

Management Discussion and Analysis
For the Operating Results of 1Q2020



Global Green Chemicals Public Company Limited



Executive Summary

In 1Q2020, overall palm oil production in both domestic and international market declined due to the significant impact of drought on agriculture. According to Department of Internal Trade, local crude palm oil (CPO) inventory plunged to the level of 170,000 tons compared to the level of 400,000 tons at the same period of previous year, resulted in a surge in crude palm oil price. In addition, the Energy Ministry has introduced B10 biodiesel as the mandatory diesel in Thailand, replacing B7 biodiesel at the beginning of 2020. Furthermore, the Government has been subsidizing B10 and B20 retail prices, making them cheaper than B7, providing by the Oil Fuel Fund. Natural fatty alcohols market in 1Q2020 moved downward from 1Q2019 affected by the coronavirus (COVID-19) outbreak. Many countries have been imposing lockdown and closing port such as China, a major buyer, whose production has stopped a long while, as well as India and other European countries.

For 1Q2020 performance, Global Green Chemicals Public Company Limited (“the Company”) had methyl ester sales volume at 101,371 tons, an increase of 22,346 tons or 28% compared to 1Q2019. This comparison excluded methyl ester sales volume in 1Q2019 of 15,678 tons which could not be recorded in profit/loss statement because methyl ester plant 2 was under testing run for commercial operation. While, Methyl ester price increased following an increase in crude palm oil price. Despite, the Company had lowered natural fatty alcohols sales volume at 20,938 tons, declined by 16% from 1Q2019. Due to these factors, the Company had total sales revenue at THB 5,227 million, rose by 86% compared to 1Q2019, resulting to EBITDA of THB 345 million, improved from prior year by 145% mainly from profitability improvement of methyl ester driven by lessen competition in product discount since the demand and supply of biodiesel close to equilibrium. With deducting the effect of Stock Gain & NRV of THB 92 million, the Company had Adjusted EBITDA of THB 253 million, an increase of 18% from 1Q2019.

In 1Q2020, the Company recorded share of profit from investment in Joint Ventures, Thai Ethoxylates Company Limited (TEX) and GGC KTIS Bio Industrial Company Limited (GKBI), at THB 62 million and Thai Baht depreciated by 9% from 30.11 THB/USD in the beginning of 1Q2020 to 32.67 THB/USD at the end of this quarter. As aforementioned, the Company posted the net profit of THB 239 million, an increase of THB 217 million or 986% from the net profit including extraordinary item for 1Q2019.

As of March 31, 2020, the Company has total assets in the amount of THB 13,149 million which comprised of cash and short-term investment amounting to THB 2,694 million, with total liabilities of THB 3,467 million and total equities of THB 9,682 million. In this regard, the Company’s financial position remains strong with low debt-to-equity ratio and high current ratio.

