the hedged prices of the commodity hedging. The Company had the Refinery Business Unit's Accounting GRM at -4.48 USD per barrel, decreased from Q4/2021 and Q1/2021. The Adjusted EBITDA and Adjusted EBITDA Margin were 3,342 million Baht and 5%, increased from 2,586 million Baht and 4% in Q4/2021 respectively.

2.2 Aromatics Business Unit

Table 5: Aromatics Product Prices and Spreads over Condensate

(Unit: USD per ton)	Q1/2021	Q4/2021	Q1/2022	YoY % +/-	QoQ % +/-
Condensate	513	683	836	63%	22%
Paraxylene (TW)	766	893	1,087	42%	22%
Paraxylene (TW)-Condensate	253	210	251	-1%	20%
Paraxylene (FECP)	753	894	1,084	44%	21%
Paraxylene (FECP)-Condensate	241	211	248	3%	18%
Benzene (Spot Korea)	753	945	1,074	43%	14%
Benzene-Condensate	240	262	238	-1%	-9%
Naphtha-Condensate	44	62	41	-7%	-33%

Paraxylene

In Q1/2022, Paraxylene (FECF) over Condensate spread averaged at 248 USD per ton, increased by 18% from Q4/2021 and 3% from Q1/2021 respectively due to the resurgence of COVID-19 situation in Q4/2021 and the easing of energy consumption control implemented in China in this quarter. Some Paraxylene producers in China operated their plants at reduced rates since the crude oil price significantly increased led to higher feedstock price and Polyester Fiber Industry were under pressure. Several Paraxylene producers also sold reformat for gasoline production where the margin was better for production of reformat into gasoline. Hence, Paraxylene supply went down in Q1/2022 from aforementioned factors.

Benzene

In Q1/2022, Benzene over Condensate spread averaged at 238 USD per ton, decreased by 9% from Q4/2021 and slightly decreased from Q1/2021. A decrease in Benzene spread was due to a lower demand from Styrene Monomer sector since there was a substantially increase in crude oil price while the styrene monomer price rose slightly led to unfavorable margins. In addition, new Styrene Monomer plants, expected to boost Benzene demand in the beginning of this year, operated at reduced rates. Lastly, the slow demand and COVID-19 restrictions in China causing logistic constraints led to the higher Benzene inventory level than the level in previous quarter.

Table 6: Aromatics market P2F

(Unit: USD per ton)	Q1/2021	Q4/2021	Q1/2022	YoY % + /(-)	QoQ % + /(-)
Market P2F	142	101	48	-67%	-53%
Hedging Gain/(Loss)	-6.3	12.1	2.6	141%	-79%
Stock Gain/(Loss) net NRV	62.5	16.0	129.0	106%	>200%
Accounting P2F	198	129	179	-10%	39%
Adjusted EBITDA (MB)	973	133	-1,106	<-200%	<-200%
Adjusted EBITDA (%)	7%	1%	-6%	-13%	-7%
Utilization Rate (%)	98%	97%	100%	2%	3%

Note:*Adjusted EBITDA refers EBITDA excluding Stock gain/(loss), NRV, Gain/(loss) from commodity hedging, and Extra item

For Aromatics Business Unit in Q1/2022, BTX utilization rate was 100%, increased from Q4/2021. Market P2F per ton BTX decreased from previous quarter to 48 USD per ton mainly due to a drop in Benzene over Condensate spread and LPG over Condensate spread (by-product of Aromatics). Moreover, the significant rise in crude oil price led to the sharp increase in condensate purchase price in this quarter. Adjusted EBITDA for Q1/2022 was Baht -1,106 million and Adjusted EBITDA Margin was -6%. The Company realized Gain from commodity hedging of 2.6 USD per ton resulted from the Company's hedging to protect against the fluctuation of Aromatics products spread. In the quarter, the Company had hedging gain since average Aromatics products spread was lower than the hedged spread. Besides, The Company had Stock Gain at 129 USD per ton, resulted to Accounting P2F of 179 USD per ton.

2.3 Olefins and Derivatives Business Unit

Table 7: Prices and Spreads of Olefins and Derivatives

(Unit: USD per ton)	Q1/2021	Q4/2021	Q1/2022	YoY % +/-	QoQ % +/-
Naphtha (MOPJ)	557	745	877	57%	18%
Ethylene (SEA)	958	1,094	1,174	23%	7%
Propylene (SEA)	986	938	1,152	17%	23%
Avg. PE	1,275	1,376	1,439	13%	5%
HDPE	1,145	1,252	1,330	16%	6%
HDPE-Naphtha	588	507	453	-23%	-11%
LLDPE	1,146	1,285	1,346	17%	5%
LLDPE- Naphtha	589	540	469	-20%	-13%
LDPE	1,533	1,592	1,640	7%	3%
LDPE- Naphtha	976	847	763	-22%	-10%
PP	1,365	1,335	1,387	2%	4%
PP-Naphtha	808	590	510	-37%	-14%
MEG (ACP)	733	937	912	24%	-3%
MEG-0.65 Ethylene	111	226	149	34%	-34%

For Ethylene (SEA) market in Q1/2022, the average Ethylene price was 1,174 USD per ton, increased from Q4/2021 and Q1/2021 by 7% and 23% respectively, as following the higher of Crude oil price and the market was supported by less supply due to planned maintenance shutdown and reducing their production capacity in Asia.

