



PTT Global Chemical Public Company Limited

Management Discussion and Analysis Q2/2020



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**WORLD MEMBERS IN CHEMICALS SECTOR
FOR 7th CONSECUTIVE YEAR**

Executive Summary

In Q2/2020, PTT Global Chemical Public Company Limited (“the Company”) had total sales revenue at Baht 69,271 million, decreased by 26% from Q1/2020 and decreased by 35% from Q2/2019. The Company’s Operating Profit (excluding Stock Loss Net Reversal of NRV, Foreign Exchange gain, and Loss from commodity hedging) of Baht 1,409 million in Q2/2020, increased from the previous quarter of Baht 1,128 million or increased by 25%. The Company had Adjusted EBITDA at Baht 6,463 million in Q2/2020, increased by 2% from Q1/2020 but decreased by 15% from Q2/2019. However, the Company had Stock Loss Net Reversal of NRV at Baht 899 million, Loss from commodity hedging at Baht 340 million, and Foreign Exchange gain at Baht 1,501 million resulting from the continuously appreciation of Thai Baht currency in the period. The Company recorded Net Profit at Baht 1,671 million (Baht 0.37/share), increased by 119% from Q1/2020.

In Q2/2020, the Company had full utilization rate in the main business units especially Olefins and Polymers after planned maintenance shutdown in the previous quarter which reflected to higher total sales volume than the previous quarter. However, Petroleum product prices decreased due to the slowdown of global demand especially in Jet Fuel consumption and Gasoline consumption that directly affected by increasing spread of the Corona Virus 2019 (COVID-19). This results in declining in products spread following weak demand of main products. The Company was mitigated by reducing the production volume of Jet Fuel and increasing the production volume of Diesel that follow the slowdown of Jet demand resulting in Refinery’s Market GRM at 2.31 USD per bbl. For Aromatics business, products spread (BTX P2F) increased from 163 USD per ton in the previous quarter to 176 USD per ton in this quarter supported by widening in Paraxylene (FECF) over Condensate spread and by-products spreads led by lower condensate price tracking with the crude oil price in the period. For Olefins and Derivatives business, the performance improved even lower average price of Polyethylene (PE) from Q1/2020, but an increase in sales volume resulted from full utilization rate after planned maintenance shutdown in Q1/2020 as a result of Adjust EBITDA increased from 9% to 11%. Additionally, the Company had Share of Profit from Investments in JV and associates at Baht 807 million, increased by 40% from Q1/2020 due to higher in Polypropylene (PP) business performance while the performance of bio-plastic business which the Company operates through Natureworks in the United States was improved.

Table 1 : Performance Summary

(Unit: Million Baht)	Q2/2019	Q1/2020	Q2/2020	YoY % +/-	QoQ % +/-	6M/2019	6M/2020	YoY % +/-
Sales Revenue	106,748	93,036	69,271	-35%	-26%	219,531	162,307	-26%
EBITDA	5,195	(2,558)	5,563	7%	>200%	16,389	3,006	-82%
EBITDA Margin (%)	5%	-3%	8%	3%	11%	7%	2%	-6%
Share of profit of investments in JV and Associates	1,283	576	807	-37%	40%	2,469	1,382	-44%
Net Profit	2,202	(8,784)	1,671	-24%	119%	8,645	(7,113)	-182%
EPS (Baht/Share)	0.49	(1.96)	0.37	-24%	119%	1.92	(1.59)	-183%
Adjusted EBITDA*	7,582	6,348	6,463	-15%	2%	17,350	12,811	-26%
Adjusted EBITDA Margin (%)	7%	7%	9%	2%	3%	8%	8%	0%

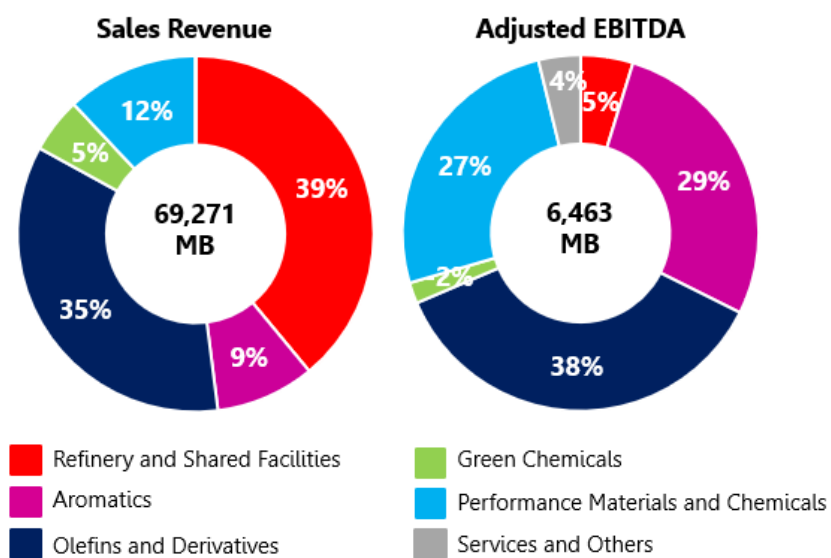
Note: * Adjusted EBITDA refers to EBITDA excluding Stock gain/(loss), NRV and Extra item

