

**THAI OIL PUBLIC COMPANY LIMITED**

**CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS**

**31 DECEMBER 2019**

## **Independent Auditor's Report**

To the shareholders and the Board of Directors of Thai Oil Public Company Limited

### **My opinion**

In my opinion, the consolidated financial statements of Thai Oil Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial statements of the Company present fairly, in all material respects, the consolidated and separate financial position of the Group and of the Company as at 31 December 2019, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRSs).

### **What I have audited**

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2019;
- the consolidated and separate statements of income for the year then ended;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include a summary of significant accounting policies.

### **Basis for opinion**

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Federation of Accounting Professions under the Royal Patronage of his Majesty the King's Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

### **Key audit matters**

Key audit matters are those matters that, in my professional judgment, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Key audit matter	How my audit addressed the key audit matter
<p><b>Goodwill impairment assessment</b></p> <p>Refer to note 4.1 - Estimation of impairment of goodwill and note 17 - Goodwill.</p> <p>The Group had goodwill of Baht 546.44 million arose from the historical acquisition of the solvent and petrochemical distribution business in Socialist Republic of Vietnam.</p> <p>The management tested the impairment of goodwill annually at the level of a cash generating unit (CGU) and assessed its recoverable amount by applying the value-in-use model which involves significant management judgements in respect to the future operating results of business, projected cash flows and the discount rate applied to the projected cash flows. Key assumptions applied in assessing the value-in-use model are:</p> <ul style="list-style-type: none"> <li>• revenue growth rates, expected changes to working capital, overhead costs and long-term growth rate in the business.</li> <li>• discount rates calculated from capital structure, market risk and beta from available information in its industry.</li> </ul> <p>From the result of impairment testing, the management determined that no impairment was recognised against this balance in the 2019 financial year.</p> <p>I focused on the valuation of goodwill due to the significant value and the fact that the determination of value-in-use depends on a number of assumptions (e.g. revenue growth rates, expected changes to working capital and overhead costs to the businesses, and the discount rates). These assumptions involve significant judgement made by the management in assessing the possibility of future business plans.</p>	<p>I carried out the following audit procedures to assess the impairment test of goodwill prepared by management.</p> <ul style="list-style-type: none"> <li>• Satisfied myself as to the appropriateness of management's identification of the CGUs.</li> <li>• Held discussions with the management to understand the basis for the assumptions applied and evaluated whether the goodwill impairment testing process and assumptions had been applied consistently across the Group.</li> <li>• Challenged management's significant assumptions used in goodwill impairment testing, especially in respect to the revenue growth rates, expected changes to working capital, overhead costs and long-term growth rate to the business. My procedures included comparing those assumptions to the external sources and management's approved business plan.</li> <li>• Assessed the reasonableness of the business plan by comparing the plans of 2019 with actual results.</li> <li>• Assessed the discount rate by considering and comparing with the independence data obtained from available public information of companies in the same industry sector to see whether the discount rate used by the management was within the acceptable range.</li> <li>• Tested the sensitivity analysis of the key assumptions used in the discounted cash flows projection, such as long-term growth rate and discount rate, to assess the sensitivity impact and the impact from changes in these key assumptions.</li> </ul> <p>As a result of the procedures performed, I did not found any irregularity of the management's assessment of the impairment and noted that the key assumptions used by management in assessing the possibility of future business plans are within the reasonable range.</p>

Key audit matter	How my audit addressed the key audit matter
<p><b>Impairment assessment in marine transportation services business</b></p> <p>Refer to note 4.2 - Impairment of property, plant and equipment, note 4.3 - Impairment of investment in subsidiaries, note 13 - Investment in subsidiaries and note 16 - Property, plant and equipment, net</p> <p>As of 31 December 2019, the Group's subsidiaries have certain vessels and crew boats which are not fully utilised in operation due to the slowdown in the exploration business which resulted in low freight charge and lower demand in marine transportation services. Management considered this as impairment indicators of vessels and crew boats of marine transportation services segment, which had net book value at Baht 2,455 million in consolidated financial statements. This also triggered the impairment indicator of loan to and investment in Thailoil Marine Co., Ltd., a direct subsidiary, amounting to Baht 590 million and Baht 970 million, respectively, in the separate financial statements. The management did not recognise provision for impairment during the year ended 2019.</p> <p>Management performed impairment testing on vessels and crew boats in consolidated financial statements, and loan to a subsidiary and investment in a subsidiary in the separate financial statements and calculated the recoverable amount by comparing between the higher of the fair value less costs to sell and value-in-use. Management assessed its recoverable amount by applying value-in-use model. This value-in-use model involves significant judgements made by management in respect to the future operating results of business, projected cash flows and the discount rate applied to the projected cash flows. Key assumptions applied in the value-in-use model were:</p> <ul style="list-style-type: none"> <li>• freight rate, utilisation rate, expected changes to working capital, operating expenditures in the business and long-term growth rate.</li> <li>• discount rates calculated from capital structure, market risk and beta from available information in its industry.</li> </ul> <p>I focused on the recoverable amount of vessels and crew boats, loans to a subsidiary and investment in a subsidiary due to its significant value and the determination of value-in-use depends on a number of assumptions. Those assumptions involve management's significant judgements in assessing the feasibility of future business plans.</p>	<p>I carried out the following audit procedures to assess the impairment test of vessels and crew boats in the consolidated financial statements, and loan to a subsidiary and investment in a subsidiary in the separate financial statements prepared by management.</p> <ul style="list-style-type: none"> <li>• Assessed the appropriateness of management's identification of the indicators for impairment of vessels and crew boats, loan to a subsidiary and investment in a subsidiary.</li> <li>• Held discussions with the management to understand the basis for the assumptions applied to the cash flow projections.</li> <li>• Challenged management's significant assumptions used in impairment testing, especially in respect to the freight rate, utilisation rate, expected changes to working capital, overhead costs and long-term growth rate to the business. My procedures included comparing those assumptions to the external sources and management's approved business plan.</li> <li>• Assessed the reasonableness of the business plan by comparing the plans of 2019 with actual results.</li> <li>• Assessed the discount rate by considering and comparing with the independence data obtained from available public information of companies in the same industry sector to see whether the discount rate used by the management was within the acceptable range.</li> <li>• Tested the sensitivity analysis of the key assumptions used in the discounted cash flows projection, such as forecasted revenue and discount rate, to assess the sensitivity impact and the impact from changes in these key assumptions.</li> </ul> <p>As a result of the procedures performed, I did not find any irregularity of the management's assessment of the impairment and noted that the key assumptions used by management in assessing the possibility of future business plans are within the reasonable range.</p>

## **Other information**

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated and separate financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to the audit committee.

## **Responsibilities of the directors for the consolidated and separate financial statements**

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRSs, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are responsible for assessing the Group and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group and the Company's financial reporting process.

## **Auditor's responsibilities for the audit of the consolidated and separate financial statements**

My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the audit committee with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers ABAS Ltd.

**Boonrueng Lerdwiseswit**  
 Certified Public Accountant (Thailand) No. 6552  
 Bangkok  
 14 February 2020

Thai Oil Public Company Limited  
Statement of Financial Position  
As at 31 December 2019

	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Assets</b>					
<b>Current assets</b>					
Cash and cash equivalents	7	74,854,227,157	33,741,253,152	71,042,494,404	29,868,078,023
Deposits at a financial institution used as collaterals	8	325,490,108	300,217,881	-	-
Short-term investments	9	1,757,198,402	73,220,568,315	1,757,147,380	73,027,317,304
Trade accounts receivable, net	10	22,465,507,253	24,359,024,864	23,633,527,215	25,193,925,665
Other receivables	11	1,287,783,429	1,381,634,279	1,173,423,156	1,443,680,409
Short-term loans to related parties	39	-	-	3,220,801,950	4,274,000,000
Short-term loans to a third party		-	45,000,000	-	-
Inventories, net	12	30,292,424,978	28,738,502,329	26,657,406,141	24,423,642,318
Prepaid corporate income tax		1,268,667,630	937,573,494	1,146,450,472	860,134,701
Value added tax receivables		752,487,659	630,751,760	243,487,143	36,760,012
Receivables from oil fuel fund		1,672,503,239	1,388,932,491	1,672,503,239	1,388,932,491
<b>Total current assets</b>		<b>134,676,289,855</b>	<b>164,743,458,565</b>	<b>130,547,241,100</b>	<b>160,516,470,923</b>
<b>Non-current assets</b>					
Available-for-sale investments	9	382,545,317	360,515,845	382,545,317	360,515,845
Investments in subsidiaries	13	-	-	15,014,809,002	14,555,419,002
Investments in joint ventures	14	617,494,075	624,895,464	-	-
Investments in associates	14	32,441,826,592	14,315,601,209	7,852,111,863	1,260,604,927
Other long-term investments	9	820,475,807	779,871,900	820,475,807	779,871,900
Long-term loans to related parties	39	-	-	11,781,334,798	400,000,000
Investment properties, net	15	102,520,270	102,520,270	1,141,368,248	1,100,443,418
Property, plant and equipment, net	16	106,559,156,720	79,929,021,500	68,321,456,357	39,989,649,341
Goodwill	17	765,013,432	790,085,313	-	-
Intangible assets, net	18	2,386,881,501	2,254,956,610	649,079,255	529,008,978
Deferred tax assets	19	670,855,534	629,338,970	556,743,979	515,758,780
Deferred land lease arrangement, net		3,217,652,692	3,244,406,394	3,154,138,346	3,169,006,005
Other non-current assets		803,815,608	838,281,436	649,600,879	668,319,370
<b>Total non-current assets</b>		<b>148,768,237,548</b>	<b>103,869,494,911</b>	<b>110,323,663,851</b>	<b>63,328,597,566</b>
<b>Total assets</b>		<b>283,444,527,403</b>	<b>268,612,953,476</b>	<b>240,870,904,951</b>	<b>223,845,068,489</b>

The accompanying notes are an integral part of these consolidated and separate financial statements.

Thai Oil Public Company Limited  
Statement of Financial Position  
As at 31 December 2019

		Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
Notes		Baht	Baht	Baht	Baht
<b>Liabilities and equity</b>					
<b>Current liabilities</b>					
Short-term loans from financial institutions	20	1,576,140,678	2,391,675,227	-	-
Trade accounts payable	21	25,015,153,158	21,844,262,665	27,134,381,690	23,516,749,444
Other payables	22	9,106,115,537	3,871,803,863	8,530,649,715	3,575,377,315
Short-term loans from related parties	39	-	-	2,467,426,531	1,506,552,107
Current portion of long-term loans from financial institutions, net	23	1,335,895,120	1,548,627,370	-	-
Current portion of debentures, net	24	-	3,000,000,000	-	3,000,000,000
Excise duty payables		1,417,726,777	4,814,818,139	1,417,726,777	4,814,818,139
Income tax payables		215,015,835	548,624,898	-	-
Other current liabilities		652,238	238,733	652,238	238,733
<b>Total current liabilities</b>		<b>38,666,699,343</b>	<b>38,020,050,895</b>	<b>39,550,836,951</b>	<b>36,413,735,738</b>
<b>Non-current liabilities</b>					
Long-term loans from financial institutions, net	23	13,884,311,639	14,837,873,738	-	-
Long-term loans from a third party	23	219,437,500	216,437,500	-	-
Long-term loans from related parties	39	3,998,847,362	-	65,366,055,503	52,028,386,444
Debentures, net	24	97,184,200,848	85,065,238,416	32,129,435,098	33,008,687,149
Deferred tax liabilities	19	124,916,226	37,020,089	-	-
Employee benefit obligations	25	4,586,029,274	3,586,980,032	3,954,907,138	3,183,164,072
Other non-current liabilities		856,576,209	376,974,231	1,149,139,617	524,495,928
<b>Total non-current liabilities</b>		<b>120,854,319,058</b>	<b>104,120,524,006</b>	<b>102,599,537,356</b>	<b>88,744,733,593</b>
<b>Total liabilities</b>		<b>159,521,018,401</b>	<b>142,140,574,901</b>	<b>142,150,374,307</b>	<b>125,158,469,331</b>

The accompanying notes are an integral part of these consolidated and separate financial statements.



Thai Oil Public Company Limited  
Statement of Financial Position  
As at 31 December 2019

	Notes	Consolidated		Separate	
		financial statements		financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
Liabilities and equity (Continued)					
Equity					
Share capital	26				
Authorised share capital					
- 2,040,027,873 ordinary shares					
at par value of Baht 10 each		20,400,278,730	20,400,278,730	20,400,278,730	20,400,278,730
Issued and paid-up share capital					
- 2,040,027,873 ordinary shares					
paid-up of Baht 10 each		20,400,278,730	20,400,278,730	20,400,278,730	20,400,278,730
Share premium on ordinary shares	26	2,456,261,491	2,456,261,491	2,456,261,491	2,456,261,491
Other surpluses (deficits)		(3,361,230,760)	303,596,612	-	-
Retained earnings					
Appropriated					
- Legal reserve	27	2,040,027,873	2,040,027,873	2,040,027,873	2,040,027,873
- Other reserves		244,500,000	244,500,000	244,500,000	244,500,000
Unappropriated		97,996,594,207	96,400,250,174	73,513,426,297	73,487,768,327
Other components of equity		196,306,468	(132,892,315)	66,036,253	57,762,737
Equity attributable to the owners of the parent		119,972,738,009	121,712,022,565	98,720,530,644	98,686,599,158
Non-controlling interests	13.3, 28	3,950,770,993	4,760,356,010	-	-
Total equity		123,923,509,002	126,472,378,575	98,720,530,644	98,686,599,158
Total liabilities and equity		283,444,527,403	268,612,953,476	240,870,904,951	223,845,068,489

The accompanying notes are an integral part of these consolidated and separate financial statements.

Thai Oil Public Company Limited  
Statement of Income  
For the year ended 31 December 2019

	Notes	Consolidated financial statements		Separate financial statements	
		2019 Baht	2018 Baht	2019 Baht	2018 Baht
Revenue from sales and services	6	362,179,344,650	389,042,328,430	375,400,619,826	404,829,381,359
Subsidy from oil fuel fund		2,147,366,790	3,123,231,734	2,147,366,790	3,123,231,734
<b>Total revenue</b>		<b>364,326,711,440</b>	<b>392,165,560,164</b>	<b>377,547,986,616</b>	<b>407,952,613,093</b>
Cost of sales of goods and services		(355,756,268,016)	(375,950,002,159)	(374,844,362,993)	(401,030,476,222)
<b>Gross profit</b>		<b>8,570,443,424</b>	<b>16,215,558,005</b>	<b>2,703,623,623</b>	<b>6,922,136,871</b>
Dividend income		167,106,044	157,371,998	2,493,896,889	4,257,840,783
Net derivative gain (loss) on hedging instruments		358,864,902	(820,524,349)	(210,628,354)	(236,862,872)
Net foreign exchange gain		1,775,101,504	626,683,439	1,847,435,026	430,095,814
Other income	29	1,576,664,491	1,718,921,457	3,466,515,162	3,704,131,833
Selling expenses		(404,947,419)	(423,970,790)	(60,645,947)	(72,892,487)
Administrative expenses		(2,279,280,408)	(2,357,752,867)	(2,398,584,521)	(2,435,738,911)
Share of profit of joint ventures and associates, net	14	1,299,352,036	1,192,891,937	-	-
<b>Profit before finance costs and income tax expense</b>		<b>11,063,304,574</b>	<b>16,309,178,830</b>	<b>7,841,611,878</b>	<b>12,568,711,031</b>
Finance costs		(3,307,491,913)	(3,510,847,618)	(2,660,072,989)	(2,942,417,762)
Finance costs from repurchase of debentures		-	(431,099,841)	-	(431,099,841)
<b>Profit before income tax expense</b>		<b>7,755,812,661</b>	<b>12,367,231,371</b>	<b>5,181,538,889</b>	<b>9,195,193,428</b>
Income tax expense	32	(1,239,408,164)	(1,982,789,060)	(526,174,798)	(954,711,119)
<b>Net profit for the year</b>		<b>6,516,404,497</b>	<b>10,384,442,311</b>	<b>4,655,364,091</b>	<b>8,240,482,309</b>
<b>Profit attributable to:</b>					
Owners of the parent		6,276,681,543	10,149,038,048	4,655,364,091	8,240,482,309
Non-controlling interests		239,722,954	235,404,263	-	-
<b>Net profit for the year</b>		<b>6,516,404,497</b>	<b>10,384,442,311</b>	<b>4,655,364,091</b>	<b>8,240,482,309</b>
<b>Basic earnings per share</b>	34	<b>3.08</b>	<b>4.97</b>	<b>2.28</b>	<b>4.04</b>

The accompanying notes are an integral part of these consolidated and separate financial statements.

Thai Oil Public Company Limited  
Statement of Comprehensive Income  
For the year ended 31 December 2019

	Consolidated financial statements		Separate financial statements	
	2019 Baht	2018 Baht	2019 Baht	2018 Baht
<b>Net profit for the year</b>	6,516,404,497	10,384,442,311	4,655,364,091	8,240,482,309
<b>Other comprehensive income (expense)</b>				
<b>Items that will be reclassified subsequently to profit or loss</b>				
Net changes in fair value of available-for-sale investments, net of tax	8,273,516	(11,147,085)	8,273,516	(11,147,085)
Exchange difference on translation of financial statements	350,031,914	(30,790,007)	-	-
Share of other comprehensive income (expense) of an associate accounted for using the equity method, net of tax	(35,645,251)	5,355,995	-	-
<b>Total items that will be reclassified subsequently to profit or loss</b>	322,660,179	(36,581,097)	8,273,516	(11,147,085)
<b>Items that will not be reclassified subsequently to profit or loss</b>				
Remeasurements of post-employment benefit obligations, net of tax	(291,305,681)	(412,747)	(243,658,190)	-
Share of other comprehensive expense of associates accounted for using the equity method, net of tax	(3,254,228)	(17,600,081)	-	-
<b>Total items that will not be reclassified subsequently to profit or loss</b>	(294,559,909)	(18,012,828)	(243,658,190)	-
<b>Other comprehensive income (expense) for the year, net of tax</b>	28,100,270	(54,593,925)	(235,384,674)	(11,147,085)
<b>Total comprehensive income for the year</b>	6,544,504,767	10,329,848,386	4,419,979,417	8,229,335,224
<b>Total comprehensive income attributable to:</b>				
Owners of the parent	6,311,590,747	10,096,673,404	4,419,979,417	8,229,335,224
Non-controlling interests	232,914,020	233,174,982	-	-
<b>Total comprehensive income for the year</b>	6,544,504,767	10,329,848,386	4,419,979,417	8,229,335,224

The accompanying notes are an integral part of these consolidated and separate financial statements.

