



Management's Discussion and Analysis

For the operating results of 3Q2018

Global Green Chemicals Public Company Limited

Executive Summary

In 3Q2018, domestic palm oil production has increased as in other countries, in addition, stock of Crude Palm Oil (CPO) both in Thailand and International market has remained high, resulting to the soften Crude Palm Oil (CPO) and Crude Palm Kernel Oil (CPKO) price than that of 3Q2017. Under these circumstances, the government has maintained B7 mandate in this quarter. Besides, the government has implemented the biodiesel B20 for large fleets and agricultural machinery since 2nd July 2018. As for natural fatty alcohols, in 3Q2018, its price was being more competitive to synthetic fatty alcohols price and also supply of natural fatty alcohols has slightly dwindled due to maintenance shutdown of some producers, hence demand for natural fatty alcohols was still in good condition.

The company revenue was posted at THB 3,704 million in 3Q2018, decreased by THB 1,476 million or 28% from the same period of last year because the product prices were soft following CPO and CPKO price. Nevertheless, the company had improved the feedstock management, resulting in the recorded adjusted EBITDA of THB 346 million, a little decrease from the previous year by 2%. In addition, the company recognized profit of THB 46 million from investments in the Thai Ethoxylate Company Limited (TEX) which produces Fatty Alcohol Ethoxylate (Derivative Product of FA). Lastly, the company had gotten an impact from the THB appreciation against USD; in which the THB was appreciated from 33.1 THB/USD in Jul 2018 to 32.4 THB/USD in Sep 2018 (2% appreciation). Consequently, the company posted net profit for the period of THB 185 million, increased from the same period of 2017 by 236%

As of 30 September 2018, the company has total assets of THB 12,793 million which comprises cash and short-term investment amounted to THB 3,890 million; with total liabilities of THB 3,528 million; and total equities of THB 9,265 million. In this regard, the company remains strong in a financial position with low debt-to-equity ratio and high current ratio.

Operating Performance

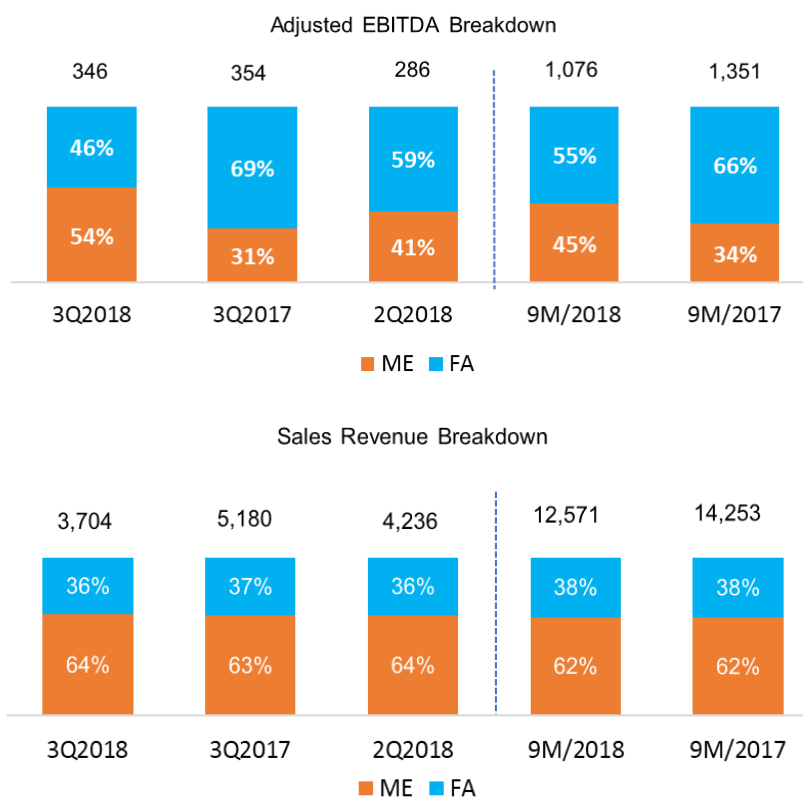
Exhibit 1 : Consolidated Company's Performance

