



Management's Discussion and Analysis of Financial Condition and Result of Operations

Star Petroleum Refining Public Company Limited

For Quarter 4/2021 and Year 2021

Table of Contents

1. Company's Operating Result	2
2. Market Condition	3
3. Financial Performance	5
Financial Results.....	5
Analysis of Financial Position	7
Statement of Cash Flow	8
Financial Ratios	9
4. Company's significant event	10

1. Company's Operating Result

(US\$ Million)	Q4/21	Q3/21	+/(–)	Q4/20	+/(–)	2021	2020	+/(–)
Total Revenue	1,574	1,245	329	1,064	510	5,350	4,152	1,198
EBITDA	88	25	63	60	28	275	(140)	415
Adjusted EBITDA ⁽¹⁾	53	1	53	25	28	82	59	22
Gain (loss) on foreign exchange	6	(6)	12	6	(0)	(2)	14	(17)
Net income (Loss)	55	4	52	29	27	150	(187)	337
Net income (Loss) (US\$ per share)	0.01	0.00	0.01	0.01	0.01	0.03	(0.04)	0.08
Accounting gross refining margin (US\$/barrel) ⁽²⁾	8.16	4.38	3.78	6.45	1.71	7.50	(1.04)	8.55
Market gross refining margin (US\$/barrel) ⁽³⁾	5.97	2.34	3.63	3.88	2.09	3.66	2.79	0.87

Crude intake (thousand barrels/day)	139.2	128.8	10.4	135.2	4.0	135.1	143.1	(8.0)
Crude intake Utilization	80%	74%	6%	77%	2%	77%	82%	-5%

(Baht Million)	Q4/21	Q3/21	+/(–)	Q4/20	+/(–)	2021	2020	+/(–)
Total Revenue	52,803	41,193	11,610	32,708	20,094	172,484	130,163	42,321
EBITDA	2,947	816	2,132	1,818	1,129	8,769	(4,551)	13,319
Adjusted EBITDA ⁽¹⁾	1,788	21	1,767	740	1,048	2,533	1,710	823
Gain (loss) on foreign exchange	199	(213)	412	193	6	(74)	464	(538)
Net income (Loss)	1,855	113	1,742	862	992	4,746	(6,005)	10,751
Net income (Loss) (Baht per share)	0.43	0.03	0.40	0.20	0.23	1.09	(1.38)	2.48

⁽¹⁾ Adjusted EBITDA refers EBITDA excluding Stock gain/loss, net NRV and Extra item

⁽²⁾ margin includes inventory gain/loss based on weighted average inventory cost.

⁽³⁾ margin is calculated based on current replacement cost.

Exchange rate (Baht/US\$)	Q4/21	Q3/21	+/(–)	Q4/20	+/(–)	2021	2020	+/(–)
Average FX	33.54	33.10	0.44	30.79	2.75	32.17	31.46	0.71
Closing FX	33.59	34.09	(0.50)	30.21	3.39	33.59	30.21	3.39

Dubai crude oil price in Q4/21 improved from Q3/21 primarily from the surging natural gas prices led to an increased usage of middle distillates for power generation during winter seasonal demand and a better COVID-19 situation due to a high vaccination rate globally which had boosted demand for oil products and refining margin. Additionally, OPEC+ decided to adhere to an existing agreement for progressively raising its output, despite a surge of the new Omicron variant spreading across the world could resulted in the restrictions and lowering demand. However, SPRC maintained on crude and product optimizations to meet with domestic demand. In Q4/21, the SPRC refinery utilization rate for the crude intake was 139 thousand barrels per day or equivalent to 80% of its refining capacity, increased from 129 thousand barrels per day in Q3/21 while there was minor maintenance on the Residual Fluidized Catalytic Cracking Unit (RFCCU) during 25 September – 8 October 2021.

Compared Q4/21 with Q3/21, sales revenue increased from US\$1,245 million to US\$1,574 million due to increase of sales volume and product prices during this quarter. The increase in both market refining margin and stock gain contributed significantly to the higher EBITDA and net income was US\$55 million in Q4/21 compared to US\$4 million in Q3/21. Excluding the stock gain, the market refining margin increased sharply from US\$2.34/bbl in Q3/21 to US\$5.97/bbl in Q4/21, owing to increasing refined product cracks due to strong

demand recovery and limited supply. Total operating expenses in this quarter decreased from the reversal of an accrued expenses of US\$5.9 million, and SPRC received a recovery from the loss of invoice payment from the cyber-attack of approximately US\$1.2 million. There was a gain on foreign exchange from baht appreciation.