Thai Oil Public Company Limited  
Statement of Changes in Equity  
For the year ended 31 December 2019

Consolidated financial statements														
Equity attributable to the owners of the parent														
Notes	Other surpluses (deficits)					Retained earnings			Other components of equity			Total owners of the parent	Non-controlling interests	Total equity
	Issued and paid-up share capital	Share premium	Surplus from business restructuring under common control	Deficit from the change in the ownership interests in subsidiaries	Deficit from the change in the net assets in an associate	Appropriated - legal reserve	Appropriated - other reserves	Unappropriated	Other comprehensive income (expense)					
									Fair value changes in available-for-sale investments	Currency translation differences of financial statements	Share of other comprehensive income (expense) of associates			
Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht
Opening balance as at 1 January 2018	20,400,278,730	2,456,261,491	330,835,954	(127,795,383)	-	2,040,027,873	244,500,000	96,975,466,730	68,909,822	(159,142,136)	(5,866,053)	122,223,477,028	4,924,769,107	127,148,246,135
Dividend	-	-	-	-	-	-	-	(10,708,683,908)	-	-	-	(10,708,683,908)	(297,032,038)	(11,005,715,946)
Acquisition of non-controlling interest without a change in control	-	-	-	100,556,041	-	-	-	-	-	-	-	100,556,041	(100,556,041)	-
Total comprehensive income (expense) for the year														
Net profit for the year	-	-	-	-	-	-	-	10,149,038,048	-	-	-	10,149,038,048	235,404,263	10,384,442,311
Other comprehensive income (expense) for the year	-	-	-	-	-	-	-	(15,570,696)	(11,147,085)	(30,790,007)	5,143,144	(52,364,644)	(2,229,281)	(54,593,925)
Closing balance as at 31 Decemcer 2018	20,400,278,730	2,456,261,491	330,835,954	(27,239,342)	-	2,040,027,873	244,500,000	96,400,250,174	57,762,737	(189,932,143)	(722,909)	121,712,022,565	4,760,356,010	126,472,378,575
Opening balance as at 1 January 2019	20,400,278,730	2,456,261,491	330,835,954	(27,239,342)	-	2,040,027,873	244,500,000	96,400,250,174	57,762,737	(189,932,143)	(722,909)	121,712,022,565	4,760,356,010	126,472,378,575
Dividend	35	-	-	-	-	-	-	(4,386,047,931)	-	-	-	(4,386,047,931)	(239,969,054)	(4,626,016,985)
Deficit from the change in the net assets in an associate	14	-	-	-	(3,664,827,372)	-	-	-	-	-	-	(3,664,827,372)	(815,763,986)	(4,480,591,358)
Non-controlling interest arising on business combination	40	-	-	-	-	-	-	-	-	-	-	-	13,234,003	13,234,003
Total comprehensive income (expense) for the year														
Net profit for the year	-	-	-	-	-	-	-	6,276,681,543	-	-	-	6,276,681,543	239,722,954	6,516,404,497
Other comprehensive income (expense) for the year	-	-	-	-	-	-	-	(294,289,579)	8,273,516	350,080,851	(29,155,584)	34,909,204	(6,808,934)	28,100,270
Closing balance as at 31 December 2019	20,400,278,730	2,456,261,491	330,835,954	(27,239,342)	(3,664,827,372)	2,040,027,873	244,500,000	97,996,594,207	66,036,253	160,148,708	(29,878,493)	119,972,738,009	3,950,770,993	123,923,509,002

The accompanying notes are an integral part of these consolidated and separate financial statements.

Thai Oil Public Company Limited  
Statement of Changes in Equity  
For the year ended 31 December 2019

Separate financial statements							
Note	Issued and paid-up share capital Baht	Share premium Baht	Retained earnings			Other components of equity	Total equity Baht
			Appropriated - legal reserve Baht	Appropriated - other reserves Baht	Unappropriated Baht	Other comprehensive income (expense)	
						Fair value changes in available-for-sale investments Baht	
<b>Opening balance as at 1 January 2018</b>	20,400,278,730	2,456,261,491	2,040,027,873	244,500,000	75,955,969,926	68,909,822	101,165,947,842
Dividend	-	-	-	-	(10,708,683,908)	-	(10,708,683,908)
<b>Total comprehensive income (expense) for the year</b>							
Net profit for the year	-	-	-	-	8,240,482,309	-	8,240,482,309
Other comprehensive expense for the year	-	-	-	-	-	(11,147,085)	(11,147,085)
<b>Closing balance as at 31 December 2018</b>	<u>20,400,278,730</u>	<u>2,456,261,491</u>	<u>2,040,027,873</u>	<u>244,500,000</u>	<u>73,487,768,327</u>	<u>57,762,737</u>	<u>98,686,599,158</u>
<b>Opening balance as at 1 January 2019</b>	20,400,278,730	2,456,261,491	2,040,027,873	244,500,000	73,487,768,327	57,762,737	98,686,599,158
Dividend	35 -	-	-	-	(4,386,047,931)	-	(4,386,047,931)
<b>Total comprehensive income for the year</b>							
Net profit for the year	-	-	-	-	4,655,364,091	-	4,655,364,091
Other comprehensive income (expense) for the year	-	-	-	-	(243,658,190)	8,273,516	(235,384,674)
<b>Closing balance as at 31 December 2019</b>	<u>20,400,278,730</u>	<u>2,456,261,491</u>	<u>2,040,027,873</u>	<u>244,500,000</u>	<u>73,513,426,297</u>	<u>66,036,253</u>	<u>98,720,530,644</u>

The accompanying notes are an integral part of these consolidated and separate financial statements.

**Thai Oil Public Company Limited**
**Statement of Cash Flows**
**As at 31 December 2019**

	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Cash flows from operating activities</b>					
Net profit for the year		6,516,404,497	10,384,442,311	4,655,364,091	8,240,482,309
<b>Adjustments to reconcile profit (loss) to cash:</b>					
(Reversal of) Allowance for decline in value of inventories adjusted to net realisable value	12	(1,255,176,302)	1,350,443,972	(1,312,869,399)	1,313,858,368
Depreciation and amortisation	31	7,084,549,254	7,263,783,285	3,747,128,900	3,787,642,038
Finance costs		3,307,491,913	3,510,847,618	2,660,072,989	2,942,417,762
Finance costs from repurchase of debentures		-	431,099,841	-	431,099,841
Unrealised (gain) loss on foreign exchange		(1,807,557,284)	428,191,957	(1,792,848,621)	427,512,032
Share of profit of joint ventures and associates, net		(1,299,352,036)	(1,192,891,937)	-	-
Dividend income		(167,106,044)	(157,371,998)	(2,493,896,889)	(4,257,840,783)
Gain on disposal of investments		(3,781,987)	(1,523,522)	(3,781,987)	(1,523,522)
Loss from the change in the ownership interests in an associate		2,919,431	-	-	-
Reversal of impairment loss on property, plant and equipment and investment property	15,16	(11,656,205)	-	(11,656,205)	-
Impairment loss on non-current assets classified as held-for-sale		43,807,963	-	-	-
Gain on disposal of non-current assets classified as held-for-sale		(5,568,040)	-	-	-
Loss on disposal of property, plant and equipment		65,561,345	2,808,995	14,131,797	1,622,872
Amortisation of advance receipts for land lease and others		(23,617,059)	(24,758,209)	(149,412,722)	(147,874,075)
Income tax expense		1,239,408,164	1,982,789,060	526,174,798	954,711,119
		13,686,327,610	23,977,861,373	5,838,406,752	13,692,107,961
<b>Changes in operating assets and liabilities</b>					
Trade accounts receivable		1,919,573,276	(2,061,153,981)	1,557,142,564	(963,003,532)
Other receivables		(270,545,044)	(559,425,087)	(119,831,888)	(630,982,298)
Inventories		(294,655,513)	2,751,955,346	(920,894,425)	2,356,965,271
Value added tax receivables		(121,735,899)	120,836,623	(206,727,131)	(36,760,012)
Receivables from oil fuel fund		(283,570,748)	(359,879,008)	(283,570,748)	(359,879,008)
Other non-current assets		(52,878,187)	(2,951,945,960)	(34,583,680)	(2,977,634,638)
Trade accounts payable		3,102,215,624	2,977,035,656	3,562,917,307	2,550,746,871
Other payables		(519,542,174)	142,307,634	(401,256,824)	1,050,028,233
Excise duty payables		(3,397,091,362)	29,922,874	(3,397,091,362)	29,922,874
Other non-current liabilities		1,121,296,638	220,682,015	1,108,784,005	68,138,049
		14,889,394,221	24,288,197,485	6,703,294,570	14,779,649,771
Income tax paid		(1,802,196,337)	(5,975,151,623)	(809,070,284)	(4,736,444,150)
<b>Net cash generated from operating activities</b>		13,087,197,884	18,313,045,862	5,894,224,286	10,043,205,621

The accompanying notes are an integral part of these consolidated and separate financial statements.

**Thai Oil Public Company Limited**
**Statement of Cash Flows**
**As at 31 December 2019**

	Notes	Consolidated		Separate	
		financial statements		financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Cash flows from investing activities</b>					
Dividends received		763,067,614	772,443,637	2,493,896,889	4,257,840,783
Payments for deposits at a financial institution used as collaterals		(25,272,227)	(300,217,881)	-	-
Proceeds from (repayment of) disposal of short-term investments, net		72,284,629,882	(21,597,119,763)	72,091,429,893	(21,824,510,133)
Purchase of available-for-sale investments		-	(5,010,249)	-	(5,010,249)
Proceeds from disposal of available-for-sale investments		-	2,737,427,082	-	2,737,427,082
Purchase of other long-term investments		(40,603,906)	-	(40,603,907)	-
Payments for short-term loans to related parties	39	-	-	(1,029,395,550)	(310,000,000)
Proceeds from short-term loans to related parties	39	-	-	2,078,500,000	11,686,500,000
Proceeds from short-term loans to a third party		45,000,000	45,000,000	-	-
Payments for long-term loans to related parties	39	-	-	(11,381,334,798)	(400,000,000)
Proceeds from long-term loans to savings co-operative of employees		11,799,334	45,991,743	11,799,334	45,991,743
Proceeds from disposal of property, plant and equipment		63,691,076	128,649,619	523,832	16,400
Purchase of property, plant and equipment		(27,530,693,950)	(7,863,692,892)	(26,016,560,982)	(6,975,873,167)
Purchase of intangible assets		(217,724,051)	(130,835,947)	(213,474,741)	(82,816,383)
Net cash payment from acquisition of investments in subsidiaries	13,40	(38,779,966)	-	(459,390,000)	-
Payments for investment in an associate	14	(21,971,689,097)	-	(6,591,506,936)	-
<b>Net cash from (used in) investing activities</b>		<b>23,343,424,709</b>	<b>(26,167,364,651)</b>	<b>30,943,883,034</b>	<b>(10,870,433,924)</b>
<b>Cash flows from financing activities</b>					
Finance costs paid		(3,256,810,814)	(3,371,009,367)	(2,703,069,927)	(3,374,795,938)
Finance costs paid for repurchase of debentures		-	(56,631,225)	-	(56,631,225)
Dividends paid to the shareholders of the parent		(4,386,047,931)	(10,708,683,908)	(4,386,047,931)	(10,708,683,908)
Dividends paid to non-controlling interests		(239,969,054)	(297,032,038)	-	-
Proceeds from short-term loans from financial institutions	20	6,990,241,219	29,126,652,825	-	18,990,292,661
Repayment of short-term loans from financial institutions	20	(7,805,775,768)	(27,622,780,554)	-	(18,990,292,661)
Proceeds from short-term loans from related parties	39	-	-	960,874,423	1,003,334,040
Proceeds from long-term loans from related parties	39	3,998,847,362	-	17,061,833,572	51,606,332,137
Proceeds from long-term loans from financial institutions	23	111,889,243	14,943,975,491	-	-
Repayment of long-term loans from financial institutions	23	(1,265,388,254)	(8,006,998,447)	-	-
Proceeds from debenture	24	17,037,010,000	51,634,496,961	-	-
Payment for debentures financing fee	24	(54,750,129)	-	-	-
Redemption of debenture	24	(3,000,000,000)	(20,076,405,723)	(3,000,000,000)	(20,076,405,723)
<b>Net cash from financing activities</b>		<b>8,129,245,874</b>	<b>25,565,584,015</b>	<b>7,933,590,137</b>	<b>18,393,149,383</b>

The accompanying notes are an integral part of these consolidated and separate financial statements.

Thai Oil Public Company Limited  
Statement of Cash Flows  
For the year ended 31 December 2019

	Note	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
		Baht	Baht	Baht	Baht
<b>Net increase in cash and cash equivalents</b>		44,559,868,467	17,711,265,226	44,771,697,457	17,565,921,080
Cash and cash equivalents at the beginning of the year		33,741,253,152	15,623,426,718	29,868,078,023	11,914,509,851
Effect of exchange rate changes		(3,446,894,462)	406,561,208	(3,597,281,076)	387,647,092
<b>Cash and cash equivalents at the end of the year</b>	7	<u>74,854,227,157</u>	<u>33,741,253,152</u>	<u>71,042,494,404</u>	<u>29,868,078,023</u>
<b>Non-cash transactions</b>					
Payables on purchase of property, plant and equipment		6,224,952,259	567,076,652	6,035,121,780	496,162,798
Payables on purchase of intangible assets		344,437,751	243,155,260	3,800	-

The accompanying notes are an integral part of these consolidated and separate financial statements.



## 1 General information

Thai Oil Public Company Limited (the Company) is a public limited company which is incorporated and domiciled in Thailand and is listed on the Stock Exchange of Thailand. The address of the Company's registered offices and refinery plant as follows:

Head office	555/1 Energy Complex Building A, 11 <sup>th</sup> Floor, Vibhavadi Rangsit Road, Kwang Chatuchak, Khet Chatuchak, Bangkok 10900, Thailand
Sriracha office and refinery plant	42/1 Moo 1, Sukhumvit Road Km. 124, Tambol Tungsukla, Amphur Sriracha, Chonburi 20230, Thailand

For reporting purposes, the Company and its subsidiaries are referred to as the Group.

The principal business operations of the Group is oil refinery and distributions, petrochemicals, lube base oil and other businesses in domestic and overseas.

These Group consolidated financial statements were authorised for issue by the board of directors on 14 February 2020.

## 2 Accounting policies

The principal accounting policies applied in the preparation of these consolidated and separate financial statements are set out below:

### 2.1 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai generally accepted accounting principles under the Accounting Act B.E. 2543, being those Thai Financial Reporting Standards issued under the Accounting Profession Act B.E. 2547, and the financial reporting requirements of the Securities and Exchange Commission under the Securities and Exchange Act.

The consolidated and separate financial statements have been prepared under the historical cost convention except as disclosed in the accounting policies below.

The preparation of financial statements in conformity with Thai generally accepted accounting principles requires the Group to use certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated and separate financial statements are disclosed in note 4.

An English version of the consolidated and separate financial statements have been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

### 2.2 New and amended financial reporting standards that are relevant and have significant impacts to the Group

#### 2.2.1 The Group has applied standard and amendments for the first time for their annual reporting commencing 1 January 2019.

Starting from 1 January 2019, the Group has applied standard and amendments which are effective for annual periods beginning on or after 1 January 2019 and are relevant to the Group. The adoption of these standards do not have significant impact on the Group.

**2.2.2 New and amended financial reporting standards that are effective for accounting period beginning or after 1 January 2020. The Group has not yet early adopted these standards.**

**a) Financial instruments**

The new financial reporting standards relate to financial instruments are:

TAS 32	Financial instruments: Presentation
TFRS 7	Financial Instruments: Disclosures
TFRS 9	Financial Instruments
TFRIC 16	Hedges of a Net Investment in a Foreign Operation
TFRIC 19	Extinguishing Financial Liabilities with Equity Instruments

These new standards address the classification, measurement, derecognition of financial assets and financial liabilities, impairment of financial assets, hedge accounting, and presentation and disclosure of financial instruments.

The Group's management is in the process of evaluating the impact from implementing such financial reporting standards.

**b) TFRS 16, Leases**

Where the Group is a lessee, TFRS 16, Leases will result in almost all leases being recognised on the statement of financial position as the distinction between operating and finance leases is removed. A right-of-use asset and a lease liability will be recognised, with exception on short-term and low-value leases.

The Group's management is in the process of evaluating the impact from implementing such financial reporting standards.

**2.3 Group accounting - investments in subsidiaries and associates and in joint arrangements**

**2.3.1 Subsidiaries**

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

The Group applies the acquisition method to account for business combinations except business combination under common control. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred to the former owners of acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the Group recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measured are recognised in profit or loss.

Any contingent consideration to be transferred by the Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill. If the total of consideration transferred, non-controlling interest recognised and previously held interest measured is less than the fair value of the net assets of the subsidiary acquired in the case of a bargain purchase, the difference is recognised directly in profit or loss.

Intercompany transactions, balances and unrealised gains on transactions between group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

### **2.3.2 Transactions with non-controlling interests**

The Group treats transactions with non-controlling interests as transactions with equity owners of the Group. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

### **2.3.3 Disposal of subsidiaries**

When the Group ceases to have control, it shall cease to consolidate its subsidiaries. Any retained interest in the entity is re-measured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities.

### **2.3.4 Business combination under common control**

The Group accounts for business combination under common control by measuring acquired assets and liabilities of the acquiree in the proportion of interests under common control at the carrying values of the acquiree presented in the highest level of the consolidation prior to the business combination under common control at the acquisition date. The Group retrospectively adjusted the business combination under common control transactions as if the combination occurred from the beginning of period of which the financial statements in the previous period are comparatively presented in accordance with the guidance of business combination under common control as issued by the Federation of Accounting Professions.

Costs of business combination under common control are the aggregated amount of fair value of assets transferred, liabilities incurred and equity instruments issued by the acquirer at the date of which the exchange in control occurs. Other costs directly attributable to business combination under common control, such as professional fees of legal advisors and other advisors, registration fees, and costs relating to preparation of information for shareholders, are capitalised as an investment in the separate financial statements while immediately recognised as expenses in the consolidated financial statements in the period in which the business combination occurs.

The difference between costs of business combination under common control and the acquirer's interests in the carrying value of the acquiree is presented as "Surplus arising from business combination under common control" in equity and is derecognised when the investment is disposed by transfer to retained earnings.

### **2.3.5 Associates**

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting.

### **2.3.6 Joint venture**

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

#### Joint operations

A joint operation is a joint arrangement whereby the Group has rights to the assets, and obligations for the liabilities relating to the arrangement. The Group recognises its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. These have been incorporated in the financial statements under the appropriate headings.

#### Joint venture

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method of accounting.

### 2.3.7 Accounting under equity method

Under the equity method, the investment is initially recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The Group's investment in associates includes goodwill identified on acquisition.

If the ownership interest in associates and joint ventures is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate. Profit or loss from reduce of the ownership interest in an associate and joint venture is recognised in profit or loss.

The Group's share of its associates and joint ventures' post-acquisition profits or losses is recognised in the profit or loss, and its share of post-acquisition movements in other comprehensive income is recognised in other comprehensive income. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, together with any long-term interests that, in substance, form part of the entity's net investment in the associates or joint ventures, the Group does not recognise further losses, unless it has liability obligations or commit to pay liability on behalf of the associates and joint ventures.

The Group determines at each reporting date whether there is any objective evidence that the investments in the associates and joint ventures are impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the investments and its carrying value and recognises the impairment amount to share of profit (loss) of associates and joint ventures in profit or loss.

Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates and joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

### 2.3.8 Separate financial statement

In the separate financial statements, investments in subsidiaries, associates and joint ventures are accounted for at cost less impairment. Cost is adjusted to reflect changes in consideration arising from contingent consideration amendments. Cost also includes direct attributable costs of investment.

A test for impairment of investments in subsidiaries, associates and joint ventures is carried out when there is a factor indicating that investments might be impaired. If the carrying value of the investments is higher than its recoverable amount, impairment loss is charged to profit or loss.

## 2.4 Foreign currency translation

### 2.4.1 Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The financial statements are presented in Thai Baht, which is the functional currency and presentation currency of the Company.

### 2.4.2 Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss is recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in profit and loss, any exchange component of that gain or loss is recognised in profit and loss.

### **2.4.3 Group companies**

The results and financial position of all of the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position;
- Income and expenses for each statement of comprehensive income are translated at average exchange rates; and
- All resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate.

### **2.5 Cash and cash equivalents**

In the consolidated and separate statements of cash flows, cash and cash equivalents includes cash on hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less. In the consolidated and separate statements of financial position, bank overdrafts are shown within current liabilities.

### **2.6 Investments**

Investments other than investments in subsidiaries, associates and joint ventures are classified into the following four categories: trading investments; held-to-maturity investments; available-for-sale investments; and general investments. The classification is depended on the purpose for which the investments were acquired. Management determines the appropriate classification of its investments at the time of the purchase and re-evaluates such designation on a regular basis.

1. Investments that are acquired principally for the purpose of generating a profit from short-term fluctuations in price are classified as trading investments and included in current assets.
2. Investments with fixed maturity that the management has the intent and ability to hold to maturity are classified as held-to-maturity.
3. Investments intended to be held for an indefinite period of time, which may be sold in response to liquidity needs or changes in interest rates, are classified as available-for-sale.
4. Investments in non-marketable equity securities are classified as general investments.