UNIT: M THB	3Q2018	3Q2017	%YoY	2Q2018	%QoQ	9M/2018	9M/2017	%YoY
Sales Revenue	3,704	5,180	-28%	4,236	-13%	12,571	14,253	-12%
EBITDA	289	211	37%	137	111%	637	750	-15%
EBITDA Margin (%)	7.8%	4.1%	3.7%	3.2%	4.6%	5.1%	5.3%	-0.2%
Stock Gain/(Loss) & NRV	-57	-143	-60%	-149	-62%	-439	-601	-27%
Adjusted EBITDA ⁽¹⁾	346	354	-2%	286	21%	1,076	1,351	-20%
Adjusted EBITDA Margin (%)	9.3%	6.8%	2.5%	6.8%	2.5%	8.6%	9.5%	-0.9%
Net Profit	185	55	236%	67	176%	317	270	17%
Extra item ⁽²⁾	-	-	n.a.	-1,920	-100%	-1,920	-	n.a.
Net Profit	185	55	236%	-1,853	-110%	-1,603	270	-694%
EPS (Baht/share)	0.18	0.05	260%	-1.81	-110%	-1.57	0.30	-623%

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

(2) Extra items were expenses from raw materials derogation amounting to THB 2,004 million net of tax income from deferred tax assets amounting to THB 84 million.

Exhibit 2 : Sales Revenue and Adjusted EBITDA breakdown by business unit comparison of 3Q2018 vs. 3Q2017 vs. 2Q2018 vs. 9M/2018 vs. 9M/2017 (million THB)



Market Overview by business

Methyl Ester (Biodiesel)

Exhibit 3: Product and Feedstock Prices

Average Price	3Q2018	3Q2017	%YoY	2Q2018	%QoQ	9M/2018	9M/2017	%YoY
Methyl Ester (B100) (Baht/litre) ⁽¹⁾	25.11	26.34	-5%	25.03	0.3%	24.93	30.09	-17%
Methyl Ester (B100) (Baht/kg.) ⁽²⁾	29.03	30.45	-5%	28.94	0.3%	28.82	34.79	-17%
Crude Palm Oil (CPO) (Baht/kg.) ⁽³⁾	20.24	22.43	-10%	20.78	-3%	20.45	26.35	-22%
EPPO P2F (Baht/kg) ⁽⁴⁾	5.29	4.79	10%	5.13	3%	5.18	4.97	4%
Biodiesel Mandate	B7	B7		B7		B7	B5, 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 according to EPPO's B100 formula

An average of the 3Q2018 CPO (CPO-DIT) price was at 20.24 THB/kg, being lower than 3Q2017 CPO price by 2.19 THB/kg or 10% due to the fact that the domestic palm oil inventory remains at high level 400,000 tons in 3Q2018, while in the past, Thailand used to have an average palm oil inventory level of 200,000 - 250,000 tons. Such situation had made the government to maintain the mandate of B7. In addition, the government has implemented B20 as an alternative fuel for fleets and agricultural machinery. The government is trying to drive the demand of B20 by setting the price of B20 to be lower than B7 by 3 THB/liter. However, such implementation was much less response from business sectors, because there are limit number of B20 distribution stations and business sectors concern the side effect to engine from using B20. Department of Energy Business estimated that in September 2018, the consumption of B20 was approximately at 2,600 tons or equal to 520 tons of B100. In addition, in this period, some fuel traders had gradually used their biodiesel inventory that the government asked the fuel traders for a collaboration to absorb the surplus of CPO in 1Q2018. As CPO price dropped in 3Q2018, Methyl Ester (ME) price was reported at 29.03 THB/kg, decreased by 1.42 THB/kg or 5%.

In 3Q2018, EPPO P2F (the difference between EPPO ME price and mixed feedstock prices) has increased from 3Q2017 and 2Q2018 by 0.50 THB/kg and 0.16 THB/kg respectively. This mainly resulted from the increasing Methanol price, calculated according to the ME EPPO price formula.

Compared to 9M/2017, the CPO price in 9M2018 declined due to the increase of palm production and stock. Concurrently, the EPPO P2F also increased due to higher of methanol price.