For Polyethylene (PE) market in Q1/2022, the average PE price was 1,439 USD per ton, which increased from Q4/2021 by 5% and Q1/2021 by 13%. The increase in Polyethylene price following the increasing of feedstock costs. However, the prices increased by far less than the rise in Ethylene price. With the fluctuation of crude oil and market product prices, PE producers remain in a wait-and-see mode, and currently focused on having an adequate level of their inventory and products purchasing. However, the market was supported by the slowdown in production of Naphtha producers in the region resulting in a decline in market supply.

For MEG (ACP) market in Q1/2022, the price was 912 USD per ton, which decreased from the previous quarter by 3%, but increased from Q1/2021 by 24% even with the higher Ethylene price in this quarter. Also, the market was pressured by the sluggish textile industry due to downstream recovery still uncertain, and the resurgence of COVID-19 in China lower which impacted the slowdown in demand and production of producers.

Table 8 : Adjusted EBITDA of Olefins and Derivatives

(Unit: Million Baht)	Q1/2021	Q4/2021	Q1/2022	YoY % + /(-)	QoQ % + /(-)
Adjusted EBITDA	7,784	4,289	4,830	-38%	13%
Adjusted EBITDA (%)*	26%	12%	11%	-15%	-1%
Utilization Rate Olefins (%)	104%	80%	85%	-19%	5%
Utilization Rate Polymer (%)	105%	98%	106%	1%	8%

Note: *If included PTA, PET %Adj. EBITDA in Q1/21, Q4/21, Q4/21, and Q1/22 are 23,10 and 10 respectively.

In Q1/2022, Olefins plants had average utilization rate of 85%, increased from Q4/2021. The Company had planned maintenance shutdown of Olefins 4 (OLE 4 or ORP) and managed production for efficiency and costs optimization even though there was an increase in Naphtha price tracking with crude oil prices. The Polymer plant utilization rate was 106%, increased from the previous quarter after finished planned maintenance shutdown of HDPE, LDPE and LLDPE plants in the previous quarter. PE price was supported by easing lockdown and demand growth for the festival in the end of the year. MEG utilization rate was 66% due to planned maintenance shutdown. MEG price was pressured by the sluggish textile industry. These resulted to Adjusted EBITDA of Olefins and Derivatives Business Unit of Baht 4,830 million, or Adjusted EBITDA Margin of 11%. In term of feedstock, the portion of feedstock used of Gas and Naphtha were 76% and 24% respectively.

2.4 Performance Materials and Chemicals Business Unit

Table 9: Prices Market P2F and Adjusted EBITDA of Performance Materials and Chemicals

(Unit: USD per ton)	Q1/2021	Q4/2021	Q1/2022	YoY % + /(-)	QoQ % + /(-)
Phenol	966	1,278	1,495	55%	17%
BPA	2,531	2,476	2,338	-8%	-6%
Propylene Oxide (PO)	2,205	1,988	1,421	-36%	-29%
Polyols	2,613	2,415	2,005	-23%	-17%
Phenol P2F	467	465	480	3%	3%
BPA P2F	1,428	1,182	853	-40%	-28%
Adjusted EBITDA (MB)	4,127	3,899	6,341	54%	63%
Adjusted EBITDA margin (%)	28%	22%	15%	-13%	-7%
Utilization Rate Phenol (%)	119%	101%	119%	0%	18%
Utilization Rate BPA (%)	113%	107%	119%	6%	12%
Utilization Rate PO (%)	89%	89%	104%	15%	15%

Phenol

In Q1/2022, Phenol price averaged at 1,495 USD per ton, increased by 17% from Q4/2021 and by 55% from Q1/2021 respectively due to a rise in Phenol prices driven by a substantial increase in crude oil price and feedstock price (Benzene & Propylene) during Russia-Ukraine war. Furthermore, supply of Phenol went down in this period due to unplanned shutdown of the main Phenol plants in China and Saudi Arabia.

In Q1/2022, BPA price averaged at 2,338 USD per ton, decreased by 6% from Q4/2021 and by 8% from Q1/2021 respectively. This was due to a slow demand of BPA downstream, which is Polycarbonate in Electrical appliance and automotive market and Epoxy resin in Electrical appliance, Constructions, and Wind Turbine market- and due to the slow trading activities during Chinese new year holiday. Lastly, the buyers were taking a wait-and-see situation for the new BPA capacity expected to start up in the rest of this year.