All four categories of investment are initially recognised at cost, which is equal to the fair value of consideration paid plus transaction cost.

Trading investments and available-for-sale investments are subsequently measured at fair value. The unrealised gains and losses of trading investments are recognised in profit or loss. The unrealised gains and losses of available-for-sale investments are recognised in other comprehensive income.

Held-to-maturity investments are carried at amortised cost using the effective yield method less impairment loss.

General investments are carried at cost less impairment loss.

A test for impairment is carried out when there is a factor indicating that an investment might be impaired. If the carrying value of the investment is higher than its recoverable amount, impairment loss is charged to profit or loss.

On disposal of an investment, the difference between the net disposal proceeds and the carrying amount is charged or credited to the profit or loss. When disposing part of the Group's holding of a particular investment in debt or equity securities, the carrying amount of the disposed part is determined by the weighted average carrying amount of the total holding of the investment.

## **2.7 Trade accounts receivable**

Trade accounts receivable are amounts due from customers for goods sold or service performed in the ordinary course of business. Trade accounts receivable are carried at the amount of consideration that is unconditionally and subsequently measured at the remaining amount less any allowance for doubtful accounts based on a review of all outstanding amounts at the year-end. The amount of the allowance is the difference between the carrying amount of the receivable and the amount expected to be collectible. Bad debts are written-off during the year in which they are identified and recognised in profit or loss within selling expenses.

## **2.8 Inventories**

Inventories are stated at the lower of cost and net realisable value. Cost is determined by the weighted average method. The cost of purchase comprises both the purchase price and costs directly attributable to the acquisition of the inventory, such as import duties and transportation charges, less all attributable discounts, allowances or rebates. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads based on normal operating capacity. It excludes borrowing costs. Net realisable value is the estimate of the selling price in the ordinary course of business, less applicable variable selling expenses. Allowance is made, where necessary, for obsolete, slow-moving and defective inventories.

## **2.9 Non-current assets (or disposal groups) held-for-sale**

Non-current assets (or disposal groups) are classified as assets held-for-sale when their carrying amount will be recovered principally through a sale transaction and a sale is considered highly probable. They are measured at the lower of the carrying amount and fair value less costs to sell.

An impairment loss is recognised for write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognised.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortised.

## **2.10 Investment property**

Property that is held for long-term rental yields or for capital appreciation or both, and that is not occupied by the companies in the Group, is classified as investment property. Investment property also includes property that is being constructed or developed for future use as investment property. Investment property of the Group is land held for long-term rentals yields.

Land held under operating leases is classified and accounted for by the Group as investment property when the rest of the definition of investment property is met. The operating lease is accounted for as if it were a finance lease.

Investment property is measured initially at its cost, including related transaction costs.

After initial recognition, investment property is carried at cost less any accumulated impairment losses (if any). Land are not depreciated.

Subsequent expenditure is capitalised to the asset's carrying amount only when it is probable that future economic benefits associated with the expenditure will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance costs are expensed when incurred. When part of an investment property is replaced, the carrying amount of the replaced part is derecognised.

## **2.11 Property, plant and equipment**

Property, plant and equipment are stated at historical cost less accumulated depreciation and allowance for impairment (if any). The costs of property, plant and equipment comprise of the purchase price, import duty, non-refundable value added tax (after deducting trade discount and amount returned from seller) and any costs directly attributable to bring the assets to location and condition necessary for them to be capable of operating in the manner intended by management. These costs also include the initial estimated costs of dismantling and removing the item and restoring the site on which they are located, the obligation for which the Group incurs either when the items are acquired or as a consequence of having used the items during a particular period. For equipments controlled by software license which is unable to operate without it. The Group consider it as part of the equipments.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

Land is not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

	<b><u>Years</u></b>
Buildings	10 - 25
Leasehold improvements	5 - 20
Refinery plant and equipment	20 - 35
Lube base oil refinery plants and equipment	16 - 20
Petrochemical plants	10 - 25
Power plants	20 - 25
Transmission facilities	25
Machinery, equipment and plant equipment	3 - 20
Oil and liquid chemical tankers and crew boats	10 - 25
Furniture, fixtures, office equipment and others	5 - 10
Vehicles	5

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

The asset's carrying amount is written-down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (Note 2.14).

Gains or losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within other gains or losses-net in profit or loss.

## **2.12 Goodwill**

Goodwill on acquisitions of subsidiaries (Note 2.3.1) is separately reported in the consolidated statement of financial position.

Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Goodwill is allocated to cash-generating units for the purpose of impairment testing. The allocation is made to those cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose and can be identified according to operating segment.

## **2.13 Intangible assets**

### **License fee, computer software and patent**

License fee, computer software and patent that are acquired by the Group, which have finite useful lives, are stated at cost less accumulated amortisation and accumulated impairment losses (if any). Amortisation is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives as follows:

	<b><u>Years</u></b>
License fee	10 - 25
Computer software	5 - 10
Patent	10

Amortisation methods, useful lives and residual values are reviewed at the end of each reporting period.

Cost associated with maintaining computer software are recognised as expense in the period in which they are incurred.



## 2.14 Impairment of assets

Assets that have an indefinite useful life, for example goodwill, are not subject to amortisation and are tested for impairment annually. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

## 2.15 Leases

### Leases - where the Group is the lessee

Long-term leases where a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the period of the lease.

Long-term leases of assets where the Group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the inception of the lease at the lower of the fair value of the leased property and the present value of the minimum lease payments.

Each lease payment is allocated between the liability and finance charges so as to achieve a constant rate on the finance balance outstanding. The corresponding rental obligations, net of finance charges, are included in other long-term payables. The interest element of the finance cost is charged to profit or loss over the lease period so as to achieve a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant or equipment acquired under finance leases is depreciated over the shorter period of the useful life of the asset and the lease term.

### Leases - where the Group is the lessor

When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable. The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income. Lease income is recognised over the term of the lease using the net investment method, which reflects a constant periodic rate of return. Initial direct costs are included in initial measurement of the finance lease receivable and reduce the amount of income recognised over the lease term.

Assets leased out under operating leases are included in property, plant and equipment in the statement of financial position. They are depreciated over their expected useful lives on a basis consistent with other similar property, plant and equipment owned by the Group. Rental income (net of any incentives given to lessees) is recognised on a straight-line basis over the lease term.

## 2.16 Borrowings

Borrowings are recognised initially at the fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost. Any difference between proceeds (net of transaction costs) and the redemption value is recognised in profit or loss over the period of the borrowings using the effective yield method.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawdown. In this case, the fee is deferred until the draw-down occurs. To the extent that there is no evidence that it is probable that some or all of the facility will be drawn-down, the fee is capitalised as a pre-payment for liquidity services and amortised over the period of the facility to which it relates.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the end of reporting date.



#### Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are included in the cost of assets. Qualifying assets are assets that require a substantial period of time to get assets to be ready for their intended use or sale. The borrowing cost can be capitalised until the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings in which the specific borrowing does not include as an expenditure of the qualifying assets is deducted from the borrowing costs.

All other borrowing costs are recognised as expense in the period in which they are incurred.

### **2.17 Current and deferred income taxes**

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case the tax is also recognised in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantially enacted at the end of reporting period in the countries where the Company and its subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation and establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognised, using the liability method, on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements.

However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the end of the reporting period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. Deferred income tax is provided on temporary differences arising from investments in subsidiaries, associates and joint arrangements, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax assets and liabilities relate to income taxes levied by the same tax authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

### **2.18 Employee benefits**

#### **2.18.1 Defined contribution**

A defined contribution plan is a plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. The Group pays contributions to a separate fund which is managed by an external fund manager in accordance with the Provident Fund Act. B.E. 2530. The contributions are recognised as an employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

#### 2.18.2 Retirement benefits

A defined benefit plan is a retirement plan that is not a defined contribution plan. Typically defined benefit plans define an amount of retirement benefit that an employee will receive on retirement, usually depends on one or more factors such as age, years of service and compensation.

The liability recognised in the statement of financial position in respect of defined benefit retirement plans is the present value of the defined benefit obligation at the end of the reporting period. The defined benefit obligation is calculated by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market yield of government bonds that are denominating in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related retirement liability.

Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. They are included in retained earnings in the statements of changes in equity.

Past-service costs are recognised immediately in profit or loss.

#### 2.18.3 Other long-term employee benefits

The Group's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted cash flow to determine its present value. Remeasurements are recognised in profit or loss in the period in which they arise.

#### 2.18.4 Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits at the earlier of the following dates: (a) when the Group can no longer withdraw the offer of those benefits; and (b) when the entity recognises costs for a restructuring that is within scope of TAS 37 and involves the payment of termination benefits. In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits due more than 12 months after the end of the reporting period are discounted to their present value.

#### 2.18.5 Short-term employee benefits

Short-term employee benefits are expensed as the related service is provided. A liability is recognised for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

### 2.19 Provision

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and the amount has been reliably estimated. Where the Group expects a provision to be reimbursed, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

### 2.20 Share capital

Ordinary shares with discretionary dividends are classified as equity.

Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds.

## **2.21 Revenue recognition**

Revenue include all revenues from ordinary business activities. All ancillary income in connection with the delivery of goods and rendering of services in the course of the Group's ordinary activities is also presented as revenue.

Revenue are recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectibility of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfillment of the obligation to the customer.

### **Sales of goods**

Revenue from contracts with customers that is derived in connection with oil refinery, lube base oil refinery, petrochemical, power generation, solvent and ethanol business is recognised when the Group satisfies a performance obligation by transferring the petroleum products, petrochemical products and other products to customers via vessel, truck, or pipeline. A transfer of goods generally occurs at the same time when legal ownerships are transferred to customers and customers have physical goods in their possession. In that case, the Group satisfies a performance obligation at a point in time.

### **Revenue from services**

Revenue from services is mainly derived from marine transportation services and is recognised when service is performed. The Group satisfies a performance obligation over time.

### **Rental income**

Rental income from investment property is recognised in profit or loss on a straight-line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income. Contingent rentals are recognised as income in the accounting period in which they are earned.

### **Interest and dividend income**

Interest income is recognised in the profit or loss as it accrues. Dividend income is recognised in the profit or loss on the date the Group's right to receive payments is established which in the case of quoted securities is usually the ex-dividend date.

## **2.22 Government grants**

Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants relating to income are deferred and recognised in profit or loss as subsidy over the period necessary to match them with the costs they are intended to compensate.

The Group separately presents government grants from revenue from sales.

## **2.23 Dividend distribution**

Dividend distribution to the Company's shareholders is recognised as a liability in the Group's financial statements in the period in which the dividends are approved by the Company's shareholders. Interim dividends are recognised when they are approved by the Board of Directors.

## **2.24 Segment reporting**

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as President and Chief Executive Officer who make strategic decisions.

### 3 Financial risk management

#### 3.1 Financial risk factors

The Group is exposed to normal business risks from changes in market interest rates and currency exchange rates and from non-performance of contractual obligation by counterparties. The Group does not hold or issue derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Group. The Group has a control system in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. The management continually monitors the Group's risk management process to ensure that an appropriate balance between risk and control is achieved.

##### 3.1.1 Foreign exchange risk

The Group is exposed to foreign exchange risk relating to purchase of raw materials, long-term loans and debentures which are denominated in foreign currencies. However, the Group enters into short-term currency hedging contracts for short-term foreign currency exposures to protect the foreign exchange risk when appropriate.

As at 31 December 2019 and 2018, the Group was exposed to foreign currency risk in respect of financial assets and liabilities denominated in the following currencies:

	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
	<b>Million Baht</b>	<b>Million Baht</b>	<b>Million Baht</b>	<b>Million Baht</b>
<b>US Dollars</b>				
Cash and cash equivalents	53,162	17,548	52,250	17,062
Short-term investments	1,757	39,076	1,757	39,076
Trade accounts receivable	1,808	3,004	481	983
Other receivables	19	165	16	162
Loans and debentures	(142,820)	(64,706)	(77,252)	(64,706)
Trade accounts payable	(6,834)	(4,425)	(6,635)	(4,128)
Other payables	(4,924)	(1,016)	(4,013)	(104)
	<b>(97,832)</b>	<b>(10,354)</b>	<b>(33,396)</b>	<b>(11,655)</b>
<b>Other currencies</b>				
Cash and cash equivalents	86	38	-	-
Trade accounts receivable	384	327	-	-
Other receivables	27	18	-	4
Loans	(480)	(576)	-	-
Trade accounts payable	(34)	(13)	-	-
Other payables	(1,561)	(98)	(1,532)	(15)
	<b>(1,578)</b>	<b>(304)</b>	<b>(1,532)</b>	<b>(11)</b>
<b>Gross exposure in the statement of financial position</b>	<b>(99,410)</b>	<b>(10,658)</b>	<b>(34,928)</b>	<b>(11,666)</b>
Currency forwards contracts	3,296	2,806	3,296	2,806
<b>Net exposure</b>	<b>(96,114)</b>	<b>(7,852)</b>	<b>(31,632)</b>	<b>(8,860)</b>

### 3.1.2 Interest rate risk

Interest rate risk is the risk that future movements in market interest rates will affect the results of the Group's operations and its cash flows. Hence, the Group has entered into hedging agreements with various investment-grade financial institutions to protect against the risk of rising interest rates.

The effective interest rates of loans as at 31 December 2019 and 2018 and the periods in which those assets mature were as follows:

Consolidated financial statements				
	Effective interest rate % per annum	Within 1 year Million Baht	After 1 year Million Baht	Total Million Baht
<b>As at 31 December 2019</b>				
<b>Non-current</b>				
Long-term loans to savings co-operative of employees	MLR less fixed margin	32	526	558
Loans to employees	MMR less fixed margin	-	6	6
Total		32	532	564
<b>As at 31 December 2018</b>				
<b>Non-current</b>				
Long-term loans to savings co-operative of employees	MLR less fixed margin	34	538	572
Loans to employees	MMR less fixed margin	1	6	7
Total		35	544	579
Separate financial statements				
	Effective interest rate % per annum	Within 1 year Million Baht	After 1 year Million Baht	Total Million Baht
<b>As at 31 December 2019</b>				
<b>Current</b>				
Short-term loans to subsidiaries	BIBOR 3 M plus fixed margin	3,221	-	3,221
<b>Non-current</b>				
Long-term loans to subsidiaries	BIBOR 3 M plus fixed margin	-	11,781	11,781
Long-term loans to savings co-operative of employees	MLR less fixed margin	32	526	558
Total		3,253	12,307	15,560
<b>As at 31 December 2018</b>				
<b>Current</b>				
Short-term loans to subsidiaries	BIBOR 3 M plus fixed margin	4,274	-	4,274
<b>Non-current</b>				
Long-term loans to subsidiaries	BIBOR 3 M plus fixed margin	-	400	400
Long-term loans to savings co-operative of employees	MLR less fixed margin	34	538	572
Total		4,308	938	5,246

The effective interest rates of loans from financial institutions and debentures as at 31 December 2019 and 2018 and the periods in which those liabilities mature were disclosed in note 23 and note 24, respectively.

### 3.1.3 Credit risk

Credit risk is the potential financial loss resulting from the failure of a customer or counterparty to settle its financial and contractual obligations to the Group as and when they fall due. The Group has no significant credit risk with any single counterparty or group of counterparties since the Group maintains business with large customers in petroleum and power industries and requires first class collateral for the rest.

### 3.1.4 Liquidity risk

The Group manages and monitors its liquidity risk by maintaining an adequate level of cash and cash equivalents to finance the Group's operations and to mitigate the effects of fluctuations in cash flows.

## 3.2 Accounting for derivatives financial instruments

Derivative are used to manage exposure to foreign exchange, interest rate and commodity price risks arising from operational, financing and investment activities. Derivative are not used for trading purposes. However, derivatives that do not qualify for hedge accounting are accounted for as trading instruments.

### Hedge of future foreign currency transactions

Forward foreign exchange contracts protect the Group from fluctuations in exchange rates by establishing the rates at which foreign currency assets will be realised or foreign currency liabilities will be settled. Forward foreign exchange contracts are recognised in the financial statements at inception. The premium or discount on the establishment of each agreement is amortised over the contract period.

### Cross currency swap and interest rate swap contracts

Cross currency swap and interest rate swap contracts use to hedge the future fluctuations in exchange rates and interest rates. Financial assets and liabilities denominated in foreign currencies are hedged by using the cross currency swap contracts and are translated into the functional currency at the foreign exchange rates determined in the contracts and revalued at the reporting date at the foreign exchange rate ruling on that date. Foreign exchange differences are recognised in profit or loss. The differences under interest rate swaps are recorded as adjustments to the interest expense relating to the financial obligations in profit or loss.

### Hedge of oil price crack spread and time spread

Differences between the fixed prices of contracts and the settlement prices are recognised in the profit or loss in the period in which the contracts mature.

## 3.3 Fair value estimation of financial instruments

The different levels have been defined as follows:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3: Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The fair value of current portion of financial assets and liabilities approximate the carrying value due to the relatively short-term maturity of these financial instruments.

The carrying value of long-term loans and borrowings with a floating interest rates approximate their fair value because the floating rates are determined by the rate in the market.

**Thai Oil Public Company Limited**  
**Notes to the Consolidated and Separate Financial Statements**  
**For the year ended 31 December 2019**

The following table presents the Group's financial instruments other than stated above that are measured at fair value and are not measured at fair value and classified into the different fair value levels as of 31 December 2019 and 2018.

<b>As at 31 December 2019</b>	<b>Consolidated financial statements</b>			
	<b>Level 1 Million Baht</b>	<b>Level 2 Million Baht</b>	<b>Level 3 Million Baht</b>	<b>Total Million Baht</b>
<b>Financial assets estimated at fair value</b>				
Equity securities - available-for-sale securities	383	-	-	383
<b>Financial assets and financial liabilities not estimated at fair value</b>				
Debentures	-	(108,498)	-	(108,498)
Oil price crack spread swap and time spread swap	-	137	-	137
Interest rate swap contracts	-	(413)	-	(413)
<b>Consolidated financial statements</b>				
<b>As at 31 December 2018</b>	<b>Level 1 Million Baht</b>	<b>Level 2 Million Baht</b>	<b>Level 3 Million Baht</b>	<b>Total Million Baht</b>
<b>Financial assets estimated at fair value</b>				
Equity securities - available-for-sale securities	361	-	-	361
Debt securities - available-for-sale securities (Private funds)	-	11,903	-	11,903
<b>Financial assets and financial liabilities not estimated at fair value</b>				
Debt securities held to maturity	-	721	-	721
Debentures	-	(89,035)	-	(89,035)
Forward exchange contracts	-	(9)	-	(9)
Oil price crack spread swap and time spread swap	-	(278)	-	(278)
Interest rate swap contracts	-	(112)	-	(112)
<b>Seperate financial statements</b>				
<b>As at 31 December 2019</b>	<b>Level 1 Million Baht</b>	<b>Level 2 Million Baht</b>	<b>Level 3 Million Baht</b>	<b>Total Million Baht</b>
<b>Financial assets estimated at fair value</b>				
Equity securities - available-for-sale securities	383	-	-	383
<b>Financial assets and financial liabilities not estimated at fair value</b>				
Long-term loans	-	(73,011)	-	(73,011)
Debentures	-	(35,748)	-	(35,748)
Oil price crack spread swap and time spread swap	-	124	-	124

As at 31 December 2018	Seperate financial statements			
	Level 1 Million Baht	Level 2 Million Baht	Level 3 Million Baht	Total Million Baht
<b>Financial assets estimated at fair value</b>				
Equity securities - available-for-sale securities	361	-	-	361
Debt securities - available-for-sale securities (Private funds)	-	11,903	-	11,903
<b>Financial assets and financial liabilities not estimated at fair value</b>				
Debt securities held to maturity	-	721	-	721
Long-term loans	-	(51,652)	-	(51,652)
Debentures	-	(37,624)	-	(37,624)
Forward exchange contracts	-	(9)	-	(9)
Oil price crack spread swap and time spread swap	-	(33)	-	(33)

#### Valuation techniques

Valuation techniques used in measuring level 2 fair values.