Fatty Alcohols

Exhibit 4 : Products and Feedstocks' prices

Average Price (USD per ton)	3Q2018	3Q2017	%YoY	2Q2018	%QoQ	9M/2018	9M/2017	%YoY
Fatty Alcohols ⁽¹⁾								
- Short Chain	3,822	3,425	12%	3,845	-1%	3,761	3,318	13%
- Mid Cut	1,351	1,810	-25%	1,402	-4%	1,516	2,039	-26%
- Long Chain	1,259	1,414	-11%	1,310	-4%	1,280	1,397	-8%
Average Fatty Alcohols ⁽²⁾	1,521	1,820	-16%	1,570	-3%	1,625	1,949	-17%
Crude Palm Kernel Oil (CPKO) ⁽³⁾	882	1,156	-24%	921	-4%	980	1,224	-20%
Market P2F of Fatty Alcohols	463	433	7%	465	-0.4%	449	481	-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)

CPKO MPOB price in 3Q2018 was at 882 USD/ton, decreased by 274 USD or 24% from 3Q2017 and decreased by 39 USD/ton or 4% from 2Q2018, according to CPO stock in Indonesia and Malaysia were still high. Furthermore, market demand is diminished as some countries have raised import duties for palm oil to protect their vegetable oil industry and consumers is concerning if the consuming of palm oil will have any negative impact to their health.

Natural fatty alcohols demand has remained in good condition when compared to the previous quarter and the same period of last year, mainly as a result of downward pricing trend of natural fatty alcohols to be lower than synthetic fatty alcohols due to the downward pricing trend of CPKO. In addition, natural fatty alcohols supply was relatively tight because of the fluctuation of CPKO price and maintenance shutdown of several producers.

Market P2F of natural fatty alcohols in 3Q2018 was at 463 USD/ton, which did not change much from the previous quarter. Compared to the same period of 2017, Market P2F of natural fatty alcohols improved by 30 USD/ton or 7%, attributable to the aforementioned supply and demand situation.

Compared to 9M/2017, the CPKO price of 9M/2018 declined due to the increasing of palm production and hence its stock; concurrently, market P2F of natural fatty alcohols also declined.

Operating Performance by business unit

Methyl Ester (ME) Business Unit Operating Performance

Exhibit 5 : Keys Operating Performance of ME Business Unit

	3Q2018	3Q2017	%YoY	2Q2018	%QoQ	9M/2018	9M/2017	%QoQ
Utilization (%) ⁽¹⁾	113%	112%	1%	108%	5%	113%	101%	-12%
Sales Volume (ton)	84,637	97,373	-13%	90,100	-6%	277,491	252,457	10%
Sales Volume (million litre) ⁽²⁾	98	113	-13%	104	-6%	321	292	10%
Sales Revenue (million baht)	2,370	3,277	-28%	2,690	-12%	7,834	8,822	-11%
EBITDA (million baht)	159	102	56%	106	50%	428	298	44%
EBITDA margin (%)	6.7%	3.1%	3.6%	3.9%	2.8%	5.5%	3.4%	2.1%
Stock Gain/(Loss) & NRV(million baht)	-28	-7	300%	-10	180%	-55	-156	-65%
Adjusted EBITDA (million baht) ⁽³⁾	187	109	72%	116	61%	483	454	6%
Adjusted EBITDA Margin (%)	7.9%	3.3%	4.6%	4.3%	3.6%	6.2%	5.1%	1.1%

Note : (1) Nameplate Capacity 300,000 Tons per year

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

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

Operating performance comparison between 3Q2018 vs. 3Q2017

In 3Q2018, the company reported the revenue of ME Business Unit THB 2,370 million, decreased by 28% from 3Q2017, as a result of a drop in sale volume 13% because there was additional sale volume in 3Q2017 due to the government had asked fuel traders to keep more stock, while in 3Q2018 a fuel trader brought out its stock that was kept from 1Q2018 as the government had asked for a collaboration to absorb the surplus of CPO. However, this quarter, the company has improved feedstock cost management, resulting to the rising in adjusted EBITDA of THB 187 million, an increase of 72% from the same period last year. Also, the company reported the EBITDA of THB 159 million, an increase of 56% from 3Q2017 as the company had the stock loss & NRV amounting to THB 28 million due to the decline of CPO price.

Operating performance comparison between 3Q2018 vs. 2Q2018

Compared to 2Q2018, the company's ME Business Unit revenue decreased by 12% majority because of ME sale volume, at 84,637 tons, decreased by 6%. The decreasing of sale volume was caused by the rainy season, and a fuel trader brought out its stock that was kept from 1Q2018 as the government had asked for a collaboration to absorb the surplus of CPO. However, the company has improved feedstock cost management, resulting to the rising in adjusted EBITDA in 3Q2018 of THB 187 million, an increase of 61% from the previous quarter. However, the company recognized the stock loss & NRV increased from 2Q2018

by THB 18 million. This was mainly due to downward trend of CPO prices. As a result, the company had EBITDA of THB 159 million in 3Q2018, an increase of 50% from 2Q2018.