Operating Performance

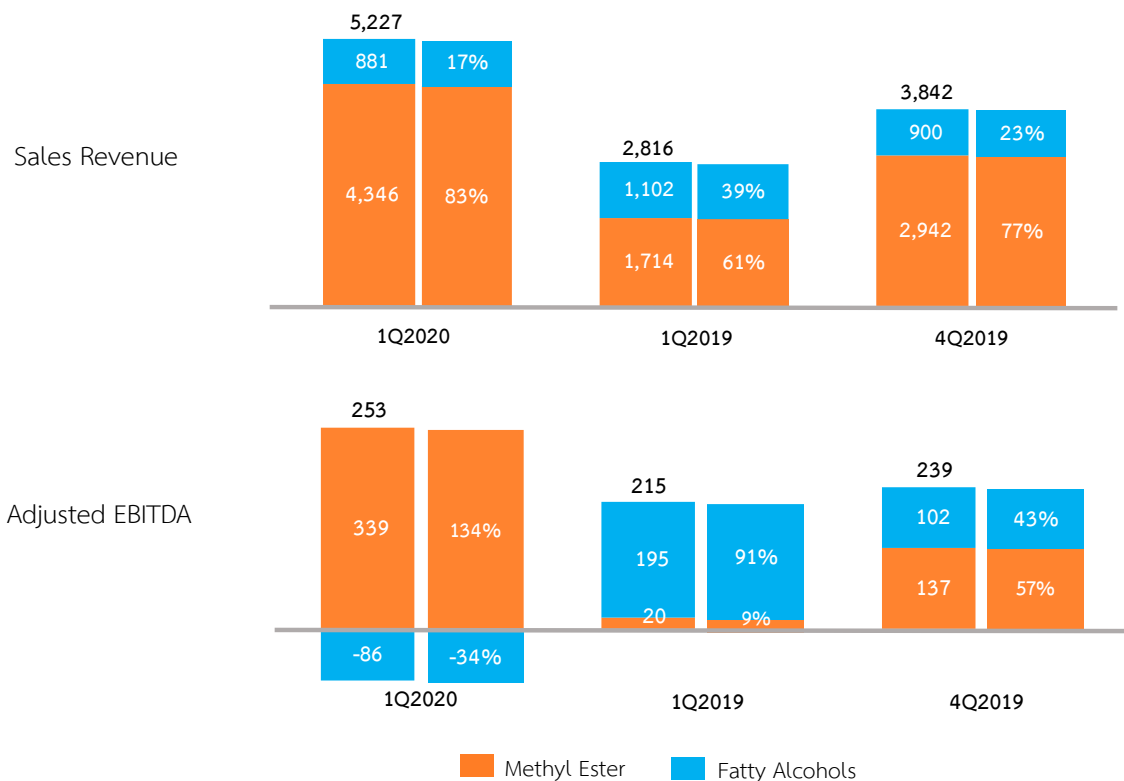
Exhibit 1: Consolidated Company's Performance comparison of 1Q2020 vs. 1Q2019 vs. 4Q2019

UNIT: Million Baht	1Q2020	1Q2019	% YoY	4Q2019	% QoQ
Sales Revenue	5,227	2,816	86%	3,842	36%
EBITDA	345	141	145%	226	53%
EBITDA Margin (%)	6.6%	5.0%	1.6%	5.9%	0.7%
Stock Gain/(Loss) & NRV	92	-74	-224%	-13	-808%
Adjusted EBITDA ⁽¹⁾	253	215	18%	239	6%
Adjusted EBITDA Margin (%)	4.8%	7.6%	-2.8%	6.2%	-1.4%
Net Profit	239	20	1,095%	97	146%
Extra Item Net of Tax ⁽²⁾	-	2	-100%	94	-100%
Net Profit after Extra Items	239	22	986%	191	25%
EPS (Baht/Share)	0.23	0.02	1,050%	0.19	21%

Note: (1) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV

(2) Extra items were from the reversal of inventory shortfall damage and deferred tax assets/liabilities

Exhibit 2 : Sales revenue and Adjusted EBITDA breakdown by business unit comparison of 1Q2020 vs. 1Q2019 vs. 4Q2019 (million THB)



Market Overview by Business

Methyl Ester (Biodiesel)

Exhibit 3: Product and Feedstock Prices

Average Price	1Q2020	1Q2019	% YoY	4Q2019	% QoQ
Methyl Ester (B100) (Baht/Litre) ⁽¹⁾	37.95	20.74	83%	25.89	47%
Methyl Ester (B100) (Baht/kg.) ⁽²⁾	43.87	23.98	83%	29.93	47%
Crude Palm Oil (CPO) (Baht/kg.) ⁽³⁾	33.94	16.04	112%	23.01	48%
EPPO P2F (Baht/kg.) ⁽⁴⁾	4.49	4.87	-8%	4.52	-1%
Biodiesel Mandate	B10	B7		B7	
Optional Biodiesel	B7 B20	B20		B10 B20	