Table 2 : Adjusted EBITDA Margin

% Adj. EBITDA Margin	Q2/2019	Q1/2020	Q2/2020	6M/2019	6M/2020
Business Unit :					
Refinery and Shared Facilities	2	5	1	2	4
Aromatics	-2	9	23	4	13
Olefins and Derivatives*	18	9	11	18	10
Green Chemicals	3	8	-4	3	3
Performance Materials and Chemicals	11	4	21	13	13
Average	7	7	9	8	8

Note: *If included PTA, PET %Adj. EBITDA in Q2/19, Q1/20, Q2/20, 6M2019, and 6M2020 are 16%, 7%, 10%, 15%, and 9% respectively

Q2/2020



Performance Analysis by Business Unit

Refinery & Shared Facilities Business Unit

Table 3 : Crude Price & Petroleum Product Spreads

(Unit: USD per bbl)	Q2/2019	Q1/2020	Q2/2020	YoY % +/-	QoQ % +/-	6M/2019	6M/2020	YoY % +/-
Dubai Crude Oil	67.36	50.70	30.55	-55%	-40%	65.44	40.62	-38%
Gasoline-Dubai	7.51	6.66	2.56	-66%	-62%	5.61	4.61	-18%
Jet-Dubai	12.21	8.51	-0.10	-101%	-101%	12.59	4.21	-67%
Diesel-Dubai	12.37	10.98	5.73	-54%	-48%	12.58	8.36	-34%
HSFO-Dubai	-2.33	-7.38	-1.63	30%	78%	-0.90	-4.51	<-200%
LSFO-Dubai	9.61	19.36	8.42	-12%	-57%	8.10	13.89	71%

Dubai crude oil market in Q2/2020 moved downward from Q1/2020 and Q2/2019. Dubai crude oil price was lowest in April from the fade of crude oil demand as a result of COVID-19 outbreak, countries lockdown, and a slowdown in air transportation. However, Dubai crude oil price increased in May and June after OPEC and its allies reached an agreement on production cut and further easing of lockdown restrictions in many countries which led to oil demand recovery. The average Dubai crude oil price in this quarter stood at 30.55 USD per bbl, and the ending price at 42.05 USD per bbl.

For Petroleum products spread over Dubai crude oil price, all refined products spread were decreased. The average Diesel over Dubai crude oil spread declined to 5.73 USD per bbl due to the demand slowdown from the lockdown and an increase in the supply as many refiners adjusted production mode to produce more Diesel instead of Jet production. For average Jet spread over Dubai crude oil price, the spread declined to -0.10 USD per bbl due to the travel restriction policies which affected to significantly declined in the Jet Fuel demand. For the Low Sulfur Fuel oil (LSFO) market, the average Low Sulfur Fuel oil over Dubai crude oil spread declined to 8.42 USD per bbl due to lower shipping activities and lower import volume from China which reflected the Chinese government's policy to support local LSFO producers.

Table 4 : Gross Refinery Margin

(Unit: USD per bbl)	Q2/2019	Q1/2020	Q2/2020	YoY % +/-	QoQ % +/-	6M/2019	6M/2020	YoY % +/-
Market GRM	3.46	3.49	2.31	-33%	-34%	3.33	2.90	-13%
CDU GRM	3.18	3.03	2.14	-33%	-30%	3.06	2.99	-2%
CRS GRM	5.05	5.58	3.30	-35%	-41%	4.78	2.48	-48%
Hedging Gain/(Loss)	0.38	2.11	-0.56	<-200%	-127%	0.12	0.79	>200%
Stock Gain/(Loss) net NRV	-1.75	-13.15	-0.25	86%	98%	0.60	-6.78	<-200%
Accounting GRM	2.09	-7.55	1.49	-28%	120%	4.05	-3.08	-176%
Adjusted EBITDA* (MB)	989	2,273	291	-71%	-87%	1,937	2,564	32%
Adjusted EBITDA (%)	2%	5%	1%	-1%	-4%	2%	4%	2%
Utilization Rate	94%	103%	102%	9%	-1%	98%	103%	5%

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

In Q2/2020, overall Petroleum products spread over crude oil price declined from both Q2/2019 and Q1/2020 due to the lockdown. However, the Company had utilization rate at 102% which followed the plan and almost unchanged from Q1/2020. Additionally, the Company was able to manage both production plan and sales contract in order to minimize those affects. Also, the Company discontinued Jet Fuel production since May and switched to produce more Diesel. The Company also closely monitors the market condition for

the proper management of crude sourcing and product spreads. In this period, Market GRM declined to 2.31 USD per bbl comparing with the previous quarter of 3.49 USD per bbl.