Operating performance comparison between 9M2018 vs. 9M2017

In 9M2018, the company reported ME Business Unit revenue of 7,834 million, a decline of 11% from 9M2017, resulting from ME price drop following CPO price softness, though the company had the higher ME sale volume of 10% due to the biodiesel mandate B7 comparing to that of B5 and B7 in 9M2017. Because of CPO price softness, the company had got stock loss & NRV of THB 55 million while in 9M2017 the company had got stock loss & NRV of THB 156 million due to CPO price continually declines. As a consequence of these factors, the company reported the EBITDA of THB 428 million, an increase of 44% and the adjusted EBITDA of THB 483 million, increased by 6%, from that of 9M2017.

Fatty Alcohol (FA) Business Unit Operating Performance

Exhibit 6 : Keys Operating Performance of FA Business Unit

	3Q2018	3Q2017	% YoY	2Q2018	%QoQ	9M/2018	9M/2017	%QoQ
Utilization (%)	110%	123%	-13%	120%	-10%	110%	108%	2%
Sales Volume (Ton)	26,899	31,574	-15%	30,209	-11%	81,343	79,107	3%
Revenue from Sales (million baht)	1,334	1,903	-30%	1,546	-14%	4,737	5,431	-13%
EBITDA (million baht)	130	109	19%	31	319%	209	452	-54%
EBITDA margin(%)	9.7%	5.7%	4.0%	2.0%	7.7%	4.4%	8.3%	-3.9%
Stock Gain/(Loss) & NRV	-29	-136	-79%	-139	-79%	-384	-445	-14%
Adjusted EBITDA (million baht) ⁽¹⁾	159	245	-35%	170	-6%	593	897	-34%
Adjusted EBITDA Margin (%)	11.9%	12.9%	-1.0%	11.0%	0.9%	12.5%	16.5%	-4.0%

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

Operating performance comparison between 3Q2018 vs. 3Q2017

Fatty Alcohol Business Unit recorded THB 1,334 million in 3Q2018, dropped down from 3Q2017 by 30%, attributed to decreasing in sale volume of natural fatty alcohols by 15% because in 3Q2017, the company had high sale volume due to customers had postpone its purchasing of natural fatty alcohols in 2Q2017 as there were highly fluctuation of CPKO price. As a result, the company had the adjusted EBITDA of THB 159 million, declined form 3Q2017 by 35%. Furthermore, pressuring of downward trend of CPKO prices, the company still had stock loss & NRV of THB 29 million, but it was less than stock loss & NRV in 3Q2017 by 79%. Accordingly, the company recognized the EBITDA of THB 130 million, increased by 19% from the same quarter of 2017.

[Operating performance comparison between 3Q2018 vs. 2Q2018](#)

Compared to the previous quarter, in 3Q2018, the sale revenue of Fatty Alcohol Business Unit was at THB 1,334 million, decreased by 14% due to the declining sale volume of natural fatty alcohols by 11% because of maintenance shutdown 15 days. Thus, the company had the adjusted EBITDA of THB 159 million, declined from 2Q2108 by THB 11 million or 6%. Nevertheless, the EBITDA was reported of THB 130 million, increased by 319%, mainly resulted from the decreasing stock loss & NRV by 79%.

[Operating performance comparison between 9M2018 vs. 9M2017](#)

In 9M2018, Fatty Alcohol Business Unit revenues recorded THB 4,737 million, decreased from 9M2017 by 13%, attributed to natural fatty alcohols prices drop follow CPKO price movement, though, the company had the sale volume of natural fatty alcohols at 81,343 tons, increased by 3% from the previous year. In addition, the company had EBITDA of THB 209 million, dropped by 54% from 9M/2017, mainly resulted from stock loss & NRV of THB 384 million. Thereby, the company had the adjusted EBITDA of THB 593 million, decreased from 9M2017 by 34%.