Note : (1) Reference Price of EPPO
 (2) Conversion ratio: 0.865 Tons = 1,000 Liters
 (3) Reference Price of DIT
 (4) Market ME Price - Mixed Feedstock according to EPPO's B100 formula

An average of crude palm oil price (CPO-DIT) in 1Q2020 was at 33.94 Baht/kg., being better than CPO price in 1Q2019 by 17.90 Baht/kg. or 112% since CPO inventory plunged to the level of 170,000 tons from 375,000 tons at the same period of last year. The domestic methyl ester demand in 1Q2020 significantly escalated from 1Q2019 thanks to the Government's announcement of B10 biodiesel as the mandatory diesel in Thailand replacing B7 biodiesel from January 1, 2020 onwards and the increasing of the B10 petrol station at 4,953 stations on March 31, 2020, in spite of the lower transportation during the spread of COVID-19 outbreak. Additionally, the Government has continually stimulated biodiesel usage. The Ministry of Energy defined a decline in all fuel prices by 1 Baht/litre from December 26, 2019 to January 10, 2020 as a New Year gift to the public, in addition to continuously subsidizing B10 and B20 retail prices, making them cheaper than B7 by 3.0 Baht/litre and 3.25 Baht/litre respectively from March 24, 2020 onwards. In this regard, the subsidizing B10 and B20 retail prices are follows;

Biodiesel Price	1 Oct 2019 – 29 Feb 2020	1 -23 Mar, 2020	Mar 24, 2020 onwards
B10 lower than B7	2 Baht/litre	3 Baht/litre	3 Baht/litre
B20 lower than B7	3 Baht/litre	3.5 Baht/litre	3.25 Baht/litre



Due to upward CPO price, methyl ester price in 1Q2020 was increased to 43.87 Baht/kg., rose by 19.89 Baht/kg. or 83% compared to 1Q2019.

Overall 1Q2020 compared to 4Q2019, CPO price climbed up to 33.94 Baht/kg., rose by 10.93 Baht/kg. or 48% primarily caused by a fallen domestic CPO inventory from 319,000 tons in 4Q2019 to 170,000 tons in 1Q2020. In 1Q2020, methyl ester demand stood at 415,000 tons, dropped from prior quarter by 5,755 tons or 1%. Although, the Ministry of Energy officially announced B10 biodiesel as the mandatory diesel in Thailand and has been subsidizing B10 and B20 retail prices, the lessen transport and delay of shipment in logistic sector affected by COVID- 19 outbreak leading to significantly decreased of overall domestic diesel consumption in 1Q2020. Meanwhile, the average of 1Q2020 methyl ester price was escalated to 43.87 Baht/kg., an increase of 47% from 4Q2019, corresponding to an upward CPO price.

The average EPPO P2F in 1Q2020 (the difference between ME EPPO price and mixed feedstock prices) was at 4.49 Baht/kg., decreased by 8% compared to 1Q2019 because the methanol price which is a factor in the ME EPPO price formula declined, while it closed to EPPO P2F in previous quarter.

Fatty Alcohols

Exhibit 4: Products and Feedstock's prices

Average Price (USD per ton)	1Q2020	1Q2019	% YoY	4Q2019	% QoQ
Fatty Alcohols ⁽¹⁾					
- Short Chain	2,186	3,249	-33%	2,438	-10%
- Mid Cut	1,225	1,241	-1%	1,157	6%
- Long Chain	1,180	1,183	-0.3%	1,106	7%
Average Fatty Alcohols ⁽²⁾	1,289	1,385	-7%	1,244	4%
Crude Palm Kernel Oil (CPKO) ⁽³⁾	800	677	18%	742	8%
Market P2F of Fatty Alcohols	329	573	-43%	353	-7%

Note : (1) Reference Price of ICIS

(2) Average price of fatty alcohols with production proportion: Short Chain 8% Mid Cut 62% and Long Chain 30%

(3) Reference Price of Malaysian Palm Oil Board (MPOB)



An average crude palm kernel oil price (MPOB) in 1Q2020 was at 800 USD/ton, increased from 1Q2019 and 4Q2019 by 123 USD/ton or 18% and 58 USD/ton or 8% respectively. The primary cause was lower in international crude palm oil inventory of 1.7 million tons from 3 million tons in 1Q2019 and 2.2 million tons in 4Q2019 driven by a direct impact of drought.

