FORMOSA PETROCHEMICAL CORPORATION
AND SUBSIDIARIES
Consolidated Financial Statements
For The Period from January 1, 2019 to September 30, 2019
And
For The Period from January 1, 2018 to September 30, 2018
Review Report of Independent Auditors

The reader is advised that these consolidated financial statements have been prepared originally in Chinese. In the event of a conflict between these financial statements and the original Chinese version or difference in interpretation between the two versions, the Chinese language financial statements shall prevail.

Review Report of Independent Accountants Translated from Chinese

To the Board of Directors and Stockholders of
Formosa Petrochemical Corporation

Introduction

We have reviewed the accompanying consolidated balance sheets of Formosa Petrochemical Corporation (the "Company") and its subsidiaries as of September 30, 2019 and 2018, the related consolidated statements of comprehensive income for the period from July 1, 2019 to September 30, 2019, period from July 1, 2018 to September 30, 2018, period from January 1, 2019 to September 30, 2019, and the period from January 1, 2018 to September 30, 2018, and the related consolidated statements of changes in equity and cash flows for the period from January 1, 2019 to September 30, 2019 and for the period from January 1, 2018 to September 30, 2018, and notes to the consolidated financial statements, including the summary of significant accounting policies (together "the consolidated financial statements"). Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Accounting Standard 34, "Interim Financial Reporting" as endorsed and became effective by Financial Supervisory Commission of the Republic of China. Our responsibility is to express a conclusion on these consolidated financial statements based on our reviews.

Scope of Review

Except as explained in the following paragraph, we conducted our reviews in accordance with Statement of Auditing Standards No. 65, "Review of Financial Information Performed by the Independent Auditor of the Entity" of the Republic of China. A review of consolidated financial statements consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with auditing standards generally accepted in the Republic of China and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Basis for Qualified Conclusion

As explained in Note 4(3), the financial statements of insignificant subsidiaries were not reviewed by independent accountants. Those statements reflect total assets of NT$38,764,283 thousand and NT$33,553,957 thousand, constituting 10% and 8% of the consolidated total assets as of September 30, 2019 and 2018, respectively, and total liabilities of NT$13,423,928 thousand and NT$8,740,036 thousand, constituting 19% and 10% of the consolidated total liabilities as of September 30, 2019 and 2018, respectively; and total comprehensive income of NT$(1,869,925) thousand, NT$(3,498,840) thousand, NT$(2,560,690) thousand, and NT$(1,296,590) thousand, constituting (19)% 、(46)%、(8)%、and (2)% of the consolidated total comprehensive income for the period from July 1, 2019 to September 30, 2019, period from July 1, 2018 to September 30, 2018, period from January 1, 2019 to September 30, 2019, and period from January 1, 2018 to September 30, 2018, respectively. As explained in Note 6(9), the financial statements of associates and joint ventures accounted for under the equity method were not reviewed by independent accountants. Those associates and joint ventures under equity method amounted to NT$28,799,214 thousand and NT$24,265,030 thousand as of September 30, 2019 and 2018, respectively. The related shares of profits from the associates and joint ventures under the equity method amounted to NT$504,168 thousand, NT$315,951 thousand, NT$985,656 thousand and NT$567,913 thousand for the period from July 1, 2019 to September 30, 2019, period from July 1, 2018 to September 30, 2018, period from January 1, 2019 to September 30, 2019, and period from January 1, 2018 to September 30, 2018, respectively. The related shares of other comprehensive income from the associates and joint ventures under the equity method amounted to NT$(396,219) thousand, NT$(865,771) thousand, NT$(209,918) thousand, and NT$(479,621) thousand for the period from July 1, 2019 to September 30, 2019, period from July1, 2018 to September 30, 2018, period from January 1, 2019 to September 30, 2019, and period from January 1, 2018 to September 30, 2018, respectively. The information related to above subsidiaries, and associates and joint ventures accounted for under the equity method disclosed in Note 13 was also not reviewed by independent accountants.

Qualified Conclusion

Based on our reviews, except for the effect of such adjustments, if any, as might have been determined to be necessary had the financial statements of insignificant subsidiaries, associates and joint ventures accounted for using equity method and the information been reviewed by independent accountants described in the preceding paragraph, nothing has come to our attention that causes us to believe that the accompanying consolidated financial statements do not present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as at September 30, 2019 and 2018, their consolidated financial performance for the period from July 1, 2019 to September 30, 2019, period from July 1, 2018 to September 30, 2018, period from January 1, 2019 to September 30, 2019, and the period from January 1, 2018 to September 30, 2018, and their cash flows for the period from January 1, 2019 to September 30, 2019, and the period from January 1, 2018 to September 30, 2018, in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Accounting Standard 34, "Interim Financial Reporting" as endorsed and became effective by Financial Supervisory Commission of the Republic of China.

Lin, Li Huang
Fuh, Wen Fun
Ernst & Young, Taiwan
October 31, 2019

Notice to Readers

The accompanying consolidated financial statements are intended only to present the financial position, results of operations and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to review such consolidated financial statements are those generally accepted and applied in the Republic of China.
Accordingly, the accompanying consolidated financial statements and report of independent accountants are not intended for use by those who are not informed about the accounting principles or auditing standards generally accepted in the Republic of China, and their applications in practice. As the financial statements are the responsibility of the management, Ernst & Young cannot accept any liability for the use of, or reliance on, the English translation or for any errors or misunderstandings that may derive from the translation.