Consolidated Profit & Loss statement

Exhibit 7 : Consolidated Profit & Loss Statement comparison of 3Q2018, 3Q2017 and 2Q2018

	3Q2018		3Q2017		YoY		2Q2018		QoQ	
	MB	%	MB	%	MB	%	MB	%	MB	%
Sale Revenue	3,704	100	5,180	100	(1,476)	(28)	4,236	100	(532)	(13)
Feedstock	(2,693)	(73)	(4,167)	(80)	1,474	(35)	(3,285)	(78)	592	(18)
Net Realizable Value (NRV)	-	-	18	-	(18)	n.a.	-	-	-	n.a.
Product to Feed Margin	1,011	27	1,031	20	(20)	(2)	951	22	60	6
Variable Costs	(472)	(13)	(468)	(9)	(4)	1	(485)	(11)	13	(3)
Fixed Costs	(138)	(4)	(130)	(3)	(8)	6	(130)	(3)	(8)	6
Stock Gain/(Loss)	(57)	(2)	(161)	(3)	104	(65)	(149)	(4)	92	(62)
SG&A	(73)	(2)	(72)	(1)	(1)	1	(83)	(2)	10	(12)
Other Income	18	0	11	0	7	64	33	1	(15)	(45)
EBITDA	289	8	211	4	78	37	137	3	152	111
Depreciation and Amortization	(124)	(3)	(143)	(3)	19	(13)	(133)	(3)	9	(7)
EBIT	165	4	68	1	97	143	4	0	161	4,025
Net Financial Costs	(5)	(0)	(12)	(0)	7	(58)	(8)	(0)	3	(38)
FX Gain/Loss ⁽¹⁾	(10)	(0)	(22)	(0)	12	(55)	44	1	(54)	(123)
Share of Profit/(Loss) from investment	46	1	15	0	31	207	27	1	19	70
Income Tax Expenses	(11)	(0)	6	0	(17)	(283)	-	-	(11)	na.
Net Profit bef extra items	185	5	55	1	130	236	67	2	118	176
Extra item net of tax ⁽²⁾	-	-	-	-	-	n.a.	(1,920)	(45)	1,920	n.a.
Net Profit after extra items	185	5	55	1	130	n.a.	(1,853)	(44)	2,038	(110)

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

(2) Extra items were expenses from raw materials derogation amounting to THB 2,004 million net of tax income from deferred tax assets amounting to THB 84 million.

Exhibit 8 : Consolidated Profit & Loss Statement comparison of 9M2018 and 9M2017

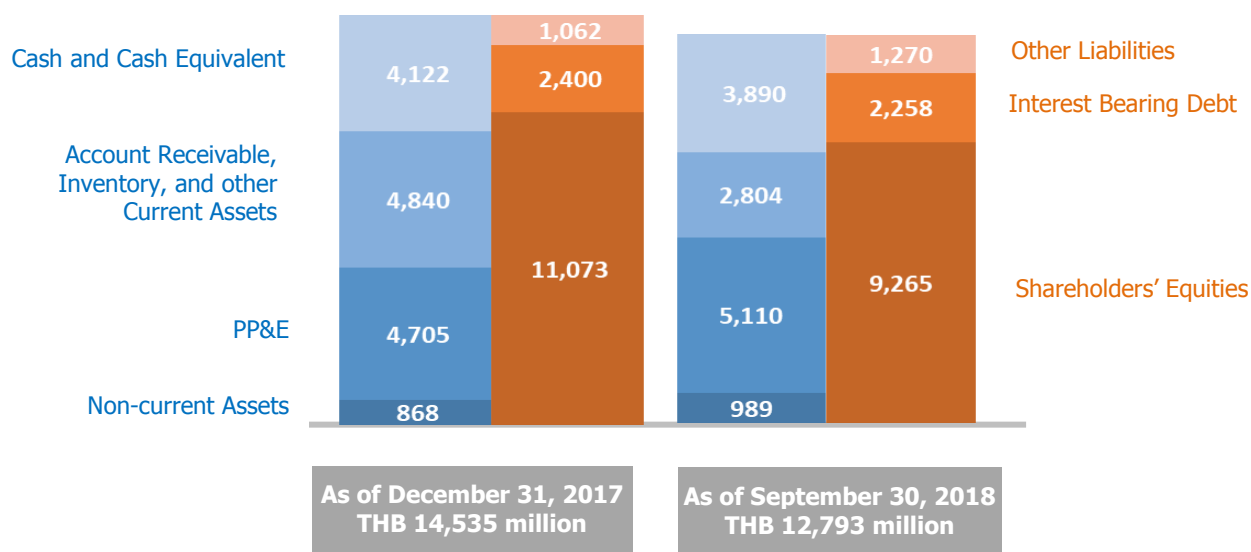
	9M2018		9M2017		YoY	
	MB	%	MB	%	MB	%
Sale Revenue	12,571	100	14,253	100	(1,682)	(12)
Feedstock	(9,500)	(76)	(11,054)	(78)	1,554	(14)
Net Realizable Value (NRV)	2	0	(1)	(0)	3	(300)
Product to Feed Margin	3,073	24	3,198	22	(125)	(4)
Variable Costs	(1,452)	(12)	(1,245)	(9)	(207)	17
Fixed Costs	(394)	(3)	(406)	(3)	12	(3)
Stock Gain/(Loss)	(441)	(4)	(600)	(4)	159	(27)
SG&A	(227)	(2)	(228)	(2)	1	(0)
Other Income	78	1	31	0	47	152
EBITDA	637	5	750	5	(113)	(15)
Depreciation and Amortization	(395)	(3)	(421)	(3)	26	(6)
EBIT	242	2	329	2	(87)	(26)
Net Financial Costs	(19)	(0)	(49)	(0)	30	(61)
FX Gain/Loss ⁽¹⁾	7	0	(73)	(1)	80	(110)
Share of Profit/(Loss) from investment	93	1	60	0	33	55
Income Tax Expenses	(6)	(0)	3	0	(9)	(300)
Net Profit bef extra items	317	3	270	2	47	17
Extra item net of tax ⁽²⁾	(1,920)	(15)	-	-	(1,920)	n.a.
Net Profit after extra items	(1,603)	(13)	270	2	(1,873)	n.a.