Due to the rising in oil prices, sales revenue increased 48% in Q4/21 compared with Q4/20, which also led to higher accounting margin. Q4/21 market margin of US\$5.97/bbl up from US\$3.88/bbl in the prior year quarter. Net income in Q4/21 was at US\$ 55 million higher than US\$ 29 million in Q4/20. Total operating expenses were lower than in the previous year quarter while SPRC continues to focus on operating expense control.

Compared 2021 with 2020, despite the lower sales volume affected by lower domestic demand from covid-19 pandemic and lockdown measures, sales revenue increased 29% due to higher oil prices. A significant stock gain due to oil prices rose led to positive EBITDA and earnings in 2021 compared to a significant loss in 2020 as a result of falling oil price. NIAT in 2021 was US\$150 million, whilst it was a net loss of US\$187 million in 2020. Excluding stock gain or loss, 2021 market gross refining margin improved to US\$3.66/bbl, compared to US\$2.79/bbl in 2020 due to the improved crack spreads, mainly in diesel and gasoline, partially offset with higher of crude premium, as the easing of restrictions had supported demand in many countries.

2. Market Condition

Pricing	Q4/21	Q3/21	+/(–)	Q4/20	+/(–)
Dubai crude oil	78.27	71.68	6.59	44.64	33.63
Light Naphtha (MOPJ)	82.68	75.11	7.57	45.38	37.29
Gasoline (premium)	93.71	83.44	10.26	48.75	44.96
Jet Fuel	88.48	77.08	11.39	47.06	41.41
Diesel	89.72	77.12	12.60	48.33	41.39
Fuel Oil	71.38	68.35	3.02	44.07	27.31

Spread over Dubai	Q4/21	Q3/21	+/(–)	Q4/20	+/(–)
Light Naphtha (MOPJ)	4.41	3.43	0.98	0.74	3.67
Gasoline (premium)	15.44	11.76	3.68	4.11	11.33
Jet Fuel	10.21	5.40	4.80	2.42	7.79
Diesel	11.45	5.44	6.01	3.69	7.76
Fuel Oil	-6.89	-3.33	-3.89	-0.57	-6.32

Average Dubai price for Q4/21 was US\$78.27/bbl, which increased from US\$71.68/bbl in Q3/21. The crude oil price rallied as sentiment was fueled by the OPEC+ group's decision to stick with its plan to boost output by only 400,000 bpd each month, despite pressure from refinery production boost as the oil demand continued on the path to recovery. Consequently, supply tightened worldwide as demand recovered more quickly than expected from the COVID-19 pandemic. However, downside risk to demand recovery remains with the spread of the Omicron COVID-19 variant, which resulted in the reinstatement of restrictions in several countries. Fuel demand was further boosted by higher natural gas prices which encouraged the use of oil as alternative feedstock which escalated Gas-to-oil switching.

Gasoline spread over Dubai in Q4/21 increased to US\$15.44/bbl. The gasoline crack was supported by the easing of movement restrictions which propelled demand in several countries, with mobility indicators showed a month-on-month rise in almost all markets. Even as infection rates climbed in various countries, driving activity remained strong as higher vaccination rates boosted consumer sentiment. However, European countries encountered a reinstatement of restrictions due to resurgence in COVID-19 cases, resulting in a demand drop for light distillates and paving the way for more arbitrage flow to Asia. Global light distillate inventory levels in 5 key areas were lower than the 2017-2019 average, with most of the deficit in the USA. Singapore inventories remained well within five-year average.

Naphtha spread over Dubai in Q4/21 increased to US\$4.41/bbl. The naphtha crack was strengthened by demand continued to be supported with positive olefin margins and poor LPG cracking economics. In addition, demand increased owing to reformer or cracker capacity additions and continued use of naphtha for cracking instead of LPG. Moreover, naphtha prices retained strength as demand remained firm as the year-end holiday season supported the rally in gasoline margins which boosted the naphtha market to support gasoline blending demand.