For the performance of Refinery business in Q2/2020, even Dubai crude oil price had constantly decreased, further easing of lockdown restrictions in many countries in the second half of the period led to gradual demand recovery which resulted to an increase in crude oil price until the end of the period. Consequently, the Company had less realized Stock loss Net Reversal of NRV at -0.25 USD per bbl. Including with Loss from Commodity Hedging of -0.56 USD per bbl, resulting in the Company's Accounting GRM of Refinery business at 1.49 USD per bbl, increased from -7.55 USD per bbl in Q1/2020 but decreased from 2.09 USD per bbl in Q2/2019. The Adjusted EBITDA of Refinery business in this period was Baht 291 million with an Adjusted EBITDA Margin of 1%.

Aromatics Business Unit

Table 5 : Aromatics Product Prices and Spreads over Condensate

(Unit: USD per ton)	Q2/2019	Q1/2020	Q2/2020	YoY % +/-	QoQ % +/-	6M/2019	6M/2020	YoY % +/-
Condensate	573	450	225	-61%	-50%	554	338	-39%
Paraxylene (TW)	909	706	496	-45%	-30%	994	601	-40%
Paraxylene (TW)-Condensate	336	256	271	-19%	6%	441	263	-40%
Paraxylene (FECF)	914	711	496	-46%	-30%	984	604	-39%
Paraxylene (FECF)-Condensate	341	261	271	-21%	4%	430	266	-38%
Benzene (Spot Korea)	625	614	371	-41%	-40%	607	493	-19%
Benzene-Condensate	52	164	146	179%	-11%	54	155	189%
Naphtha-Condensate	-32	-10	49	>200%	>200%	-24	19	181%

Paraxylene

In Q2/2020, Paraxylene (FECF) over Condensate spread slightly increased by 4% from Q1/2020 from 261 USD per ton to 271 USD per ton due to a decline in condensate price, following crude oil price, which declined at a higher rate comparing with Paraxylene price. However, the spread declined by 21% comparing with Q2/2020. In the quarter, Paraxylene prices declined due to the impact of COVID-19 outbreak which led to global economic slowdown and the demand faded from Purified Terephthalic Acid (PTA) and Polyester market. Moreover, the shutdown of a large PTA plant in China put pressure on Paraxylene prices from excess supply while Paraxylene inventory remained at a high level, even Paraxylene market was supported by the slowdown or shutdown of high-cost producers.

Benzene

In Q2/2020, Benzene over Condensate spread decreased from Q1/2020 by 11% but increased from Q2/2019 by 179% due to the pressure from declined in crude oil prices and accumulated supply in the market in Q2/2019. Additionally, Benzene was produced over real demand as Aromatics producers speed up their Paraxylene production to take benefit from high margin in Q2/2019. In Q2/2020, Benzene price was pressured from slowdown in demand especially limited import from China due to high inventory level and lower demand from downstream product Styrene Monomer and Polystyrene impacted by COVID-19 outbreak.

Table 6 : Aromatics market P2F

(Unit: USD per ton)	Q2/2019	Q1/2020	Q2/2020	YoY % + /(-)	QoQ % + /(-)	6M/2019	6M/2020	YoY % + /(-)
Market P2F	75	163	176	136%	8%	147	169	15%
Hedging Gain/(Loss)	13.6	5.4	-2.3	-117%	-142%	0.3	1.5	>200%
Stock Gain/(Loss) net NRV	-41.0	-112.9	-44.6	-9%	60%	-17.4	-78.0	<-200%
Accounting P2F	47	55	129	173%	133%	130	93	-28%
Adjusted EBITDA* (MB)	-305	1,422	1,846	>200%	30%	1,176	3,268	178%
Adjusted EBITDA (%)	-2%	9%	23%	25%	14%	4%	13%	9%
Utilization Rate (%)	72%	97%	99%	27%	2%	83%	98%	15%

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

For Aromatics business in Q2/2020, BTX utilization rate was 99%, increased from Q1/2020 and Q2/2019, which planned maintenance shutdown of Aromatics plant 1 for 53 days took place. Paraxylene over Condensate spread (FECF) rose to 271 USD per ton, Benzene over Condensate spread decreased to 146 USD per ton, and by-products spread increased resulted to higher Market P2F per ton BTX to 176 USD per ton, increased by 8% from Q1/2020 and increased by 136% from Q2/2019, with Adjusted EBITDA of Baht 1,846 million and Adjusted EBITDA Margin at 23%. A significant increase in Adjusted EBITDA margin was mainly due to the significant drop in condensate price from Q1/2020 resulted from lower in crude oil price at the beginning of this quarter, and lower demand of condensate followed the slowdown of Jet Fuel and Gasoline consumption affected by Covid-19 outbreak. In addition, in this period, the Company had Stock loss Net Reversal of NRV at -44.6 USD per ton and realized Loss from commodity hedging at -2.3 USD per ton, resulted in Accounting P2F of 129 USD per ton.