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

(2) Extra items were expenses from raw materials derogation amounting to THB 2,004 million net of tax income from deferred tax assets amounting to THB 84 million.

Statement of Financial Position

Exhibit 9 : Consolidated Financial Position as of September 30, 2018 and as of December 31, 2017



Assets

As of September, 30, 2018, the company had total assets of THB 12,793 million, decreased from December 31, 2017 by THB 1,742 million, due to the following reasons; 1) a decrease in current assets of THB 2,269 million, which was mainly due to the lower account receivable of THB 646 million because of the declining of ME sale volume and natural fatty alcohols, from the end of last year and natural fatty alcohols price declined; a decreasing of inventory of THB 1,336 million from the expenses of raw materials derogation; and 2) an increase of non-current assets of THB 527 million, which was mainly due to the increasing of PP&E value of THB 751 million which came from investment in ME plant 2 project, offsetting by depreciation of non-current assets of THB 345 million.

Liabilities

As of September 30, 2018, the company had total liabilities of THB 3,528 million, an increase of THB 66 million or 2% from December 31st, 2017, mainly attributable to the increasing of higher accounts payable but offsetting by a decrease in long term loan from financial institution as per repayment schedule.

Shareholder's equities

As of September 30, 2018, the company had total shareholders' equity of THB 9,265 million, decreased from December 31st, 2017 by THB 1,808 million or 16% as a result of loss in 9M2018.

Statement of Cash Flows

The company had cash from operating activities of 877 THB million which included 1) the cash from net profit before extra items of THB 317 million , and other operating activities of THB 563 million which attributable to a decrease from accounts receivable; 2) Cash flow spending for investing activities of THB 738 million , which was spent on obtaining PP&E for THB 797 million, mainly due to investment in ME plant 2 project and the receiving of dividend from TEX amounting to THB 91 million ; and 3) Cash Flow spending for financing activities of THB 402 million , which was from annual dividend payment, long-term loan principal repayment and interest payment.

Key Financial Ratios

Exhibit 10: Key Financial Ratios comparison of 3Q2018 vs. 3Q2017 vs. 2Q2018

Key Financial Ratios	3Q2018	3Q2017	2Q2018
Current ratio(x)	4.4	6.6	4.0
EBITDA to sales revenue (%)	7.8	4.1	3.2
Net profit to sales revenue (%)	5.0	1.1	(43.7)
Return on total assets (%)	(9.9)	3.1	(10.5)
Return on equity (%)	(13.3)	4.4	(14.1)
Debt to equity(x)	0.4	0.3	0.4
Interest bearing debt to equity(x)	0.2	0.2	0.2
Interest bearing debt to EBITDA(x)	2.2	2.5	2.4

Notes: Current Ratio(Times)	=	Current assets divided by current liabilities
EBITDA to sales revenue (%)	=	EBITDA divided by sales revenue
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 attributable to owners of the company
Debt to equity(Times)	=	Total debt divided by shareholders' equities
Interest bearing debt to equity(Times)	=	Interest bearing debt divided by shareholders' equities
Interest bearing debt to EBITDA(Times)	=	Interest bearing debt divided by EBITDA