

Management Discussion and Analysis  
For the Operating Results of FY2022



Global Green Chemicals Public Company Limited



## CONTENTS

Executive Summary .....	3
Operating Performance .....	4
Methyl Ester (Biodiesel) Business Unit .....	6
Fatty Alcohols (FA) Business Unit.....	12
Market and Business Outlook in 2023 .....	18
Consolidated Statement of Income.....	21
Statement of Financial Position .....	23
Statement of Cash Flows .....	24
Key Financial Ratios .....	25

## Executive Summary

As for performance in FY2022, Global Green Chemicals Public Company Limited (“the Company”) recorded the total revenue of THB 25,084 million, rose by 20% from FY2021 and Adjusted EBITDA of THB 2,125 million, rose by 90% from the previous year. In addition, the Company had a Stock Loss & NRV of THB 393 million, as a result, the Company posted the net profit before extra item of THB 849 million improved by THB 75 million or 10% from FY2021.

In 2021, the Company has recorded an extra item, which is the provision of contingent liabilities from the case for damages in lawsuits THB 444 million (details as shown in the Management Discussion and Analysis FY2021) resulting in the net profit after extra item of THB 330 million (or profit per share of THB 0.32). While in 2022, the Company has recorded an extra item of THB 104 million from the setting up of deferred tax assets from the tax benefits from the Company’s restructuring by the entire business transfer of Thai Fatty Alcohols Co., Ltd. (TFA), which is legally effective from October 1, 2022 onwards, resulting in the net profit for the year 2022 after the extra item of THB 953 million (or profit per share of THB 0.93), an increase of THB 623 million or 189% from the previous year.

For the performance of the methyl ester (ME) business in FY2022, the sales volume decreased by 9% compared to FY2021, stood at 293,466 tons, caused by the government policy for the adjustment of biodiesel mandatory in high speed diesel fuel to be only B5 from February 5 until October 9, 2022 and up to B7 From October 10, 2022 to March 31, 2023 to mitigate the impact on people's cost of living from the energy price crisis, directly reduced the overall methyl ester consumption in the country significantly. While the methyl ester selling price increased by 13% compared to the previous year according to an increase of domestic CPO price in line with crude oil prices. Even though there was the restructuring of the methyl ester price formula by the Energy Policy and Planning Office (EPPO), Ministry of Energy effective from October 3, 2022 onwards which the restructuring of formula caused the methyl ester price to be dropped. However, the Company recorded revenue of methyl ester business increased by 7% compared to the prior year.

For the performance of the fatty alcohols (FA) business in FY2022, the Company’s sales volume of fatty alcohols increased by 13% compared to the previous year owing to the production volume in FY2022 was higher than FY2021 due to the longer shutdown period of the fatty alcohols plant for catalyst changing and maintenance than usual in FY2021 to improve production and product quality. While the company had the shorter shutdown period in FY2022, together with an increase of fatty alcohols sale volume to other countries such as India, South America and Africa to compensate for the decrease in sales volume in China due to the COVID-19 pandemic there have not yet improved. In addition, an average price of natural fatty alcohols

has increased in line with the crude palm kernel oil price (CPKO-MPOB) due to a decrease in production capacity affected from labor shortage in Malaysia including Domestic Market Obligation (DMO) measures that limit the export of palm oil (including fatty alcohols and refined glycerine) in Indonesia. Meanwhile the demand for fatty alcohols increased owing to the economic recovery. As a result of these factors, fatty alcohols sales revenue rose by 55% compared to the previous year.

As of December 31, 2022, the Company has total assets in the amount of THB 13,633 million which comprised of cash and short-term investment amounting to THB 2,734 million, with total liabilities of THB 3,306 million and total equities of THB 10,327 million.

## Operating Performance

Exhibit 1: Consolidated Company's Performance comparison of 4Q2022 vs. 4Q2021 vs. 3Q2022 and FY2022 vs. FY2021

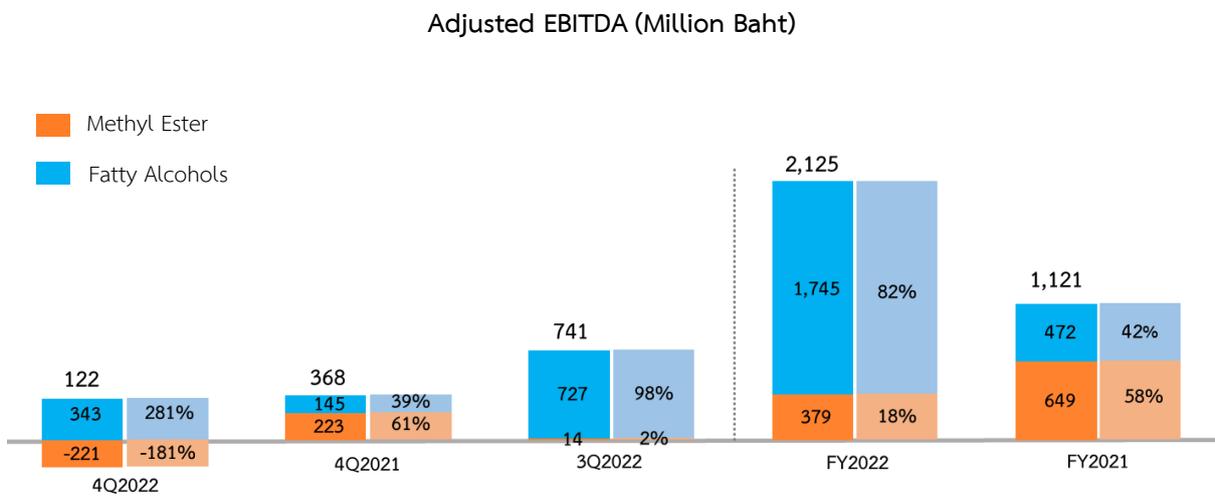
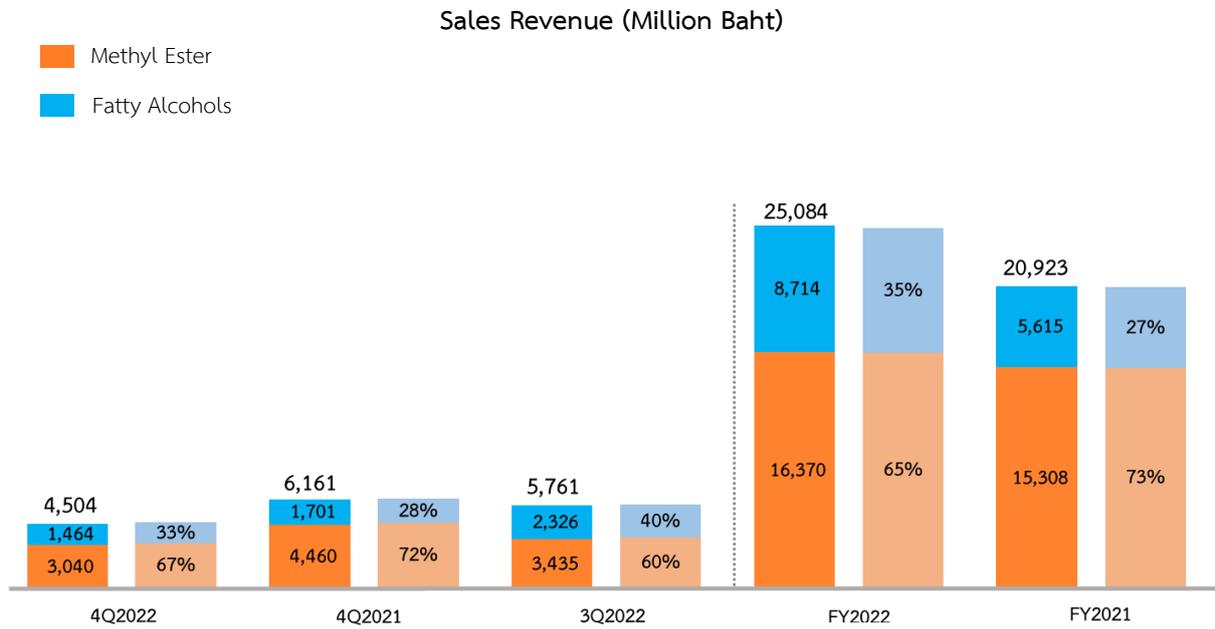
UNIT: Million Baht	4Q2022	4Q2021	% YoY	3Q2022	& QoQ	FY2022	FY2021	% YoY
Sales Revenue	4,504	6,161	-27%	5,761	-22%	25,084	20,923	20%
EBITDA	57	596	-90%	300	-81%	1,732	1,524	14%
EBITDA Margin (%)	1.3%	9.7%	-8.4%	5.2%	-3.9%	6.9%	7.3%	-0.4%
Stock Gain/(Loss) & NRV	(65)	228	-129%	(441)	-85%	(393)	403	-198%
Adjusted EBITDA <sup>(1)</sup>	122	368	-67%	741	-84%	2,125	1,121	90%
Adjusted EBITDA Margin (%)	2.7%	6.0%	-3.3%	12.9%	-10.2%	8.5%	5.4%	3.1%
<b>Net Profit</b>	<b>(130)</b>	<b>356</b>	<b>-137%</b>	<b>70</b>	<b>-286%</b>	<b>849</b>	<b>774</b>	<b>10%</b>
Provision of contingent liabilities from lawsuit	-	(444)	n.a.	-	n.a.	-	(444)	n.a.
Income / (Expense) of Income Tax	104	-	n.a.	-	n.a.	104	-	n.a.
Extra items <sup>(2)</sup>	104	(444)	-123%	-	n.a.	104	(444)	-123%
<b>Net Profit after extra item</b>	<b>26</b>	<b>(88)</b>	<b>-70%</b>	<b>70</b>	<b>-137%</b>	<b>953</b>	<b>330</b>	<b>189%</b>
<b>EPS (Baht/Share)</b>	<b>(0.03)</b>	<b>(0.09)</b>	<b>-67%</b>	<b>0.07</b>	<b>-143%</b>	<b>0.93</b>	<b>0.32</b>	<b>191%</b>