Propylene Oxide (PO)

In Q1/2022, Propylene Oxide (PO) price averaged at 1,421 USD per ton, decreased by 29% from Q4/2021 and by 36% from Q1/2021 respectively due to following reasons. There were two major PO plants in China started up in this quarter led to the more Propylene Oxide supply in the market. In addition, the travel restrictions enforced by China's Zero Covid Policy during the resurgence of COVID-19 outbreak led to logistics constraints were the hurdle of PO downstream demand.

In Q1/2022, Polyols price averaged at 2,005 USD per ton, decreased by 4% from Q4/2021 and by 23% from Q1/2021 respectively. This was a result of the additional supply PO/Polyols plants in China, lower demand impacted by China's Zero Covid Policy, Russia-Ukraine war, and slow trading activities in Chinese New Year holiday.

Industrial Coating Resins

In Q1/2022, demand of Industrial Coating was slightly lower. This was attributable to following reasons: lower Automotives OEM volumes impacted by micro-chips shortages, lower volumes in China due to lower demand for the container business along a general business slowdown in the region, and an increase in number of Covid cases in certain regions (e.g. Australia/Oceania, Greater China).

For Performance Materials and Chemicals Unit in Q1/2022, Utilization rate of Phenol and BPA was 119% and 121% respectively, which increased from Q4/2021 due to a planned maintenance shutdown of Phenol plant 1 in last quarter. Market P2F per ton of Phenol slightly increased by 3% from Q4/2021 to 480 USD per ton. Market P2F per ton of BPA decreased by 28% from Q4/2021 to 853 USD per ton due to the low BPA demand as stated above. For Propylene Oxide and Polyols, the utilization rate of Propylene Oxide was 104%, increased from last quarter due to the planned maintenance in last period. In Q1/2022, Performance Materials and Chemicals business enhanced by realization of allnex performance, even the decrease in performance of Phenol and Propylene Oxide price causing by a drop in BPA spread and a rise in Propylene feedstock price from last quarter. These resulted to Adjusted EBITDA of Performance Materials and Chemicals Unit in Q1/2022 of Baht 6,341 million or Adjusted EBITDA Margin of 15%.

Table 10: Adjusted EBITDA by Business Unit

Adjusted EBITDA (MB)	Q1/2021	Q4/2021	Q1/2022	YoY	QoQ
				% +/-	% +/-
Business Unit :					
Refinery and Shared Facilities	956	2,586	3,342	>200%	29%
Aromatics	973	133	(1,106)	<-200%	<-200%
Olefins and Derivatives	7,784	4,289	4,830	-38%	13%
Green Chemicals	334	599	730	118%	22%
Performance Materials and Chemicals	4,127	3,899	6,341	54%	63%
Services and Others	160	(1,333)	135	-15%	110%
*Adjusted EBITDA (MB)	14,335	10,173	14,273	0%	40%

Note: * Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, Gain/(loss) from commodity hedging, and Extra item

3. Operating Performance

Unit: MB		Q1/2021	Q4/2021	Q1/2022	YoY % + /(-)	QoQ % + /(-)
1	Sales Revenue	101,864	139,298	175,554	72%	26%
2	Feedstock cost	(74,123)	(106,681)	(135,428)	83%	27%
3	Product to Feed Margin	27,741	32,617	40,126	45%	23%
4	Variable Cost	(7,413)	(10,614)	(12,606)	70%	19%
5	Fixed OH	(3,615)	(6,320)	(6,935)	92%	10%
6	Stock Gain/(Loss) and NRV	2,296	1,040	4,884	113%	>200%
7	Gain/(Loss) on Commodity Hedging	(226)	1,462	(8,568)	<-200%	<-200%
8	Other Revenue	1,126	1,465	1,529	36%	4%
9	SG&A Expenses	(3,505)	(6,975)	(7,842)	124%	12%
10	EBITDA	16,404	12,675	10,588	-35%	-16%
11	Depreciation & Amortization	(5,515)	(6,408)	(6,520)	18%	2%
12	Loss from impairment of assets	-	(1,886)	-	-	100%
13	Provision of contingent liabilities-subsiary	-	(444)	-	-	100%
14	Gain on sale of investment	-	1,388	-	-	-100%
15	EBIT	10,889	5,325	4,068	-63%	-24%
16	Net financial expense	(1,097)	(1,400)	(2,014)	84%	44%
17	FX Gain/(Loss)	(639)	(1,708)	595	193%	135%
18	Gain/(loss) from financial derivatives	(505)	(192)	1,066	>200%	>200%
19	Share of gain/(loss) from investment	1,900	1,472	1,150	-39%	-22%
20	Corporate Income Tax	(721)	(190)	(184)	-74%	-3%
21	Net Profit after Tax	9,827	3,308	4,681	-52%	42%
22	Profit/(loss) attributable to:					
23	Non-controlling interests	132	60	470	>200%	>200%
24	Owners of the Company	9,695	3,248	4,212	-57%	30%
25	Adjusted EBITDA*	14,335	10,173	14,273	-0.4%	40%