English Translation of Consolidated Financial Statements Originally Issued in Chinese

FORMOSA PETROCHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

SEPTEMBER 30, 2019、DECEMBER 31, 2018 AND SEPTEMBER 30, 2018

(Expressed in Thousands of Dollars)

(September 30, 2019 and September 30, 2018 were unaudited)

ASSETS	Notes	September 30, 2019 NTD	December 31, 2018 NTD	September 30, 2018 NTD
CURRENT ASSETS				
Cash and cash equivalents	4 & 6.1 &12	$23,324,016	$37,753,658	$31,714,183
Financial assets at fair value through profit or loss — current	4 & 6.2 & 12	4,142,698	4,016,864	4,027,243
Financial assets at fair value through other comprehensive income — current	4 & 6.3 & 8 & 12	57,068,640	51,304,527	57,053,554
Financial assets for hedging — current	4 & 6.4 & 12	10,896	13,353	11,556
Notes receivable, net	4 & 6.5 & 12	6,473	1,775	7,939
Notes receivable due from related parties, net	4 & 6.5 & 7 & 12	1,792,974	1,722,460	1,960,987
Accounts receivable, net	4 & 6.5 & 12	27,608,615	23,675,099	31,556,853
Lease receivables	4 & 6.6 & 12	-	276,137	271,622
Accounts receivable due from related parties, net	4 & 6.5 & 7 & 12	19,316,768	28,415,749	32,473,641
Finance lease receivable, net	4 & 6.19 & 12	299,120	-	-
Other receivables (including from related parties)	7 & 12 & 13	17,751,510	15,522,723	19,724,310
Inventories	4 & 6.7	61,460,991	60,878,921	81,554,516
Prepayments	6.8	9,004,222	7,847,980	7,466,015
Other current assets	8	914,497	769,508	664,783
Total current assets		222,701,420	232,198,754	268,487,202
NONCURRENT ASSETS				
Financial assets at fair value through other comprehensive income — non-current	4 & 6.3 & 12	19,569,445	22,051,740	21,600,187
Financial assets for hedging — non-current	4 & 6.4 & 12	-	-	756
Investments accounted for using the equity method	4 & 6.9	28,799,214	26,056,025	24,265,030
Property, plant and equipment	4 & 6.10 & 7 & 8	103,075,166	107,366,691	107,683,412
Mineral resources	4	791,395	581,442	546,365
Right-of-use assets	4 & 6.19 & 7	7,587,863	-	-
Investment property	4 & 6.11	366,244	374,081	374,081
Deferred tax assets	4 & 6.23	4,603,577	5,665,790	4,996,212
Long-term lease receivables	4 & 6.6 &12	-	3,431,686	3,481,639
Long-term finance lease receivable, net	4 & 6.19 & 12	3,424,013	-	-
Other non-current assets	4 & 6.11	8,266,711	8,043,246	7,947,951
Total non-current assets		176,483,628	173,570,701	170,895,633
TOTAL ASSETS		$399,185,048	$405,769,455	$439,382,835

The accompanying notes are an integral part of the financial statements.

(Forward)

English Translation of Consolidated Financial Statements Originally Issued in Chinese

FORMOSA PETROCHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

SEPTEMBER 30, 2019、DECEMBER 31, 2018 AND SEPTEMBER 30, 2018

(Expressed in Thousands of Dollars)

(September 30, 2019 and September 30, 2018 were unaudited)

LIABILITIES AND EQUITY	Notes	September 30, 2019 NTD	December 31, 2018 NTD	September 30, 2018 NTD
CURRENT LIABILITIES				
Short-term loans	6.12 & 8 & 12	$1,157,549	$759,871	$207,451
Financial liabilities for hedging — current	4 & 6.4 & 12	9,895	95,472	4,560
Contract liabilities — current	4 & 6.17	223,537	274,843	393,738
Notes payable	12	5,079	19,194	-
Accounts payable	12	14,350,834	17,161,925	26,828,124
Accounts payable to related parties	7 & 12	1,121,103	3,142,550	4,119,723
Other payables	6.16	15,353,157	12,357,315	13,235,248
Other payables to related parties	7	460,553	729,663	684,444
Current tax liabilities	4 & 6.23	5,561,529	7,784,840	15,916,688
Current lease liabilities	4 & 6.19 & 7 &12	1,089,226	-	-
Current portion of long-term debts	6.13 & 6.14 & 8	3,200,000	7,650,000	11,983,333
Lease obligations payable — current	7 & 9 & 12	-	210,021	207,665
Other current liabilities	9	229,322	245,730	764,038
Total current liabilities		42,761,784	50,431,424	74,345,012
NONCURRENT LIABILITIES				
Financial liabilities for hedging — non-current	4 & 6.4 & 12	-	-	343
Bonds payable	6.13	14,700,000	6,800,000	6,800,000
Deferred tax liabilities	4 & 6.23	168,958	225,707	215,327
Non-current lease liabilities	4 & 6.19 & 7 &12	6,680,717	-	-
Lease obligations payable — non-current	7 & 9 & 12	-	1,604,297	1,647,915
Defined benefit pension liability	4 & 6.15	4,692,793	4,660,178	4,515,824
Other non-current liabilities		1,361,894	1,391,669	1,376,603
Total non-current liabilities		27,604,362	14,681,851	14,556,012
TOTAL LIABILITIES		70,366,146	65,113,275	88,901,024
EQUITY	4 & 6.16			
Capital stock				
Common stock		95,259,597	95,259,597	95,259,597
Capital surplus		31,399,948	31,385,997	31,422,150
Retained earnings				
Legal reserve		68,510,664	62,501,642	62,501,642
Special reserve		3,033,784	3,033,784	3,033,784
Unappropriated earnings		92,754,628	114,793,328	119,055,225
Total retained earnings		164,299,076	180,328,754	184,590,651
Other equity		33,957,640	30,763,860	36,303,456
Other noncontrolling interest	6.16	3,902,641	2,917,972	2,905,957
TOTAL EQUITY		328,818,902	340,656,180	350,481,811
TOTAL LIABILITIES AND EQUITY		$399,185,048	$405,769,455	$439,382,835

The accompanying notes are an integral part of the financial statements.