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

(2) Extra Items from the provision of contingent liabilities from lawsuit and deferred income tax items



Exhibit 2 : Sales revenue and Adjusted EBITDA breakdown by business unit comparison of 4Q2022 vs. 4Q2021 vs. 3Q2022 and FY2022 vs. FY2021 (million THB)



## Operating Performance by Business Unit

### Methyl Ester (Biodiesel) Business Unit

Exhibit 3: Product and Feedstock Prices

Average Price	4Q2022	4Q2021	% YoY	3Q2022	% QoQ	FY2022	FY2021	% YoY
Methyl Ester (B100) (Baht/litre) <sup>(1)</sup>	35.07	46.81	-25%	39.47	-11%	46.38	41.00	13%
Methyl Ester (B100) (Baht/kg) <sup>(2)</sup>	40.55	54.12	-25%	45.62	-11%	53.61	47.43	13%
Crude Palm Oil (CPO) (Baht/kg) <sup>(3)</sup>	32.59	44.61	-27%	35.34	-8%	43.59	37.99	15%
EPPO P2F (Baht/kg) <sup>(4)</sup>	4.25	3.11	37%	3.11	37%	3.39	3.11	9%

	January 1, 2020 - October 10, 2021	: B7/B10/B20
	October 11 - 31, 2021	: B6
Biodiesel Mandate	November 1 - 30, 2021	: B7/B10/B20
	December 1, 2021 - February 4, 2022	: B7
	February 5 - October 9, 2022	: B5
	October 10, 2022 - March 31, 2023	: B7

- 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 and MeOH price according to EPPO's B100 formula

### Market overview comparison between 4Q2022 vs. 4Q2021

For the methyl ester market overview in 4Q2022, an average of crude palm oil price (CPO-DIT) was at 32.59 Baht/kg., dropped by 12.02 Baht/kg. or 27% compared to the same period last year, which decreased from increasing production following the favorable climate for production. The output of CPO in 4Q2022 was at 911,897 tons from 630,479 tons in 4Q2021, resulting in the domestic CPO stock at the end of 4Q2022 of 349,000 tons, while at the end of 4Q2021 was at 172,657 tons.

In terms of the demand for methyl ester in 4Q2022, which tends to decrease compared to the same period last year, stood at 349,152 tons, a drop of 2,245 tons or 0.6%, owing primarily to the government policy for the adjustment of biodiesel mandatory in high-speed diesel fuel, which are as follows:



4Q2021		4Q2022	
Period	Mandatory	Period	Mandatory
October 1 – 10, 2021	B7/B10/B20	February 5 - October 9, 2022	B5
October 11 - 31, 2021	B6	October 10, 2022 - March 31, 2023	B7
November 1 - 30, 2021	B7/B10/B20		
December 1, 2021 - February 4, 2022	B7		

According to the government’s policy for the adjustment of biodiesel mandatory in high-speed diesel fuel, the overall demand for methyl ester in the market remains stable. Although the overall diesel consumption has improved as a result of improved the COVID-19 pandemic situation, the government has declared an end to the emergency situation in all affected areas effective from October 1, 2022 onwards, and people are encouraged to resume their normal lives.

The methyl ester price in 4Q2022 was likely to decrease to 40.55 Baht/kg., dropped by 13.57 Baht/kg., or 25% compared to the same period last year, which depreciated in line with the domestic CPO price and the restructuring of the methyl ester price formula by the Energy Policy and Planning Office (EPPO), Ministry of Energy with effective from October 3, 2022 onwards.