On the demand side, natural fatty alcohols in 1Q2020 has considerably slowed down from the same period of prior year since China has been implementing lockdown and closing some ports to control the spread of COVID-19. Major buyers in China had to stop their production for a long while. India and other European countries also enacted lockdown measure. As aforementioned and unable to suppression of COVID-19 spreading soon, fatty alcohols market's purchasing power has been declining.

On the supply side, Indonesia and Malaysia, the major producers of CPO and CPKO, implemented lockdown measure to prevent the spread of COVID-19, resulting in supply chain and travel restrictions. Additionally, some producers announced the temporarily capacity reduction of their plants (Force Majeure) such as IOI Corporation Berhad and Emery Oleochemicals since March 18, 2020, leading to a contraction in fatty alcohols supply.

The market P2F of natural fatty alcohols in 1Q2020 was at 329 USD/ton, a decrease of 43% from 573 USD/ton in 1Q2019 because Fatty alcohols supply in 1Q2019 was tight caused by the announcement of permanent shutdown of some synthetic fatty alcohols plants in Europe and temporary shutdown of some Chinese fatty alcohols plants owing to more strictly safety control and more stringent environmental regulations by their government. Moreover, the market demand in 1Q2019 was improved by rising demand from agriculture sector and construction sector, while the market demand and supply in 1Q2020 was impacted from COVID-19 outbreak as aforementioned. Compared to 4Q2019, the market P2F in 1Q2020 dropped by 7% because the growing of an average fatty alcohols price was only by 4% to stood at 1,289 USD/ton, compared to the higher percentage of increasing price of CPKO due to fallen of supply from COVID-19 outbreak.

Operating Performance by Business Unit

Methyl Ester (ME) Business Unit Operating Performance

Exhibit 5: Keys Operating Performance of ME Business Unit

Methyl Ester Business	1Q2020	1Q2019	% YoY	4Q2019	% QoQ
Utilization (%)	82% ⁽¹⁾	102% ⁽²⁾	-20%	75% ⁽¹⁾	7%
Sales Volume (ton)	101,371	94,703 ⁽³⁾	7%	106,755	-5%
Sales Volume (million litre) ⁽⁴⁾	117	109	7%	123	-5%
Sales Revenue (million baht)	4,346	1,714	154%	2,942	48%
EBITDA (million baht)	301	2	14,950%	171	76%
EBITDA margin (%)	6.9%	0.1%	6.8%	5.8%	1.1%
Stock Gain/(Loss) & NRV (million baht)	-38	-18	111%	34	-212%
Adjusted EBITDA (million baht) ⁽⁵⁾	339	20	1,595%	137	147%
Adjusted EBITDA Margin (%)	7.8%	1.2%	6.6%	4.7%	3.1%

Note : (1) Nameplate Capacity 500,000 tons per year from methyl ester plant 1 and plant 2 with nameplate 300,000 and 200,000 ton per year respectively. The methyl ester plant 2 has commenced the commercial operation on April 5, 2019.

(2) Nameplate Capacity 300,000 tons per year from methyl ester plant 1

(3) In 1Q2019, the company reported sales volume from methyl ester plant 2 amounting to 15,678 tons which could not be recorded in profit/loss statement because it was under testing run for commercial operation. However, sales volume for methyl ester as aforementioned was included in the total sales volume of 94,703 tons in 1Q2019 as table above.