Jet and diesel crack spreads over Dubai increased from previous quarter to be US\$10.21/bbl and US\$11.45/bbl respectively. Jet crack spreads strengthened as countries continued to ease cross-border movement requirements, supporting the recovery of international aviation demand. Although the resumption of international air travel was improved, the emergence of the Omicron variant has dampened Jet demand. Consequently, many countries have tightened border controls to curb the potential spread of the new variant. This is particularly bearish for jet fuel demand given the surging number of COVID-19 infections in Europe. Diesel crack were firm as industrial and manufacturing activities continued to improve. Despite the recovery in industrial and manufacturing activities in virus-hit countries, gasoil cracks came under pressure from return of capacity from maintenance and lower demand from exports markets in Europe. Furthermore, the tight power supply in mainland China and India provided some upside demand for diesel from the portable diesel generators. Global middle distillate inventory levels in 5 key areas were at their lowest since 2013 and lower than the 2017-2019 average, with deficits in all key areas except for Fujairah (Data started in 2017). Singapore middle distillate stocks decreased to 7.9 million barrels, falling 25% Q-o-Q due to high export levels.

Fuel oil spread over Dubai in Q4/21 was -US\$6.89/bbl, which was lower than Q3/21. Fuel oil consumption for power generation started decreasing from September after the end of the peak summer demand season in South Asia. Market sentiment has turned bearish as demand for the high-sulfur grade has been waned after the peak summer period in South Asia. Moreover, supply rose as refineries returned from maintenance and increased crude throughput. The regional stock levels increased slightly as net imports increased. Singapore onshore fuel oil inventories increased by 4% Q-o-Q to 19.6 million barrels.

According to cracks for all key refined products strengthened, SPRC's average market refining margin in Q4/21 was US\$5.98/bbl, which is higher as compared to US\$2.34/bbl in Q3/21. Moreover, demand has picked up with the recovery from the COVID-19 pandemic, with a further boost from power generators which have been turning away from expensive gas and coal to fuel oil and diesel. SPRC continues to capture margin by optimizing crude slate and throughput to meet stronger domestic demand as well as producing higher value products such as on grade DSR asphalt and decant oil as carbon black feedstock.

3. Financial Performance

Financial Results

	US\$ Million			US\$ Million		US\$ Million		
	Q4/21	Q3/21	+/(−)	Q4/20	+/(−)	2021	2020	+/(−)
Total Revenue	1,574	1,245	329	1,064	510	5,350	4,152	1,198
Cost of sales	(1,510)	(1,226)	(284)	(1,031)	(480)	(5,133)	(4,370)	(763)
Gross profit	63	19	45	34	30	217	(218)	435
Other income	1	0	0	1	(1)	2	2	(0)
Gain (loss) on exchange rate	9	(5)	14	3	6	11	10	1
Administrative expenses	(1)	(7)	6	(4)	3	(24)	(29)	5
Finance costs	(2)	(2)	0	(1)	(0)	(7)	(6)	(1)
Fair value (loss) gain on derivatives	(3)	(1)	(1)	3	(6)	(14)	5	(18)
Income tax	(12)	(1)	(11)	(7)	(5)	(37)	48	(85)
Net income (Loss)	55	4	52	29	27	150	(187)	337

	Baht Million			Baht Million		Baht Million		
	Q4/21	Q3/21	+/(−)	Q4/20	+/(−)	2021	2020	+/(−)
Total Revenue	52,803	41,193	11,610	32,708	20,094	172,484	130,163	42,321
Cost of sales	(50,677)	(40,580)	(10,097)	(31,700)	(18,977)	(165,598)	(137,169)	(28,429)
Gross profit	2,126	613	1,513	1,009	1,117	6,886	(7,006)	13,892
Other income	20	16	4	38	(18)	62	71	(9)
Gain (loss) on exchange rate	296	(164)	459	99	197	359	320	39
Administrative expenses	(24)	(220)	196	(120)	97	(749)	(911)	162
Finance costs	(51)	(54)	3	(45)	(6)	(212)	(177)	(34)
Fair value (loss) gain on derivatives	(97)	(50)	(47)	94	(191)	(433)	144	(577)
Income tax	(414)	(28)	(386)	(211)	(203)	(1,166)	1,555	(2,721)
Net income (Loss)	1,855	113	1,742	862	992	4,746	(6,005)	10,751

Production Volumes

Petroleum products	Q4/21	Q3/21	Q4/20	Thousands barrels	
				2021	2020
Polymer Grade Propylene	373	386	435	1,610	1,666
Liquefied Petroleum Gas	583	527	613	2,358	2,411
Light Naphtha	786	798	836	3,159	3,395
Gasoline	3,964	3,687	4,215	15,348	15,533
Jet Fuel	322	244	22	1,171	1,675
Diesel	5,721	4,991	5,664	21,169	24,214
Fuel Oil	738	512	418	2,253	2,619
Asphalt	190	139	137	710	614
Mix C4	503	533	503	2,113	2,025
Other ⁽¹⁾	1,163	924	997	4,194	4,175
Total production	14,342	12,742	13,839	54,086	58,326

⁽¹⁾ Includes sulfur and reformat and products sold pursuant to our cracker feed exchange.