The restructuring of the methyl ester (B100) price formula details as follows:

$$\text{Restructuring of B100 price formula} = \frac{(B100_{CPO} \times Q_{CPO}) + (B100_{ST} \times Q_{ST})}{Q_{Total}}$$

Methyl ester (B100) price formula (2010 – October 2, 2022)				Methyl ester (B100) price formula <u>Revised</u> (October 3, 2022 onwards)			
Total production cost				Total production cost			
B100 (CPO)	= 0.94 CPO	+ 0.1 MeOH	+ 3.82	B100 (CPO)	= 0.94 CPO	+ 0.1 MeOH	+ 3.74
B100 (RPO)	= 0.93 RPO	+ 0.1 MeOH	+ 2.69	B100 (ST)	= 0.86 ST	+ 0.09 MeOH	+ 3.53
B100 (ST)	= 0.86 ST	+ 0.09 MeOH	+ 2.69				

Note:

- Crude Palm Oil (CPO) which CPO price announced by the Department of Internal Trade (DIT)
- Refined Palm Oil (RPO) or Refined Bleached Deodorized Palm Oil (RBDPO) which RPO price is CPO price plus 3 Baht.
- Palm Stearin (ST)
- B100<sub>CPO</sub> : Methyl ester (B100) price (Baht/litre) which produced from CPO
- B100<sub>ST</sub> : Methyl ester (B100) price (Baht/litre) which produced from ST
- Q<sub>CPO</sub> : Methyl ester (B100) volume which produced from CPO and RPO by monthly (litre/day) announced by the Department of Internal Trade (DIT)
- Q<sub>ST</sub> : Methyl ester (B100) volume which produced from ST by monthly (litre/day) announced by the Department of Internal Trade (DIT)
- Q<sub>Total</sub> : Total Methyl ester (B100) volume (litre/day)

Ref: Energy Policy and Planning Office (EPPO), Ministry of Energy



The restructuring of the methyl ester (B100) price formula (new cost plus). The calculation price from RPO has been cancelled, which is the highest B100 price formula. Therefore, when calculating the B100 price according to the restructuring formula, As a result, the overall of B100 price will decrease, although there is an increase in the proportion of total production cost in the formula for calculating B100 price which produced from CPO and ST.

### Market overview comparison between 4Q2022 vs. 3Q2022

For the overview of methyl ester market in 4Q2022, an average of crude palm oil price (CPO-DIT) was at 32.59 Baht/kg. decreased from 3Q2022 by 2.75 Baht/kg. or 8%, which is decreasing due to the lower demand in China from the COVID-19 pandemic situation in China has not yet improved according to the increased number of COVID-19 infections. In addition, an announcement by the European Union (EU) to prevent the import of products from deforestation to be sold in the EU market coincided with the level of CPO stocks in Malaysia rising by more than 2 million tons, the highest level in 3 years, resulting in a decline in the global price. While the domestic CPO production capacity increased significantly during 4Q2022, with the highest production capacity of 341,988 tons in October 2022, the domestic CPO stocks were at a high level of more than 300,000 tons, while the export volume was close to that of 3Q2022, causing the domestic CPO price to decline in accordance with the global price and domestic factors.

The demand for methyl ester in 4Q2022 was improved compared to the previous quarter, stood at 349,152 tons, an increase of 93,120 tons or 36%, owing primarily to the government policy for the adjustment of biodiesel mandatory in high speed diesel fuel from B5 to B7 from October 10, 2022 until March 31, 2023 to support the CPO price, which decreased in line with the global prices, couple with the improved COVID-19 pandemic situation in Thailand and the cancellation of the emergency situation by the Government in any areas effective from October 1, 2022 onwards. Then, the demand for methyl ester in the country has improved as people returned to their normal lives and the demand for diesel fuel increased.

For the methyl ester price in 4Q2022, it was down to 40.55 Baht/kg., decreased by 5.07 Baht/kg., or 11% compared to the previous quarter, following a decline of the domestic CPO price and the restructuring of the methyl ester price formula by the Energy Policy and Planning Office (EPPO), Ministry of Energy with effective from October 3, 2022 onwards.

### Market overview comparison between FY2022 vs. FY2021

For the overview of methyl ester market in FY2022, an average of crude palm oil price (CPO-DIT) was at 43.59 Baht/kg. increased from FY2021 by 5.60 Baht/kg. or 15% due to the higher of crude oil prices which pressured the replacement oil price to be high as well, the tight supply of vegetable oil in the United States because soybean oil, which can be used in biodiesel production, caused the soybean oil price to rise. This put upward pressure on palm oil prices, which can be used as substitutes raw materials. In addition, the Indonesian government has announced an adjusted proportion of domestic CPO and palm olein sale volumes to 30% from 20% in 1Q2022 and a ban on exports in 2Q2022, following Domestic Market Obligation (DMO) policy. Due to the war between Russia and Ukraine, which is a major exporter of sunflower oil in the world, continued pressure caused the supply of vegetable oil in the world market to decline. The CPO export volume in FY2022 increased to 1,094,547 tons from 602,826 tons in FY2021, or 82%, resulting in domestic CPO prices adjusting in line with global prices.

On the methyl ester demand side in FY2022, it has slightly decreased from the previous year, stood at 1,197,193 tons, dropped by 250,838 tons or 17%. Although the overall diesel consumption in Thailand has increased due to the relaxation of travel control measures arising from the improved COVID-19 pandemic situation. But, due to the government policy for the adjustment of biodiesel mandatory in high speed diesel fuel to be only B5 from February 5 until October 9, 2022 and up to be B7 From October 10, 2022 to March 31, 2023 to mitigate the impact on people's cost of living from the energy price crisis, this directly reduced the overall methyl ester consumption in the country significantly.

For the supply side of the methyl ester market in FY2022, it improved due to the expansion of production capacity from the existing and new entering manufacturers by 300,000 tons per year, resulting in higher competition in the market. The overall average utilization rate of the industry in FY2022 has decreased to approximately 35% – 40%.

The methyl ester price in FY2022 rose to 43.59 Baht/kg., increased by 5.60 Baht/kg., or 15% compared to FY2021 in line with the domestic CPO price despite of the restructuring of the methyl ester price formula by the Energy Policy and Planning Office (EPPO), Ministry of Energy with effective from October 3, 2022 onwards.

Exhibit 4: Keys Operating Performance of ME Business Unit

Methyl Ester Business	4Q2022	4Q2021	% YoY	3Q2022	% QoQ	FY2022	FY2021	% YoY
Utilization (%)	58%	63%	-5%	56%	2%	57%	64%	-7%
Sales Volume (ton)	76,125	80,642	-6%	73,785	3%	293,466	323,462	-9%
Sales Volume (million litre) <sup>(1)</sup>	88	93	-6%	85	3%	339	374	-9%
Sales Revenue (million baht)	3,040	4,460	-32%	3,435	-11%	16,370	15,308	7%
EBITDA (million baht)	(207)	324	-164%	(227)	-9%	235	739	-68%
EBITDA margin (%)	-6.8%	7.3%	-14.1%	-6.6%	-0.2%	1.4%	4.8%	-3.4%
Stock Gain/(Loss) & NRV (million baht)	14	101	-86%	(241)	-106%	(145)	90	-261%
Adjusted EBITDA (million baht) <sup>(2)</sup>	(221)	223	-199%	14	-1,679%	380	649	-41%
Adjusted EBITDA Margin (%)	-7.3%	5.0%	-12.3%	0.4%	-7.7%	2.3%	4.2%	-1.9%

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

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

### Operating performance comparison between 4Q2022 vs. 4Q2021

In 4Q2022, the Company recorded methyl ester sales revenue of THB 3,040 million, decreased by 11% from 4Q2021 primarily due to the methyl ester selling price dropping in relation to CPO price from increased production following the favorable climate to production, as well as the restructuring of the methyl ester price formula by the Energy Policy and Planning Office (EPPO), Ministry of Energy with effective from October 3, 2022 onwards, combined with the lower diesel demand from the biodiesel mandatory adjustment policy as above market situation, resulting in a 6% drop in methyl ester sales volume.