Type	Valuation technique
Debt securities - available-for-sale securities (Private funds)	Thai Bond Market Association Government Bond Yield Curve as of the reporting date.
Debentures/ Long-term loans	Market comparison technique: The valuation model is based on ask prices or lastest price of comparable market securities.
Oil price crack spread swap and time spread swap/ Cross currency and interest rate swap contracts/ Interest rate swap contracts	Market comparison technique: The fair values are based on broker quotes. Similar contracts are traded in an active market and the quotes reflect the actual transactions in similar instruments.

The Group did not have any transfers between levels 1 and 2 during the year.



#### 4 Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

##### Critical accounting estimates and assumptions

During the year ended 31 December 2019, the Group makes estimates and assumptions concerning the future. The result of accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below.

##### 4.1 Estimated impairment of goodwill

The Group performs an impairment test of goodwill annually, in accordance with the accounting policy stated in note 2.12. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. The value-in-use calculation requires the management to estimate the future cash flows expected to arise from the cash-generating unit in order to calculate present value. Significant estimates and assumptions used are growth rate and discount rate which reflect risk of the particular cash-generating unit (Note 17). Determination of the assumptions is necessary for the goodwill impairment testing.

##### 4.2 Impairment of property, plant and equipment

The Group tests impairment of property, plant and equipment whenever events or changes in circumstances indicate that the carrying amount of asset is greater than its estimated recoverable amount. Recoverable amount is the higher of fair value less costs to sell and its value in use. The calculation of fair value less costs to sell involves significant judgements and assumptions of the management in respect to characteristics and conditions of individual asset, expected disposal period, including the list of total assets expected to be disposed. The value-in-use calculates from a cash flow projection which approved by managements. Those cash flows are determined by annual earnings before interest, taxes, depreciation, and amortisation (EBITDA) estimated by management, adjusted by corporate income tax, change in working capital and capital expenditures considered necessary. A long-term growth rate has been determined with reference to gross domestic product (GDP) growth rates for the countries in which the CGUs operates and experiences by management.

##### 4.3 Impairment of investment in subsidiaries

The Group tests impairment of investments in subsidiaries whenever events or changes in circumstances indicate that the carrying amount of asset is greater than its estimated recoverable amount which calculated by using value-in-use method. Value in use involves the future operating results of business, projected cash flows, discount rate to be applied to the projected cash flows and projected dividend payouts of subsidiaries.

##### 4.4 Fair value of derivatives and other financial instruments

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. The Group uses its judgement to select a variety of methods and make assumptions that are mainly based on market conditions exist at the end of each reporting period as disclosed in note 3.3.

##### 4.5 Retirement benefits

The present value of the retirement benefits obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate. Any changes in these assumptions will have an impact on the carrying amount of retirement benefits obligation.

The Group determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the retirement benefits obligations. In determining the appropriate discount rate, the Group considers the market yield of government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related retirement benefits liability.

Additional information of other key assumptions for retirement benefits obligations is disclosed in note 25.

## 5 Capital risk management

The objectives of the Group's capital management are to safeguard the Group's ability to continue as a going concern in order to provide returns to the Group's shareholders and benefits to other stakeholders. The management sets strategies to support the Group's operations for more efficiency, and better performances and stronger financial status, including dividend and capital management policies to maintain the optimal capital structure and cost of capital.

## 6 Segment information

Segment information is presented in respect of the Group's business segments. The primary format, business segments, is based on the Group's management and the internal reporting structure provided to the chief operating decision maker.

Segment results, assets and liabilities include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

### Reportable segments

The Group comprises the following main business segments:

Segment 1:	Oil refinery
Segment 2:	Lube base oil refinery
Segment 3:	Petrochemical
Segment 4:	Power generation
Segment 5:	Marine transportation services
Segment 6:	Solvent
Segment 7:	Ethanol
Segment 8:	Others

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Assets, revenue, and profit (loss) from operation of the business in consolidated financial statements for the year ended 31 December 2019 and 2018 are as follows:

	For the year ended 31 December 2019									
	Oil refinery	Lube base oil refinery	Petro-chemical	Power generation	Marine transportation services	Solvent	Ethanol	Others	Elimination	Total
	Million Baht									
Revenue from sales and services										
- External	314,333	13,755	18,801	4,970	411	9,000	909	-	-	362,179
- Inter-segment	61,067	4,488	33,397	6,800	249	102	564	4,295	(110,962)	-
Subsidy from oil fuel fund	2,147	-	-	-	-	-	-	-	-	2,147
Cost of sales and services	(374,844)	(16,803)	(51,357)	(10,089)	(654)	(8,282)	(1,374)	(4,055)	111,702	(355,756)
<b>Gross profit</b>	2,703	1,440	841	1,681	6	820	99	240	740	8,570
Dividend income	2,494	-	-	-	-	-	-	-	(2,327)	167
Net derivative gain (loss) on hedging instruments	(210)	-	569	-	-	-	-	-	-	359
Net foreign exchange gain (loss)	1,847	1	22	4	(3)	(106)	2	8	-	1,775
Other income	3,467	83	316	31	26	19	3	1	(2,369)	1,577
Selling expenses	(60)	(106)	(166)	-	-	(285)	(19)	-	231	(405)
Administrative expenses	(2,398)	(80)	(164)	(28)	(163)	(309)	(60)	(48)	971	(2,279)
Share of profit (loss) of joint ventures and associates, net	-	-	-	844	29	-	(9)	-	435	1,299
<b>Profit (loss) before finance costs and income tax expense</b>	7,843	1,338	1,418	2,532	(105)	139	16	201	(2,319)	11,063
Finance costs	(2,661)	(4)	(297)	(452)	(112)	(85)	(18)	-	322	(3,307)
<b>Profit (loss) before income tax expense</b>	5,182	1,334	1,121	2,080	(217)	54	(2)	201	(1,997)	7,756
Income tax benefit (expense)	(527)	(267)	(244)	(121)	1	(31)	-	(10)	(41)	(1,240)
<b>Net profit (loss) for the year</b>	4,655	1,067	877	1,959	(216)	23	(2)	191	(2,038)	6,516
Profit (loss) attributable to:										
- Owners of the parent	4,655	1,067	910	1,959	(216)	25	(10)	191	(2,305)	6,276
- Non-controlling interests	-	-	(33)	267	-	(2)	8	-	-	240
<b>Net profit (loss) for the year</b>	4,655	1,067	877	2,226	(216)	23	(2)	191	(2,305)	6,516
<b>Recognition of revenue</b>										
- Point in time	4,655	1,067	877	2,226	-	23	(2)	191	(2,305)	6,732
- Over time	-	-	-	-	(216)	-	-	-	-	(216)
<b>Total revenue</b>	4,655	1,067	877	2,226	(216)	23	(2)	191	(2,305)	6,516

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	For the year ended 31 December 2018									
	Oil refinery	Lube base oil refinery	Petro-chemical	Power generation	Marine transportation services	Solvent	Ethanol	Others	Elimination	Total
	Million Baht									
Revenue from sales and services										
- External	329,762	15,671	27,583	4,839	354	9,851	983	-	-	389,043
- Inter-segment	75,067	5,288	39,118	6,895	267	141	494	1,925	(129,195)	-
Subsidy from oil fuel fund	3,123	-	-	-	-	-	-	-	-	3,123
Cost of sales and services	(401,030)	(19,533)	(62,776)	(9,795)	(616)	(9,193)	(1,381)	(1,846)	130,220	(375,950)
<b>Gross profit</b>	<b>6,922</b>	<b>1,426</b>	<b>3,925</b>	<b>1,939</b>	<b>5</b>	<b>799</b>	<b>96</b>	<b>79</b>	<b>1,025</b>	<b>16,216</b>
Dividend income	4,258	-	-	-	-	-	-	-	(4,101)	157
Net derivative loss on hedging instruments	(237)	-	(584)	-	-	-	-	-	-	(821)
Net foreign exchange gain	430	14	159	3	10	11	-	-	-	627
Other income	3,705	87	299	26	45	16	6	2	(2,467)	1,719
Selling expenses	(73)	(97)	(207)	-	-	(291)	(19)	-	263	(424)
Administrative expenses	(2,436)	(76)	(118)	(34)	(122)	(279)	(77)	(40)	824	(2,358)
Share of profit of joint ventures and associates, net	-	-	-	997	118	-	15	-	63	1,193
<b>Profit (loss) before finance costs and income tax expense</b>	<b>12,569</b>	<b>1,354</b>	<b>3,474</b>	<b>2,931</b>	<b>56</b>	<b>256</b>	<b>21</b>	<b>41</b>	<b>(4,393)</b>	<b>16,309</b>
Finance costs	(3,374)	(4)	(409)	(321)	(123)	(76)	(17)	-	382	(3,942)
<b>Profit (loss) before income tax expense</b>	<b>9,195</b>	<b>1,350</b>	<b>3,065</b>	<b>2,610</b>	<b>(67)</b>	<b>180</b>	<b>4</b>	<b>41</b>	<b>(4,011)</b>	<b>12,367</b>
Income tax benefit (expense)	(955)	(271)	(581)	(140)	1	(40)	-	3	-	(1,983)
<b>Net profit (loss) for the year</b>	<b>8,240</b>	<b>1,079</b>	<b>2,484</b>	<b>2,470</b>	<b>(66)</b>	<b>140</b>	<b>4</b>	<b>44</b>	<b>(4,011)</b>	<b>10,384</b>
Profit (loss) attributable to:										
- Owners of the parent	8,240	1,079	2,530	2,470	(43)	123	4	44	(4,298)	10,149
- Non-controlling interests	-	-	(46)	287	(23)	17	-	-	-	235
<b>Net profit (loss) for the year</b>	<b>8,240</b>	<b>1,079</b>	<b>2,484</b>	<b>2,757</b>	<b>(66)</b>	<b>140</b>	<b>4</b>	<b>44</b>	<b>(4,298)</b>	<b>10,384</b>

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	For the year ended 31 December 2019									
	Oil refinery	Lube base oil refinery	Petro-chemical	Power generation	Marine transportation services	Solvent	Ethanol	Others	Elimination	Total
	Million Baht									
Trade accounts receivable	23,634	1,022	3,950	1,438	61	1,249	98	850	(9,836)	22,466
Inventories	26,657	1,314	1,298	163	27	568	291	-	(26)	30,292
Other current assets	80,257	1,935	1,928	2,039	141	911	53	1,056	(6,401)	81,919
Investments in subsidiaries	15,015	-	-	-	-	-	-	-	(15,015)	-
Investments in joint ventures	-	-	-	-	617	-	-	-	-	617
Investments in associates	7,852	-	-	21,769	3	-	810	-	2,008	32,442
Long-term loans to a related party	11,781	-	-	-	-	-	-	76,123	(87,904)	-
Property, plant and equipment	68,321	1,275	18,093	11,020	2,498	2,190	1,362	-	1,800	106,559
Other non-current assets	7,354	633	1,786	100	8	1,307	11	711	(2,760)	9,150
<b>Total assets</b>	<b>240,871</b>	<b>6,179</b>	<b>27,055</b>	<b>36,529</b>	<b>3,355</b>	<b>6,225</b>	<b>2,625</b>	<b>78,740</b>	<b>(118,134)</b>	<b>283,445</b>
Trade accounts payable	27,134	863	4,556	781	46	613	48	779	(9,805)	25,015
Short-term loans	2,468	-	3,157	-	534	777	331	256	(5,947)	1,576
Current portion of long-term loans from financial institutions	-	-	536	312	179	254	55	-	-	1,336
Other current liabilities	9,949	254	510	223	54	116	47	80	(494)	10,739
Long-term loans	65,366	-	4,522	22,989	1,680	654	39	11,128	(88,275)	18,103
Debentures	32,129	-	-	-	-	-	-	65,055	-	97,184
Other non-current liabilities	5,104	44	247	96	60	81	14	693	(771)	5,568
<b>Total liabilities</b>	<b>142,150</b>	<b>1,161</b>	<b>13,528</b>	<b>24,401</b>	<b>2,553</b>	<b>2,495</b>	<b>534</b>	<b>77,991</b>	<b>(105,292)</b>	<b>159,521</b>

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	For the year ended 31 December 2018									
	Oil refinery	Lube base oil refinery	Petro-chemical	Power generation	Marine transportation services	Solvent	Ethanol	Others	Elimination	Total
	Million Baht									
Trade accounts receivable	25,194	1,547	5,098	1,482	55	1,491	114	697	(11,319)	24,359
Inventories	24,423	1,865	1,347	113	33	738	245	-	(26)	28,738
Other current assets	110,899	809	2,170	2,506	204	990	92	203	(6,228)	111,645
Investments in subsidiaries	14,555	-	-	-	-	-	-	-	(14,555)	-
Investments in joint ventures	-	-	-	-	625	-	-	-	-	625
Investments in associates	1,261	-	-	9,115	-	-	819	-	3,121	14,316
Property, plant and equipment	39,990	1,301	18,609	11,753	2,707	2,341	1,366	-	1,862	79,929
Other non-current assets	7,523	639	1,910	84	7	1,366	7	52,223	(54,758)	9,001
<b>Total assets</b>	<b>223,845</b>	<b>6,161</b>	<b>29,134</b>	<b>25,053</b>	<b>3,631</b>	<b>6,926</b>	<b>2,643</b>	<b>53,123</b>	<b>(81,903)</b>	<b>268,613</b>
Trade accounts payable	23,517	1,362	5,419	1,514	31	640	39	626	(11,304)	21,844
Current portion of										
long-term loans from financial institutions	-	-	535	288	150	535	40	-	-	1,548
Current portion of debentures	3,000	-	-	-	-	-	-	-	-	3,000
Other current liabilities	9,897	715	4,706	144	456	1,435	426	106	(6,258)	11,627
Long-term loans from financial institutions	52,028	-	5,054	7,921	1,459	589	32	-	(52,028)	15,055
Debentures	33,009	-	-	-	-	-	-	51,793	263	85,065
Other non-current liabilities	3,708	46	256	17	477	62	12	442	(1,018)	4,002
<b>Total liabilities</b>	<b>125,159</b>	<b>2,123</b>	<b>15,970</b>	<b>9,884</b>	<b>2,573</b>	<b>3,261</b>	<b>549</b>	<b>52,967</b>	<b>(70,345)</b>	<b>142,141</b>

#### Major customer

Revenue from two customers represents Baht 235,580 million (2018: revenue from three customers represented Baht 242,664 million) of the Group's revenue from sales and service.

#### Geographical segments

In presenting information on the basis of geographical segments, segment revenue is based on the geographical location of customers and segment assets are based on the geographical location of the assets.

#### Geographical information

	Revenue		Non-current assets	
	For the year ended 31 December		As at 31 December	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Thailand	334,593	344,949	147,362	102,794
Other countries	29,733	47,217	1,406	1,075
Total	364,326	392,166	148,768	103,869

### 7 Cash and cash equivalents

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Cash on hand	3	6	-	1
Deposits held at bank				
- savings and current accounts	27,400	14,130	23,591	10,262
- savings accounts (Private Funds)	-	36	-	36
- fixed deposit accounts less than 3 months	47,451	19,569	47,451	19,569
Total	74,854	33,741	71,042	29,868

As at 31 December 2019, the interest rates on deposits in savings accounts are 0.01% – 2.00% per annum (2018: 0.01% – 3.09% per annum).

As at 31 December 2019, the interest rates on deposits in fixed accounts less than 3 months are 0.75% – 2.62% per annum (2018: 1.50% – 2.94% per annum) and these deposits have an average maturity of 89 days.

As at 31 December 2019, the Group's deposit at financial institutions of Baht 1,170 million were used to pledge as collateral for credit facilities (2018: Baht 1,472 million). However, the Group's deposit at financial institutions which pledged as collateral for credit facilities can be withdrawn if it meets the objectives and conditions of loan agreements to support the normal working capital and business operations of the Group (Note 23).

### 8 Deposit at a financial institution used as collateral

As at 31 December 2019, deposits at a financial institution used as short-term collateral represented deposits of a subsidiary amounting to Baht 325 million (2018: Baht 300 million), which was used as collateral for credit facilities with a financial institution as described in note 23. The amount is restricted for long-term loans and interest repayment that will be due in the next period.

9 Other investments

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>Short-term investments</b>				
Cash at bank - fixed deposits	1,757	60,596	1,757	60,403
Debt securities held to maturity	-	721	-	721
Debt securities - available-for-sale securities (Private funds)	-	11,903	-	11,903
	1,757	73,220	1,757	73,027
<b>Available-for-sale investments</b>				
Equity securities - available-for-sale securities	383	361	383	361
	383	361	383	361
<b>Other long-term investments</b>				
Other non-marketable securities	820	780	820	780
	820	780	820	780
<b>Total</b>	<b>2,960</b>	<b>74,361</b>	<b>2,960</b>	<b>74,168</b>

Cash at bank - fixed deposits

As at 31 December 2019, the Group's fixed deposits have not been pledged as collateral for credit facilities as described in note 23 (2018: Baht 540 million).

Equity securities - available-for-sale securities

During the year 2017, the Company entered into CIMB-Principal Energy and Petrochemical Index Fund (CIMB - PRINCIPAL EPIF), to invest in equities issued by the energy and petrochemical companies listed in The Stock Exchange of Thailand. The Company purchased 28.85 million units or amounting to Baht 300 million which its fair value as at 31 December 2019 is Baht 383 million. (2018: Baht 361 million).

Debt securities - available-for-sale securities

The Company established private funds and engaged independent assets management companies. As at 31 December 2019, the value of private funds outstanding totalling Baht 0.40 million (2018: Baht 11,939 million) (including cash at bank - savings account as disclosed in note 7). Those private funds have invested in debt securities which are considered at an investment grade.



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Other non-marketable securities

		Consolidated and Separate financial statements							
		Ownership interest		Paid-up capital		Cost method		Dividend income	
Type of Business		2019 %	2018 %	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>Related parties</b>									
Thai Petroleum Pipeline Co., Ltd.	Oil transportation by pipeline	9.19	9.19	8,479	8,479	779	779	160	154
Sarn Palung Social Enterprise Co., Ltd.	Social enterprise	15.00	15.00	10	3	2	1	-	-
						781	780	160	154

During the year ended 31 December 2019, the Company invested in RVP II, L.P. amounting to Baht 39 million.

## 10 Trade accounts receivable

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Related parties (Note 39)	9,484	11,812	14,241	17,390
Other parties	12,982	12,547	9,393	7,804
Total	22,466	24,359	23,634	25,194
<u>Less</u> allowance for doubtful accounts	-	-	-	-
Trade accounts receivable, net	22,466	24,359	23,634	25,194

Aging analyses for trade accounts receivable are as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>Related parties</b>				
Within credit terms	9,484	11,812	14,241	17,390
<u>Less</u> allowance for doubtful accounts	-	-	-	-
Net	9,484	11,812	14,241	17,390
<b>Other parties</b>				
Within credit terms	12,942	12,545	9,393	7,804
Overdue:				
- Less than 3 months	40	2	-	-
	12,982	12,547	9,393	7,804
<u>Less</u> allowance for doubtful accounts	-	-	-	-
Net	12,982	12,547	9,393	7,804
Total	22,466	24,359	23,634	25,194

The normal credit term granted by the Group ranges from 7 days to 90 days.

## 11 Other receivables

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Prepaid expenses	647	601	467	500
Other accounts receivable	219	256	417	502
Current portion of long-term loans to savings co-operative of employees	33	34	33	34
Other	389	491	256	408
Total	1,288	1,382	1,173	1,444

## 12 Inventories, net

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Crude oil and feedstock	11,678	9,874	10,656	8,835
Materials, spare parts and supplies	1,573	1,560	1,078	1,115
Finished and semi-finished oil products	8,300	6,995	6,189	4,245
Goods in transit				
Crude oil	8,759	11,652	8,733	11,541
Materials, spare parts and supplies	85	16	2	2
<u>Less</u> allowance for decline in value of inventories adjusted to net realisable value				
- Crude oil and feedstock	(1)	(769)	(1)	(769)
- Finished and semi-finished oil products	(102)	(589)	-	(545)
Inventories, net	30,292	28,739	26,657	24,424

As at 31 December 2019, the inventories as stated above included a legal reserve amounting to Baht 11,321 million (2018: Baht 10,413 million).