Total Sale Revenue

Petroleum products ⁽¹⁾	Q4/21	Q3/21	Q4/20	US\$ Million	
				2021	2020
Polymer Grade Propylene	30	31	32	133	103
Liquefied Petroleum Gas	41	32	25	132	90
Light Naphtha	65	60	40	226	137
Gasoline	517	420	360	1,790	1,319
Jet Fuel	29	26	0	91	95
Diesel	672	528	499	2,301	2,001
Fuel Oil	61	31	23	145	97
Asphalt	13	10	6	51	25
Mix C4	43	39	29	163	94
Crude	0	0	0	2	10
Others ⁽²⁾	103	68	52	316	181
Total Revenue	1,574	1,245	1,064	5,350	4,152

⁽¹⁾ Includes Government LPG and oil subsidies.

⁽²⁾ Includes sulfur, reformat and products sold pursuant to our cracker feed exchange.

Sale revenue in Q4/21 increased 26% from Q3/21 from the increase in sale volume from 13.1 million barrels in Q3/21 to 14.9 million barrels in Q4/21 mainly from an increase in domestic demand of diesel and gasoline due to easing restrictive lockdown measures with high vaccination rate in Thailand and also increased of average oil price during Q4/21.

Comparing Q4/21 with Q4/20, sale revenue increased 48%, which was impacted by higher oil prices, while slightly increase in sale volume which increased from 14.4 million barrels in Q4/20 to 14.9 million barrels in Q4/21.

Similarly, sale revenue in 2021 also increased 29% compared to 2020 due to higher oil prices but offset by lower sale volume which decreased from 60.6 million barrels to 56.0 million barrels.

The table presents breakdown of revenues from sale of petroleum products to company's customers.

Customer	Q4/21	Q3/21	Q4/20	2021	2020
Chevron	40%	42%	50%	43%	52%
PTT & PTTOR	44%	42%	35%	41%	35%
Other oil and petrochemical companies	16%	16%	15%	16%	13%
Total	100%	100%	100%	100%	100%

Cost of Sales

As a result of higher crude intake in Q4/21, the cost of sale increased 23% compared to prior quarter. The increase in cost of sale was in line with the increase in sales revenue due to higher domestic demand in this quarter.

Comparing Q4/21 to Q4/20, cost of sales in Q4/21 increased which reflected from oil price rose in this quarter while there was a slightly higher in sale volume compared with the same quarter in prior year.

Cost of sales for 2021 increased 17% from 2020. The increase in cost of crude oil on weighted average inventory was offset by lower sale volume.

Gain / (loss) on Foreign Exchange and Financial Derivatives

Comparing Q4/21 with Q3/21, SPRC had a net foreign exchange gain of US\$5.9 million in Q4/21, compared to exchange loss of US\$6.5 million in Q3/21 due to stronger Baht than previous quarter. Baht strengthen resulted in an increase in the value of Baht denominated receivables when converted to US\$ equivalent.

Similarly, there was a foreign exchange gain of US\$6.3 million in Q4/20 due to Baht to US\$ continued appreciation during Q4/20.

Comparing 2021 to 2020, Thai Baht value against US\$ in 2021 continued to decline due to the economic downturn and resulted in to exchange loss of US\$2.5 million compared to exchange gain of US\$14.4 million in the same period of prior year when Baht appreciated in value.