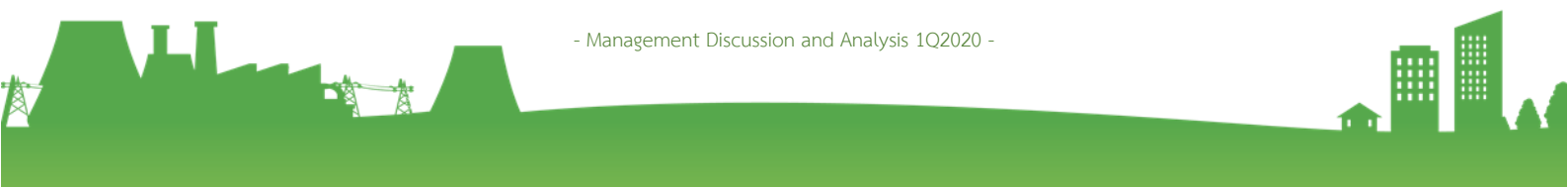
(4) Conversion ratio: 0.865 Tons = 1,000 Liters

(5) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV

Operating performance comparison between 1Q2020 vs. 1Q2019

In 1Q2020, the Company recorded methyl ester business sales revenue of THB 4,346 million, an increase of THB 2,632 million or 154% because of the rising of methyl ester selling price in relation to upward CPO price and increasing sales volume. If considering methyl ester sales volume in 1Q2019 which could be realized in profit/loss statement at 79,025 tons, the Company had an increasing of sales volume in 1Q2020 by 22,346 tons or 28%, resulted from the official announcement of B10 biodiesel as the mandatory diesel. Although, sales revenue of refined glycerine, by-product of methyl ester and fatty alcohols, decreased in relation to a decline in selling price of refined glycerine approximately 20%.

Due to the growing of biodiesel demand following B10 as the mandatory diesel, the competition in market as well as B100 discount are weaken, leading to a stable equilibrium between supply and demand in biodiesel industry, as a result, the profitability of methyl ester raised up. Based on these factors, the Company



had EBITDA of THB 301 million, improved by THB 299 million from the same quarter of last year. However, the decreasing of CPO and methyl ester prices at end of 1Q2020 impacted on the Company's Stock Loss & NRV of THB 38 million. Consequently, the Company reported Adjusted EBITDA of THB 339 million, an increase of THB 319 million or 1,595% from 1Q2019 when deducting the effect of Stock Loss & NRV.

Operating performance comparison between 1Q2020 vs. 4Q2019

On quarter by quarter basis, sales revenue in 1Q2020 increased by THB 1,404 million or 48%. This was because an average of methyl ester selling price improved in a relation to the rising of CPO price. Despite, sales volume of methyl ester reduced by 5% because in 4Q2019, there were extra demand from fuel traders under section no.7 that prepared the B10 stock for new B10 mandatory in the beginning 2020.

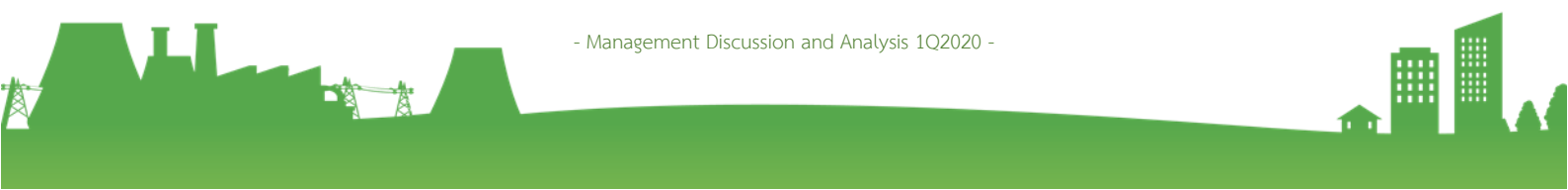
Based on above factors, in 1Q2020, the Company had EBITDA of THB 301 million, an increase of THB 130 million or 76%. When deducting the effect of Stock Loss & NRV of THB 38 million, Adjusted EBITDA was recorded at THB 339 million, rose by THB 202 million or 147% from previous quarter.