Note: * Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, Gain/(loss) from commodity hedging, and Extra item

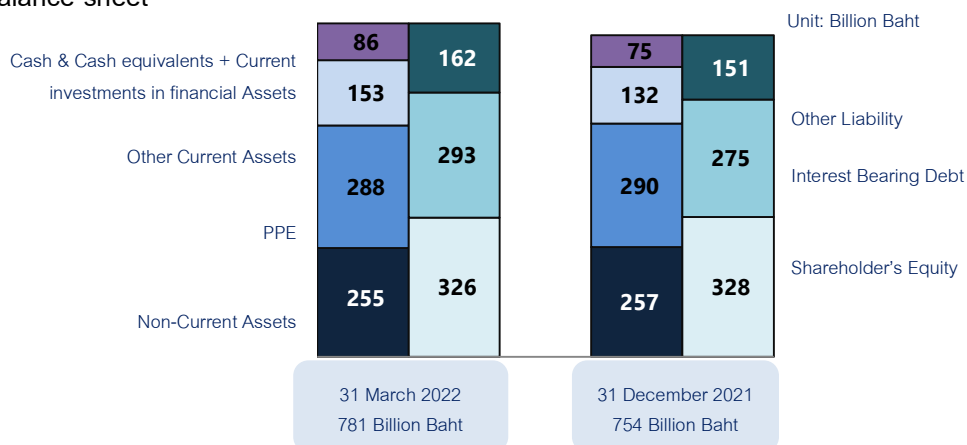
In Q1/2022, the Company had higher sales revenue than the previous quarter and Q1/2021 as the overall products price increased due to higher crude oil price and consolidation of allnex's financial performance. Whilst, the Company had higher Variable costs due to Variable costs from allnex and higher fuel costs. Fixed overhead and SG&A expenses went up from the previous quarter and Q1/2021 because of consolidation of allnex's expenses and higher freight. However, excluding allnex's expenses, fixed overhead and SG&A expenses decreased from Q4/2021 due to less expenses from advisor fee for the Acquisition of shares of allnex and maintenance expenses of Polymer and Phenol plants which incurred in the previous quarter. Depreciation and Amortization increased from the previous quarter due to allnex's depreciation and amortization. The Company also reviewed the assets useful life by engineering, which led to lower depreciation and amortization. The Company had an increase in Financial Expenses from Q4/2021 due to



additional debt financing. Additionally, the Company had Foreign Exchange gain in Q1/2022 by Baht 595 million due to the appreciation in Baht currency. In Q1/2022, the Company had gain from entering into Treasury Lock over USD Bond issuance of Baht 1,082 million resulting in the Company's Gain from financial derivatives increasing from the previous quarter and Q1/2021. The Company's share from investment declined from the previous quarter and Q1/2021 due to a decline in Petrochemical business from lower product spread.

4. Statements of Financial Position

4.1 Balance sheet



Assets

As of March 31, 2022, the Company had total asset of Baht 781,338 million, increased by 4% or Baht 27,222 million from December 31, 2021 and variance of assets were described as follows:

- Total Current asset increased by Baht 31,432 million mainly due to 1) an increase in Cash and Cash Equivalents and Current Investments in financial assets by Baht 11,160 million (refer to cash flows analysis) 2) The Company had a rise in Account Receivable by Baht 11,709 million. 3) Inventories was increased by Baht 6,809 million due to higher in crude oil and product prices.
- Property plant and equipment decreased by Baht 2,044 million mainly due to depreciation in this period.
- Non-current asset decreased by Baht 2,166 million from 1) Other non-current financial assets decreased by Baht 4,876 million due to the fair value measurements on Global Power Synergy Public Company Limited (GPSC) 2) the investment in allnex, which included a decrease in intangible assets by Baht 2,965 million and goodwill by Baht 1,260 million due to the appreciation in Baht currency. However, there was an increase in Investments in subsidiary, associate and other companies by Baht 6,581 million from purchase of ordinary shares in Vinythai Public Company Limited (VNT) by Baht 5,895 million. Hence, the Company had an ordinary share of 37.73% which increased from 24.98% in VNT.

Liabilities

As of March 31, 2022, the Company had total liabilities of Baht 455,184 million, increased by 7% or Baht 28,672 million from December 31, 2021 and movements of liabilities were as follows:

- Interest-bearing debt increased by Baht 17,868 million (including Lease liabilities) due to Bonds issuance by Baht 72,728 million in January 2022 by Baht 30,000 million, and Bonds issuance by USD 1,300 million in March 2022. Whilst, the Company had prepayment of long-term loan to PTT Treasury Center Co., Ltd. (PTT TCC) by Baht 55,600 Baht.
- Other liabilities increased by Baht 10,804 million due to 1) Account payable increased by Baht 11,107 million due to higher in raw material price. 2) Other current liabilities increased by Baht 2,526 million resulting from the increase in the Company's liabilities of derivatives related to financial and commodity

hedging. 3) Other non-current liabilities decreased by Baht 2,829 million due to decreased Deferred tax liabilities.