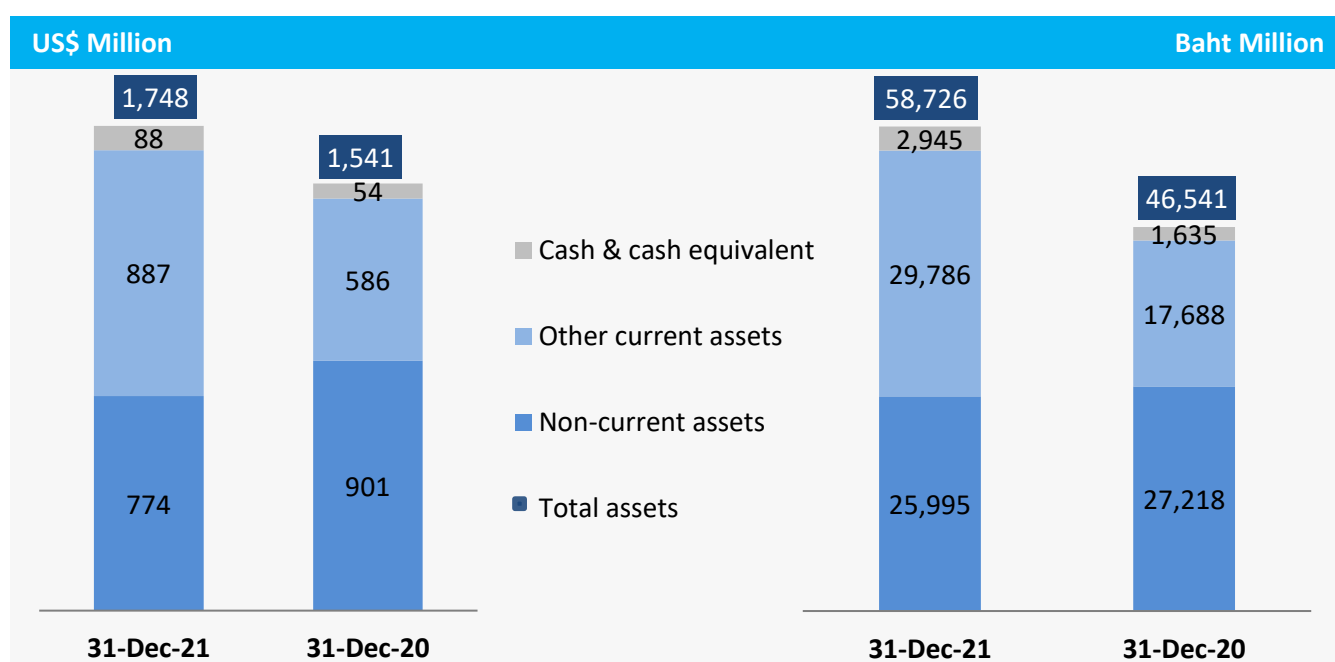
Administrative Expenses

Comparing Q4/21 with Q3/21 and Q4/20, administrative expense significant decreased to US\$0.6 million in Q4/21 from US\$6.7 million in Q3/21 and US\$3.9 million in Q4/20 as a result of the reversal accrue expenses of US\$5.9 million and SPRC received the recovery from the loss of invoice payment from the cyber-attack approximately US\$1.2 million in this quarter.