Inventories recognised as expenses in cost of sale of goods for the year ended 31 December 2019 and 2018 are as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
- Cost of sale of goods	229,647	274,923	266,840	315,367
- (Reversal of) write-down to net realisable value	(1,255)	1,350	(1,313)	1,314
Net	228,392	276,273	265,527	316,681

## 13 Investments in subsidiaries

### 13.1 Movements of investments in subsidiaries are as follows:

	Separate financial statements	
	2019 Million Baht	2018 Million Baht
At 1 January	14,555	14,555
Additional paid-up share capital in a subsidiary	460	-
At 31 December	15,015	14,555

**Direct subsidiary**

***Thaioil Treasury Center Co., Ltd.***

On 25 June 2019, the Extraordinary General Meeting of Shareholder No.1 of Thaioil Treasury Center Co., Ltd. (TTC) passed a resolution to issue additional share capital for 94.62 million shares with a par value of Baht 10 each, totaling of Baht 946.20 million. Total registered capital of TTC after issuing additional share capital will be Baht 956.20 million. The Company purchased all of its issued shares and initially paid up for these additional shares in July and October 2019 in an amount of Baht 460 million .

**Indirect subsidiaries**

***TOP Ventures Co., Ltd.***

In August 2019, TTC has directly invested in TOP Ventures Co., Ltd., which is a newly registered company in Thailand. TTC holds 99.99% of its total registered shares. TOP Ventures Co., Ltd. has 3.50 million ordinary shares with a par value of Baht 10 each, totalling Baht 35 million. TTC has initially paid up at 25% in an amount of Baht 8.75 million and TTC paid for its shares in August 2019.

***TOP Ventures Hong Kong Limited***

In August 2019, TTC has directly invested in TOP Ventures Hong Kong Limited (TVHK), which is a newly registered company in Hong Kong Special Administrative Region. TTC holds 100% of its total registered shares. TVHK has 1 ordinary share with a par value of Hong Kong Dollar 1. TTC has fully paid for its share proportion in August 2019.

***TOP Ventures America LLC***

In August 2019, TVHK, an indirect subsidiary of the Company, has directly invested in TOP Ventures America LLC which is a newly registered company in United States of America. TVHK holds 100% of its total registered shares. TOP Ventures America LLC has 1 ordinary share with a par value of US Dollar 1. TVHK has fully paid for its share in August 2019.

***PT.Tirta Surya Raya***

On 12 September 2019, TOP Solvent Company Limited (TS), an indirect subsidiary, purchased the shares in PT. Tirta Surya Raya (TSR) from the existing shareholders of TSR representing of 67% shareholding interests. TS purchased 15,410 shares, totalling US Dollar 1.28 million or equivalent to Baht 40.24 million as details shown in note 40.

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**13.2 The details of subsidiaries are as follows:**

	Country of incorporation	Nature of the business	Percentage of direct shareholding		Paid-up capital		Cost method		Separate financial statements Dividend income for the year	
			2019	2018	2019	2018	2019	2018	2019	2018
			%	%	Million Baht	Million Baht	Million Baht	Million Baht	Million Baht	Million Baht
Thai Paraxylene Co., Ltd. and its subsidiary	Thailand	Paraxylene manufacturing and distribution	99.99	99.99	2,572	2,572	2,161	2,161	514	1,029
- Subsidiary LABIX Co., Ltd.	Thailand	Linear Alkyl Benzene manufacturing and distribution	75.00	75.00	4,655	4,655	-	-	-	-
Thai Lube Base Public Company Limited	Thailand	Lube base oil refining and distribution	99.99	99.99	1,758	1,758	1,979	1,979	88	1,318
Thaioil Marine Co., Ltd. and its subsidiaries	Thailand	Providing marine transportation services for petroleum and liquid chemical products	99.99	99.99	970	970	970	970	-	-
- Subsidiaries TOP Maritime Service Co., Ltd.	Thailand	Providing marine transportation services for crew and utilities in the Gulf of Thailand	99.99	99.99	520	520	-	-	-	-
Thaioil Marine International Pte. Ltd.	Singapore	Investment in marine transportation for crude oil and petroleum product business	100.00	100.00	274	274	-	-	-	-
Thaioil Energy Services Co., Ltd.	Thailand	Providing human resource management	99.99	99.99	40	40	40	40	-	-
Thaioil Solvent Co., Ltd. and its subsidiaries	Thailand	Investment in solvent and chemical business	99.99	99.99	1,250	1,250	1,250	1,250	-	-
- Subsidiaries TOP Solvent Co., Ltd. and its subsidiaries	Thailand	Distribution of solvent and chemical products	99.99	99.99	1,200	1,200	-	-	-	-
Sak Chaisidhi Co., Ltd.	Thailand	Solvent and chemical products manufacturing	80.52	80.52	190	190	-	-	-	-

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			Separate financial statements							
	Country of incorporation	Nature of the business	Percentage of direct shareholding		Paid-up capital		Cost method		Dividend income for the year	
			2019 %	2018 %	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
TOP Solvent (Vietnam) LLC.	Vietnam	Distribution of solvent and chemical products	100.00	100.00	634	634	-	-	-	-
PT.Tirta Surya Raya	Indonesia	Distribution of solvent and chemical products	67.00	-	50	-	-	-	-	-
Thaioil Ethanol Co., Ltd. and its subsidiaries	Thailand	Investment in ethanol businesses and alternative energy products	99.99	99.99	1,450	1,450	1,450	1,450	-	-
- Subsidiaries										
Sapthip Co., Ltd. and its subsidiaries	Thailand	Ethanol products manufacturing and distribution	50.00	50.00	800	800	-	-	-	-
Sapthip Green Energy Co., Ltd.	Thailand	Biogas power generation and distribution	99.99	99.99	25	20	-	-	-	-
Thaioil Power Co., Ltd.	Thailand	Power and stream generation and distribution	73.99	73.99	2,810	2,810	3,195	3,195	676	520
TOP SPP Co., Ltd.	Thailand	Power and stream generation and distribution	99.99	99.99	3,500	3,500	3,500	3,500	858	1,050
Thaioil Treasury Center Co. Co., Ltd. and its subsidiaries	Thailand	Treasury center for the Group's business	99.99	99.99	470	10	470	10	-	-
- Subsidiaries										
TOP Ventures Company Limited	Thailand	Investment in venture capital and/or start-up business	99.99	-	9	-	-	-	-	-
TOP Ventures Hong Kong Limited and its subsidiaries	Hong Kong	Investment in venture capital and/or start-up business	100.00	-	-	-	-	-	-	-
TOP Ventures America LLC.	United States of America	Investment in venture capital and/or start-up business	100.00	-	-	-	-	-	-	-
Total investment in subsidiaries							15,015	14,555	2,136	3,917

None of the Company's investment in subsidiaries are publicly listed and consequently they do not have published price quotations.

**Impairment assessment for loan to and investment in a subsidiary**

The Company has assessed the recoverable amount of loan to and investment in Thaioil Marine Co., Ltd. by determining discounted future cash flows. The key assumptions used to determine recoverable amount included freight rate and utilisation rate, expected changes to working capital, operating expenditures, long-term growth rate derived from expectations of future outcomes taking into account of the past experience, adjusted for anticipated revenue growth and discount rate referred to weighted average cost of capital (WACC) at 7.61 %. The recoverable amount was estimated to be higher than its carrying amount and no impairment was required to separate financial statements. The following table shows the amount by which this key assumption would need to be changed individually for the estimated recoverable amount to be equal the carrying amount.

	%
Forecasted revenue decrease	3.82
Discount rate increase	3.61

### 13.3 Summarised financial information on subsidiaries with material non-controlling interests

Set out below are the summarised financial information for each subsidiary that has non-controlling interests and are material to the Group. The amounts disclosed for each subsidiary are before inter-company eliminations.

See note 28 for transactions with non-controlling interests.

#### Summarised statement of financial position

As at 31 December	Thaioil Power Co., Ltd.		LABIX Co., Ltd.		Other individually immaterial subsidiaries		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht	Million Baht	Million Baht	Million Baht	Million Baht
Non-controlling interest percentage	26.01%	26.01%	25.00%	25.00%				
Current assets	977	1,196	1,600	2,615				
Non-current assets	22,824	10,381	10,962	11,371				
Current liabilities	(446)	(630)	(2,774)	(3,573)				
Non-current liabilities	(15,458)	-	(5,500)	(5,994)				
<b>Net assets</b>	<b>7,897</b>	<b>10,947</b>	<b>4,288</b>	<b>4,419</b>				
Carrying amount of non-controlling interests	2,054	2,847	1,072	1,105	825	808	3,951	4,760



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Summarised statement of comprehensive income

For the year ended 31 December	Thaioil Power Co., Ltd.		LABIX Co., Ltd.		Other individually immaterial subsidiaries		Total	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht	2018 Million Baht	2019 Million Baht	2019 Million Baht	2018 Million Baht
Revenue from sales and services	4,391	4,409	17,473	19,117				
Profit (loss)	1,026	1,101	(131)	(178)				
Other comprehensive income (expense)	(26)	1	-	-				
<b>Total comprehensive income (expense)</b>	<b>1,000</b>	<b>1,102</b>	<b>(131)</b>	<b>(178)</b>				
Profit (loss) allocated to non-controlling interests	267	286	(33)	(45)	6	(6)	240	235
Other comprehensive income (expense) allocated to non-controlling interests	260	284	(33)	(45)	6	(6)	233	233
<u>Summarised statement of cash flows</u>								
Cash flows from operating activities	313	671	364	1,345				
Cash flows from investing activities	(14,973)	390	190	157				
Cash flows from financing activities	14,467	(871)	(795)	(1,163)				
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(193)</b>	<b>190</b>	<b>(241)</b>	<b>339</b>				
Cash and cash equivalents at the beginning of the year	617	427	392	54				
Exchange losses on cash and cash equivalents	-	-	-	(1)				
Cash and cash equivalents at the end of the year	424	617	151	392				
Dividends paid to non-controlling interests	237	183	-	-				

## 14 Investments in joint ventures and associates

### 14.1 Movements of investments in joint ventures and associates are as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>At 1 January</b>	14,941	14,368	1,261	1,261
Addition of investment in an associate	21,971	-	6,591	-
Share of profit of joint ventures and associates, net	1,299	1,193	-	-
Dividend income	(596)	(605)	-	-
Exchange differences on translation	(69)	(3)	-	-
Share of other comprehensive expense of associates, net of tax	(3)	(12)	-	-
Loss from the change in the ownership interests in an associate	(3)	-	-	-
Deficit from the change in the net assets in an associate	(4,481)	-	-	-
<b>At 31 December</b>	<b>33,059</b>	<b>14,941</b>	<b>7,852</b>	<b>1,261</b>

#### Direct associate

##### *Global Power Synergy Public Company Limited*

On 20 June 2018, Global Power Synergy Public Company Limited (GPSC), an associate of the Group entered into Share Purchase Agreement with a company which is a shareholder of Glow Energy Public Company Limited (GLOW) to purchase shares of GLOW. The shares purchase transaction has already been completed on 14 March 2019. The associate has purchased both direct and indirect shares of GLOW for 69.11% of total registered and paid-up capital.

Subsequently, during the year, the associate submitted the tender offer to purchase remaining shares from GLOW's minority shareholders. The associate has acquired additional 30.72% of total registered and paid-up capital from the tender offer, resulting in the associate to be the major shareholders of GLOW with a 99.83% of total registered and paid-up capital in total. Therefore, the investment has been reclassified to be an investment in a subsidiary. Consequently, the Group recognised deficit from the change in the net assets in an associate resulting from the change in ownership interest in GLOW, totalling Baht 4,452 million in the shareholder's equity.

The Committee of Stock Exchange of Thailand had an order to delist the securities of GLOW from being the listed securities on the Stock Exchange of Thailand since 13 December 2019 onwards.

On 4 October 2019, the Company and a subsidiary paid for additional shares capital to GPSC which issued and offered the newly-issued ordinary shares to the existing shareholders proportionate to their respective shareholdings whereby the existing shareholders are able to oversubscribe for the newly-issued ordinary shares. Consequently, the Group's ownership interest diluted from 29.70% to 29.69%. The Group recognised loss from the change in ownership interest in an associate amounting to Baht 3 million in administrative expenses in the statement of income. In addition, the newly-issued ordinary shares of GPSC has a share issuance cost amounting to Baht 95 million which the Group has recognised a deficit from the change in the net assets in an associate amounting to Baht 29 million in the shareholder's equity.

## 14.2 Investments in joint ventures

The details of joint ventures are as follows:

Consolidated financial statements										
	Country of incorporation	Nature of business	Ownership interest held by the Group		Cost method		Equity method		Dividend income	
			2019 %	2018 %	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
TOP-NTL Pte. Ltd.	Singapore	Providing service as a trustee manager	50.00	50.00	-	-	18	16	-	-
TOP-NTL Shipping Trust	Singapore	Investment in marine transportation for crude oil and petroleum product business	50.00	50.00	24	24	73	67	-	-
TOP Nautical Star Co., Ltd.	Thailand	Providing marine transportation services for crude oil, feedstock and petroleum product and storage	35.00	35.00	53	53	120	110	-	-
TOP-NYK MarineOne Pte. Ltd.	Singapore	Providing marine transportation for crude oil and petroleum product business	50.00	50.00	274	274	406	432	-	33
Total investments in joint ventures					351	351	617	625	-	33

All joint ventures above are private companies and do not have a quoted market price available for their shares. There are no contingent liabilities relating to the Group's interest in these joint ventures.

### 14.3 Investments in associates

The details of associates are as follows:

Consolidated financial statements										
	Country of incorporation	Nature of business	Ownership interest held by the Group		Cost method		Equity method		Dividend income	
			2019 %	2018 %	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
PTT Digital Solutions Co., Ltd.	Thailand	Provide information technology and computer service activities	20.00	20.00	30	30	428	368	18	16
PTT Energy Solutions Co., Ltd.	Thailand	Provide technical and operational services	20.00	20.00	30	30	42	48	-	-
Global Power Synergy Public Company Limited	Thailand	Power, steam and water generation and distribution for industries	29.69	29.70	19,235	3,855	31,159	13,081	578	556
Ubon Bio Ethanol Public Company Limited	Thailand	Ethanol products manufacturing and distribution	21.28	21.28	769	769	810	819	-	-
T. I. M. Ship Management Co., Ltd.	Thailand	Provide ship management services	33.33	33.33	1	1	3	-	-	-
Total investments in associates					20,065	4,685	32,442	14,316	596	572

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			Separate financial statements					
	Country of incorporation	Nature of business	Ownership interest held by the Company		Cost method		Dividend income	
			2019 %	2018 %	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
PTT Digital Solutions Co., Ltd.	Thailand	Provide information technology and computer service activities	20.00	20.00	30	30	18	16
PTT Energy Solutions Co., Ltd.	Thailand	Provide technical and operational services	20.00	20.00	30	30	-	-
Global Power Synergy Public Company Limited	Thailand	Power, steam and water generation and distribution for industries	8.91	8.91	7,792	1,201	174	167
Total investments in associates					7,852	1,261	192	183

As at 31 December 2019, the fair value of the Group and the Company's interests in Global Power Synergy Public Company Limited, which is listed in the Stock Exchange of Thailand, were Baht 71,794 million and 21,538 million (2018: Baht 23,188 million and 6,956 million).

Other associates are private companies and do not have a quoted market price available for their shares. There are no contingent liabilities relating to the Group's interest in these associates.

### Summarised financial information for associates

Set out below are the summarised financial information for the associates that are material to the Group. The information disclosed reflects the amounting presented in the financial statements of the relevant associates (not the Group's shares of those amounts). They have been amended to reflect adjustments made using the equity method, including fair value adjustments and modifications for differences in accounting policy.

### Summarised statement of financial position

As at 31 December	Global Power Synergy Public Company Limited	
	2019 Million Baht	2018 Million Baht
Current assets	38,919	12,164
Non-current assets	213,097	52,275
Current liabilities	(36,748)	(4,727)
Non-current liabilities	(105,092)	(17,363)
<b>Net assets</b>	<b>110,176</b>	<b>42,349</b>
Attributable to non-controlling interests	9,283	2,357
Attributable to investee's shareholders	100,893	39,992

### Summarised statement of comprehensive income

For the year ended 31 December	Global Power Synergy Public Company Limited	
	2019 Million Baht	2018 Million Baht
Revenue	66,562	24,880
Net profit	6,001	3,889
Other comprehensive expense	(151)	(41)
<b>Total comprehensive income</b>	<b>5,850</b>	<b>3,848</b>
Attributable to non-controlling interests	1,914	530
Attributable to investee's shareholders	3,936	3,318

### Reconciliation of summarised financial information

Reconciliation of the summarised financial information presented to the carrying amount of its interest in associate.

Summarised financial information	Global Power Synergy Public Company Limited	
	2019 Million Baht	2018 Million Baht
Group's interest in net assets of investee at 1 January	13,081	12,652
Addition of investment in an associate	21,971	-
Total comprehensive income attributable to the associate	1,169	985
Dividends received during the year	(578)	(556)
Loss from the change in the ownership interests in an associate	(3)	-
Deficit from the change in the net assets in an associate	(4,481)	-
Group's interest in net assets of investee at 31 December	31,159	13,081
<b>Carrying amount of interest in associates At 31 December</b>	<b>31,159</b>	<b>13,081</b>

### Individually immaterial joint ventures and associates

In addition to the interests in associates disclosed above, the Group also has interests in a number of individually immaterial joint ventures and associates that are accounted for using the equity method.

	Individually immaterial joint ventures	
	2019 Million Baht	2018 Million Baht
<b>Aggregate carrying amount of individually immaterial joint ventures</b>	617	625
<b>Aggregate amounts of the Group's share of</b>		
Profit from continuing activities	26	118
Other comprehensive expense	(34)	(35)
Total comprehensive income (expense)	(8)	83
	Individually immaterial associates	
	2019 Million Baht	2018 Million Baht
<b>Aggregate carrying amount of individually immaterial associates</b>	1,283	1,235
<b>Aggregate amounts of the Group's share of</b>		
Profit from continuing activities	67	77
Other comprehensive expense	(2)	-
Total comprehensive income	65	77

### 15 Investment property, net

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 1 January</b>				
Cost	103	103	1,111	1,111
<u>Less</u> Provision for impairment	-	-	(11)	(11)
Net book amount	103	103	1,100	1,100
<b>For the year ended 31 December</b>				
Opening net book amount	103	103	1,100	1,100
Transfer from property, plant and equipment, net (Note 16)	-	-	30	-
Reversal of provision for impairment	-	-	11	-
Closing net book amount	103	103	1,141	1,100
<b>As at 31 December</b>				
Cost	103	103	1,141	1,111
<u>Less</u> Provision for impairment	-	-	-	(11)
Net book amount	103	103	1,141	1,100
Fair value	458	273	2,682	1,764

The fair value of investment property of the Group and the Company's are Baht 458 million and 2,682 million, respectively (2018: Baht 273 million and 1,764 million, respectively) which are valued by an independent appraiser certified by Professional Standard under the open market values on an existing use basis and income approach.

## Fair value Measurement

### Fair value hierarchy

The fair value of investment property was determined by external, independent property valuers, having appropriate recognised professional qualifications and experiences in valuing the property. The independent valuers provide the fair value of the Group's investment property portfolio on a regular basis.

The fair value measurement for all investment property has been categorised as a level 3 fair value based on the inputs to the valuation technique used.