Shareholder's Equity

As of March 31, 2022, the Company had total Shareholder's Equity of Baht 326,153 million, decreased by Baht 1,450 million from December 31, 2021, as a result from Net profit as of Q1/2022 at million 4,212 Baht. Additionally, the Company had lower Other components of equity by Baht 6,096 million, which included the fair value measurements on the reclassification date of GPSC of Baht 3,896 million and loss from translation differences on financial statement of Baht 2,068 million.

4.2 Cashflow statement

Cashflow (Unit: Million Baht)	For the 3 months
	period Ended 31 Mar 2022
Net cash flows provided by operating activities	4,119
Net cash flows used in investing activities	(17,588)
Net cash flows provided by financing activities	15,337
Net increase (decrease) in cash and cash equivalents, before effect from foreign exchange rate	1,868
Effects of exchange rates on cash and cash equivalents	1,057
Net decrease in cash and cash equivalents during the period	2,925
Cash and cash equivalents at the beginning of the period	55,613
Cash and cash equivalents at the end of the period	58,538
Current investments in financial assets at the end of the period	27,616
Net cash and cash equivalent and investment at the end of the period	86,514

For the period ended March 31, 2022, the company had cash flow activities as follows:

- Cash flows provided by operating activities of Baht 4,119 million.
- Cash flow used in investing activities of Baht 17,588 million. The bond proceeds was applied to invest in financial assets included bank deposit, bonds, and equities of Baht 8,391 million. The Company had cash paid for investment in buying in VNT shares by Baht 5,895 million and cash paid for property, plant, and equipment, and intangible assets amounting to Baht 3,946 million, for example, Olefins 2/2 Modification (OMP).
- Cash flow provided by financing activities of Baht 15,337 million mainly due to the proceeds from Bonds issuance by Baht 72,989 million, PTT TCC long-term loan prepayment by Baht 55,600 million, and cash paid for finance costs by Baht 2,792 million.



As a result, as of March 31, 2022, the Company had total Cash and Cash Equivalents of Baht 58,538 million, along with Current investments in financial assets of Baht 27,616 million. Hence, the Company had total cash and cash equivalent and investment of Baht 86,514 million. The Company had Net interest-bearing debt to equity at 0.63 times and Net interest-bearing debt to EBITDA at 3.74 times.

4.3 Key Financial Ratios

Financial Ratios	Q1/2021	Q4/2021	Q1/2022
Current Ratio (Times)	2.73	1.41	1.44
EBITDA to Sales Revenue (%)	11.71%	13.14%	10.27%
Net Profits to Sales Revenues (%)	5.57%	9.67%	7.33%
Return on Total Assets (%)	5.02%	9.45%	8.09%
Return on Equity (%)	6.58%	15.01%	13.00%
Interest Bearing Debt to Equity (Times)	0.66	0.84	0.90
Net Interest Bearing Debt to Equity (Times)	0.33	0.61	0.63
Interest Bearing Debt to EBITDA (Times)	5.05	4.50	5.30
Net Interest Bearing Debt to EBITDA (Times)	2.49	3.28	3.74

Remarks:

Current Ratio	=	Current Assets divided by Current Liabilities
EBITDA to Sales Revenue	=	EBITDA divided by Sales Revenue
Net Profit to Sales Revenue	=	Profits attributable to Owners of the Company to Sales Revenue
Return on Total Assets	=	Earnings before Interest and Tax divided by Average Total Assets
Return on Equity	=	Profits attributable to Owners of the Company divided by Average Equity attributable to Owners of the Company
Interest Bearing Debt to Equity	=	Interest Bearing Debt divided by Shareholder's Equity
Net Interest Bearing Debt to Equity	=	Interest Bearing Debt net Cash and Cash Equivalent and Current Investments in financial assets divided by Shareholder's Equity
Interest Bearing Debt to EBITA	=	Interest Bearing Debt net Cash and Cash Equivalent and Current Investments in financial assets divided by EBITDA
Net Interest Bearing Debt to EBITDA	=	Interest Bearing Debt net Cash and Cash Equivalent and Current Investments in financial assets divided by EBITDA

5. Projects Progress

The Company has important projects in the pipeline:

- The Company had approved an investment for the Recycle Plant that have signed a cooperation agreement to establish a Joint venture company to be called ENVICCO Limited. The joint venture company was established with the objectives to be manufacturer of high-quality recycled plastic resins, with rPET and rHDPE capacity of 45,000 ton per year including rPET 30,000 ton per year and rHDPE 15,000 ton per year. The plant is expected to start commercial operation within Q2/2022.
- The Company and Kuraray Co. Ltd (KRR) set up a joint venture, Kuraray GC Advanced Materials Co. Ltd, with High Heat Resistant Polyamide-9T (PA9T) capacity of 13,000 ton per year and Hydrogenated Styrenic Block Copolymer (HSBC) capacity of 16,000 ton per year. The plant is expected to start commercial operation within Q4/2022.
- The Company had approved an investment for the Olefins 2 Modification Project which will allow the Company to increase Propane usage as feedstock and align with the Company's strategy to enhance feedstock flexibility and long-term competitiveness. The plant is expected to start commercial operation within Q1/2023.