Olefins and Derivatives Business Unit

Table 7 : Prices and Spreads of Olefins and Derivatives

(Unit: USD per ton)	Q2/2019	Q1/2020	Q2/2020	YoY % +/-	QoQ % +/-	6M/2019	6M/2020	YoY % +/-
Naphtha (MOPJ)	541	440	274	-49%	-38%	530	357	-33%
Ethylene (SEA)	824	679	557	-32%	-18%	876	618	-29%
Propylene (SEA)	796	787	644	-19%	-18%	817	716	-12%
Avg. PE	1,055	880	793	-25%	-10%	1,057	837	-21%
HDPE	1,080	839	760	-30%	-9%	1,086	800	-26%
HDPE-Naphtha	539	399	486	-10%	22%	556	443	-20%
LLDPE	1,017	847	754	-26%	-11%	1,027	801	-22%
LLDPE- Naphtha	476	407	480	1%	18%	497	444	-11%
LDPE	1,067	955	866	-19%	-9%	1,056	911	-14%
LDPE- Naphtha	526	515	592	13%	15%	526	554	5%
PP	1,143	986	871	-24%	-12%	1,135	929	-18%
PP-Naphtha	602	546	597	-1%	9%	605	572	-6%
MEG (ACP)	773	708	582	-25%	-18%	803	645	-20%
MEG-0.65 Ethylene	237	267	220	-7%	-18%	234	243	4%

For Polyethylene (PE) market in Q2/2020, the average PE price was 793 USD per ton, declined by 10% and 25% from Q1/2020 and Q2/2019 respectively due to the impact of COVID-19 on the slowdown in both of consumption and global economics. However, the situation is expected to improve following the Lockdown easing in many countries that began at the end of the period especially in China which drove products demand, while the restocking of plastic producers have seen. However, PE inventory in China remained lower than 5-year's average level which indicates that demand could potentially further improve. In addition, higher Crude oil price led to higher PE price at the end of quarter. For MEG (ACP), the price declined by 18% from the previous quarter and by 25% from Q2/2019 due to decreasing demand from downstream industry and increasing MEG inventory in China.

Table 8 : Adjusted EBITDA of Olefins and Derivatives

(Unit: Million Baht)	Q2/2019	Q1/2020	Q2/2020	YoY % +/-	QoQ % +/-	6M/2019	6M/2020	YoY % +/-
Adjusted EBITDA	5,442	1,792	2,474	-55%	38%	10,831	4,266	-61%
Adjusted EBITDA (%)*	18%	9%	11%	-7%	2%	18%	10%	-8%
Utilization Rate Olefins (%)	104%	81%	100%	-4%	19%	103%	91%	-12%
Utilization Rate Polymer (%)	101%	89%	102%	1%	13%	100%	95%	-5%

Note: *If included PTA, PET %Adj. EBITDA in Q2/19, Q1/20, Q2/20, 6M2019, and 6M2020 are 16%, 7%, 10%, 15%, and 9% respectively

In Q2/2020, Olefins plants had average utilization rate of 100%, increased from Q1/2020 at 81% where the planned maintenance shutdown of the Olefins plant 2/1 and 2/2 for 39 days and 35 days respectively took place. Polymer plant utilization rate was at 102%, increased from 89% in Q1/2020 due to the planned maintenance shutdown of HDPE plant for 15 days while MEG utilization rate was at 97%, almost stable from the previous quarter. Therefore, even PE price declined from the previous quarter and Olefins price declined by 18% from the previous quarter, an increase in sales volume from full capacity and an adjustment of sales plan to match with the demand in the market resulted to Adjusted EBITDA at Baht 2,474 million or Adjusted EBITDA Margin at 11%. In term of feedstock, the portion of feedstock used of Gas and Naphtha were 76% and 24% respectively.

Table 9 : Adjusted EBITDA by Business Unit

Adjusted EBITDA (MB)	Q2/2019	Q1/2020	Q2/2020	YoY % +/-	QoQ % +/-	6M/2019	6M/2020	YoY % +/-
Business Unit :								
Refinery and Shared Facilities	989	2,273	291	-71%	-87%	1,937	2,564	32%
Aromatics	-305	1,422	1,846	>200%	30%	1,176	3,268	178%
Olefins and Derivatives	5,442	1,792	2,474	-55%	38%	10,831	4,266	-61%
Green Chemicals	77	361	-129	<-200%	-136%	187	232	24%
Performance Materials and Chemicals	1,017	277	1,717	69%	>200%	2,549	1,994	-22%
Services and Others	362	222	263	-27%	18%	669	486	-27%
Adjusted EBITDA*	7,582	6,348	6,463	-15%	2%	17,350	12,811	-26%