English Translation of Consolidated Financial Statements Originally Issued in Chinese

FORMOSA PETROCHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

FOR THE PERIOD FROM JANUARY 1, 2019 TO SEPTEMBER 30, 2019

AND FOR THE PERIOD FROM JANUARY 1, 2018 TO SEPTEMBER 30, 2018

(Expressed in Thousands of Dollars, Except for Earnings per Share)

(Unaudited)

	Notes	For the period from July 1 to September 30, 2019 NTD	For the period from July 1 to September 30, 2018 NTD	For the period from January 1 to September 30, 2019 NTD	For the period from January 1 to September 30, 2018 NTD
OPERATING REVENUES	4 & 6.17 & 7	$160,011,988	$201,119,066	$495,251,832	$575,523,556
OPERATING COSTS	4 & 6.7 & 6.20 & 7	148,399,243	176,422,832	459,344,982	494,526,361
GROSS PROFIT		11,612,745	24,696,234	35,906,850	80,997,195
OPERATING EXPENSES	4 & 6.15 & 6.18 & 6.20 & 7				
Selling and marketing		1,520,127	1,589,491	4,542,314	4,758,438
General and administrative		1,096,767	1,110,326	3,367,358	3,350,090
Research and development		65,633	88,988	158,692	210,949
Expected credit losses (gains)		(18,546)	36,589	(51,622)	96,204
Total operating expenses		2,663,981	2,825,394	8,016,742	8,415,681
OPERATING INCOME		8,948,764	21,870,840	27,890,108	72,581,514
NON-OPERATING INCOME AND EXPENSES					
Other income	6.21 & 7	4,753,471	2,823,861	6,496,654	5,556,439
Other gains and losses	6.21 & 7	297,256	385,936	1,263,573	1,575,700
Financial costs	6.21 & 7	(152,585)	(158,991)	(457,410)	(537,384)
Share of profit or loss of associates and joint ventures accounted for using the equity method	4 & 6.9	504,168	315,951	985,656	567,913
Total non-operating income and expenses		5,402,310	3,366,757	8,288,473	7,162,668
INCOME BEFORE INCOME TAX		14,351,074	25,237,597	36,178,581	79,744,182
INCOME TAX EXPENSE	4 & 6.23	1,923,908	4,537,759	6,526,942	15,525,558
NET INCOME		12,427,166	20,699,838	29,651,639	64,218,624
OTHER COMPREHENSIVE INCOME	6.9 & 6.22				
Items that will not be reclassified to profit or loss					
Unrealized gains (losses) from equity instruments investments measured at fair value through other comprehensive income		(2,086,023)	(12,229,554)	3,116,746	(4,480,459)
Share of other comprehensive income of associates and joint ventures accounted for using equity method		(436,165)	(869,767)	(319,344)	(623,762)
Income tax (benefit) expense relating to items that will not be reclassified		-	-	-	(33,448)
Items that may be reclassified subsequently to profit or loss					
Exchange differences arising from translation of foreign operations		(23,071)	42,106	254,808	612,369
Gains (losses) on hedging instrument		14,028	22,927	83,120	(32,886)
Share of other comprehensive income of associates and joint ventures accounted for using the equity method		39,946	3,996	109,426	144,141
Income tax (benefit) expense relating to items that may be reclassified		2,805	4,586	16,625	(5,368)
Total other comprehensive income (loss) for the period, net of income tax		(2,494,090)	(13,034,878)	3,228,131	(4,341,781)
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		$9,933,076	$7,664,960	$32,879,770	$59,876,843
NET INCOME ATTRIBUTABLE TO:					
Shareholders of the parent		$12,443,538	$20,706,689	$29,694,929	$64,233,953
Noncontrolling interests		(16,372)	(6,851)	(43,290)	(15,329)
		$12,427,166	$20,699,838	$29,651,639	$64,218,624
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:					
Shareholders of the parent		$9,953,094	$7,667,008	$32,888,709	$59,825,660
Noncontrolling interests		(20,018)	(2,048)	(8,939)	51,183
		$9,933,076	$7,664,960	$32,879,770	$59,876,843
EARNINGS PER SHARE (NTD)	4 & 6.24				
Earnings per share — basic/diluted					
Continuing operating income before tax		$1.51	$2.65	$3.80	$8.37
Net Income		$1.31	$2.17	$3.12	$6.74

The accompanying notes are an integral part of the financial statements.

English Translation of Consolidated Financial Statements Originally Issued in Chinese

FORMOSA PETROCHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

FOR THE PERIOD FROM JANUARY 1, 2019 TO SEPTEMBER 30, 2019

AND FOR THE PERIOD FROM JANUARY 1, 2018 TO SEPTEMBER 30, 2018

(Expressed in Thousands of Dollars)

(Unaudited)