Fatty Alcohol (FA) Business Unit Operating Performance

Exhibit 6 : Keys Operating Performance of FA Business Unit

Fatty Alcohols Business	1Q2020	1Q2019	% YoY	4Q2019	% QoQ
Utilization (%)	102%	111%	-9%	74%	28%
Sales Volume (Ton)	20,938	24,798	-16%	24,539	-15%
Revenue from Sales (million baht)	881	1,102	-20%	900	-2%
EBITDA (million baht)	44	139	-68%	55	-20%
EBITDA margin (%)	5.0%	12.6%	-7.6%	6.1%	-1.1%
Stock Gain/(Loss) & NRV	130	-56	-332%	-47	-377%
Adjusted EBITDA (million baht) ⁽¹⁾	-86	195	-144%	102	-184%
Adjusted EBITDA Margin (%)	-9.8%	17.7%	-27.5%	11.3%	-21.1%

Note: (1) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV



Operating performance comparison between 1Q2020 vs. 1Q2019

In 1Q2020, fatty alcohols business recorded sales revenue of THB 881 million, a decrease of THB 221 million or 20% from 1Q2019 primarily due to the reduction of fatty alcohols sales volume by 16% to stood at 20,938 tons from slowing down of fatty alcohols demand. The main cause was COVID-19 outbreak, attributed to the worldwide buyers' lockdown such as China, India and Europe. While, in 1Q2019, the supply of fatty alcohols market was tight due to a permanent shutdown of synthetic fatty alcohols plant in Europe. As mentioned above, the profitability of fatty alcohols business decreased. Nonetheless, the Company had EBITDA of THB 44 million, dropped by 68% from 1Q2019 and had Adjusted EBITDA of THB -86 million, a decrease of 144% from 1Q2019 when deducing impact from Stock Gain & NRV of THB 130 million.

Operating performance comparison between 1Q2020 vs. 4Q2019

On quarter by quarter basis, sales revenue of fatty alcohols business in 1Q2020 was at THB 881 million, slightly decreased from previous quarter. Although, sales volume of fatty alcohols declined by 15%, on the other hand, an average of natural fatty alcohols price increased following upward CPKO price. However, the Company had EBITDA of THB 44 million, a decrease of 20% compared to prior quarter. The primary cause was fluctuation of CPKO price, resulted in a decline in profitability of fatty alcohols. Despite, CPKO price moved upward compared to previous quarter, the average of product price was unable to catch up CPKO price immediately. When deducing impact from Stock Gain & NRV of THB 130 million in 1Q2020, Adjusted EBITDA was recorded at THB -86 million, a decrease of 184%.

Consolidated Profit & Loss statement

Exhibit 7 : Consolidated Profit & Loss Statement comparison of 1Q2020, 1Q2019 and 4Q2019