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

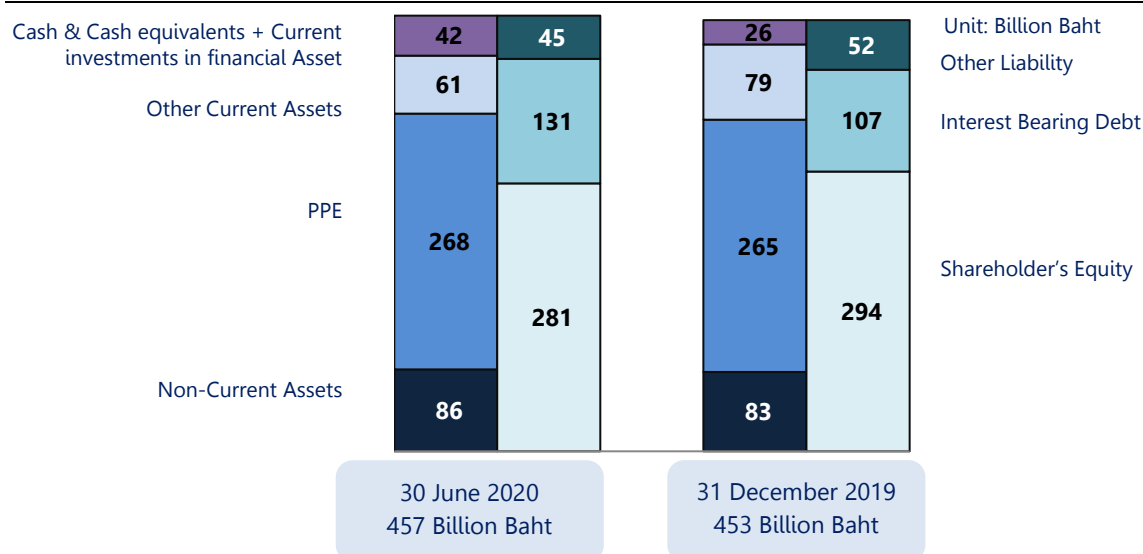
Operating Performance

Unit : MB		Q2/2019	Q1/2020	Q2/2020	YoY % + /(-)	QoQ % + /(-)	6M/19	6M/20	YoY % + /(-)
	Sales Revenue	106,748	93,036	69,271	-35%	-26%	219,531	162,307	-26%
	Feedstock cost	(85,491)	(75,543)	(50,804)	-41%	-33%	(174,669)	(126,347)	-28%
	Product to Feed Margin	21,257	17,493	18,467	-13%	6%	44,862	35,960	-20%
1	Variable Cost	(7,345)	(6,501)	(6,797)	-7%	5%	(14,805)	(13,298)	-10%
2	Fixed OH	(4,710)	(3,815)	(3,352)	-29%	-12%	(8,624)	(7,166)	-17%
3	Stock Gain/(Loss) and NRV	(1,402)	(8,906)	(899)	36%	90%	23	(9,805)	< -200%
4	Gain/(Loss) on Commodity Hedging	386	1,187	(340)	-188%	-129%	142	847	> 200%
5	Other Revenue	894	1,096	1,310	47%	20%	2,000	2,406	20%
6	SG&A Expenses	(3,885)	(3,112)	(2,826)	-27%	-9%	(7,210)	(5,938)	-18%
	EBITDA	5,195	(2,558)	5,563	7%	> 200%	16,389	3,006	-82%
7	Depreciation & Amortization	(4,668)	(5,057)	(5,088)	9%	1%	(9,679)	(10,146)	5%
8	Reversal (Loss) of GGC's inventory	14	-	-	-100%	-	16	-	-100%
	EBIT	541	(7,615)	475	-12%	106%	6,726	(7,140)	< -200%
9	Net financial expense	(495)	(785)	(706)	43%	-10%	(992)	(1,490)	50%
10	FX Gain (Loss)	692	(2,193)	1,501	117%	168%	1,130	(692)	-161%
11	Share of gain/(loss) from investment	1,283	576	807	-37%	40%	2,469	1,382	-44%
12	Corporate Income Tax	376	1,295	(406)	< -200%	-131%	(343)	890	> 200%
13	Net Profit after Tax	2,397	(8,722)	1,671	-30%	119%	8,990	(7,050)	-178%
	Profit/(loss) attributable to:								
14	Non-controlling interests	195	62	-	-100%	-100%	345	63	-82%
15	Owners of the Company	2,202	(8,784)	1,671	-24%	119%	8,645	(7,113)	-182%
16	Adjusted EBITDA*	7,582	6,348	6,463	-15%	2%	17,350	12,811	-26%

Note: *Adjusted EBITDA refers EBITDA excluding Stock gain/loss, net NRV and Extra item