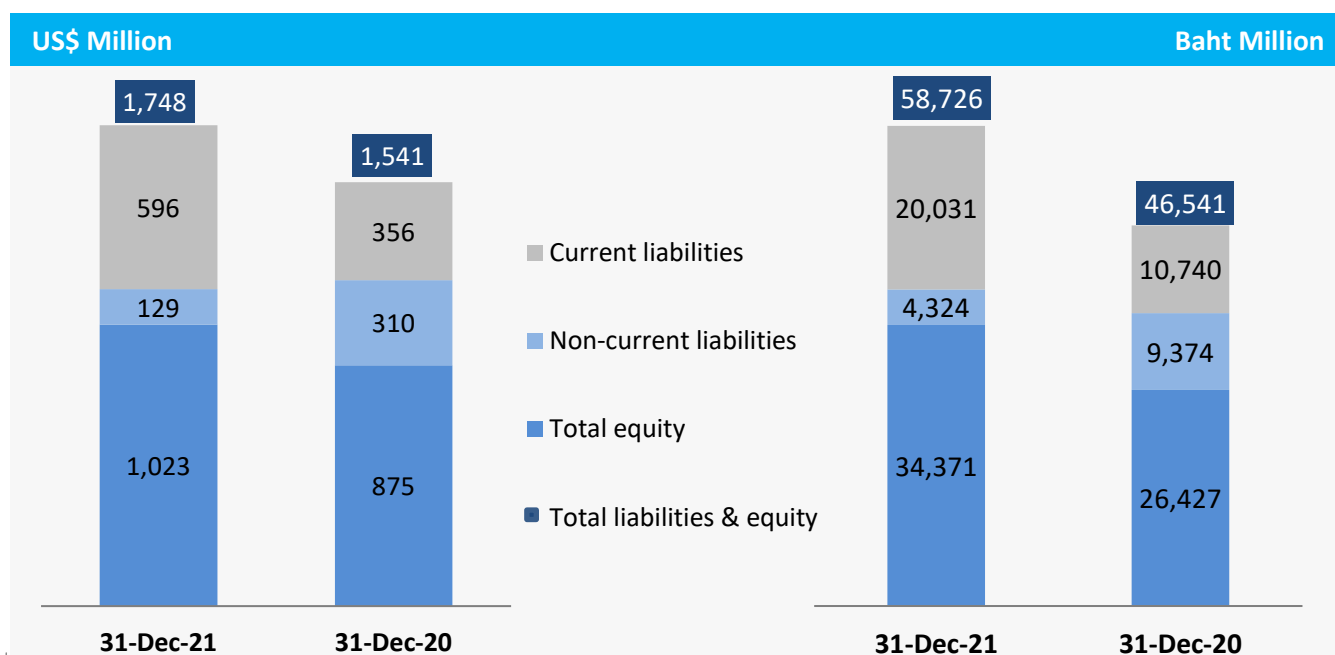
Comparing 2021 with 2020, total administrative expense decreased from US\$29 million in 2020 to US\$24 million in 2021 due to reversal accrue expenses and operating expense control effectively.

Analysis of Financial Position

Asset Breakdown



Liabilities & Equity



Assets

Total assets as of 31 December 21 increased by US\$207 million (Baht 12,185 million) from 31 December 20.

Total current assets significantly increased US\$335 million (Baht 13,408 million) mainly due to:

- an increase in inventory of US\$191 million (Baht 7,434 million) mainly from higher inventory price due to increasing in oil price
- an increase in trade and other receivables of US\$112 million (Baht 4,705 million) due to higher product selling price in December 21 and also slightly higher sales volume comparing to December 20
- an increase in cash and cash equivalent of US\$34 million (Baht 1,310 million) due to net cash generated from operating profit, partly offset by repayment of long-term borrowings of US\$85 million (Baht 2,844 million) during the year.

On the contrary, non-current assets decreased US\$127 million (Baht 1,223 million) mainly due to a decrease in property, plant and equipment of US\$79 million (but increase Baht 63 million from currency translation) due to depreciation expenses in 2021, and a decrease in deferred tax asset of US\$36 million (Baht 950 million) from the utilization of operating loss carryforward from profit in 2021.

Liabilities

Total liabilities as of 31 December 21 increased US\$59 million (Baht 4,241 million) from 31 December 20. The increment was mainly from:

- an increase in trade and other account payables of US\$157 million (Baht 6,140 million) from an increase in crude oil price in December 21 comparing to December 20; but partly offset by
- a decrease in L-T borrowing of US\$99 million (Baht 2,183 million). The decrease was impacted from loan repayment of US\$85 million, and exchange rate impact on non-US\$ borrowing; and
- a decrease in VAT of US\$5 million (Baht 143 million) from higher VAT input in December 21 and excise tax payable of US\$4 million (Baht 8 million) from timing of product lifting in late of December 21 comparing to December 20.

Shareholders' Equity

Shareholders' equity as of 31 December 21 increased US\$148 million (Baht 7,944 million) from 31 December 20 resulted from the net profit in 2021.

Statement of Cash Flow

	US\$ Million		Baht Million	
	2021	2020	2021	2020
Net cash generated (used) in operating activities	121	(42)	3,782	(1,448)
Net cash used in investing activities	(3)	(11)	(103)	(350)
Net cash (used) generated from financing activities	(85)	106	(2,844)	3,346
Net increase (decrease) in cash and cash equivalents	33	53	835	1,549
Cash and cash equivalents at the beginning of the period	54	1	1,635	20
Adjustments from foreign exchange translation	1	0	475	66
Cash and cash equivalents at the end of the period	88	54	2,945	1,635

SPRC cash and cash equivalents was US\$88 million at the end of December 2021, increased from US\$54 million at the end of December 2020.

Details of cash flow activities in 2021 are as follow.