	Equity Attributable to Shareholders of the Parent												
			Retained Earnings			Other Components of Equity							
New Taiwan Dollars	Common Stock	Capital Surplus	Legal Reserve	Special Reserve	Unappropriated Earnings	Foreign Currency Translation Reserve	Unrealized gains (losses) from Equity Instruments Investments measured at Fair Value through Other Comprehensive Income	Unrealized gain or loss from Available-for-sale Financial Assets	Cash Flow Hedges Reserve	Gains (losses) on Hedging Instruments	Total Parent Equity	Noncontrolling Interest	Total Equity
Balance as of January 1, 2018	$95,259,597	$31,422,127	$54,484,627	$3,033,784	$120,590,574	$(222,138)	$-	$36,684,584	$33,445	$-	$341,286,600	$2,859,884	$344,146,484
Effects of retrospective application and retrospective restatement	-	-	-	-	2,228,393	-	40,933,308	(36,684,584)	(33,445)	33,445	6,477,117	(300)	6,476,817
Balance as of January 1, 2018 after adjustment	95,259,597	31,422,127	54,484,627	3,033,784	122,818,967	(222,138)	40,933,308	-	-	33,445	347,763,717	2,859,584	350,623,301
Appropriation of 2017 earnings:													
Legal reserve	-	-	8,017,015	-	(8,017,015)	-	-	-	-	-	-	-	-
Cash dividends	-	-	-	-	(60,013,546)	-	-	-	-	-	(60,013,546)	-	(60,013,546)
Other change in capital surplus:													
Other change in capital surplus	-	23	-	-	-	-	-	-	-	-	23	-	23
Net income for the period from January 1 to September 30, 2018	-	-	-	-	64,233,953	-	-	-	-	-	64,233,953	(15,329)	64,218,624
Other comprehensive income for the period from January 1 to September 30, 2018	-	-	-	-	34,519	690,180	(5,105,474)	-	-	(27,518)	(4,408,293)	66,512	(4,341,781)
Total comprehensive income	-	-	-	-	64,268,472	690,180	(5,105,474)	-	-	(27,518)	59,825,660	51,183	59,876,843
Increase (decrease) in noncontrolling interests	-	-	-	-	-	-	-	-	-	-	-	(4,810)	(4,810)
Disposal of equity instruments investments designated at fair value through other comprehensive income	-	-	-	-	(1,653)	-	1,653	-	-	-	-	-	-
Balance as of September 30, 2018	$95,259,597	$31,422,150	$62,501,642	$3,033,784	$119,055,225	$468,042	$35,829,487	$-	$-	$5,927	$347,575,854	$2,905,957	$350,481,811
Balance as of January 1, 2019	$95,259,597	$31,385,997	$62,501,642	$3,033,784	$114,793,328	$672,695	$30,156,859	$-	$-	$(65,694)	$337,738,208	$2,917,972	$340,656,180
Appropriation of 2018 earnings:													
Legal reserve	-	-	6,009,022	-	(6,009,022)	-	-	-	-	-	-	-	-
Cash dividends	-	-	-	-	(45,724,607)	-	-	-	-	-	(45,724,607)	-	(45,724,607)
Other changes in capital surplus:													
Changes in equity of associates and joint ventures accounted for using equity method	-	13,652	-	-	-	-	-	-	-	-	13,652	-	13,652
Other changes in capital surplus	-	299	-	-	-	-	-	-	-	-	299	-	299
Net income for the period from January 1 to September 30, 2019	-	-	-	-	29,694,929	-	-	-	-	-	29,694,929	(43,290)	29,651,639
Other comprehensive income for the period from January 1 to September 30, 2019	-	-	-	-	-	329,883	2,797,402	-	-	66,495	3,193,780	34,351	3,228,131
Total comprehensive income	-	-	-	-	29,694,929	329,883	2,797,402	-	-	66,495	32,888,709	(8,939)	32,879,770
Increase (decrease) in noncontrolling interests	-	-	-	-	-	-	-	-	-	-	-	993,608	993,608
Balance as of September 30, 2019	$95,259,597	$31,399,948	$68,510,664	$3,033,784	$92,754,628	$1,002,578	$32,954,261	$-	$-	$801	$324,916,261	$3,902,641	$328,818,902

The accompanying notes are an integral part of the financial statements.

English Translation of Consolidated Financial Statements Originally Issued in Chinese

FORMOSA PETROCHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE PERIOD FROM JANUARY 1, 2019 TO SEPTEMBER 30, 2019

AND FOR THE PERIOD FROM JANUARY 1, 2018 TO SEPTEMBER 30, 2018

(Expressed in Thousands of Dollars)

(Unaudited)

	For the period from January 1 to September 30, 2019	For the period from January 1 to September 30, 2018
	NTD	NTD
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$36,178,581	$79,744,182
Adjustments to reconcile net income before tax to net cash provided by operating activities:		
Depreciation and depletion	8,971,133	10,129,005
Amortization	1,227,000	1,600,862
Net loss (gain) on financial assets or liabilities at fair value through profit or loss	(125,834)	(169,906)
Interest expense	457,410	537,384
Interest income	(533,133)	(695,131)
Dividends income	(4,464,038)	(3,325,548)
Share of loss (profit) of associates and joint ventures accounted for using equity method	(985,656)	(567,913)
(Gain) loss on disposal of property, plant and equipment	(38,535)	4,865
(Gain) loss on disposal of investment property	-	(5,908)
Impairment loss on non-financial assets	7,837	42,046
Changes in operating assets and liabilities:		
Decrease (increase) in financial assets at fair value through profit or loss, mandatorily measured at fair value	-	2,281,705
Decrease (increase) in notes receivable (including related parties)	(75,212)	(364,694)
Decrease (increase) in accounts receivable (including related parties)	5,165,465	(9,376,698)
Decrease (increase) in other receivables (including related parties)	(2,248,920)	(581,948)
Decrease (increase) in inventories	(582,070)	(23,178,369)
Decrease (increase) in prepayments	(1,828,843)	673,064
Decrease (increase) in other current assets	(90,670)	(36,867)
Increase (decrease) in contract liabilities	(51,306)	295,475
Increase (decrease) in notes payable	(14,115)	(7,202)
Increase (decrease) in accounts payable (including related parties)	(4,832,538)	19,008,086
Increase (decrease) in other payables	3,059,337	(210,208)
Increase (decrease) in other current liabilities	43,817	(1,403,641)
Increase (decrease) in defined benefit pension liability, net	32,615	36,691
Cash from operating activities	39,272,325	74,429,332
Income taxes received (paid)	(7,761,413)	(9,573,384)
Net cash provided by (used in) operating activities	31,510,912	64,855,948

The accompanying notes are an integral part of the financial statements.

(Forward)

English Translation of Consolidated Financial Statements Originally Issued in Chinese

FORMOSA PETROCHEMICAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE PERIOD FROM JANUARY 1, 2019 TO SEPTEMBER 30, 2019
AND FOR THE PERIOD FROM JANUARY 1, 2018 TO SEPTEMBER 30, 2018
(Expressed in Thousands of Dollars)
(Unaudited)