In addition, the Company's refined glycerine sales volume and selling price increased by 2,717 tons and 1,288 USD/ton from the previous year, with the selling price in 4Q2021 at 978 USD/ton due to an increase in demand especially for cleaning products, and a decrease in supply as a result of the lower biodiesel production due to the biodiesel mandatory adjustment policy during FY2022.

According to fluctuation of CPO price and selling price of methyl ester, the Company recorded Stock Gain & NRV of THB 14 million in 4Q2022. The Company posted EBITDA of THB -207 million, which decreased from the same quarter of the previous year by 164%. However, when deducting the effect of Stock Gain & NRV, the Company reported Adjusted EBITDA of THB -221 million, a decrease of THB 444 million from 4Q2021 or 199% and an Adjusted EBITDA Margin of -7.3%.



### Operating performance comparison between 4Q2022 vs. 3Q2022

In 4Q2022, the Company recorded methyl ester sales revenue of THB 3,040 million, a decrease of THB 395 million or 11% from the previous quarter, mainly from the methyl ester selling price dropping by 11% which declined in line with CPO prices due to the lower demand in China from the COVID-19 pandemic situation in China, which has not yet improved according to the increased number of COVID-19 infections, together with the level of CPO stocks in Malaysia rose by more than 2 million tons, the highest level in 3 years. However, the demand for methyl ester in 4Q2022 was improved compared to the previous quarter owing to the government policy for the adjustment of biodiesel mandatory in high speed diesel fuel from B5 to B7 from October 10, 2022 until March 31, 2023 to support the CPO price which decreased in line with the global prices, coupled with the improved COVID-19 pandemic situation in Thailand, where people have returned to their normal lives, resulting in an increase of demand for diesel fuel increased. As a result, in 4Q2022 methyl ester sales volume increased by 3% and the Company recorded Stock Gain & NRV of THB 14 million and EBITDA of THB -207 million, a decrease by 9% from the previous quarter. When deducting the effect of Stock Gain & NRV, Adjusted EBITDA was reported at THB -221 million, a decrease of THB 235 million or more than 1,000% from 3Q2022 and an Adjusted EBITDA Margin of -7.3%.

### Operating performance comparison between FY2022 vs. FY2021

In FY2022, the Company posted methyl ester business sales revenue of THB 16,370 million, an increase of THB 1,062 million or 7% from FY2021, owing primarily to a 13% increase of methyl ester selling price following upward CPO price, which was in line with global price due to the higher export volume of CPO in Thailand according to the market situation as above mentioned. While methyl ester sales volume decreased by 9% in comparison with last year, this was due to the government policy for the adjustment of biodiesel mandatory in high speed diesel fuel to be only B5 from February 5 until October 9, 2022 and up to be B7 From October 10, 2022 to March 31, 2023, to mitigate the impact on people's cost of living from the energy price crisis, directly reduced the overall methyl ester consumption in the country. However, the Company recorded higher refined glycerine sales revenue due to the increase in selling price and sales volume of refined glycerine.

Following the considerably volatility of CPO prices in FY2022, the Company posted Stock Loss & NRV of THB 145 million. In FY2022, the Company recorded EBITDA of THB 235 million, decreased from the same period of prior year by 68%. When deducting the effect of Stock Loss & NRV as aforementioned, the Company reported Adjusted EBITDA of THB 380 million, a decrease of THB 269 million or 41% from FY2021 and Adjusted EBITDA Margin was at 2.3%

## Fatty Alcohols (FA) Business Unit

Exhibit 5: Products and Feedstock's prices

Average Price (USD per ton)	4Q2022	4Q2021	% YoY	3Q2022	% QoQ	FY2022	FY2021	% YoY
Fatty Alcohols <sup>(1)</sup>								
- Short Chain	4,394	2,998	47%	4,364	1%	4,248	2,434	75%
- Mid Cut	1,474	2,278	-35%	1,549	-5%	2,112	2,021	5%
- Long Chain	1,730	2,184	-21%	2,570	-33%	2,657	1,631	63%
Average Fatty Alcohols <sup>(2)</sup>	1,752	2,301	-24%	2,042	-14%	2,419	1,937	25%
Crude Palm Kernel Oil (CPKO) <sup>(3)</sup>	949	1,684	-44%	1,148	-17%	1,562	1,362	15%
Market P2F of Fatty Alcohols	595	247	141%	641	-7%	514	275	87%

Note : (1) Reference Price of ICIS

(2) Average price of fatty alcohols with production proportion: Short Chain 7% Mid Cut 64% and Long Chain 29%

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

### Market overview comparison between 4Q2022 vs. 4Q2021

For the fatty alcohols market overview in 4Q2022, an average crude palm kernel oil price (CPKO-MPOB) decreased from the same quarter of the previous year, stood at 949 USD/ton, dropped 735 USD/ton or 44% due to the CPKO stock in the international market increasing to 252,000 tons, a double increase from the same period last year, impacted by volume exports to Europe and India, which were down by 31% compared with the same period last year, including with a concern about the lockdown measures and the COVID-19 pandemic situation in China. As a result, the CPKO price declined compared to the same period last year.

On the demand side, in 4Q2022, demand declined from the same period last year. The main reason is that most of buyers were relieved of the improving supply situation after major producers in Malaysia, Indonesia and the United States resumed their normal operations compared to the same period last year, when the supply situation was tight due to measures to control pollution and energy costs in China, forcing many major producers with total production capacity of over 280,000 tons per year to temporarily halt their production. Meanwhile, major producers in Indonesia and Thailand with total production capacity of 400,000 tons per year also had temporarily shutdown for maintenance during that period.



In addition, the impact of the uncertainty of the Russian-Ukrainian war causing an economic recession, USD currency appreciation and the decrease in raw material prices caused some buyers to begin to delay their purchases and hoard fewer products, especially less demand for Long Chain fatty alcohols in the Antioxidant industry for use in the production of the Personal Protective Equipment (PPE) due to the recovered COVID-19 pandemic situation in many countries. As a result, the overall fatty alcohols market was rather sluggish.

An average price of natural fatty alcohols in 4Q2022 has decreased compared to the same period of the previous year following the depreciation of raw material prices. The Mid Cut fatty alcohols prices dropped to 1,474 USD/ton, a decrease of 804 USD/ton or 35% as well as the Long Chain fatty alcohols price down to 1,730 USD/ton, a decrease of 454 USD/ ton or 21%, while the Short Chain fatty alcohols prices rose to 4,394 USD/ton, an increase of 1,396 USD/ton, or 47% owing to the tight supply.