- a) Net cash generated from operating activities of US\$121 million (Baht 3,782 million) which was primarily due to:
 - a. Cash generated from 2021 net profit of US\$150 million (Baht 4,746 million) and non-cash items of US\$124 million (Baht 3,943 million);
 - b. Cash generated from operating liabilities of US\$147 million (Baht 4,740 million) mainly from an increase in trade and other payables US\$157 million (Baht 5,043 million) due to the increase in the price of crude oil purchase in December 21 but partly offset by a decrease in other current liabilities of US\$9 million (Baht 303 million) mainly from higher VAT input in December 21 comparing to December 20. Cash generated was partly offset by
 - c. Cash used in operating assets of US\$300 million (Baht 9,647 million). The increase in oil price also gave rise to an increase in inventory US\$192 million (Baht 6,178 million) and an increase in trade and other receivables of US\$111 million (Baht 3,578 million) from higher selling price.
- b) Net cash used in investing activities of US\$3 million (Baht 103 million). An ongoing Covid-19 pandemic in 2021 led to the defer of capital expenditure and therefore a small investment in 2021.
- c) Net cash used in financing activities of US\$85 million (Baht 2,844 million) for the principal repayment of long-term borrowings in June, September and December.

Financial Ratios

		Q4/21	Q3/21	Q4/20	2021	2020
Current Ratio	(Time)	1.6	2.0	1.8	1.6	1.8
Gross Profit Margin	(%)	4.0	1.5	3.2	4.1	(5.2)
Net Profit Margin	(%)	3.5	0.3	2.7	2.8	(4.5)
Debt to Equity ratio	(Time)	0.7	0.7	0.8	0.7	0.8
Net Interest-Bearing Debt to Equity ratio	(Time)	0.2	0.3	0.3	0.2	0.3
Interest Coverage ratio	(Time)	68.2	N/A	35.3	19.2	N/A

Note:

Current Ratio	= Current Assets / Current Liabilities	(Time)
Gross Profit Margin	= Gross Profit (Loss) / Sales Revenue	(%)
Net Profit Margin	= Quarter (Net Profit (Loss) / Total Revenue)	(%)
Debt to Equity Ratio	= Total Liabilities / Total Shareholders' Equity	(Time)
Net Interest Bearing Debt to Equity ratio	= Interest Bearing Debt - Cash / Total Shareholders' Equity	(Time)
Interest Coverage ratio (Cash basis)	= (Cash flow from Operating activities + Interest paid + Income tax paid) / Interest paid	(Time)

4. Company's significant event after 31 December 2021

On 25 January 2022 at 21.06 hrs., there was crude oil leak at the Single Point Mooring (SPM). The amount of crude oil leak was estimated to be 39 tons or equivalent to 47,000 liters which based on the best information available. The Company has worked together with related government agencies and private sector with use of the dispersant sprays both by ships and helicopter and deployed booms to remove and control the oil slick. The related government agencies confirmed that all oil slick in the Mae Ram Phueng area was no longer visible as of 30 January 2022, with neither oil stain found in the Mae Ram Phueng area, nor at Prao Bay in the area surrounding Samet island.

On 9 February 2022, during the process to embark on a plan to remove the remaining crude oil from the SPM system's non-damaged hose, oil was released from a second leak point, which was captured and treated. SPRC immediately paused all recovery activities and reinstated offshore and onshore incident response operations. On 10 February 2022, an oil sheen of approximately 5,000 liters was observed outside of the SPM area. SPRC responded with use of dispersant with the support of the Royal Thai Navy. These response activities have been completed.

The Company conducts a thorough investigation of the incident to get to the root cause of the failure and will look to leverage external subject matter experts and cooperate with all related governments in the investigation process.

The Company endeavors to provide a reasonable and fair remedy to those who have been impacted. In cooperation with various government agencies and key stakeholders, four committees have been formed and are working to address the criteria and mechanisms of payment for the respective groups.

The Company is currently in the process of assessing the impact together with the insurance companies; provided with the insured amount to the damage property and the 3rd parties liabilities, and the environmental and communities impacts. The refinery continues to operate as usual.

For the financial matter, in 2022, the Company has recognized the related expenditure from this incident in the amount of US\$ 5 million or equivalent to Baht 162 million and might incur the additional future expenditures.

The Company provides information and updates regarding this incident in the Company's website at www.sprc.co.th.