Currently, the projects are remained on the development plan. The company will publicly announce the information once the implementation of the projects is officially made.

Estimated Annual CAPEX of PTTGC Group for the next 5 years

Projects	Total 2022-2026	Estimated Annual CAPEX (M.USD)				
		2022	2023	2024	2025	2026
1) Key Project						
- Recycle Plant	3	3				
- Super Engineering Plastic (KGC)	7	7				
- Olefin 2 Modification	115	65	50			
2) Other projects	297	156	81	39	20	0
3) allnex expansion & growth Capex	187	78	75	30	2	2
GC group Grand total	608	309	206	69	22	2

Notes: 1. Group annual maintenance ~ 310-360 M.USD (including allnex Holding GmbH)

2. Other projects such as IT & digital, new office facility, etc.

6. Market and Business Outlook in H2/2022

The outbreak of COVID-19 is continuing its spread across the world, and COVID's mutation continues to evolve which simultaneously impacts the global economy. Additionally, the war against Ukraine and sanctions on Russia's energy have caused direct impacts on economies around the globe. These resulted to impact to the global energy supply and prices, and global inflationary. However, the Company anticipates that the global economy continues to recover in line with the increase in demand for Petroleum and Petrochemical products.

The Company anticipates that the average price of Dubai crude oil will be within the range of 95-103 USD per barrel. The International Energy Agency (IEA) had estimated the crude oil demand (as of April 2022) in 2022 at 99.4 million barrels per day, increased by 1.9 million barrels per day from the last year demand. Even there is an uncertainty amid the reason mentioned above.

For Petroleum products, the Company anticipates that products price and products spread will be stable at high level from unlocking the lockdown with the ease in traveling resulted in increased in Petroleum demand, tightening supply from decreased in export quota from China, and OPEC's supply control. As a result, Diesel over Dubai crude oil spread is expected to be 25-27 USD per barrel while Low Sulfur Fuel Oil (LSFO) over Dubai crude oil spread to be 22-23 USD per barrel. The HSFO over Dubai crude oil spread is expected to be -3 to -1 USD per barrel. The expected Gasoline over Dubai crude oil spread is 17-19 USD per barrel, supported by the increase in transportation. The company will continue to focus on the production and our contracts with suppliers and partners to ensure that the Company will be able to handle current and future crises and uncertainties. The Company expects that the Refinery utilization rate of 2022 will be operated at around 85% as there will be the planned maintenance shutdown of refinery on Q4/2022.

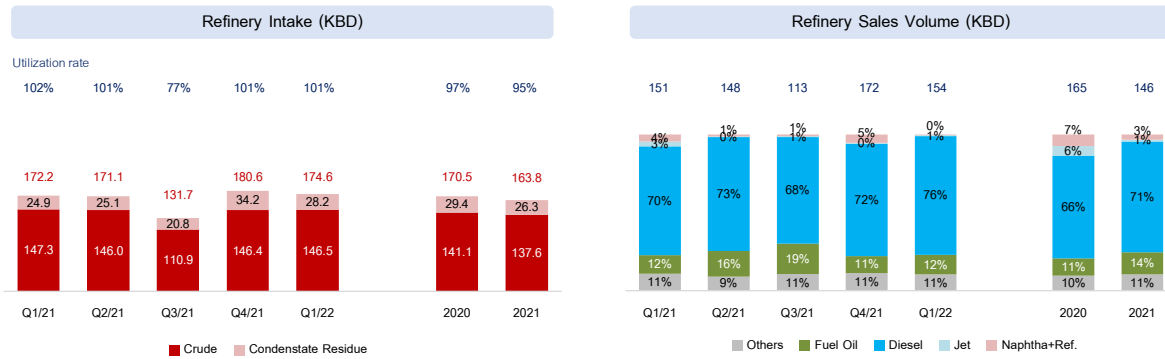
For Petrochemical products, Paraxylene over Naphtha spread is expected to be 250-260 USD per ton. As more producers enter the market, however, the expected demand from downstream business such as Fiber and Filaments industries, Purified Terephthalic Acid (PTA), and PET Bottle Resin are expected to gradually recover following the recovery in global economy through the next year. Benzene over Naphtha spread is expected to be 255-260 USD per ton, supported by the new capacity of downstream products such as Styrene Monomer (SM), and Phenol. The Company expects that the Aromatics utilization rate of 2022 will be 91%.