The Company had lower sales revenue than Q1/2020 by 26% and Q2/2019 by 35% even sales volume was increased due to the fully utilized of Olefins and Polymers plants after the planned maintenance shutdown in the previous quarter, but affected by soften Petroleum and Petrochemical prices led by concerns on global economic from Covid-19 outbreak. Variable cost in Q2/2020 was higher from Q1/2020 due to an increase in production volume, but lower from Q2/2019 followed the direction of Crude oil and products prices. Whilst Fixed overhead and SG&A expenses decreased from both Q1/2020 and Q2/2019 due to an intensive expenses control program, employee benefits expense at Baht 784 million in Q2/2019, and a decrease in lease expenses but higher depreciation expense after the implementation of TFRS 16 on January 1, 2020. In addition, Share of profit from investment (attributable to Owners of the Company) increased from Q1/2020 due to the improvement in both Polypropylene (PP) business and Bio-plastic business performance which the Company operates through Natureworks and PTTMCC, but decreased from Q2/2019 due to due to softening performance in overall petrochemical business. Additionally, the financial expenses increased from the previous quarter due to rising of interest expense from additional debt financing to enhance liquidity management, while interest received declined tracking with market interest in the period.

Statement of Financial Position



As of June 30, 2020, the Company had Total asset of Baht 457,446 million, increased by Baht 4,932 million from December 31, 2019. Total Current asset declined by Baht 1,440 million mainly due to decreasing of Account receivables of Baht 11,464 and decreasing of inventory by 4,761 million even increasing of Cash and Cash Equivalents and Investment in financial asset by Baht 16,439 million. However, the Company had higher Non-current asset by Baht 6,372 million which derived from increasing in Property, plant and equipment led by purchasing and construction of assets within the period net amount of Baht 3,889 million. In addition, the Company had higher Right of Use by Baht 5,102 million as a result of TFRS 16 implemented on January 1, 2020 that mainly due to land lease and utilities rental, whilst other non-current assets decreased by Baht 2,619 million. Furthermore, the Company had total liabilities of Baht 176,278 million as of June 30, 2020, increased by Baht 17,359 million from December 31, 2019 due to Interest-Bearing Debt increased by Baht 23,733 million resulted from Bond issuing increasing of land lease and utilities rental of Baht 4,233 million as a result of TFRS16 that mainly due to land lease and tank rental. However, Account payable decreased by Baht 8,643 million and Other Current Liabilities decreased by Baht 1,704 million. For this period, the Company had total Shareholders' Equity of Baht 281,168 million, decreased by Baht 12,427 million from December 31, 2019 mainly due to Net loss of Baht 7,113 million for the six month period end June 30, 2020 and Dividend payment for second half year 2019 of Baht 4,486 million.

Cash and Cash Equivalents and Current Investments in financial assets increased by Baht 16,439 million from the end of last year. The Company had cash flow from operations of Baht 10,471 million while cash flow used in investment activities of Baht 14,786 million which mainly invested in the purchasing of property, plant and equipment and intangible assets on the projects such as Olefins Reconfiguration Project, Propylene Oxide by GC Oxirane Co., Ltd. and Polyols & PU System by GC Polyols Co., Ltd. However, there was cash received from the repayment of short-term borrowing from GPSC by Baht 1,123 million, and dividend and interest income of Baht 2,007 million. The Company's cash flow received from financing activities of Baht 16,259 million mainly received from Bond issuing by Baht 15,000 million and net Short-term and Long-term borrowings by Baht 7,888 million. Nevertheless, the Company had the Dividend payment of Baht 4,773 million and interest payment to financial institutions and hire-purchase contracts of Baht 2,051 million. As a result, as of June 30, 2020 the Company had total Cash and Cash Equivalents of Baht 30,739 million, including Current investments in financial assets of Baht 11,261 million and Non-current investments in financial assets in private fund and in-house of Baht 430 million, the Company had totaling cash and cash equivalent and investment of Baht 42,429 million, increased by Baht 14,532 million from the end of last year. The Company had net interest-bearing debt to equity at 0.32 times and Net interest-bearing debt to EBITDA at 6.16 times.

Key Financial Ratios

Financial Ratios	Q2/2019	Q1/2020	Q2/2020
Current Ratio (Times)	1.84	1.94	2.63
EBITDA to Sales Revenue (%)	8.20%	3.60%	4.09%
Net Profits to Sales Revenues (%)	5.26%	-0.91%	-1.16%
Return on Total Assets (%)	6.72%	-0.26%	-0.23%
Return on Equity (%)	8.84%	-1.44%	-1.45%
Interest Bearing Debt to Equity (Times)	0.30	0.39	0.47
Net Interest Bearing Debt to Equity (Times)	0.19	0.32	0.32
Net Interest Bearing Debt to EBITDA (Times)	1.39	6.38	6.16

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 divided by Shareholder's Equity
Net Interest Bearing Debt to EBITDA	=	Interest Bearing Debt net Cash and Cash Equivalent and Current Investments divided by EBITDA

Market and Business Outlook in second half of 2020

The outbreak of COVID-19 has spread more than a half year and the total number of cases are more than 16 million people (as of July 2020) that significantly impact the global economy. Also, the impact of the US-China trade war which impacts some Refinery and Petrochemical producers has slowdown their operating rate to handle with lower demand from the recession. Also, the demand is expected to gradually recover in the second half of the year.