### [Market overview comparison between 4Q2022 vs. 3Q2022](#)

For the fatty alcohols market overview in 4Q2022, an average crude palm kernel oil price (CPKO-MPOB) decreased from the previous quarter, stood at 949 USD/ton, dropped 199 USD/ton or 17% due to the concerns about demand in China caused by the ZERO-COVID measure announcement, as well as a decrease in export volume in 4Q2022. Including the capacity production of CPKO in Malaysia in 4Q2022, production was increased while export volume dropped to the lowest level in 5 years, resulting in a high level of CPKO stock at the end of December at 250,000 tons. Although there was more export to China, this was due to China's tendency to relax its ZERO-COVID measures to revitalize the domestic economy. But, the overall export volume remained stable from such factors. As a result, the CPKO price decreased in 4Q2022 compared to the previous quarter.

On the demand side, natural fatty alcohols in 4Q2022 have dropped from the previous quarter. Although 4Q2022 is the high season for cosmetics and home & personal care products, the main buyer China has stopped production during the long holiday due to the National Day during October 1-7, 2022. Coupled with the impact of the uncertainty of the Russian-Ukrainian war causing an economic recession, USD currency appreciation, and the decrease in raw material prices, some buyers delayed their purchases and hoard fewer products. Mid Cut fatty alcohols, in particular, price declined in line with the trend of improving raw material prices and supply, as well as less demand in Long Chain fatty alcohols in the Antioxidant industry for use in the production of Personal Protective Equipment (PPE) due to the COVID-19 pandemic situation in many countries having recovered, and less demand for Short Chain Fatty Alcohols because some perfume manufacturers in China shutdown plant for maintenance in October 2022.

The overall supply side of the fatty alcohols slightly improved owing to the main manufacturers in Indonesia and Malaysia, with a total production capacity of 650,000 tons per year, resuming normal production after solving problem in the production process during at the end of August to early September 2022. While the Company has temporarily shutdown for catalyst changing during mid-September to the beginning of October 2022 as well. There is also a manufacturer in Indonesia, with a total production capacity of 200,000 tons per year, that has temporarily shutdown to solve the production process problem in November 2022, and a manufacturer in China, with a total production capacity of 60,000 tons per year, has temporarily shutdown for maintenance for about 2 weeks in November 2022 as well.

The Mid Cut fatty alcohols prices dropped to 1,474 USD/ton in line with sluggish market demand and depreciating raw material prices, a decrease of 75 USD/ton or 5%, while the Long Chain fatty alcohols price dropped to 1,730 USD/ton, a decrease of 840 USD/ton or 33%, and the Short Chain fatty alcohols price remained stable at 4,394 USD/ton, an increase of 30 USD/ton or 1% due to lower supply than other grades of fatty alcohols.

#### [Market overview comparison between FY2022 vs. FY2021](#)

The overall average CPKO-MPOB price for FY2022 was 1,562 USD/ton, up 200 USD/ton or 15% from FY2021, In 1H2022, the CPKO price increased due to the decline in production capacity due to labor shortage in Malaysia and the Domestic Market Obligation (DMO) measurement of Indonesia to limit palm oil exports (including fatty alcohols and glycerine), while the demand has increased due to the economic recovery. The COVID-19 pandemic situation has improved in 2H2022, causing CPKO production to increase. At the same time, many buyers are concerned about the global economic recession along with maintaining the COVID-19 measurement and COVID-19 pandemic situation in China had not yet improved, causing Malaysia's exports to decline and the CPKO stock in the international market to increase to a high level of 250,000 tons, causing CPKO price to decline in 2H2022, resulting in a relatively high price compared to the previous year.

On the demand side, natural fatty alcohols in FY2022 tend to be stable compared to the previous year. Despite the fact that the new strain of COVID-19 "Omicron" (B.1.1.529) has spread rapidly and is causing concern in many countries, the COVID-19 pandemic situation in 2H2022 has recovered, and the cancellation of the country's lockdown measurement in both European and American buyers, as well as the Asian region coupled with tight supply in the market, has caused buyers to begin returning to the market. However, overall market demand is also vulnerable to other negative factors such as the volatility of raw material price,

the uncertain situation of the geopolitical conflict between China and Taiwan, Russian-Ukrainian war, which could be prolonged and result in global economic recession, inflation, USD currency appreciation and high transportation costs. As a result, these factors pressures compel buyers to exercise greater caution when making purchases.

The overall supply of the fatty alcohols was tighter in FY2022, mainly from the Domestic Market Obligation (DMO) policy, which was announced by the Indonesian government for the extension of enforcement measures to cover products produced from palm oil (including fatty alcohols and glycerine). As a result, exporters are required to sell fatty alcohols at least 20% to the domestic market between February 15 and March 9, 2022 and up to 30% between March 10 and 17, 2022, resulting in less volume entering the market and more procedures for obtaining export permission. As a result, the delivery of goods to the destination country was delayed. In addition, some manufacturers in United States, Indonesia and Malaysia shutdown plant, causing the overall market capacity to shrink.

The average price of natural fatty alcohols has risen compared to the same period last year. The Mid Cut fatty alcohols prices rose to 2,112 USD/ton, an increase of 91 USD/ton or 5%, as well as the Long Chain fatty alcohols price, which rose to 2,657 USD/ton, an increase of 1,026 USD/ton or 63% and the Short Chain fatty alcohols price increased to 4,248 USD/ton, an increase of 1,814 USD/ton or 75% due to higher raw material prices and tight supply.

Exhibit 6 : Keys Operating Performance of FA Business Unit

Fatty Alcohols Business	4Q2022	4Q2021	% YoY	3Q2022	% QoQ	FY2022	FY2021	% YoY
Utilization (%)	79%	73%	6%	101%	-22%	96%	81%	15%
Sales Volume (Ton)	21,416	21,744	-2%	27,714	-23%	97,413	86,213	13%
Revenue from Sales (million baht)	1,464	1,701	-14%	2,326	-37%	8,714	5,615	55%
EBITDA (million baht)	264	272	-3%	527	-50%	1,497	785	91%
EBITDA margin (%)	18.0%	16.0%	2.0%	22.7%	-4.7%	17.2%	14.0%	3.2%
Stock Gain/(Loss) & NRV	(79)	127	-162%	(200)	-61%	(248)	313	-179%
Adjusted EBITDA (million baht) <sup>(1)</sup>	343	145	137%	727	-53%	1,745	472	270%
Adjusted EBITDA Margin (%)	23.4%	8.5%	14.9%	31.3%	-7.9%	20.0%	8.4%	11.6%

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

### Operating performance comparison between 4Q2022 vs. 4Q2021

The fatty alcohols business recorded sales revenue of THB 1,464 million in 4Q2022, a decrease of 14% from 4Q2021, mainly due to a decrease in average fatty alcohols prices of 24% in line with raw material prices due to the CPKO stock in the international market having doubled from the same period last year. Including the COVID-19 pandemic situation in China, the country has not yet recovered. As a result, the CPKO price declined. In addition, the sales volume of fatty alcohols declined by 2% due to the improved supply situation, causing most buyers to relieve their worries and slow down their purchasing and hoarding of product.