The following table shows the valuation technique used in measuring the fair value of investment property, as well as the significant unobservable inputs used.

Valuation technique	Significant unobservable inputs	Inter-relationship between key unobservable inputs and fair value measurement
- <u>Discounted cash flows</u> ; The valuation model considers the present value of net cash flows to be generated from the property, taking into account expected rental growth rate. The expected net cash flows are discounted using risk-adjusted discount rates. Among other factors, the discount rate estimation considers the quality of its location (prime vs secondary), tenant credit quality and lease terms.	<ul style="list-style-type: none"> <li>Contractually agreed lease income over the remaining period.</li> <li>The risk-adjusted discount rates (6%-7%)</li> </ul>	<p>The estimated fair value increase (decrease) if:</p> <ul style="list-style-type: none"> <li>Expected market rental growth were higher (lower);</li> <li>The risk-adjusted discount rate were lower (higher).</li> </ul>
- <u>Market approach</u>	The adjusted quoted price and the actual selling price of comparable investment properties	The estimated fair value increase (decrease) if land price were higher (lower).

Amounts recognised in profit and loss that are related to investment property are as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Rental income	8	8	44	44



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**16 Property, plant and equipment, net**

Consolidated financial statements													
Million Baht													
	Land	Buildings	Leasehold improve- ments	Refinery plant and equipment	Petro- chemical plants	Power plants	Transmission facilities	Machinery, equipment and plant equipment	Oil and liquid chemical tankers and crew boats	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
At 1 January 2018													
Cost	6,237	2,011	211	104,671	34,862	17,388	193	6,222	4,566	911	18	4,985	182,275
Less Accumulated depreciation	-	(1,339)	(16)	(76,336)	(14,873)	(5,102)	(156)	(3,372)	(1,233)	(664)	(14)	-	(103,105)
Less Provision for impairment	(11)	-	-	-	-	-	-	-	(547)	-	-	-	(558)
Net book amount	6,226	672	195	28,335	19,989	12,286	37	2,850	2,786	247	4	4,985	78,612
For the year ended													
31 December 2018													
Opening net book amount	6,226	672	195	28,335	19,989	12,286	37	2,850	2,786	247	4	4,985	78,612
Exchange differences	-	(1)	-	-	-	-	-	(1)	-	-	-	-	(2)
Additions during the year	302	1	-	200	6	-	-	54	35	16	1	7,412	8,027
Transfer in (out)	-	726	-	14	62	32	-	353	-	15	-	(1,202)	-
Disposals, net	-	(1)	-	(2)	-	-	-	(1)	(646)	(1)	-	-	(651)
Depreciation charged during the year	-	(83)	(8)	(3,178)	(2,018)	(722)	(6)	(349)	(149)	(72)	(1)	-	(6,586)
Reversal of provision for impairment, net	-	-	-	-	-	-	-	-	529	-	-	-	529
Closing net book amount	6,528	1,314	187	25,369	18,039	11,596	31	2,906	2,555	205	4	11,195	79,929
At 31 December 2018													
Cost	6,539	2,690	211	104,752	34,930	17,420	193	6,621	3,355	938	18	11,195	188,862
Less Accumulated depreciation	-	(1,376)	(24)	(79,383)	(16,891)	(5,824)	(162)	(3,715)	(782)	(733)	(14)	-	(108,904)
Less Provision for impairment	(11)	-	-	-	-	-	-	-	(18)	-	-	-	(29)
Net book amount	6,528	1,314	187	25,369	18,039	11,596	31	2,906	2,555	205	4	11,195	79,929

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	Consolidated financial statements												
	Million Baht												
	Land	Buildings	Leasehold improve- ments	Refinery plant and equipment	Petro- chemical plants	Power plants	Transmission facilities	Machinery, equipment and plant equipment	Oil and liquid chemical tankers and crew boats	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
For the year ended 31 December 2019													
Opening net book amount	6,528	1,314	187	25,369	18,039	11,596	31	2,906	2,555	205	4	11,195	79,929
Exchange differences	-	(6)	-	-	-	-	-	(19)	-	-	-	(4)	(29)
Additions during the year	505	26	-	916	1,060	-	-	76	19	19	-	30,574	33,195
Addition from business combination (Note 40)	-	-	1	-	-	-	-	-	-	2	-	-	3
Transfer in (out)	-	915	-	2,229	299	40	-	338	173	72	-	(4,066)	-
Transfer to intangible assets (Note 18)	-	-	-	-	-	-	-	-	-	-	-	(1)	(1)
Disposals, net	-	(6)	-	(6)	(51)	-	-	-	(101)	-	-	-	(164)
Depreciation charged during the year	-	(160)	(8)	(3,068)	(1,841)	(716)	(8)	(347)	(159)	(77)	(1)	-	(6,385)
Reversal of provision for impairment, net	11	-	-	-	-	-	-	-	-	-	-	-	11
Closing net book amount	7,044	2,083	180	25,440	17,506	10,920	23	2,954	2,487	221	3	37,698	106,559
At 31 December 2019													
Cost	7,044	3,523	212	104,280	35,958	17,460	193	6,972	3,416	1,012	14	37,698	217,782
Less Accumulated depreciation	-	(1,440)	(32)	(78,840)	(18,452)	(6,540)	(170)	(4,018)	(911)	(791)	(11)	-	(111,205)
Less Provision for impairment	-	-	-	-	-	-	-	-	(18)	-	-	-	(18)
Net book amount	7,044	2,083	180	25,440	17,506	10,920	23	2,954	2,487	221	3	37,698	106,559

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	Separate financial statements							Million Baht
	Land	Buildings	Refinery plant and equipment	Machinery, equipment and plant equipment	Furniture, fixtures, office equipment and others	Vehicles	Construction in progress	Total
<b>At 1 January 2018</b>								
Cost	3,856	844	96,453	1,257	557	4	4,691	107,662
<u>Less</u> Accumulated depreciation	-	(726)	(69,434)	(1,034)	(382)	(4)	-	(71,580)
Net book amount	3,856	118	27,019	223	175	-	4,691	36,082
<b>For the year ended 31 December 2018</b>								
Opening net book amount	3,856	118	27,019	223	175	-	4,691	36,082
Additions during the year	298	-	200	27	13	-	6,584	7,122
Transfer in (out)	-	642	14	2	2	-	(660)	-
Disposals, net	-	(1)	(1)	-	-	-	-	(2)
Depreciation charged during the year	-	(28)	(3,078)	(61)	(45)	-	-	(3,212)
Closing net book amount	4,154	731	24,154	191	145	-	10,615	39,990
<b>At 31 December 2018</b>								
Cost	4,154	1,439	96,535	1,284	572	4	10,615	114,603
<u>Less</u> Accumulated depreciation	-	(708)	(72,381)	(1,093)	(427)	(4)	-	(74,613)
Net book amount	4,154	731	24,154	191	145	-	10,615	39,990
<b>For the year ended 31 December 2019</b>								
Opening net book amount	4,154	731	24,154	191	145	-	10,615	39,990
Additions during the year	505	21	916	33	13	-	30,071	31,559
Transfer in (out)	-	834	2,228	76	32	-	(3,170)	-
Transfer to investment property (Note 15)	(30)	-	-	-	-	-	-	(30)
Disposals, net	-	(5)	(6)	-	-	-	-	(11)
Depreciation charged during the year	-	(103)	(2,967)	(67)	(50)	-	-	(3,187)
Closing net book amount	4,629	1,478	24,325	233	140	-	37,516	68,321
<b>At 31 December 2019</b>								
Cost	4,629	2,197	96,063	1,357	604	-	37,516	142,366
<u>Less</u> Accumulated depreciation	-	(719)	(71,738)	(1,124)	(464)	-	-	(74,045)
Net book amount	4,629	1,478	24,325	233	140	-	37,516	68,321

The gross amounts of the Group's and the Company's fully depreciated property, plant and equipment that were still in use as at 31 December 2019, were Baht 53,767 million (2018: Baht 56,387 million) and Baht 44,191 million (2018: Baht 47,894 million), respectively.

As at 31 December 2019, certain subsidiaries mortgaged their land, building, petrochemical plant, machines and crew boats as collateral for credit facilities as described in note 23. The net book value of land, building, petrochemical plant, machines and crew boats amounted to Baht 20,304 million (2018: Baht 21,373 million).

For the year ended 31 December 2019, borrowing costs of Baht 1,592 million for the Group and Baht 1,722 million for the Company represented the specific borrowing to finance the Clean Fuel Project. The Group and the Company applied capitalisation rate at 4.625% to 5.375% and 5.22% to 5.96% per annum, respectively for borrowing cost calculation. The borrowing costs were included in 'Additions during the year'.

An indirect subsidiary's crew boat which is the asset under marine transportation services segment was classified as non-current assets held-for-sale during the second quarter of the year 2019 at the lower of its carrying amount and fair value less cost to sell from the time the Group considered that this asset is held-for-sale. Therefore, the Group recognised its loss of Baht 43.81 million as the administrative expenses in the statement of income. Also, the Group measured the non-recurring fair value using the market approach, and this fair value falls within a level 2 of the fair value hierarchy.

The classification of the non-current assets held-for-sale was in line with the operating business strategy and sales obligations of the indirect subsidiary's management. The sales completed in July 2019.

#### **Impairment assessment for vessels and crew boats**

During 2019, certain subsidiaries have vessels and crew boats which are not fully utilised in operation due to the fact that the exploration business is in the downturn and resulted in low freight charge and demand in marine transportation business. This situation indicated that vessels and crew boats may be impaired. Management calculated the recoverable amount by comparing between the higher of the fair value less costs to sell and value-in-use. Management of subsidiaries engaged an independent appraiser to determine the fair value of underlying assets using market approach. As a result, value in use is higher and will be used as recoverable amount.

Value-in-use is calculated by determining discounted future cash flows. The Key assumption used to determine value-in-use included freight rate, utilisation rate, expected changes to working capital, operating expenditures, long-term growth rate derived from expectation of future outcomes taking into account of the past experience, adjusted for anticipated revenue growth and discount rate referred to weighted average cost of capital (WACC) at 8.20%.

Subsidiaries did not recognise impairment loss because the value-in-use of assets was higher than its carrying amount. Management has considered a reasonably possible change in a key assumption could cause the carrying amount to exceed the recoverable amount. The following table shows the amount by which this key assumption would need to be changed individually for the estimated recoverable amount to be equal the carrying amount.

	<u>%</u>
Forecasted revenue decrease	7.67
Discount rate increase	4.10

#### **Measurement of fair value**

##### Fair value hierarchy

The fair value of assets of subsidiaries which are not fully utilised in operation was determined by management of subsidiaries and external independent appraiser who has an appropriate recognised professional qualifications and recent experience in the category of the asset being valued. The fair value measurement for assets which are not fully used in operation has been categorised as a level 2 fair value based on the input to the valuation technique used by using market approach.

17 Goodwill

	Consolidated financial statements	
	2019 Million Baht	2018 Million Baht
<b>At 1 January 2018</b>		
Cost	790	806
Net book amount	790	806
<b>For the year ended 31 December</b>		
Opening net book amount	790	806
Additions from business combination (Note 40)	13	-
Exchange differences	(38)	(16)
Closing net book amount	765	790
<b>At 31 December 2018</b>		
Cost	765	790
Net book amount	765	790

Goodwill is allocated to the Group's cash-generating units (CGUs) identified according to business segment which is solvent segment.

**Impairment testing for goodwill**

The recoverable amount was based on its value-in-use, determined by discounting future cash flows to be generated in the future from the continuing use of CGU which based on the management approved financial five-year budget. Those cash flows are determined by annual earnings before interest, taxes, depreciation, and amortisation (EBITDA) estimated by management, adjusted by corporate income tax, change in working capital and relevant capital expenditures. The estimate also included a long-term growth rate with reference to gross domestic product (GDP) growth rates for the countries in which the CGUs operates and experiences by management.

Based on the goodwill impairment testing by the discounted cash flow method using the estimated rates referred to weighted average cost of capital (WACC) of Thailand and Vietnam at the rates 8.75% and 11.16% and long-term growth rate at the rates 3.00% and 6.80%, respectively. The recoverable amount was estimated to be higher than its carrying amount and no impairment was required to be recognised in the Group's financial statements. Management has considered a reasonably possible change in a key assumption could cause the carrying amount to exceed the recoverable amount. The following table shows the amount by which this key assumption would need to be changed individually for the estimated recoverable amount to be equal the carrying amount.

	Goodwill in Thailand	Goodwill in Vietnam
	%	%
Discount rate increase	4.80	0.20
Long-term growth rate decrease	7.43	0.24

**18 Intangible assets, net**

<b>Consolidated financial statements</b>				
<b>Million Baht</b>				
	<b>License fee</b>	<b>Computer software</b>	<b>Patent</b>	<b>Total</b>
<b>At 1 January 2018</b>				
Cost	3,274	855	1	4,130
<u>Less</u> Accumulated amortisation	(1,364)	(381)	-	(1,745)
Net book amount	1,910	474	1	2,385
<b>For the year ended 31 December 2018</b>				
Opening net book amount	1,910	474	1	2,385
Additions during the year	58	73	-	131
Adjustment	(72)	-	-	(72)
Amortisation charged during the year	(122)	(67)	-	(189)
Closing net book amount	1,774	480	1	2,255
<b>At 31 December 2018</b>				
Cost	3,253	928	1	4,182
<u>Less</u> Accumulated amortisation	(1,479)	(448)	-	(1,927)
Net book amount	1,774	480	1	2,255
<b>For the year ended 31 December 2019</b>				
Opening net book amount	1,774	480	1	2,255
Additions during the year	215	103	-	318
Transfer from property, plant and equipment, net (Note 16)	-	1	-	1
Amortisation charged during the year	(96)	(91)	-	(187)
Closing net book amount	1,893	493	1	2,387
<b>At 31 December 2019</b>				
Cost	3,468	1,032	1	4,501
<u>Less</u> Accumulated amortisation	(1,575)	(539)	-	(2,114)
Net book amount	1,893	493	1	2,387

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	<b>Separate financial statements</b>			
	<b>Million Baht</b>			
	<b>License fee</b>	<b>Computer software</b>	<b>Patent</b>	<b>Total</b>
<b>At 1 January 2018</b>				
Cost	838	708	1	1,547
<u>Less</u> Accumulated amortisation	(775)	(242)	-	(1,017)
Net book amount	63	466	1	530
<b>For the year ended 31 December 2018</b>				
Opening net book amount	63	466	1	530
Additions during the year	17	66	-	83
Amortisation charged during the year	(25)	(59)	-	(84)
Closing net book amount	55	473	1	529
<b>At 31 December 2018</b>				
Cost	855	774	1	1,630
<u>Less</u> Accumulated amortisation	(800)	(301)	-	(1,101)
Net book amount	55	473	1	529
<b>For the year ended 31 December 2019</b>				
Opening net book amount	55	473	1	529
Additions during the year	112	101	-	213
Amortisation charged during the year	(10)	(83)	-	(93)
Closing net book amount	157	491	1	649
<b>At 31 December 2019</b>				
Cost	967	875	1	1,843
<u>Less</u> Accumulated amortisation	(810)	(384)	-	(1,194)
Net book amount	157	491	1	649

## 19 Deferred income taxes

The analysis of deferred tax assets and deferred tax liabilities is as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>At 31 December</b>				
Deferred tax assets	671	629	557	516
Deferred tax liabilities	(125)	(37)	-	-
Deferred tax assets, net	546	592	557	516
	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>At 31 December</b>				
<b>Deferred tax assets:</b>				
Deferred tax assets to be recovered within 12 months	3	55	-	-
Deferred tax assets to be recovered after more than 12 months	940	737	900	708
	943	792	900	708
<b>Deferred tax liabilities:</b>				
Deferred tax liabilities to be settled within 12 months	(51)	(54)	(55)	(50)
Deferred tax liabilities to be settled after more than 12 months	(346)	(146)	(288)	(142)
	(397)	(200)	(343)	(192)
<b>Deferred tax assets, net</b>	546	592	577	516

The movements of deferred tax assets and deferred tax liabilities is as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
At 1 January	592	498	516	481
Charged/(credited) to profit or loss (Note 32)	(103)	94	(3)	35
Charged to other comprehensive income	57	-	44	-
At 31 December	546	592	557	516



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The movements in deferred tax assets and liabilities during the year is as follows:

	Consolidated financial statements				
	Employee benefit obligation Million Baht	Impairment losses on assets Million Baht	Others Million Baht	Total Million Baht	
<b>Deferred tax assets</b>					
At 1 January 2019	717	2	73	792	
Charged/(credited) to profit or loss	127	(2)	(47)	78	
Charged to other comprehensive income	73	-	-	73	
At 31 December 2019	917	-	26	943	
At 1 January 2018	703	2	20	725	
Charged to profit or loss	14	-	53	67	
At 31 December 2018	717	2	73	792	
	Consolidated financial statements				
	Depreciation Million Baht	Borrowing cost Million Baht	Deferred cost of debentures Million Baht	Others Million Baht	Total Million Baht
<b>Deferred tax liabilities</b>					
At 1 January 2019	(153)	-	(28)	(19)	(200)
Charged to profit or loss	(27)	(143)	(11)	-	(181)
Charged to other comprehensive income	-	-	-	(16)	(16)
At 31 December 2019	(180)	(143)	(39)	(35)	(397)
At 1 January 2018	(204)	-	-	(23)	(227)
(Charged)/credited to profit or loss	51	-	(28)	4	27
At 31 December 2018	(153)	-	(28)	(19)	(200)
	Separate financial statements				
	Employee benefit obligation Million Baht	Impairment losses on assets Million Baht			Total Million Baht
<b>Deferred tax assets</b>					
At 1 January 2019	706	2			708
Charged/(credited) to profit or loss	134	(2)			132
Charged to other comprehensive income	60	-			60
At 31 December 2019	900	-			900
At 1 January 2018	693	2			695
Charged to profit or loss	13	-			13
At 31 December 2018	706	2			708

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	Separate financial statements				
	Depreciation Million Baht	Borrowing cost Million Baht	Deferred cost of debentures Million Baht	Others Million Baht	Total Million Baht
<b>Deferred tax liabilities</b>					
At 1 January 2019	(153)	-	(34)	(5)	(192)
(Charged)/credited to profit or loss	50	(169)	(15)	(1)	(135)
Charged to other comprehensive income	-	-	-	(16)	(16)
At 31 December 2019	(103)	(169)	(49)	(22)	(343)
At 1 January 2018	(204)	-	-	(10)	(214)
(Charged)/credited to profit or loss	51	-	(34)	5	22
At 31 December 2018	(153)	-	(34)	(5)	(192)

Deferred income tax assets are recognised for tax loss carried forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable. The Group did not recognise deferred income tax assets of Baht 448 million (2018: Baht 474 million) in respect of losses amounting to Baht 2,242 million (2018: Baht 2,370 million) that can be carried forward against future taxable income. Losses amounting to Baht 2,242 million will expire during 2020 to 2024 (2018: Baht 2,370 million will expire during 2019 to 2023).

## 20 Short-term loans from financial institutions

Short-term loans from financial institutions for the Group and the Company are as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Short-term loans from financial institutions				
- Secured	722	1,365	-	-
- Unsecured	854	1,027	-	-
Total short-term loans from financial institutions	1,576	2,392	-	-

Movements of short-term loans from financial institutions for the Group and the Company are as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Opening balance	2,392	969	-	-
Cash flows:				
Proceeds from short-term loans	6,990	29,127	-	18,990
Repayments of short-term loans	(7,806)	(27,623)	-	(18,990)
Other non-cash movements:				
Other changes	-	(81)	-	-
Closing balance	1,576	2,392	-	-

As at 31 December 2019, short-term loans from financial institutions represented promissory notes of the subsidiaries which denominated in Thai Baht amounting to Baht 1,416 million, Vietnamese Dong 115,195 million (equivalent to Baht 150 million) and Indonesian Rupiah 4,719 million (equivalent to Baht 10 million), and bore interest at rates of 2.40% to 10.00% per annum (2018: subsidiaries' short-term loans denominated in Thai Baht amounting to Baht 2,135 million and Vietnamese Dong 183,668 million (equivalent to Baht 257 million), and bore interest at rates of 2.25% to 7.12% per annum).