The Company anticipates that the average price of Dubai crude oil will be within the range of 42-45 USD per bbl. The International Energy Agency (IEA) had estimated the crude oil demand (as of July 2020) in 2020 at 92.1 Mbbl per day, decreased by 7.2 Mbbl per day from the demand in 2019. The estimate is higher than previous quarter's estimates by 2 Mbbl per day. However, there is uncertainty over the prolonged strict measures as a means of controlling COVID-19, which will impact the global economic condition and put pressure on the crude oil price.

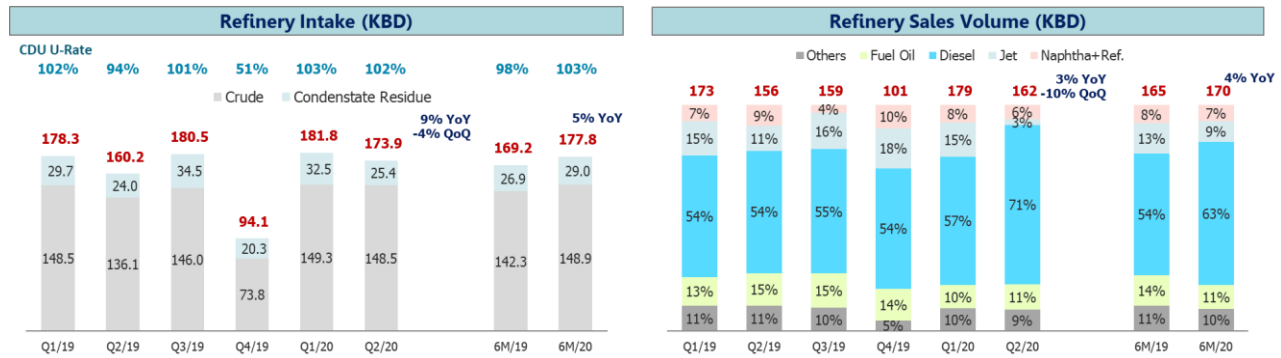
For Petroleum products, the Company anticipates that products price and products spread will be under pressure from the uncertainty as mentioned previously, which will impact the global fuel consumption, especially Jet Fuel consumption and Gasoline consumption. However, there will be some recovery in the second half of the year. As a result, for the second half of the year, Diesel over Dubai crude oil spread is expected to be 8-9 USD per bbl while Low Sulfur Fuel Oil (LSFO) over Dubai crude oil spread to be 7-8 USD per bbl amid lower demand for High Sulfur Fuel Oil (HSFO). The HSFO over Dubai crude oil spread is expected to be -6 to -5 USD per bbl in the second half of the year. Gasoline will be under pressure from high inventory level and increasing production from high utilization rate of refineries in North America region. The expected Gasoline over Dubai crude oil spread is 6-7 USD per bbl. As a result, the Company decreases the production of Jet oil and increases production volume of Diesel which helped to reduce the impact. As for the Company's Refinery utilization rate of 2020, it will be operated at around 101%.

For Petrochemical products, the Company has been impacted by the spread of COVID-19 only in term of pricing, our production is still on plan. For Aromatics products, Paraxylene over Naphtha spread, in the second half of 2020, is expected to be 160-220 USD per ton which slightly decreases from the first half of the year. Despite the new supply from new producers, the demand from downstream business such as Fiber and Filaments industries, Purified Terephthalic Acid (PTA), and PET Bottle Resin are expected to decelerate due to the spread of Covid-19. Benzene over Naphtha spread is expected to be 90-110 USD per ton which declined from the first half of the year due to new capacities in Q4/2020 while the demand for downstream products such as Styrene Monomer and Phenol are steady. The Company has a planned maintenance shutdown of Aromatics plant II in Q3/2020. The Company expects that the Aromatics utilization rate of 2020 will be 92%.