	For the period from January 1 to September 30, 2019	For the period from January 1 to September 30, 2018
	NTD	NTD
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of financial assets at fair value through other comprehensive income	-	(1,676,070)
Proceeds from disposal of financial assets at fair value through other comprehensive income	-	21,752
Acquisition of investments accounted for using the equity method	(2,393,732)	(22,176)
Acquisition of property, plant and equipment:		
Cost paid	(5,517,432)	(9,799,662)
Interest paid	(1,542)	(1,536)
Proceeds from disposal of property, plant and equipment	67,556	9,750
Decrease in receipts in advance due to disposal of assets	(60,226)	-
Decrease in other receivables — due from affiliates	7,259	13,856,677
Proceeds from disposal of investment property	-	53,329
Decrease in long-term lease receivables	172,822	104,987
Increase in other financial assets	(54,319)	-
Decrease in other financial assets	-	255,833
Increase in other non-current assets	(777,864)	(1,231,905)
Interests received	546,007	725,180
Dividends received	4,904,174	4,048,398
Acquisition of mineral resources	(295,116)	(126,042)
Net cash provided by (used in) investing activities	(3,402,413)	6,218,515
CASH FLOWS FROM FINANCING ACTIVITIES		
Increase in short-term loans	397,678	-
Decrease in short-term loans	-	(372,615)
Proceeds from issuing bonds (including current portion)	11,100,000	-
Repayments of bonds (including current portion)	(7,650,000)	(11,250,000)
Repayments of long-term debt (including current portion)	-	(11,562,883)
Increase in other payables to related parties	-	483,279
Decrease in other payables to related parties	(269,110)	-
Decrease in lease payable	-	(152,357)
Payments of lease liabilities	(873,076)	-
Decrease in other non-current liabilities	(29,775)	(7,951)
Cash dividends paid	(45,724,436)	(60,013,172)
Interest paid	(520,777)	(688,339)
Change in noncontrolling interests	993,608	(4,810)
Net cash provided by (used in) financing activities	(42,575,888)	(83,568,848)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	37,747	83,920
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(14,429,642)	(12,410,465)
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	37,753,658	44,124,648
CASH AND CASH EQUIVALENTS, END OF PERIOD	$23,324,016	$31,714,183

The accompanying notes are an integral part of the financial statements.

Formosa Petrochemical Corporation and Subsidiaries
Notes To Consolidated Financial Statements
September 30, 2019、December 31, 2018 and September 30, 2018
(September 30, 2019 and September 30, 2018 were unaudited)
(Amounts expressed in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

1. HISTORY AND ORGANIZATION

Formosa Petrochemical Corporation (the "Company") had prepared for incorporation since March 1992 and was incorporated on April 6, 1992. The Company is located in the No.6 Naphtha Cracker Complex in Mailiao of Yunlin County. The Company's shares were approved to be listed on the Taiwan Stock Exchange on November 12, 2003 and were traded publicly starting from December 26, 2003. The major shareholders of the Company are Formosa Plastics Corporation, Nan Ya Plastics Corporation and Formosa Chemicals & Fibre Corporation with equity interests of 28.56%, 23.11% and 24.15%, respectively, as of September 30, 2019.

2. DATE AND PROCEDURES OF AUTHORIZATION OF FINANCIAL STATEMENTS FOR ISSUE

The consolidated financial statements of the Company and its subsidiaries ("the Group") for the nine months periods ended September 30, 2019 and 2018 were authorized for issue in accordance with a resolution of the Board of Directors on October 31, 2019.

3. NEWLY ISSUED OR REVISED STANDARDS AND INTERPRETATIONS

(1) Changes in accounting policies resulting from applying for the first time certain standards and amendments

The Group applied for the first time International Financial Reporting Standards, International Accounting Standards, and Interpretations issued, revised or amended which are recognized by Financial Supervisory Commission ("FSC") and become effective for annual periods beginning on or after January 1, 2019. The nature and the impact of each new standard and amendment that has a material effect on the Group is described below:

(a) *IFRS 16"Leases"*

IFRS 16 "Leases" replaces IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement contains a Lease", SIC-15 "Operating Leases - Incentives" and SIC-27 "Evaluating the Substance of Transactions Involving the Legal Form of a Lease".

The Group follows the transition provision in IFRS 16 and the date of initial application was 1 January 2019. The impacts arising from the adoption of IFRS 16 are summarized as follows:

A. Please refer to Note 4 for the accounting policies before or after January 1, 2019.

B. For the definition of a lease, the Group elected not to reassess whether a contract is, or contains, a lease on January 1, 2019. The Group is permitted to apply IFRS 16 to contracts that were previously identified as leases applying IAS 17 and IFRIC 4 but not to apply IFRS 16 to contracts that were not previously identified as containing a lease applying IAS 17 and IFRIC 4. That is, for contracts entered (or changed) on or after January 1, 2019, the Group need to assess whether contacts are, or contain, leases applying IFRS 16. In comparing to IAS 17, IFRS 16 provides that a contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group assessed most of the contracts are, or contain, leases and has no significant impact arise.

C. The Group is a lessee and elects not to restate comparative information in accordance with the transition provision in IFRS 16. Instead, the Group recognizes the cumulative effect of initially applying IFRS 16 as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at the date of initial application.

(a) Leases previously classified as operating leases

For leases that were previously classified as operating leases applying IAS 17, the Group measured and recognized those leases as lease liability on January 1, 2019 at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate on January 1, 2019, and; The Group chooses, on a lease-by-lease basis, to measure the right-of-use asset at either:

An amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognized in the balance sheet immediately before January 1, 2019.

On January 1, 2019, the Group's right-of-use asset and lease liability increased by NT$6,316,948 thousand and NT$6,316,948 thousand, respectively.

In accordance with the transition provision in IFRS 16, the Group used the following practical expedients on a lease-by-lease basis to leases previously classified as operating leases:

i. Apply a single discount rate to a portfolio of leases with reasonably similar characteristics.
ii. Rely on its assessment of whether leases are onerous immediately before January 1, 2019 as an alternative to performing an impairment review.
iii. Elect to account in the same way as short-term leases to leases for which the lease term ends within 12 months of January 1, 2019.
iv. Exclude initial direct costs from the measurement of the right-of-use asset on January 1, 2019.
v. Use hindsight, such as in determining the lease term if the contract contains options to extend or terminate the lease.

(b) Leases previously classified as finance leases

For leases that were previously classified as finance leases applying IAS 17, the Group reclassified the lease asset of NT$1,597,781 thousand and the lease payable of NT$1,814,318 thousand as measured by IAS 17 to the right-of-use asset of NT$1,597,781 thousand and the lease liability of NT$1,814,318 thousand, respectively, on January 1, 2019.

(c) Please refer to Note 4 and Note 6 for additional disclosure of lessee and lessor which required by IFRS 16.

(d) As at January 1, 2019, the impacts arising from the adoption of IFRS 16 are summarized as follows:

i. The weighted average lessee's incremental borrowing rate applied to lease liabilities recognized in the balance sheet on January 1, 2019 was 1.979%.
ii. An explanation of the difference, NT$1,611,256 thousand, between: operating lease commitments disclosed applying IAS 17 as at December 31, 2018, discounted using the incremental borrowing rate on January 1, 2019; and lease liabilities recognized in the balance sheet as at January 1, 2019.