	1Q2020		1Q2019		YoY		4Q2019		QoQ	
	ลบ.	%	ลบ.	%	ลบ.	%	ลบ.	%	ลบ.	%
Sale Revenue	5,227	100	2,816	100	2,411	86	3,842	100	1,385	36
Feedstock	(4,292)	(82)	(1,975)	(70)	(2,317)	117	(2,872)	(75)	(1,420)	49
Net Realizable Value (NRV)	(7)	(0)	(7)	(0)	-	-	4	0	(11)	(275)
Product to Feed Margin	928	18	834	30	94	11	974	25	-46	(5)
Variable Costs	(411)	(8)	(403)	(14)	(8)	2	(393)	(10)	(18)	5
Fixed Costs	(154)	(3)	(133)	(5)	(21)	16	(231)	(6)	77	(33)
Stock Gain/(Loss)	99	2	(67)	(2)	166	(248)	(17)	(0)	116	(682)
SG&A	(127)	(2)	(112)	(4)	(15)	13	(129)	(3)	2	(2)
Other Income	10	0	22	1	(12)	(55)	22	1	(12)	(55)
EBITDA	345	7	141	5	204	145	226	6	119	53
Depreciation and Amortization	(154)	(3)	(111)	(4)	(43)	39	(132)	(3)	(22)	17
EBIT	191	4	30	1	161	537	94	2	97	103
Net Financial Costs	(11)	(0)	(4)	(0)	(7)	175	(6)	(0)	(5)	83
FX Gain/Loss ⁽¹⁾	18	0	(3)	(0)	21	(700)	(1)	(0)	19	(1,900)
Share of Profit/(Loss) from investment	59	1	1	0	58	5,800	8	0	51	638
Income Tax Expenses	(18)	(0)	(4)	(0)	(14)	350	2	0	(20)	(1,000)
Net Profit bef extra items	239	5	20	1	219	1,095	97	3	142	146
Extra item net of tax ⁽²⁾	-	-	2	0	(2)	(100)	94	2	(94)	(100)
Net Profit after extra items	239	5	22	1	217	986	191	5	48	25

Notes :

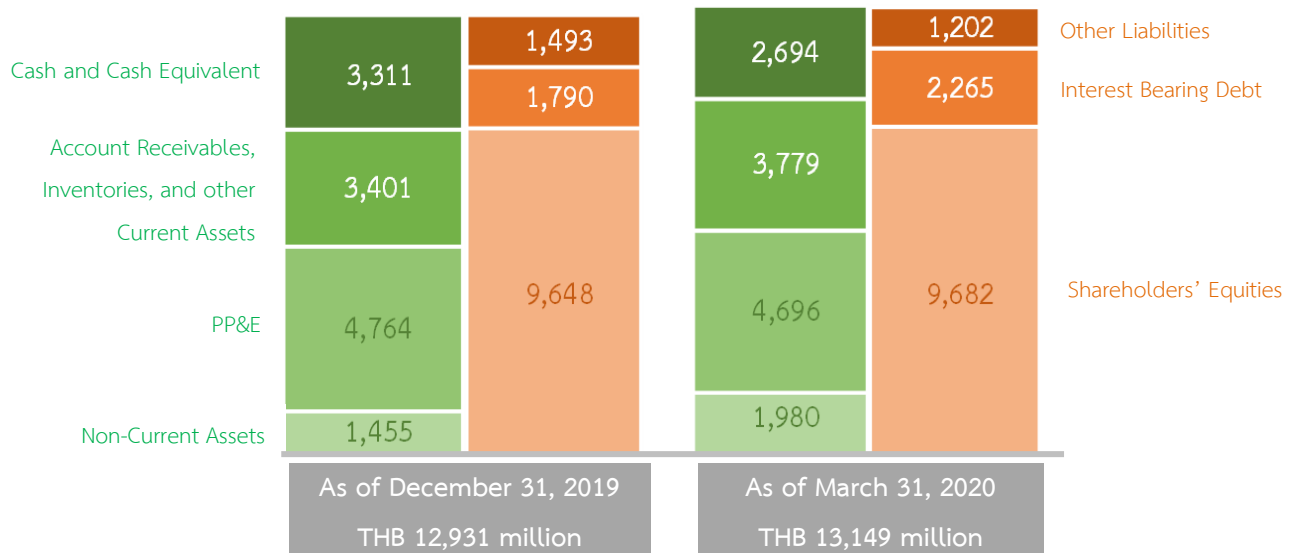
(1) Including Gain/(Loss) from FX and Derivatives

(2) Extra items were from the reversal of inventory shortfall damage and deferred tax assets/liabilities



Statement of Financial Position

Exhibit 8 : Consolidated Financial Position as of March 31, 2020 and as of December 31, 2019