From such details, resulting in the Stock Loss & NRV of THB 79 million. The Company recorded EBITDA of THB 264 million in 4Q2022, a decrease of 3% from 4Q2021. When deducting the effect of Stock Loss & NRV, the Company had Adjusted EBITDA of THB 343 million, improved by 137% and Adjusted EBITDA Margin was at 23.4%.

### Operating performance comparison between 4Q2022 vs. 3Q2022

On a quarter by quarter basis, the Company recorded sales revenue of fatty alcohols in 4Q2022 decreasing by 37% from the previous quarter, mainly due to a 14% decline in average fatty alcohols prices following the volatility of CPKO prices due to the concerns over demand in China with the ZERO-COVID measure announcement, as well as the decreased export volume from the previous quarter including increased capacity production of CPKO in Malaysia in 4Q2022. While export volume drops to the lowest level in 5 years, causing the CPKO price to decline. Likewise, fatty alcohols sales volume decreased by 23%, mainly from main buyer.



China has stopped production during the long holiday due to the National Day (during October 1-7, 2022), coupled with the impact of the uncertainty of the Russian-Ukrainian war causing an economic recession, USD currency appreciation, and the decrease in raw material prices, causing some buyers to delay their purchases and hoard fewer products.

However, the Company recorded EBITDA of THB 264 million, a decrease of 50% compared to 3Q2022. When deducting the effect of Stock Loss & NRV of THB 79 million, the Company had Adjusted EBITDA of THB 343 million, decreased by 53% and Adjusted EBITDA Margin was at 23.4%.

### Operating performance comparison between FY2022 vs. FY2021

For the FY2022, fatty alcohols business recorded sales revenue of THB 8,714 million, increased by THB 3,099 million or 55% from FY2021, owing to a 25% increase of average of fatty alcohols price, which was consistent with an average crude palm kernel oil (CPKO) prices due to tight supply from the labor shortages in Malaysia and the Domestic Market Obligation (DMO) measurement of Indonesia to limit palm oil exports (including fatty alcohols and glycerine). The demand for natural fatty alcohols tends to be stable owing to the recovered COVID-19 pandemic situation and the cancellation of the country's lockdown measurement in both European and American buyers and Asian region, coupled with tight supply in the market, causing buyers to start returning to the market, as aforementioned in the market situation.

In the performance of FY2022, the Company recorded EBITDA of THB 1,497 million, increased from FY2021 by 91%. When deducting impact from Stock Loss & NRV of THB 248 million, Adjusted EBITDA was recorded at THB 1,745 million, increased by 270% and Adjusted EBITDA Margin was at 20%.

## Market and Business Outlook in 2023

### **Methyl Ester Market Outlook**

For the methyl ester demand in 2023, the Company anticipates that it tends to improve from the previous year to increase by 27% from approximately 1.30 million tons/year in 2022, mainly from the government's policy to maintain the proportion of biodiesel mandate to be B7 as main grade until March 31, 2023. It is also expected to increase the proportion of biodiesel mandate in high-speed diesel from B7 to 3 types namely B7, B10 and B20 from April 1, 2023 onwards after the CPO price level adjusted near to normal level. In addition, people are starting to resume their normal lives due to the easing of the COVID-19 pandemic situation, and tourism tends to recover from both domestic and international tourists. Therefore, the Company anticipates that the overall demand of methyl ester in 2023 will tend to increase.

In terms of the overall supply of the methyl ester market in 2023, it will remain stable because there is no expansion of the production capacity from the existing manufacturers and no entry of new manufacturers. The Company anticipates that the average utilization rate of the industry will increase to 50% - 55%.

For the methyl ester price in 2023, the Company anticipates that it tends to drop in 2022, which is depreciating in line with the trend of domestic CPO prices and also from the restructuring of the methyl ester price formula by the Energy Policy and Planning Office (EPPO), Ministry of Energy as described above

### **Fatty Alcohols Market Outlook**

For the natural fatty alcohols demand in 2023, the Company anticipates that it will remain stable to slightly improve from 2022 due to the unravelling of the COVID-19 pandemic situation and the lifting of lockdown measures in buyers' countries such as in Europe, America and Asian region, causing the buyers return to the market, especially the Chinese market, which is the main buyer. As a result, the overall demand has improved. Although the global economic situation tends to be in recession due to the factors such as interest rate, inflation and USD currency appreciation, this has caused the purchasing power in the market to decrease, including the uncertainty of the potentially protracted war between Russia and Ukraine. As a result, overall market demand has not recovered as much as it should.

For the overall supply of natural fatty alcohols in 2023, the Company anticipates that it tends to improve compared to the previous year, when many major manufacturers' had production process problems, causing temporary reduction in production during April and August 2022. In addition, the Indonesian government implemented the Domestic Market Obligation (DMO) policy in February 2022, which requires exporters to sell at least 20% of fatty alcohols to the domestic market before exporting, causing the markets' aggregate supply to contracted significantly. Meanwhile, Indonesia has no plans to resume Domestic Market Obligation (DMO) measures for Oleochemical products in 2023.

In terms of fatty alcohols price in 2023, the Company anticipates that it is likely to drop in 2022 in line with the trend of CPKO price, including the increasing of the competition in the market due to improved supply.

### **Refined Glycerine Market Outlook**

For the demand of refined glycerine in 2023, the Company anticipates that it will be stable to slightly improve compared to the previous year. Although the COVID-19 pandemic situation has eased and the demand for detergents and hygiene products continues to increase, including the cancellation of the country's lockdown measures, especially in China, who is main buyer, causing the demand has improved. However, as the forecast of global economic situation tends toward recession due to interest rates, inflation and USD currency appreciation, these may affect purchasing power in the market, including given the uncertainty situation of the potentially protracted war between Russia and Ukraine. These factors may pressure buyers to be more cautious in their purchases as mentioned above.

For the overall supply of refined glycerine market in 2023, the Company anticipates that it is likely to improve. As major fatty alcohols producers in the market resume normal production, including the alternative energy policy of each country, it tends to increase the proportion of biodiesel mandate in 2023 especially in Southeast Asia. For example, the proportion of biodiesel mandate to be B7 B10 and B20 in Thailand and the proportion of biodiesel mandate to be B35 from B30 in Indonesia including testing the possibility of using B40 resulting in the overall supply of refined glycerine in the market tend to increase.

In terms of an average price of refined glycerine in 2023, the Company anticipates that it is likely to drop in 2022 following CPO price which is expected to weaken and the increasing of the competition in the market due to an increase supply.

## Ethanol Market Outlook

For the ethanol demand in 2023, the Company anticipates that it is likely to improve 16% from the previous year approximately 1.12 million tons/year, owing to people starting to resume their normal lives due to the easing of the COVID-19 pandemic situation, as well as a recovery of tourism from both domestic and international tourists. It is expected that the overall ethanol demand in 2023 will tend to increase.