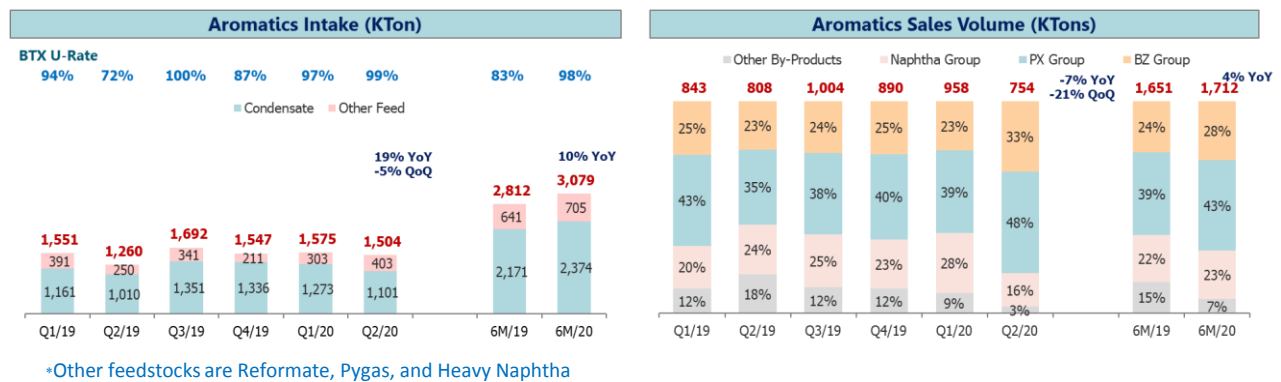
The outlook for Olefins and Derivatives product is expected to maintain from the first half of the year, due to new supply is expected in 2020 and lower crude oil price. The average Polyethylene price is expected to be 830-910 USD per ton in the second half of 2020. For MEG market, MEG price is expected to be stable from the first half of the year. MEG supply is expected to increase from new capacities, but MEG will be supported by downstream demand especially Packaging industry which has potential to grow. The Company expects that the average MEG (ASP) will be 420-480 USD per ton in the second half of the year. In 2020, Olefins plants utilization rate will be around 97% since there are planned maintenance shutdown in Q1/2020 whilst Polymers plants utilization rate will be around 101%.

Appendix

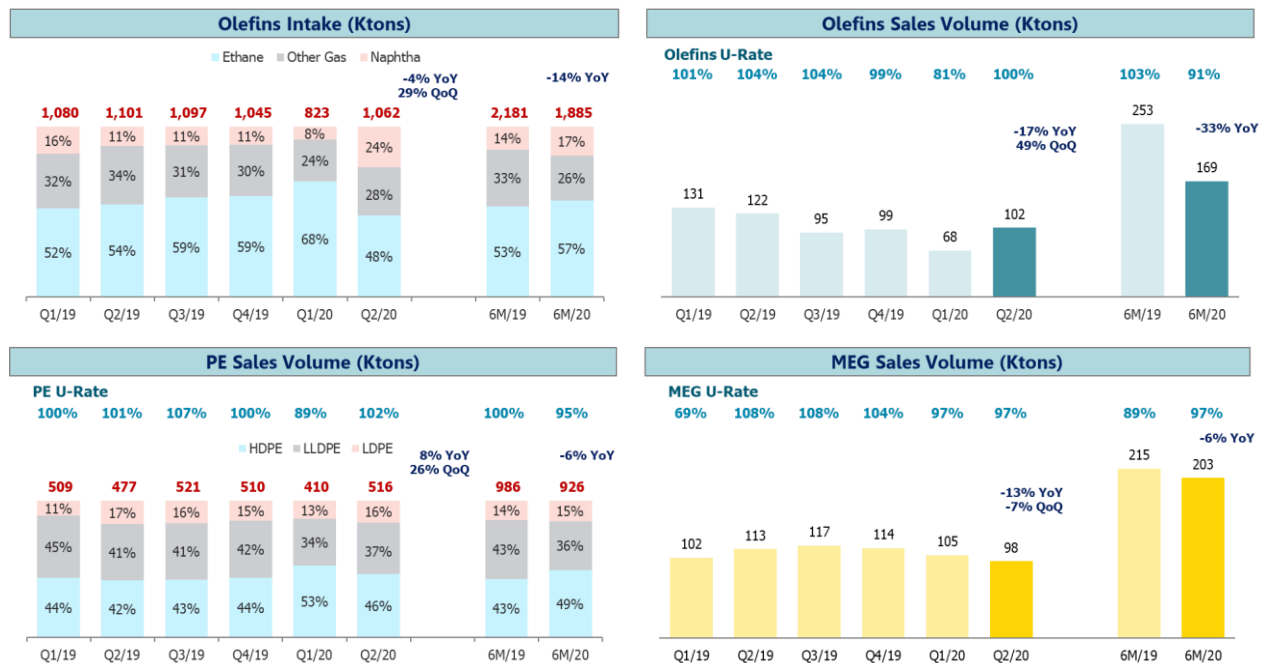
Graph 1: Refinery Intake and Sales Volume



Graph 2: Aromatics Intake and Sales Volume (BTX)



Graph 3: Olefins Intake and Olefins and Derivatives Sales Volume



Planned Maintenance Shutdown Schedule 2020

Plant		2020											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
OLE	Cracker		39	OLE2/1									
	Oleflex		35	OLE2/2									
POL	HDPE		15	HD1/2		15	HDPE2						
	LDPE		12							24			
	LLDPE I		20										
	LLDPE II						20						
	PS									20	HIPS		
										13	GPSS		
EOB	TOCGC												
	EA												
PHN	Phenol I												
	Phenol II		31										
	BPA		20										
REF	Refinery												
ARO1	Aromatics I												
ARO2	Aromatics II							19					