Assets

As of March 31, 2020, the Company had total assets of THB 13,149 million, an increase of THB 218 million compared to December 31, 2019 in which key changes are described as follow;

1. Non-current assets increased by THB 457 million mainly from;
 - 1.1 The right of use (ROU) asset increased by THB 485 million following the new standard for leases under Thai Financial Reporting Standards 16 (TFRS 16).
 - 1.2 Investments in Joint Ventures and Associates increased by THB 59 million primarily due to share of profit from investment in Joint Ventures.
 - 1.3 PP&E decreased by THB 68 million due to a depreciation in 1Q2020.
 - 1.4 Deferred tax asset declined by THB 18 million.
2. Current assets decreased by THB 239 million mainly from;
 - 2.1 A decline in cash and cash equivalent THB 617 million due to operating and construction payment for refined glycerine project 2.
 - 2.2 An increasing of inventories of THB 332 million caused by the rising of raw material and methyl ester prices.
 - 2.3 Accounts receivable and other accounts receivables increased by THB 55 million caused by the rising of methyl ester and fatty alcohols selling prices compared to end of 2019.

Liabilities

As of March 31, 2020, the Company had total liabilities of THB 3,467 million, an increase of THB 184 million or 6% compared to December 31, 2019, mainly attributed to

1. The lease liability increased by THB 475 million which is accounted for similarly to the right of use asset under TFRS 16.
2. Accrued dividend increased by THB 205 million due to the approval the Company's Board of Directors on March 27, 2020.
3. Accounts payable and other accounts payables decreased by THB 484 million due to an extremely decline in raw material prices compared to end of FY2019.

Shareholder's equities

As of March 31, 2020, the Company had total shareholder's equity of THB 9,682 million, an increase of THB 34 million compared to December 31, 2019. This was the net profit of THB 239 million in 1Q2020 and the announcement of interim dividend payment of THB 205 million as the approval of the Company's Board of Directors on March 27, 2020.

Statement of Cash Flows

The Company had cash used in operating activities of THB 524 million which comprised of cash from the net profit of THB 239 million, the adjustment for non-cash items, a decline in accounts payable, an increasing of accounts receivable and inventories.

The Company had cash from investing activities of THB 224 million caused by a decline in deposits with financial institutions of THB 300 million and cash spending for PP&E and intangible assets of THB 84 million mainly from investment in refined glycerine project 2 and interest income of THB 8 million.

The Company had cash flow spending for financial activities of THB 25 million, which was spent for financial lease and interest payment.

Key Financial Ratios

Exhibit 9 : Key Financial Ratios comparison of 1Q2020, 1Q2019 and 4Q2019.

Key Financial Ratio	1Q2020	1Q2019	4Q2019
Current Ratio (x)	4.0	5.2	3.6
EBITDA to Sales Revenue (%)	6.6	5.0	5.9
Net Profit to Sales Revenue (%)	4.5	0.8	4.9
Return on Total Assets (%)	4.1	(10.9)	2.3
Return on Equity (%)	3.2	(11.5)	1.0
Debt to Equity (x)	0.4	0.3	0.3
Interest Bearing Debt to Equity (x)	0.2	0.2	0.2
Interest Bearing Debt to EBITDA (x)	3.2	2.5	3.6

Notes:

Current ratio (x)	=	Current assets divided by current liabilities
EBITDA to sales revenue (%)	=	EBITDA divided by sale volume
Net profit to sales revenue (%)	=	Net profit divided by sales revenue
Return on total assets (%)	=	Net profit divided by average total assets
Return on equity (%)	=	Net profit divided by average equities attributed to owners of the company
Debt to equity (x)	=	Total debt divided by shareholders' equities
Interest bearing debt to equity (x)	=	Interest bearing debt divided by shareholder' equities
Interest bearing debt to EBITDA (x)	=	Interest bearing debt divided by EBITDA