The outlook for Olefins and Derivatives product is the products spread is expected to remain steady from the previous year, due to the recovery in demand during economic recovery. While Olefins and Polymer supply continue to increase by new productions. The average HDPE price is expected to be 1,340-1,350 USD per ton and the HDPE Naphtha spread to be 440-450 USD per ton. For MEG market, MEG price is expected to slightly increase even MEG supply increases. However, MEG will be supported by higher raw material prices and downstream demand especially textile industry, and packaging industry which are expected to recover. The Company expects that the average MEG (ASP) will be 680-700 USD per ton. The Company expects Olefins plants utilization rate to be around 88% due to the planned maintenance shutdown of Olefins plant 3 in Q2/2022 for 39 days and planned maintenance for the preparation for the commercial operation of Olefins plant 2/2 modification project in Q4/2022. The Company expects that Polymers plants utilization rate will be around 102%.

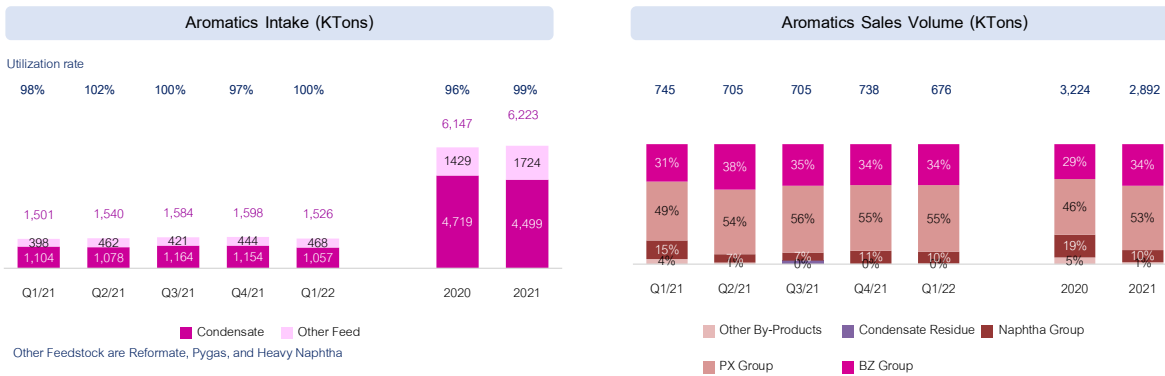
7. Appendix

7.1 Production and Sales

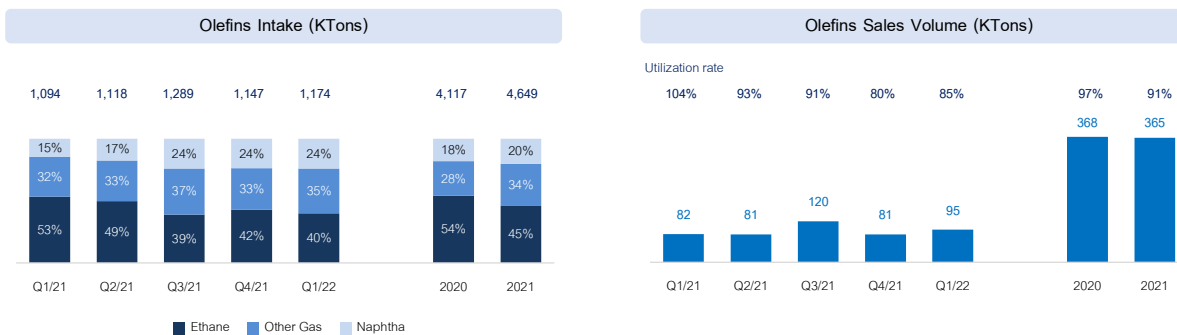
Graph 1: Refinery Intake and Sales Volume

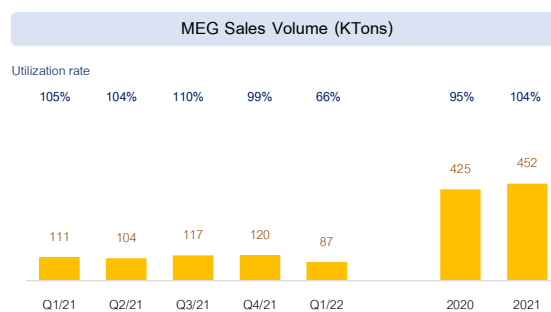
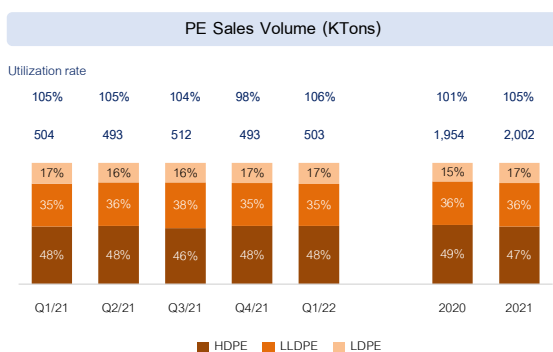