Operating lease commitments disclosed applying IAS 17 as at December 31, 2018	$7,233,537
Discounted using the incremental borrowing rate on January 1, 2019	$6,520,010
Add: the carrying value of lease payables as at December 31, 2018	1,814,318
Less: adjustment to leases that meet and elect to account in the same way as short-term leases (if any)	(203,062)
The carrying value of lease liabilities recognized as at January 1, 2019	$8,131,266

D. The Group is a lessor and has not made any adjustments. Please refer to Note 4 and Note 6 for the information relating to the lessor.

(2) Standards or interpretations issued, revised or amended, by International Accounting Standards Board ("IASB") which are endorsed by FSC, but not yet adopted by the Group as at the end of the reporting period are listed below.

Items	New, Revised or Amended Standards and Interpretations	Effective Date issued by IASB
a	Definition of a Business (Amendments to IFRS 3)	January 1, 2020
b	Definition of Material (Amendments to IAS 1 and 8)	January 1, 2020

(a) *Definition of a Business* (Amendments to IFRS 3)

The amendments clarify the definition of a business in IFRS 3 Business Combinations. The amendments are intended to assist entities to determine whether a transaction should be accounted for as a business combination or as an asset acquisition.

IFRS 3 continues to adopt a market participant's perspective to determine whether an acquired set of activities and assets is a business. The amendments clarify the minimum requirements for a business; add guidance to help entities assess whether an acquired process is substantive; and narrow the definitions of a business and of outputs; etc.

(b) *Definition of a Material* (Amendments to IAS 1 and 8)

The main amendment is to clarify new definition of material. It states that "information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity." The amendments clarify that materiality will depend on the nature or magnitude of information. An entity will need to assess whether the information, either individually or in combination with other information, is material in the context of the financial statements. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users.

The abovementioned standards and interpretations were issued by IASB and endorsed by FSC so that they are applicable for annual periods beginning on or after January 1, 2020. The above mentioned standards and interpretations have no material impact on the Group.

(3) Standards or interpretations issued, revised or amended, by International Accounting Standards Board ("IASB") which are not endorsed by FSC, but not yet adopted by the Group as at the end of the reporting period are listed below.

Items	New, Revised or Amended Standards and Interpretations	Effective Date issued by IASB
a	IFRS 10 "Consolidated Financial Statements" and IAS 28 "Investments in Associates and Joint Ventures" — Sale or Contribution of Assets between an Investor and its Associate or Joint Ventures	To be determined by IASB
b	IFRS 17 "Insurance Contracts"	January 1, 2021
c	Interest Rate Benchmark Reform – Amendments to IFRS 9, IAS 39 and IFRS 7	January 1, 2020

(a) *IFRS 10"Consolidated Financial Statements" and IAS 28"Investments in Associates and Joint Ventures" — Sale or Contribution of Assets between an Investor and its Associate or Joint Ventures*

The amendments address the inconsistency between the requirements in IFRS 10 *Consolidated Financial Statements and IAS 28 Investments in Associates and Joint Ventures*, in dealing with the loss of control of a subsidiary that is contributed to an associate or a joint venture. IAS 28 restricts gains and losses arising from contributions of non-monetary assets to an associate or a joint venture to the extent of the interest attributable to the other equity holders in the associate or joint ventures. IFRS 10 requires full profit or loss recognition on the loss of control of the subsidiary. IAS 28 was amended so that the gain or loss resulting from the sale or contribution of assets that constitute a business as defined in IFRS 3 between an investor and its associate or joint venture is recognized in full. IFRS 10 was also amended so that the gains or loss resulting from the sale or contribution of a subsidiary that does not constitute a business as defined in IFRS 3 between an investor and its associate or joint venture is recognized only to the extent of the unrelated investors' interests in the associate or joint venture. The effective date of the amendments has been postponed indefinitely, but early adoption is allowed.

(b) IFRS 17 "Insurance Contracts"

IFRS 17 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects (including recognition, measurement, presentation and disclosure requirements). The core of IFRS 17 is the General (building block) Model, under this model, on initial recognition, an entity shall measure a group of insurance contracts at the total of the fulfilment cash flows and the contractual service margin. The fulfilment cash flows comprise of the following:

(i) estimates of future cash flows;
(ii) Discount rate: an adjustment to reflect the time value of money and the financial risks related to the future cash flows, to the extent that the financial risks are not included in the estimates of the future cash flows; and
(iii)a risk adjustment for non-financial risk.

The carrying amount of a group of insurance contracts at the end of each reporting period shall be the sum of the liability for remaining coverage and the liability for incurred claims. Other than the General Model, the standard also provides a specific adaptation for contracts with direct participation features (the Variable Fee Approach) and a simplified approach (Premium Allocation Approach) mainly for short-duration contracts.

(c) Interest Rate Benchmark Reform – Amendments to IFRS 9, IAS 39 and IFRS 7

The amendments include a number of exceptions, which apply to all hedging relationships that are directly affected by interest rate benchmark reform. A hedging relationship is directly affected if the interest rate benchmark reform gives rise to uncertainties about the timing and or amount of benchmark-based cash flows of the hedged item or the hedging instrument. Hence, the entity shall apply the exceptions to all hedging relationships directly affected by the interest rate benchmark reform.

The amendments include:
(i) highly probable requirement
When determining whether a forecast transaction is highly probable, an entity shall assume that the interest rate benchmark on which the hedged cash flows are based is not altered as a result of the interest rate benchmark reform.
(ii) prospective assessments
When performing prospective assessments, an entity shall assume that the interest rate benchmark on which the hedged item, hedged risk and/or hedging instrument are based is not altered as a result of the interest rate benchmark reform.
(iii)IAS 39 retrospective assessment
An entity is not required to undertake the IAS 39 retrospective assessment (i.e. the actual results of the hedge are within a range of 80–125%) for hedging relationships directly affected by the interest rate benchmark reform.
(iv)separately identifiable risk components
For hedges of a non-contractually specified benchmark component of interest rate risk, an entity shall apply the separately identifiable requirement only at the inception of such hedging relationships.