On the supply side of the ethanol market in 2023, the Company anticipates that there will be an increase in the production capacity expansion from the existing manufacturers, an increase of 159,000 million tons/year, or 9% nearly matching the increase in ethanol demand. It is expected that an average utilization rate in the industry will remain at 60%.

In terms of ethanol price in 2023, the Company anticipates that it likely to decline in 2022, which is in line with the raw material prices for ethanol production from sugar cane, molasses and cassava chips, which are expected to decline to normal level. As a result, the cost of production and the overall average ethanol market price tend to decrease.

## Consolidated Statement of Income

Exhibit 7 : Consolidated Profit & Loss Statement comparison of 4Q2022, 4Q2021 and 3Q2022

	4Q2022		4Q2021		YoY		3Q2022		QoQ	
	MB	%	MB	%	MB	%	MB	%	MB	%
<b>Sale Revenue</b>	<b>4,504</b>	<b>100</b>	<b>6,161</b>	<b>100</b>	<b>(1,657)</b>	<b>(27)</b>	<b>5,761</b>	<b>100</b>	<b>(1,257)</b>	<b>(22)</b>
Feedstock	(3,580)	(79)	(5,129)	(83)	1,549	(30)	(4,296)	(75)	716	(17)
Net Realizable Value (NRV)	4	0	-	-	4	n.a	2	0	2	100
<b>Product to Feed Margin</b>	<b>928</b>	<b>21</b>	<b>1,032</b>	<b>17</b>	<b>(104)</b>	<b>(10)</b>	<b>1,467</b>	<b>25</b>	<b>(539)</b>	<b>(37)</b>
Variable Costs	(351)	(8)	(317)	(5)	(34)	11	(459)	(8)	108	(24)
Fixed Costs	(303)	(7)	(245)	(4)	(58)	24	(176)	(3)	(127)	72
Stock Gain/(Loss)	(69)	(2)	228	4	(297)	(130)	(443)	(8)	374	(84)
SG&A	(169)	(4)	(142)	(2)	(27)	19	(115)	(2)	(54)	47
Other Income	21	0	41	1	(20)	(49)	26	0	(5)	(19)
<b>EBITDA</b>	<b>57</b>	<b>1</b>	<b>597</b>	<b>10</b>	<b>(540)</b>	<b>(90)</b>	<b>300</b>	<b>5</b>	<b>(243)</b>	<b>(81)</b>
Depreciation and Amortization	(139)	(3)	(188)	(3)	49	(26)	(154)	(3)	15	(10)
<b>EBIT</b>	<b>(82)</b>	<b>(2)</b>	<b>408</b>	<b>7</b>	<b>(490)</b>	<b>(120)</b>	<b>146</b>	<b>3</b>	<b>(228)</b>	<b>(156)</b>
Net Financial Costs	(7)	(0)	(10)	(0)	3	(30)	(9)	(0)	2	(22)
FX Gain/Loss <sup>(1)</sup>	(24)	(1)	9	0	(33)	(367)	(17)	(0)	(7)	41
Share of Profit/(Loss) from investment	10	0	20	0	(10)	(50)	(6)	(0)	16	(267)
Income Tax Expenses	(27)	(1)	(71)	(1)	44	(62)	(44)	(1)	17	(39)
<b>Net Profit</b>	<b>(130)</b>	<b>(3)</b>	<b>356</b>	<b>6</b>	<b>(486)</b>	<b>(137)</b>	<b>70</b>	<b>1</b>	<b>(200)</b>	<b>(286)</b>
<b>Extra item<sup>(2)</sup></b>	<b>104</b>	<b>2</b>	<b>(444)</b>	<b>(7)</b>	<b>548</b>	<b>(123)</b>	<b>-</b>	<b>-</b>	<b>104</b>	<b>-</b>
<b>Net Profit after extra item</b>	<b>(26)</b>	<b>(1)</b>	<b>(88)</b>	<b>(1)</b>	<b>62</b>	<b>(70)</b>	<b>70</b>	<b>1</b>	<b>(96)</b>	<b>(137)</b>

Notes :

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

(2) Extra Item from the provision of contingent liabilities from lawsuit and deferred income tax items

Exhibit 8 : Consolidated Profit &amp; Loss Statement comparison of FY2022 and FY2021

	FY2022		FY2021		YoY	
	MB	%	MB	%	MB	%
<b>Sale Revenue</b>	<b>25,084</b>	<b>100</b>	<b>20,923</b>	<b>100</b>	<b>4,161</b>	<b>20</b>
Feedstock	(20,094)	(80)	(17,561)	(84)	(2,533)	14
Net Realizable Value (NRV)	(18)	(0)	-	-	(18)	n.a
<b>Product to Feed Margin</b>	<b>4,972</b>	<b>20</b>	<b>3,362</b>	<b>16</b>	<b>1,610</b>	<b>48</b>
Variable Costs	(1,653)	(7)	(1,113)	(5)	(540)	49
Fixed Costs	(804)	(3)	(758)	(4)	(46)	6
Stock Gain/(Loss)	(375)	(1)	403	2	(778)	(193)
SG&A	(476)	(2)	(435)	(2)	(41)	9
Other Income	68	0	65	0	3	5
<b>EBITDA</b>	<b>1,732</b>	<b>7</b>	<b>1,524</b>	<b>7</b>	<b>208</b>	<b>14</b>
Depreciation and Amortization	(604)	(2)	(708)	(3)	104	(15)
<b>EBIT</b>	<b>1,128</b>	<b>4</b>	<b>816</b>	<b>4</b>	<b>312</b>	<b>38</b>
Net Financial Costs	(38)	(0)	(43)	(0)	5	(12)
FX Gain/Loss <sup>(1)</sup>	(49)	(0)	6	0	(55)	(917)
Share of Profit/(Loss) from investment	47	0	86	0	(39)	(45)
Income Tax Expenses	(240)	(1)	(91)	(0)	(149)	164
<b>Net Profit</b>	<b>849</b>	<b>3</b>	<b>774</b>	<b>4</b>	<b>75</b>	<b>10</b>
Extra item <sup>(2)</sup>	104	0	(444)	(2)	548	(123)
<b>Net Profit after extra item</b>	<b>953</b>	<b>4</b>	<b>330</b>	<b>2</b>	<b>623</b>	<b>189</b>