Graph 2: Aromatics Intake and Sales Volume (BTX)

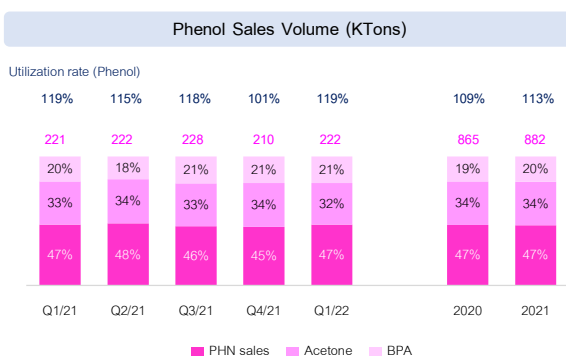


Graph 3: Olefins Intake and Olefins and Derivatives Sales Volume





Graph 4: Phenol chain Sales Volume



7.2 Adjusted EBITDA

Table 1 : % Adjusted EBITDA Margin (2018-2021)

Table 1.1 : % Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, Gain/(loss) from commodity hedging, and Extra item

% Adj. EBITDA Margin	2018	2019	2020	Q1/2021	Q2/2021	Q3/2021	Q4/2021	2021
Business Unit :								
Refinery and Shared Facilities	4	2	1	2	1	2	4	3
Aromatics	8	1	8	7	14	14	1	8
Olefins and Derivatives	26	15	16	26	26	18	12	20
Green Chemicals	6	5	7	7	5	10	11	8
Performance Materials and Chemicals	15	10	18	28	30	30	22	27
Average	12	7	9	14	15	14	7	12

Table 1.2 : % Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, and Extra item

% Adj. EBITDA Margin	2018	2019	2020	Q1/2021	Q2/2021	Q3/2021	Q4/2021	2021
Business Unit :								
Refinery and Shared Facilities	5	2	2	2	-1	-7	6	1
Aromatics	7	3	11	7	12	24	2	11
Olefins and Derivatives	26	15	16	26	26	18	12	20
Green Chemicals	6	5	7	7	5	10	11	8
Performance Materials and Chemicals	15	10	18	28	30	30	22	27
Average	12	7	9	14	14	13	8	12

Table 2: Adjusted EBITDA by Business Unit (2018-2021)

Table 2.1 : Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, Gain/(loss) from commodity hedging, and Extra item

Adjusted EBITDA (MB)	2018	2019	2020	Q1/2021	Q2/2021	Q3/2021	Q4/2021	2021
Business Unit :								
Refinery and Shared Facilities	10,033	3,394	1,853	956	397	528	2,586	4,468
Aromatics	6,994	984	3,442	973	2,152	2,449	133	5,707
Olefins and Derivatives	35,349	17,738	14,843	7,784	8,432	6,866	4,289	27,370
Green Chemicals	860	632	1,228	334	236	440	599	1,609
Performance Materials and Chemicals	7,010	3,554	6,020	4,127	5,104	5,439	3,899	18,569
Services and Others	1,347	1,351	717	160	42	34	-1,333	-1,097
*Adjusted EBITDA (MB)	61,594	27,652	28,102	14,335	16,363	15,756	10,173	56,627

Table 2.2 : Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss),NRV, and Extra item

Adjusted EBITDA (MB)	2018	2019	2020	Q1/2021	Q2/2021	Q3/2021	Q4/2021	2021
Business Unit :								
Refinery and Shared Facilities	10,259	3,843	2,184	841	-370	-2,523	3,592	1,540
Aromatics	6,492	1,721	3,635	859	1,885	4,064	398	7,206
Olefins and Derivatives	35,353	17,800	14,795	7,784	8,460	6,626	4,480	27,350
Green Chemicals	860	632	1,228	334	236	440	599	1,609
Performance Materials and Chemicals	7,010	3,554	6,020	4,130	5,110	5,439	3,899	18,578
Services and Others	1,347	1,351	717	160	42	34	-1,333	-1,097
*Adjusted EBITDA (MB)	61,322	28,900	28,579	14,108	15,363	14,080	11,635	55,186

7.3 Planned Maintenance Shutdown Schedule 2022

Plant		2022											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
OLE	Cracker		19	OLE4		39	OLE3			16	OLE2/1 and OLE2/3		27
	Oleflex												OLE2/2
POL	HDPE									28	BPE1		38
	LDPE					24							HDPE
	LLDPE I					7							
	LLDPE II					20							
	PS					15							
EOB	TOCGC		35										
	EA		35										
PHN	Phenol I												
	Phenol II												11
	BPA							30					
REF	Refinery											50	
ARO1	Aromatics I						30						
ARO2	Aromatics II												
GCO	PO										56		