The amendments also include the end of application of the exceptions requirements and the related disclosures requirements of the amendments.

The abovementioned standards and interpretations issued by IASB have not yet endorsed by FSC at the date when the Group's financial statements were authorized for issue, the local effective dates are to be determined by FSC. As the Group is still currently determining the potential impact of the standards and interpretations listed under (a) and (c), it is not practicable to estimate their impact on the Group at this point in time. The remaining new or amended standards and interpretations have no material impact on the Group.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(1) Statement of compliance

The consolidated financial statements of the Group for the nine months periods ended September 30, 2019 and 2018 have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers ("the Regulations") and IAS 34 *Interim Financial Reporting* as endorsed and became effective by the FSC.

(2) Basis of preparation

The consolidated financial statements have been prepared on a historical cost basis, except for financial instruments that have been measured at fair value. The consolidated financial statements are expressed in thousands of New Taiwan Dollars ("NT$") unless otherwise stated.

(3) Basis of consolidation

A. Preparation principle of consolidated financial statements

Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if and only if the Group has:

(a) power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee)
(b) exposure, or rights, to variable returns from its involvement with the investee, and
(c) the ability to use its power over the investee to affect its returns

When the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

(a) the contractual arrangement with the other vote holders of the investee
(b) rights arising from other contractual arrangements
(c) the Group's voting rights and potential voting rights

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control.

Subsidiaries are fully consolidated from the acquisition date, being the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases. The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using uniform accounting policies. All intra-group balances, income and expenses, unrealized gains and losses and dividends resulting from intra-group transactions are eliminated in full.

A change in the ownership interest of a subsidiary, without a change of control, is accounted for as an equity transaction.

Total comprehensive income of the subsidiaries is attributed to the owners of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

If the Group loses control of a subsidiary, it:

(a) derecognizes the assets (including goodwill) and liabilities of the subsidiary;
(b) derecognizes the carrying amount of any non-controlling interest;
(c) recognizes the fair value of the consideration received;
(d) recognizes the fair value of any investment retained;
(e) recognizes any surplus or deficit in profit or loss; and
(f) reclassifies the parent's share of components previously recognized in other comprehensive income to profit or loss.

B. The consolidated entities are listed as follows:

			Percentage of ownership (%)		
Investor	Subsidiaries	Main business	September 30, 2019	December 31, 2018	September 30, 2018
The Company	Formosa Oil (Asia Pacific) Corp.	Sales Retailer	100%	100%	100%
The Company	Formosa Petrochemical Transportation Corp.	Transportation Service	88%	88%	88%
The Company	FPCC USA. INC.	Oil exploration & production	100%	100%	100%
The Company	FPCC Marine Corporation (Note1)	Leasing on ships	100%	100%	100%
The Company	Formosa Petrochemical International (Cayman) Limited	Investing	100%	100%	100%
The Company	FG INC.	Investing	57%	57%	57%
FG INC.	FG LA LLC	Petrochemical products manufacturing and selling	100%	100%	100%
FPCC Marine Corporation (Note1)	Formosa Petrochemical Marine Company Limited (Note2)	Transportation	-	100%	100%

Note 1: Formosa Dredging Corporation was renamed FPCC Marine Corporation on May 14, 2019.

Note 2: Formosa Petrochemical Marine Company Limited has been dissolved on September 20, 2019.

C. Subsidiaries are excluded from the consolidated financial statements and the reason are as follows:

(a)

Investor	Subsidiaries	Main business	Percentage of ownership (%) September 30, 2019	Percentage of ownership (%) December 31, 2018	Percentage of ownership (%) September 30, 2018
Formosa Oil (Asia Pacific) Corp.	Whale Home International Corp.	Sales Retailer	53.80%	51.23%	51.23%
Formosa Petrochemical Transportation Corp.	Whale Home International Corp.	Sales Retailer	15.69%	15.69%	15.69%

Note: The total percentages of ownership of Formosa Oil (Asia Pacific) Corporation and Formosa Petrochemical Transportation Corporation in Whale Home International Corp., Ltd. was 69.49% and 66.92% and 66.92% as of September 30, 2019, December 31, 2018, and September 30, 2018, respectively. The Company does exercise the significant influence on Whale Home International Corp., Ltd. However, because the total assets, liabilities and net income of Whale Home International Corp., Ltd, accounted for only 0.09%, 0.05%, 0.02% and 0.09%, 0.04%, 0.01% and 0.08%, 0.03%, 0.01% of the Company's corresponding accounts as of September 30, 2019, December 31, 2018, and September 30, 2018. Therefore, Whale Home International Corp., Ltd was not included in the consolidated financial statement.

The financial statements of some of the consolidated subsidiaries listed above had not been reviewed by auditors. As of September 30, 2019 and September 30, 2018, the related total assets of the subsidiaries which were not reviewed by auditors amounted to NT$38,764,283 thousand and NT$33,553,957 thousand, respectively, and the related total liabilities amounted to NT$13,423,928 thousand and NT$8,740,036 thousand, respectively. The comprehensive income (loss) of these subsidiaries amounted to NT$(2,560,690) thousand and NT$(1,296,590) thousand for the nine months ended September 30, 2019 and 2018, respectively.

(b) Although NKFG is wholly-owned by the Group before September 20, 2019, it is a joint venture rather than a subsidiary based on its economic substance. The percentage of ownership of the Group in NKFG was changed from 100% to 50% after September 20, 2019. Please refer to Note 6.(9).E.

(4) Foreign currency transactions

The Group's consolidated financial statements are presented in NT$, which is also the Company's functional currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency.

Transactions in foreign currencies are initially recorded by the Group entities at their respective functional currency rates prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency closing rate of exchange ruling at the reporting date. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions.

All exchange differences arising on the settlement of monetary items or on translating monetary items are taken to profit or loss in the period in which they arise except for the following:

A. Exchange differences arising from foreign currency borrowings for an acquisition of a qualifying asset to the extent that they are regarded as an adjustment to interest costs are included in the borrowing costs that are eligible for capitalization.