These short-term loans of subsidiaries are secured and jointed collateral with the long-term loans under the terms and condition in the Credit Facilities Agreement as detailed in note 23.

## 21 Trade accounts payable

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Related parties (Note 39)	13,562	10,595	16,002	12,726
Other parties	11,453	11,249	11,132	10,791
Total	25,015	21,844	27,134	23,517

## 22 Other payables

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Accrued operating expenses	173	103	17	39
Oil Fuel Fund payable	45	517	45	517
Other payables	7,270	1,739	7,657	2,133
Others	1,618	1,513	812	886
Total	9,106	3,872	8,531	3,575

## 23 Long-term loans from financial institutions and a third party

Long-term loans from financial institutions and a third party are as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Current portion of long-term loans from financial institutions, net				
- Secured	909	863	-	-
- Unsecured	427	685	-	-
Long-term loans from financial institutions, net				
- Secured	12,679	13,587	-	-
- Unsecured	1,206	1,252	-	-
Long-term loans from a third party				
- Unsecured	219	216	-	-
Total long-term loans	15,440	16,603	-	-

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Movements of long-term loans from financial institutions and a third party are as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Opening balance	16,603	9,660	-	-
<u>Cash flows:</u>				
Proceeds from long-term loans	112	14,944	-	-
Repayments of long-term loans	(1,265)	(8,007)	-	-
<u>Other non-cash movements:</u>				
Amortisation of deferred financing fee	12	6	-	-
Exchange differences	(22)	-	-	-
Closing balance	15,440	16,603	-	-

The weighted average effective interest rate of the long-term loans from financial institutions and a third party of the Group were 3.51% per annum (2018: 3.28% per annum).

The detail of long-term loans of the Group are as follows:

Outstanding balance as at 31 December								
		2019		2018				
No.	Currency in agreement	Original Currency (Million)	Equivalent to Million Baht	Original Currency (Million)	Equivalent to Million Baht	Interest rate per annum (%)	Principal repayment term	Interest payment period
1	Baht	588	588	688	688	MLR minus a certain margin	Semi-Annual	Semi-Annual
2	Baht	75	75	125	125	MLR minus a certain margin	Semi-Annual	Semi-Annual
3	Baht	588	588	804	804	FDR (6M) plus a certain margin	Semi-Annual	Semi-Annual
4	Baht	32	32	72	72	FDR (6M) plus a certain margin	Semi-Annual	Semi-Annual
5	Baht	7,921	7,921	8,209	8,209	THBFIX (3M) plus a certain margin	Semi-Annual	Quarterly
6	Baht	797	797	796	796	FDR (6M) plus a certain margin	Quarterly	Quarterly
7	Baht	4,838	4,838	5,374	5,374	THBFIX (3M) plus a certain margin	Semi-Annual	Monthly
8	Vietnamese Dong	245,737	320	228,506	319	Fixed rate	Semi-Annual	Semi-Annual
9	Baht	219	219	216	216	THBFIX (3M) plus a certain margin	A specified in the agreement	A specified in the agreement
10	Baht	41	41	-	-	MLR minus a certain margin	Semi-Annual	Semi-Annual
11	Baht	21	21	-	-	MLR minus a certain margin	Semi-Annual	Semi-Annual
Total			15,440		16,603			

The Group's long-term loans are secured by collateral of land, building, petrochemical plants, machinery, crew boats and deposits at financial institutions (Note 7, Note 8 and Note 16) in accordance with the Credit Facilities Agreement.

The Group is required to comply with certain criteria and conditions; for example, maintaining shareholders' portion, maintaining debt to equity ratio at the level as specified in the contract and providing financial supports based on ownership percentage.

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The interest rate exposure on the long-term loans from financial institutions and a third party of the Group and the Company is as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Long-term loans				
- at fixed rate	320	319	-	-
- at floating rate	15,120	16,284	-	-
Total long-term loans	15,440	16,603	-	-

Maturity of long-term loans from financial institutions and a third party is as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Not later than one year	1,336	2,549	-	-
Later than 1 year but not later than 5 years	4,970	5,049	-	-
Later than 5 years	9,134	10,005	-	-
Total long-term loans	15,440	16,603	-	-

As at 31 December 2019, the Group and the Company had available credit facilities from financial institutions amounting to Baht 5,209 million and 4,000 million, respectively (2018: Baht 6,039 million and 4,700 million, respectively).

## 24 Debentures, net

As at 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Debentures, net	97,727	88,729	32,292	36,180
<u>Less</u> Discount on debenture	(543)	(664)	(163)	(171)
	97,184	88,065	32,129	36,009
<u>Less</u> Current portion of debentures, net	-	(3,000)	-	(3,000)
Debentures, net	97,184	85,065	32,129	33,009

Movements of debentures of the Group and the Company are as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Opening balance	88,065	55,839	36,009	55,839
<u>Cash flows:</u>				
Additions	17,037	51,634	-	-
Repayments	(3,000)	(20,076)	(3,000)	(20,076)
Financing fee	(55)	-	-	-
<u>Other non-cash movements:</u>				
Interest of discount on debenture	14	325	8	321
Exchange differences	(4,877)	343	(888)	(75)
Closing balance	97,184	88,065	32,129	36,009

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Debentures issued by the Company and a subsidiary are unsecured and unsubordinated. The debentures issued by a subsidiary are fully guaranteed by the Company. Detail are as follows:

Consolidated financial statements							
Issuance date	Maturity date	Years	Currency	2019 (Million)	2018 (Million)	Interest rate (% p.a.)	Interest payment term
12 March 2014	12 March 2019	5	Baht	-	3,000	4.13	Semi-annual basis
30 April 2010	30 April 2022	12	Baht	3,000	3,000	4.80	Semi-annual basis
23 March 2012	23 March 2027	15	Baht	7,500	7,500	5.05	Semi-annual basis
23 January 2013	23 January 2023	10	US Dollars	216.4	216.4	3.625	Semi-annual basis
23 January 2013	23 January 2043	30	US Dollars	172.4	172.4	4.875	Semi-annual basis
12 March 2014	12 March 2021	7	Baht	3,000	3,000	4.61	Semi-annual basis
12 March 2014	12 March 2024	10	Baht	7,000	7,000	4.84	Semi-annual basis
10 April 2018	23 January 2023	10	US Dollars	283.6	283.6	3.625	Semi-annual basis
10 April 2018	23 January 2043	30	US Dollars	327.6	327.6	4.875	Semi-annual basis
20 November 2018	20 November 2028	10	US Dollars	400	400	4.625	Semi-annual basis
20 November 2018	20 November 2048	30	US Dollars	600	600	5.375	Semi-annual basis
17 October 2019	17 October 2049	30	US Dollars	565	-	3.50	Semi-annual basis

  

Separate financial statements							
Issuance date	Maturity date	Years	Currency	2019 (Million)	2018 (Million)	Interest rate (% p.a.)	Interest payment term
30 April 2010	30 April 2022	12	Baht	3,000	3,000	4.80	Semi-annual basis
23 March 2012	23 March 2027	15	Baht	7,500	7,500	5.05	Semi-annual basis
23 January 2013	23 January 2023	10	US Dollars	216.4	216.4	3.625	Semi-annual basis
23 January 2013	23 January 2043	30	US Dollars	172.4	172.4	4.875	Semi-annual basis
12 March 2014	12 March 2021	7	Baht	3,000	3,000	4.61	Semi-annual basis
12 March 2014	12 March 2024	10	Baht	7,000	7,000	4.84	Semi-annual basis

The Company and a subsidiary are required to comply with certain procedures and conditions; for example, maintaining shareholders' portion at the level as specified in the contract.

The weighted average effective interest rate of the debentures of the Group and the Company is 4.50% per annum (2018: 4.71% per annum) and 4.62% per annum (2018: 4.61% per annum), respectively.

## 25 Employee benefit obligations

The movement in the defined benefit obligation over the year is as follows:

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
At 1 January	3,587	3,511	3,183	3,161
Current service cost	344	305	249	244
Past service cost	379	-	301	-
Actuarial losses	385	1	326	-
Benefit payment	(109)	(230)	(104)	(222)
At 31 December	4,586	3,587	3,955	3,183

Actuarial losses recognised in other comprehensive income arising from:

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Demographic assumptions	-	1	-	-
Financial assumptions	364	-	305	-
Total	364	1	305	-

On 5 April 2019, an amendment bill to the Labour Protection Law was published in the Government Gazette. The amended law will become effective 30 days after its publication. The main amendment is that the compensation for employees who have retired and have more than or equal to 20 years of service has changed from 300 day's pay to 400 day's pay. The effects of the amendment were recognised as past service cost during the year.

The principal actuarial assumptions used were as follows:

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Discount rate	2.0%	3.0%	2.0%	3.0%
Salary increases rate	5.0%-10.0%	5.0%-10.0%	5.0%-10.0%	5.0%-10.0%
Employee turnover	0.0%-4.0%	0.0%-4.0%	0.0%-4.0%	0.0%-4.0%

Assumptions regarding future mortality have been based on published statistics and mortality tables.

Sensitivity analysis for each significant assumption used is as follows:

	Consolidated financial statements					
	Impact on defined benefit obligation					
	Change in assumption		Increase in assumption		Decrease in assumption	
	2019	2018	2019	2018	2019	2018
	%	%	Million Baht	Million Baht	Million Baht	Million Baht
Discount rate	1	1	(414)	(299)	460	350
Salary growth rate	1	1	512	403	(448)	(354)
	Separate financial statements					
	Impact on defined benefit obligation					
	Change in assumption		Increase in assumption		Decrease in assumption	
	2019	2018	2019	2018	2019	2018
	%	%	Million Baht	Million Baht	Million Baht	Million Baht
Discount rate	1	1	(326)	(247)	356	285
Salary growth rate	1	1	441	362	(390)	(319)

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The above sensitivity analysis are based on a change in an assumption while all other assumptions remain constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method which is the present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period has been applied when calculating the pension liability recognised within the consolidated statement of financial position. The methods and types of assumptions used in preparing the sensitivity analysis did not change when compared to the previous period.

The weighted average employee benefit obligations of the Group is 19 years (2018: 19 years).

## 26 Share capital and premium on share capital

	<b>Number of shares Million Shares</b>	<b>Ordinary shares Million Baht</b>	<b>Share premium Million Baht</b>	<b>Total Million Baht</b>
At 31 December 2019 and 2018	2,040	20,400	2,456	22,856

The total number of authorised ordinary shares is 2,040 million shares with a par value of Baht 10 per share. All issued shares are fully paid-up.

Section 51 of the Public Companies Act B.E. 2535 requires companies to set aside share subscription monies received in excess of the par value of the shares issued to a reserve account (share premium). Share premium is not available for dividend distribution.

## 27 Legal reserve

Under the Public Limited Company Act., B.E. 2535, the Company is required to set aside as a legal reserve at least 5% of its net profit after accumulated deficit brought forward (if any) until the reserve is not less than 10% of the registered capital. The legal reserve is non-distributable.

## 28 Non-controlling interests

Movement of non-controlling interests are as follows:

	<b>Consolidated financial statements</b>	
	<b>2019 Million Baht</b>	<b>2018 Million Baht</b>
<b>For the year ended 31 December</b>		
Opening balance	4,760	4,925
Changes in shareholding interest in a subsidiary	-	(101)
Addition from business combination (Note 40)	13	-
Dividend payment from subsidiaries	(240)	(297)
Share of total comprehensive income from subsidiaries	233	233
Deficit from the changes in net assets in an associate	(815)	-
Closing balance	3,951	4,760

### Changes in net assets in an associate

As mentioned in note 14, the Group recognised deficit from the changes in the net assets in an associate resulting from the change in ownership interest in GLOW in an amount of Baht 4,452 million and shares issuance cost in an amount of Baht 29 million in the shareholder's equity, resulting in the recognition of deficit to non-controlling interests totalling Baht 815 million.



## 29 Other income

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Land lease income	14	20	88	92
Interest income	1,164	1,381	1,344	1,618
Service income and others	399	318	2,035	1,994
Total	1,577	1,719	3,467	3,704

## 30 Employee benefit expenses

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
<b>Management</b>				
Salaries and wages	216	223	172	170
Contributions to provident fund	20	21	17	16
Retirement gratuity fund	16	17	16	17
Other	101	126	91	113
	353	387	296	316
<b>Other employees</b>				
Salaries and wages	2,617	2,464	1,290	1,385
Contributions to provident fund	138	142	90	99
Retirement gratuity fund	362	148	362	144
Other	670	439	471	360
	3,787	3,193	2,213	1,988
Total	4,140	3,580	2,509	2,304

The Group established an employees' registered provident fund in which the employees contribute monthly at rates ranging from 3% to 15% of their basic salaries and the Group contributes monthly at rates ranging from 3% to 15% of the employees' basic salaries. The provident funds are registered with the Ministry of Finance as juristic entities and are managed by licensed Fund Managers.

## 31 Expenses by nature

The statement of income includes an analysis of expenses by function. Significant expenses by nature are detailed as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
	Million Baht	Million Baht	Million Baht	Million Baht
Changes in finished goods and work in progress	1,789	2,400	2,489	2,112
Purchase and raw materials used	255,705	282,928	292,519	323,252
Natural gas used	10,684	10,677	2,060	2,214
Employee benefit expenses	4,141	3,580	2,509	2,304
Depreciation and amortisation	7,085	7,264	3,747	3,788
Excise tax	65,172	57,313	65,124	57,256
Oil fuel fund contribution/ Energy conservation fund contribution	4,391	2,822	4,391	2,822

## 32 Income tax expense

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<u>Current tax:</u>				
Current tax on profits for the year	1,139	2,078	529	991
Adjustments in respect of prior year	(3)	(1)	(6)	(1)
Total current tax	1,136	2,077	523	990
<u>Deferred tax:</u>				
Changes from temporary differences (Note 19)	103	(94)	3	(35)
Income tax expense	1,239	1,983	526	955

The tax on the Group's profit before income tax expense differs from the theoretical amount that would arise using the basic weighted average tax rate applicable to profit of the home country of the Company are as follows:

For the year ended 31 December	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
Profit before income tax expense	7,756	12,367	5,182	9,195
Tax calculated at a tax rate of	20	20	20	20
The result of the accounting profit multiplied by the income tax rate	1,551	2,473	1,036	1,839
Tax effect of:				
Income not subject to tax	(333)	(517)	(520)	(896)
Expenses not deductible for tax purpose	32	29	16	13
Tax losses for which no deferred income tax asset was recognised	(8)	(1)	-	-
Adjustments in respect of prior year	(3)	(1)	(6)	(1)
Income tax expense	1,239	1,983	526	955

The weighted average applicable tax rate of the Group and Company were 15.98% and 10.15%, respectively (2018: 16.03% and 10.38%, respectively).

Revenues, profit before finance costs and income tax expense, and income tax expense from operation in foreign countries of the Group for the year ended 31 December 2019 are as follow:

	Revenues <sup>(1)</sup> Million Baht	Profit before finance costs and income tax expense Million Baht	Income tax expense Million Baht
Thailand	365,178	11,032	1,239
Vietnam <sup>(2)</sup>	2,989	23	-
Indonesia	26	(8)	-
Singapore <sup>(3)</sup>	-	16	-
Total	368,193	11,063	1,239

### Notes:

- (1) Revenues subject to tax consist of revenue from sale of services, subsidy from oil fuel fund, dividend income, net derivative gain on hedging, net foreign exchange gain, and other income.
- (2) No income tax expense due to unutilised tax losses brought forward from the previous year.
- (3) No income tax expense due to tax exemption for specific business by the government of Singapore.

### 33 Promotional privileges

Certain local subsidiaries have been granted privileges by the Board of Investment relating to power and steam generation, petrochemical product production, chemical product production, ethanol product production, marine transportation, offshore crude oil unloading facilities and industrial zone. The summary of privileges granted are as follows:

- (a) an exemption from payment of import duty and tax on machinery and equipment as approved by the Board of Investment.
- (b) an exemption from payment of corporate income tax for promoted operations for periods of 7 to 8 years from the dates on which the income is first derived from such operations or 8 years from the date on which the income is received subsequent to when the privileges were granted.
- (c) a 50% reduction in the normal corporate income tax rate on the net profit derived from certain promotional operations for a period of 5 years, commencing from the expiry date in (b) above.

As promoted companies, the subsidiaries must comply with certain conditions and restrictions provided for in the promotional certificates.

Revenues from promoted businesses were as follows:

	<b>Consolidated financial statements</b>	
	<b>2019</b>	<b>2018</b>
	<b>Million Baht</b>	<b>Million Baht</b>
Revenues from promoted businesses	27,946	34,117

### 34 Basic earnings per share

Basic earnings per share is calculated by dividing the net profit attributable to the shareholders of the Company by the weighted average number of ordinary shares issued during the year.

	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
Net profit attributable to the ordinary shareholders of the Company (Million Baht)	6,277	10,149	4,655	8,240
Weighted average number of ordinary shares outstanding (Million shares)	2,040	2,040	2,040	2,040
Basic earnings per share (Baht per share)	3.08	4.97	2.28	4.04

The Group did not have any potential dilutive ordinary shares issued during the year ended 31 December 2019 and 2018, so there is no presentation of diluted earning per share.

### 35 Dividends

At the Board of the Director meeting of the Company held on 30 August 2019, the Company's Board of Directors approved the appropriation of interim dividends in respect of the operating results for the first six-month period of 2019 at Baht 1.00 per share, totalling Baht 2,040 million. The interim dividends were paid to the Company's shareholders on 27 September 2019.

At the Annual General Shareholders meeting of the Company held on 10 April 2019, the shareholders approved the payment of dividends in respect of the operating result of 2018 at Baht 2.65 per share, totalling Baht 5,406 million. After a deduction of the interim dividends of Baht 1.50 per share which were paid to the Company's shareholders in September 2018, the dividends remained for distribution were Baht 1.15 per share, totalling Baht 2,346 million. The dividends were paid to the shareholders on 26 April 2019.

### 36 Commitments and contingencies

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>Capital commitments</b>				
Project construction agreements	69,362	4,162	69,190	4,051
Total	69,362	4,162	69,190	4,051
<b>Non-cancellable operating lease commitments</b>				
Within one year	1,534	238	1,501	231
After one year but within five years	3,529	1,418	3,442	1,390
After five years	17,761	17,724	17,521	17,591
Total	22,824	19,380	22,464	19,212
<b>Other commitments</b>				
Letters of guarantee issued by financial institutions	2,065	2,007	1,457	1,426
Forward foreign exchange contracts	2,905	2,806	2,905	2,806
Crude oil purchase agreements	54,180	44,543	54,180	44,543
Total	59,150	49,356	58,542	48,775

#### Investment in Clean Fuel Project

The Company has engaged contractors for construction of Clean Fuel Project (CFP) which has been approved in the Extraordinary General Meeting of Shareholders held on 27 August 2018, with the investment project value of not exceeding US Dollar 4,825 million or equivalent to Baht 160,279 million. The project cost includes the investment of Energy Recovery Unit (ERU). The ERU is an electrical power plant, with the designed generating capacity of 250 megawatts and steam, to supply the production process of the CFP.

#### Power Purchase Agreements

Two subsidiaries have power purchase agreements for a period of 25 years with the Electricity Generating Authority of Thailand (EGAT) expiring in 2023 and 2041 whereby the subsidiaries will supply the electric energy to EGAT at the agreed quantity and price. As the contracted party with EGAT, the subsidiaries must comply with conditions and restrictions provided for in the agreements.

#### Joint Venture Agreement on Leasing State Properties

On 21 August 2018, the Company has signed an agreement on leasing state properties with Ministry of Finance. The Company agrees to pay rental annually for the period of 30 years from 2022 until 2052.

On the signing date, the Company paid up-front fee amounting to Baht 2,962 million.