## Notes :

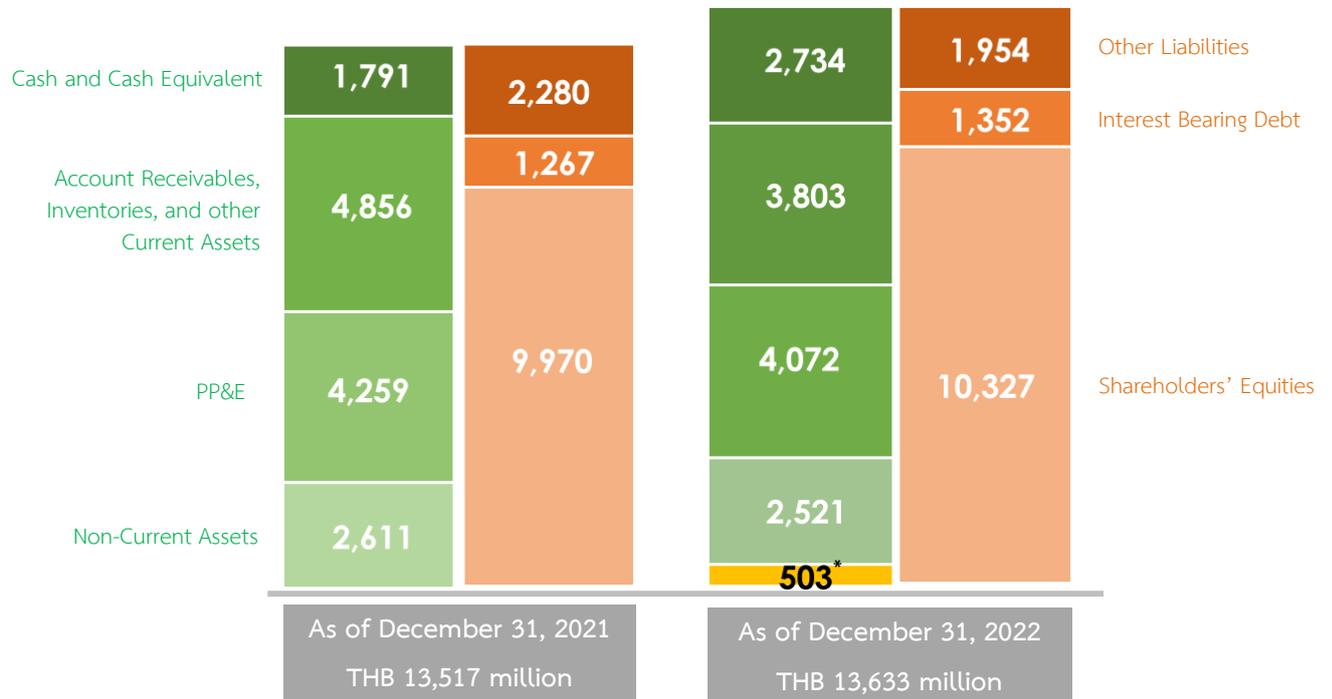
(1) Including Gain/(Loss) from FX and Derivatives

(2) Extra Item from the provision of contingent liabilities from lawsuit and deferred income tax items



## Statement of Financial Position

Exhibit 9 : Consolidated Financial Position as of December 31, 2021 and as of December 31, 2022



## Assets

As of December 31, 2022, the Company had total assets of THB 13,633 million, an increase of THB 116 million compared to December 31, 2021 in which key changes are described as follow;

1. Current assets decreased by THB 110 million mainly from;
  - 1.1 An increase in cash and cash equivalent THB 943 million
  - 1.2 Accounts receivable and other accounts receivables decreased by THB 666 million caused by the decreasing of selling price of methyl ester and fatty alcohols compared to end of 2021.
  - 1.3 Inventory decreased by THB 367 million owing to the decline in the selling price of methyl ester and fatty alcohols, resulting in relation to decrease in inventory.
2. Non-current assets increased by THB 226 million mainly from;
  - 2.1 An increase in restricted deposits THB 503 million regarding the lawsuit order at the creditor's request under the civil case. The details are disclosed in the notes to the financial statements.
  - 2.2 PP&E decreased by THB 187 million mainly due to depreciation expenses incurred in the period.
  - 2.3 The right of use (ROU) asset decreased by THB 88 million.

## Liabilities

As of December 31, 2022, the Company had total liabilities of THB 3,306 million, a decrease of THB 241 million compared to December 31, 2021, mainly attributed to

- 1) Accounts payable decreased by THB 364 million mainly from the decreasing of raw material prices.
- 2) Long-term loans from financial institutions increased by THB 181 million.
- 3) Lease liabilities decreased by THB 96 million.
- 4) Corporate tax payable increased by THB 91 million.

## Shareholders' equity

As of December 31, 2022, the Company had total shareholders' equity of THB 10,327 million, an increase of THB 357 million compared to December 31, 2021. This was the net profit of THB 953 million for the year 2022, other comprehensive income of THB 17 million and dividend payment to shareholders of THB 614 million (divided into dividends for the year 2021 of THB 358 million and interim dividends in September of THB 256 million).

## Statement of Cash Flows

*Exhibit 10: Consolidated Cash Flows Statement for the period ended December 31, 2022 and December 31, 2021.*

Cash Flow (Unit: Million Baht)	31 December 2022	31 December 2021
Net cash received (used in) operating activities	1,747	1,115
Net cash received (used in) investing activities	(1,292)	(268)
Net cash received (used in) financing activities	(569)	(1,083)
Effect of exchange rate changes on balances held in foreign currencies	(13)	5
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(127)</b>	<b>(231)</b>
Cash and cash equivalents as at 1 January	1,511	1,742
<b>Cash and cash equivalents as at 31 December</b>	<b>1,384</b>	<b>1,511</b>

Note: Ending cash and cash equivalents as at 31 December 2022 had not included current investment in financial assets of THB 1,350 million.

As for statement of cash flows of FY2022, the Company had cash received from operating activities of THB 1,747 million which comprised of cash from the net profit of THB 953 million, the adjustment for non-cash items, a decrease in account receivables and inventories. Including a decrease in account payables, a decrease in other account payables and an increase in restricted deposits.



The Company had cash used in investing activities of THB 1,292 million, primarily due to cash spending for an increase in the investments in current financial assets of THB 1,070 million, cash spending for purchase of buildings and equipment of THB 271 million, cash spending for the investment in joint ventures (GKBI) of THB 54 million and cash receiving from dividend of THB 102 million.

The Company had cash used in financial activities of THB 569 million mainly due to dividend payment of THB 614 million, cash spending for lease liabilities of THB 100 million and interest paid of THB 38 million while had cash receiving from financial institutions of THB 183 million.

As the activities above, the Company had a decrease in cash and cash equivalents in the amount of THB 127 million which had cash and cash equivalents as of January 1, 2022 in the amount of THB 1,511 million. As a result, as of December 31, 2022 the Company had cash and cash equivalents of THB 1,384 million (excluding investments in current financial assets of THB 1,350 million and restricted deposits THB 503 million).

## Key Financial Ratios

Exhibit 11 : Key Financial Ratios comparison of FY2022 vs FY2021

Key Financial Ratio	FY2022	FY2021
Current Ratio (x)	3.3	2.2
EBITDA to Sales Revenue (%)	6.9	7.3
Net Profit to Sales Revenue (%)	3.8	1.6
Return on Total Assets (%)	7.8	3.5
Return on Equity (%)	9.4	3.3
Debt to Equity (x)	0.3	0.4
Interest Bearing Debt to Equity (x)	0.1	0.1
Interest Bearing Debt to EBITDA (x)	0.8	0.8

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