#### Interest Rate Swap Contracts

A subsidiary has entered into interest rate swap contracts with various financial institutions to manage exposure and fluctuations in interest rate on long-term loans in Thai Baht. As at 31 December 2019, a subsidiary had notional amount of Baht 6,019 million (2018: Baht 6,241 million), whereby exchanging floating interest rate based on THBFIX 3M plus certain fixed margin per annum with fixed interest rate. The swap contracts are effective from April 2018 to March 2028.

#### Long-term Maintenance Agreements

Subsidiaries have long-term supply and maintenance power generator agreements with a local company and a foreign company (service providers) for a period of 14 years and 15 years, whereby the service providers shall supply and repair parts used for yearly and scheduled repairs. Subsidiaries have commitments to pay for the parts and maintenance service fees to the service provider at the prices as specified in the agreements. The agreements are effective on 1 June 2016 and 14 December 2018.

### 37 Contingent liabilities and contingent assets

As at 31 December 2019, the contingent liabilities and contingent assets of the Company are as follows:

The Company has oil price crack spread swap with foreign companies and related parties (counterparties). The Company has or the counterparties have commitments to make payments for the differences between the fixed price and floating price of each period.

As at 31 December 2019, the Company had oil volume under the agreements totalling 1.57 million barrels (2018: 1.10 million barrels).

### 38 Insurance policy

As at 31 December 2019, the Group has an All Risks and Business Interruption (BI) from a syndicate of insurers and reinsurers for a total insured value of US Dollars 22,751 million (2018: US Dollars 15,168 million). Such policy is renewed on an annual basis. Certain subsidiaries have assigned their rights to proceeds from insurance claims under the BI to the lenders under certain borrowings agreements.

### 39 Related party transaction

Individuals and entities that directly or indirectly control or are controlled by or are under common control with the Company, including investment entities, associates, joint venture and individuals or entities having significant influence over the Company, key management personnel, including directors and officers of the Company and close members of the family of these individuals and entities associated with these individuals also constitute related parties.

In considering each possible related-party relationship, attention is directed to the substance of the relationship, and not merely the legal form.

The Company is an entity in the PTT Public Company Limited (PTT) group of companies. PTT is incorporated in Thailand and is the major shareholder and the parent of the Company. PTT owned 47.53% of the Company's issued and paid-up share capital as at 31 December 2019 (2018: 48.03%).

Details of subsidiaries, joint ventures and associates were disclosed in note 13 and note 14.

Relationships with key management and other related parties were as follows:

<b>Name of entities</b>	<b>Country of incorporation</b>	<b>Nature of relationships</b>
PTT Public Company Limited	Thailand	Parent company
Thai Paraxylene Co., Ltd.	Thailand	Subsidiary and/or common directors
Thai Lube Base Public Company Limited	Thailand	Subsidiary and/or common directors
Thaioil Marine Co., Ltd.	Thailand	Subsidiary and/or common directors
Thaioil Energy Services Co., Ltd.	Thailand	Subsidiary and/or the Company's management as a director
Thaioil Solvent Co., Ltd.	Thailand	Subsidiary and/or common directors
TOP Solvent Co., Ltd.	Thailand	Indirect subsidiary and/or the Company's management as a director
Sak Chaisidhi Co., Ltd.	Thailand	Indirect subsidiary and/or the Company's management as a director
TOP Solvent (Vietnam) LLC.	Vietnam	Indirect subsidiary and/or the Company's management as a director
PT. Tirta Surya Raya	Indonesia	Indirect subsidiary
Thaioil Ethanol Co., Ltd.	Thailand	Subsidiary and/or the Company's management as a director
Thaioil Power Co., Ltd.	Thailand	Subsidiary and/or common directors
TOP SPP Co., Ltd.	Thailand	Subsidiary and/or common directors
Thaioil Treasury Center Co., Ltd.	Thailand	Subsidiary and/or the Company's management as a director

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<b>Name of entities</b>	<b>Country of incorporation</b>	<b>Nature of relationships</b>
TOP Ventures Company Limited	Thailand	Indirect subsidiary and/or the Company's management as a director
TOP Ventures HK Limited	Hong Kong	Indirect subsidiary and/or the Company's management as a director
TOP Ventures America LLC	USA	Indirect subsidiary and/or the Company's management as a director
Sapthip Co., Ltd.	Thailand	Indirect subsidiary and/or the Company's management as a director
Sapthip Green Energy Co., Ltd.	Thailand	Indirect subsidiary and/or the Company's management as a director
Thaioil Marine International Pte. Ltd.	Singapore	Indirect subsidiary and/or the Company's management as a director
TOP Maritime Service Co., Ltd.	Thailand	Indirect subsidiary and/or the Company's management as a director
LABIX Co., Ltd.	Thailand	Indirect subsidiary and/or common directors
TOP-NTL Pte. Ltd.	Singapore	Joint venture of subsidiary
TOP-NTL Shipping Trust	Singapore	Joint venture of subsidiary
TOP Nautical Star Co., Ltd.	Thailand	Joint venture of subsidiary and/or the Company's management as a director
TOP-NYK MarineOne Pte. Ltd.	Singapore	Joint venture of indirect subsidiary and/or the Company's management as a director
PTT Digital Solutions Co., Ltd.	Thailand	Associate and/or the Company's management as a director
PTT Energy Solutions Co., Ltd.	Thailand	Associate and/or the Company's management as a director
Global Power Synergy Public Company Limited	Thailand	Indirect associate and/or common directors
Ubon Bio Ethanol Public Company Limited	Thailand	Indirect associate and/or the Company's management as a director
T.I.M. Ship Management Co., Ltd.	Thailand	Indirect associate and/or the Company's management as a director
PTT International Trading Pte. Ltd.	Singapore	Subsidiary of the parent company
PTT Oil and Retail Business Public Company Limited	Thailand	Subsidiary of the parent company and/or Common directors
PTT Exploration and Production Public Company Limited	Thailand	Subsidiary of the parent company
PTT Treasury Center Co., Ltd.	Thailand	Subsidiary of the parent company
Energy Recovery Unit Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Energy Complex Co., Ltd.	Thailand	Subsidiary of the parent company
IRPC Public Company Limited	Thailand	Subsidiary of the parent company
PTT Tank Terminal Co., Ltd.	Thailand	Subsidiary of the parent company and/or common directors
PTT Global Chemical Public Company Limited	Thailand	Subsidiary of the parent company
PTT International Trading London Ltd.	England	Subsidiary of the parent company
PTT Phenol Co., Ltd.	Thailand	Indirect subsidiary of the parent company
PTT Exploration and Production International Company Limited	Thailand	Indirect subsidiary of the parent company
PTTEP Energy Development Company Limited	Thailand	Indirect subsidiary of the parent company
Solution Creation Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Thai Tank Terminal Ltd.	Thailand	Indirect subsidiary of the parent company
Global Green Chemicals Public Company Limited	Thailand	Indirect subsidiary of the parent company
Vencorex (Thailand) Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Thai Petroleum Pipeline Co., Ltd.	Thailand	Related company and/or the Company's management as a director
GC Glycol Co., Ltd.	Thailand	Indirect subsidiary of the parent company
Sarn Palung Social Enterprise Co., Ltd.	Thailand	Related company and/or the Company's management as a director
PTT MCC Biochem Co., Ltd.	Thailand	Indirect subsidiary of the parent company
PTT Oil Myanmar Co., Ltd.	Myanmar	Indirect subsidiary of the parent company
Brighter PTT Oil and Retail Co., Ltd.	Myanmar	Joint venture of subsidiary of the parent company

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The pricing policies for particular types of transactions are explained further below:

<b>Transactions</b>	<b>Pricing policies</b>
Revenue from sale and services, lease income, purchase of goods and assets	Market prices or, where no market price exists, at contractually agreed prices
Interest income and expense	Agreed rates as stipulated in the agreements
Dividend income	Right to receive dividends
Other income and expenses	Contractually agreed prices
Directors' remuneration	Amounts approved by the Group's shareholders

Significant transactions for the year ended 31 December 2019 and 2018 with related parties were as follows:

	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	<b>2019 Million Baht</b>	<b>2018 Million Baht</b>	<b>2019 Million Baht</b>	<b>2018 Million Baht</b>
<b>For the year ended 31 December</b>				
<b>Parent Company</b>				
Revenue from sales and services	1,938	84,544	1,929	82,490
Purchase of crude oil and feedstock	124,769	142,972	116,149	134,494
Other income	2	9	2	9
Other expenses	124	118	121	117
Purchase of assets	1	3	1	-
<b>Subsidiaries</b>				
Revenue from sales and services	-	-	61,096	75,109
Purchase of crude oil and feedstock	-	-	42,948	49,740
Interest income	-	-	211	276
Dividend income	-	-	2,136	3,917
Land lease income	-	-	74	72
Other income	-	-	1,812	2,334
Interest expense	-	-	1,051	927
Other expenses	-	-	1,925	1,022
Purchase of assets	-	-	1,056	41
<b>Joint ventures</b>				
Other expenses	1,253	1,263	1,253	1,263
<b>Associates</b>				
Revenue from sales and services	4	10	3	6
Purchase of crude oil and feedstock	434	623	412	622
Dividend income	596	-	192	183
Land lease income	8	8	8	8
Other income	21	21	20	19
Other expenses	363	289	342	270
Purchase of assets	69	63	69	63
<b>Other related parties</b>				
Revenue from sales and services	173,782	100,564	164,868	91,517
Purchase of crude oil and feedstock	17,879	10,424	13,102	4,905
Purchase - sale of crude oil and feedstock for legal reserve	2,240	1,668	2,240	1,668
Dividend income	160	154	160	154
Other income	33	7	33	7
Interest expense	27	-	-	-
Other expenses	368	368	330	318
<b>Directors' remuneration</b>	63	79	54	69

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Balances as at 31 December 2019 and 2018 with related parties were as follows:

**Trade accounts receivable - related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Parent company	-	85	-	85
Subsidiaries	-	-	5,282	6,490
Associates	4	5	4	5
Other related parties	9,480	11,722	8,955	10,810
	9,484	11,812	14,241	17,390
<u>Less</u> allowance for doubtful accounts	-	-	-	-
Trade accounts receivable - related parties, net	9,484	11,812	14,241	17,390

**Other accounts receivable - related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Parent company	1	1	1	1
Subsidiaries	-	-	241	327
Associates	2	1	2	1
Total	3	2	244	329

**Short-term loans to related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Subsidiaries*	-	-	3,221	4,274
Total	-	-	3,221	4,274

\* Please see note 13 for impairment assessment for loan to and investment in a subsidiary.

Interest rates during the year 2019 and 2018 were charged at highest money market rate for short-term loan based on BIBOR 3M plus certain fixed margin per annum.

Movements of short-term loans to related parties during the year ended 31 December 2019 and 2018 were as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
At 1 January	-	-	4,274	15,651
Cash flows:				
Payments for short-term loans	-	-	1,029	310
Proceeds from short-term loans	-	-	(2,078)	(11,687)
<u>Other non-cash movements:</u>				
Exchange losses	-	-	(4)	-
At 31 December	-	-	3,221	4,274



**Long-term loans to related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Subsidiaries*	-	-	11,781	400
Total	-	-	11,781	400

\* Please see note 13 for impairment assessment for loan to and investment in a subsidiary.

Movements of long-term loans to related parties during the year ended 31 December 2019 and 2018 were as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
At 1 January	-	-	400	-
<u>Cash flows:</u>				
Payments for long-term loans	-	-	11,381	400
At 31 December	-	-	11,781	400

On 26 September 2019, the Company entered into a loan agreement with a subsidiary at the credit facility amount of Baht 11,385 million. The purpose is to support a subsidiary within the Group to purchase the additional share capital of an associate. The loan has no collateral and bears a fixed interest rate at 2.66% per annum. The agreement is for a period of 4.5 years from the initial drawdown date.

On 14 November 2018, the Company entered into a loan agreement with a subsidiary in an amount of Baht 400 million for financial restructuring. The borrowing bears the interest rate at highest money market rate for short-term loan based on BIBOR 3M plus margin. The agreement is effective for a period of 3 years from signing date.

**Trade accounts payable - related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Parent company	12,309	9,546	11,598	8,093
Subsidiaries	-	-	3,496	3,916
Associates	26	27	19	23
Other related parties	1,227	1,022	889	694
Total	13,562	10,595	16,002	12,726

**Other accounts payable - related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Parent company	-	5	-	2
Subsidiaries	-	-	886	705
Associates	50	51	50	51
Other related parties	65	28	37	24
Total	115	84	973	782

**Short-term loans from related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Subsidiaries	-	-	2,467	1,506
Total	-	-	2,467	1,506

Interest rates during the year 2019 and 2018 were charged at highest money market rate for short-term loan based on BIBOR 3M plus certain fixed margin per annum.

Movements of short-term loans from related parties during the year ended 31 December 2019 and 2018 were as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
At 1 January	-	-	1,506	503
<u>Cash flows:</u>				
Proceeds from short-term loans	-	-	961	1,003
At 31 December	-	-	2,467	1,506

**Long-term loans from related parties**

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
<b>As at 31 December</b>				
Subsidiary	-	-	65,366	52,028
Other related party	3,999	-	-	-
Total	3,999	-	65,366	52,028

Movements of long-term loans from related parties during the year ended 31 December 2019 and 2018 were as follows:

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
At 1 January	-	-	52,028	-
<u>Cash flows:</u>				
Proceeds from long-term loans	3,999	-	17,062	51,606
<u>Other non-cash movements:</u>				
Amortisation of deferred financing fee	-	-	10	4
Exchange (gain)/losses	-	-	(3,734)	418
At 31 December	3,999	-	65,366	52,028

On 11 April 2018, 20 November 2018 and 17 October 2019, the Company entered into long-term loan agreements with a subsidiary totalling of US Dollar 2,163.11 million. The loans bear a fixed interest rate of 3.93% to 5.96% per annum with maturity dates in 2023 to 2049.

On 26 September 2019, a subsidiary entered into a long-term loan agreement with a related company amounting to Baht 4,000 million to purchase additional share capital of an associate. The loan has no collateral and bears a fixed interest rate of 2.82 per annum. The agreement is for a period of 4.5 years from initial drawdown date.

#### Other non-current liabilities

	Consolidated financial statements		Separate financial statements	
	2019 Million Baht	2018 Million Baht	2019 Million Baht	2018 Million Baht
As at 31 December				
Related party	440	-	440	-
Total	440	-	440	-

#### Significant agreements with related parties

During the year ended 31 December 2019, the Group had the following significant agreements with related parties.

##### Asset Sale and Purchase Agreement for the Energy Recovery Unit (ERU)

The Company has entered into the Asset Sale and Purchase Agreement for the ERU with a related company to support energy and utilities for Clean Fuel Project (CFP) whereby the purchase price is specified in the agreement. The Company will transfer ownership in the ERU to the purchaser upon satisfaction of all the conditions precedent set out in the agreement (Closing Date). Such conditions precedent include the Company's countersigning of the Provisional Acceptance Certificate (PAC) to the contractor which is expected to occur in 2023 and purchaser and seller receive all necessary certification from relevant authorities.

##### Fuel and Utilities Supply Agreement

The Company has entered into the Fuel and Utilities Supply Agreement with a related company to supply pitch, other fuels and utilities used in the operation of the ERU. The term of the agreement is 25 years from the Closing Date and the parties may agree to extend the term for another 5 years.

##### Power Purchase Agreement

The Company has entered into the Power Purchase Agreement with a related company to purchase electricity, steam and other by-products generated by the ERU. The term of the agreement is 25 years from the Closing Date and the parties may agree to extend the term for another 5 years.

##### Operation and Maintenance Services Agreement

The Company has entered into the Operation and Maintenance Services Agreement with a related company to provide the services of operation and maintenance of the ERU. The term of the agreement is 25 years from the Closing Date and the parties may agree to extend the term for another 5 years.

#### 40 Business combination

On 12 September 2019, TS purchased the shares for investment in PT. Tirta Surya Raya (TSR), from the existing shareholders of TSR representing 67% shareholding interest. TSR is a company registered in Indonesia and engages in distributing solvent and chemical products. TS purchased 15,410 shares, totalling US Dollar 1.28 million or equivalent to Baht 40.24 million.

The following table summarises the consideration paid for TSR, and the estimated fair value of the assets acquired and liabilities assumed recognised on 12 September 2019, as follows.

	<b>Million Baht</b>
Cash	40
Total purchase consideration	40

Recognised estimated fair value of identifiable assets acquired and liabilities assumed are as follows:

	<b>Million Baht</b>
Cash and cash equivalents	1
Trade accounts receivable	15
Other receivables	31
Inventories	4
Plant and equipment, net (Note 16)	3
Other liabilities	(14)
Estimated fair value of identifiable net assets	40
<u>Less</u> Non-controlling interest	(13)
Total estimated fair value of identifiable net assets acquired	27
Goodwill	13
Purchase consideration	40

The Group is under the process of determining fair value of the acquired net assets which is expected to be finalised within 12 months from the acquisition date.

The revenue and profit for the year in the consolidated statement of income for the year ended 31 December 2019 included revenue and net loss of TSR since 12 September 2019 of Baht 25.58 million and Baht 8.36 million, respectively.

#### 41 Reclassifications

The comparative figures have been reclassified to conform with changes in presentation in the current year. The Group has reclassified each financial statement line item as follows:

	Consolidated financial statements			Separate financial statements		
	Previously reported Million Baht	Reclassification Million Baht	After reclassification Million Baht	Previously reported Million Baht	Reclassification Million Baht	After reclassification Million Baht
<b>Statement of financial position as at 31 December 2018</b>						
Cash and cash equivalents	34,041	(300)	33,741	-	-	-
Deposits at a financial institution used as collaterals	-	300	300	-	-	-
Short-term loans	45	(45)	-	4,274	(4,274)	-
Short-term loans to related parties	-	-	-	-	4,274	4,274
Short-term loans to a third party	-	45	45	-	-	-
Goodwill	585	205	790	-	-	-
Intangible assets, net	2,460	(205)	2,255	-	-	-
Long-term borrowings	15,054	(15,054)	-	52,028	(52,028)	-
Long-term loans from financial institutions, net	-	14,838	14,838	-	-	-
Long-term loans from a third party	-	216	216	-	-	-
Long-term loans from related parties	-	-	-	-	52,028	52,028
Other non-current assets	4,083	(3,244)	839	3,837	(3,169)	668
Deferred land lease arrangement, net	-	3,244	3,244	-	3,169	3,169
<b>Statement of income for the year ended 31 December 2018</b>						
Revenue from sales and services	389,343	(301)	389,043	405,130	(301)	404,829
Subsidy from oil fuel fund	-	3,123	3,123	-	3,123	3,123
Cost of sales of goods and services	(373,128)	(2,822)	(375,950)	(398,208)	(2,822)	(401,030)

#### 42 Event after the reporting period

##### Dividend declaration

At the meeting of the Board of Directors of the Company held on 14 February 2020, the Company's Board of Directors approved the submission for approval at the annual general meeting of the shareholders of the Company the appropriation of 2019 annual dividends at Baht 1.50 per share, totalling Baht 3,060 million. After a deduction of the interim dividends of Baht 1.00 per share which were paid to the Company's shareholders in September 2019, the remaining dividends of Baht 0.50 per share, totalling Baht 1,020 million, are scheduled for payment on 21 April 2020. This dividend is subject to the approval of the Company's shareholders at the annual general meeting to be held on 3 April 2020.

##### Registered capital increase of subsidiaries

On 2 January 2020, at the Executive Committee Meeting No. 1/2020, the committee passed a resolution to approve a registered capital increase of TOP Ventures Hong Kong Limited amounting to US Dollars 8.3 million. The subsidiary received payment on 7 January 2020 and already registered the change of registered capital.

On 2 January 2020, at the Executive Committee Meeting No. 1/2020, the committee passed a resolution to approve a registered capital increase of TOP Ventures America LLC amounting to US Dollars 8.2 million. The subsidiary received payment on 7 January 2020 and already registered the change of registered capital.