B. Foreign currency items within the scope of IFRS 9 *Financial Instrument* are accounted for based on the accounting policy for financial instruments.

C. Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation is recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

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

(5) Translation of financial statements in foreign currency

The assets and liabilities of foreign operations are translated into NT$ at the closing rate of exchange prevailing at the reporting date and their income and expenses are translated at an average rate for the period. The exchange differences arising on the translation are recognized in other comprehensive income. On the disposal of a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation, recognized in other comprehensive income and accumulated in the separate component of equity, is reclassified from equity to profit or loss when the gain or loss on disposal is recognized. The following are accounted for as disposals even if an interest in the foreign operation is retained by the Group: the loss of control over a foreign operation, the loss of significant influence over a foreign operation, or the loss of joint control over a foreign operation.

On the partial disposal of a subsidiary that includes a foreign operation that does not result in a loss of control, the proportionate share of the cumulative amount of the exchange differences recognized in other comprehensive income is re-attributed to the non-controlling interests in that foreign operation. In partial disposal of an associate or jointly controlled entity that includes a foreign operation that does not result in a loss of significant influence or joint control, only the proportionate share of the cumulative amount of the exchange differences recognized in other comprehensive income is reclassified to profit or loss.

Any goodwill and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and expressed in its functional currency.

(6) Current and non-current distinction

An asset is classified as current when:

A. The Group expects to realize the asset, or intends to sell or consume it, in its normal operating cycle
B. The Group holds the asset primarily for the purpose of trading
C. The Group expects to realize the asset within twelve months after the reporting period
D. The asset is cash or cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

A liability is classified as current when:

A. The Group expects to settle the liability in its normal operating cycle
B. The Group holds the liability primarily for the purpose of trading
C. The liability is due to be settled within twelve months after the reporting period
D. The Group does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting period. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification

All other liabilities are classified as non-current.

(7) Cash and cash equivalents

Cash and cash equivalents comprises cash on hand, demand deposits and short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value (including time deposits with maturing of less than 12 months, repurchase bonds and commercial papers).

(8) Financial instruments

Financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities within the scope of IFRS 9 *Financial Instruments* are recognized initially at fair value plus or minus, in the case of investments not at fair value through profit or loss, directly attributable transaction costs.

A. Financial instruments: Recognition and Measurement

The Group accounts for regular way purchase or sales of financial assets on the trade date.

The Group classified financial assets as subsequently measured at amortized cost, fair value through other comprehensive income or fair value through profit or loss on the basis of both:

(a) the Group's business model for managing the financial assets and
(b) the contractual cash flow characteristics of the financial asset.

Financial assets measured at amortized cost

A financial asset is measured at amortized cost if both of the following conditions are met and presented as notes receivable, accounts receivable (including financing lease receivables), financial assets measured at amortized cost and other receivables etc., on balance sheet as at the reporting date:

(a) the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows and
(b) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Such financial assets are subsequently measured at amortized cost (the amount at which the financial asset is measured at initial recognition minus the principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between the initial amount and the maturity amount and adjusted for any loss allowance) and is not part of a hedging relationship. A gain or loss is recognized in profit or loss when the financial asset is derecognized, through the amortization process or in order to recognize the impairment gains or losses.

Interest revenue is calculated by using the effective interest method. This is calculated by applying the effective interest rate to the gross carrying amount of a financial asset except for:

(a) purchased or originated credit-impaired financial assets. For those financial assets, the Group applies the credit-adjusted effective interest rate to the amortized cost of the financial asset from initial recognition.
(b) financial assets that are not purchased or originated credit-impaired financial assets but subsequently have become credit-impaired financial assets. For those financial assets, the Group applies the effective interest rate to the amortized cost of the financial asset in subsequent reporting periods.

Financial asset measured at fair value through other comprehensive income

A financial asset is measured at fair value through other comprehensive income if both of the following conditions are met:

(a) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets and
(b) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Recognition of gain or loss on a financial asset measured at fair value through other comprehensive income are described as below:

(a) A gain or loss on a financial asset measured at fair value through other comprehensive income should be recognized in other comprehensive income, except for impairment gains or losses and foreign exchange gains and losses, until the financial asset is derecognized or reclassified.
(b) When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income should be reclassified from equity to profit or loss as a reclassification adjustment.
(c) Interest revenue calculated by using the effective interest method (effective interest rate times the carrying amount of the financial asset) or the method stated below should be recognized in profit or loss.
    (i) For purchased or originated credit-impaired financial assets, the Group applies the credit-adjusted effective interest rate to the amortized cost of the financial asset.
    (ii) For financial assets that are not purchased or originated credit-impaired financial assets but subsequently become credit-impaired financial assets, the Group applies the effective interest rate to the amortized cost of the financial asset in subsequent reporting periods.

Besides, for certain equity investments within the scope of IFRS 9 that is neither held for trading nor contingent consideration recognized by an acquirer in a business combination to which IFRS 3 applies, the Group made an irrevocable election to present the changes of the fair value in other comprehensive income at initial recognition. Amounts presented in other comprehensive income shall not be subsequently transferred to profit or loss (when disposal of such equity instrument, its cumulated amount included in other components of equity is transferred directly to the retained earnings) and these investments should be presented as financial assets measured at fair value through other comprehensive income on the balance sheet. Dividends on such investment are recognized in profit or loss unless the dividends clearly represents a recovery of part of the cost of investment.

Financial assets at fair value through profit or loss

Financial assets were classified as measured at amortized cost or measured at fair value through other comprehensive income based on aforementioned criteria. All other financial assets were measured at fair value through profit or loss and presented on the balance sheet as financial assets measured at fair value through profit or loss.

Such financial assets are measured at fair value, the gains or losses resulting from remeasurement is recognized in profit or loss which includes any dividend or interest received on such financial assets.

B. Impairment of financial assets

The Group recognizes a loss allowance for expected credit losses on debt instrument investments measured at fair value through other comprehensive income and financial asset measured at amortized cost. The loss allowance on debt instrument measured at fair value through other comprehensive income is recognized in other comprehensive income and does not reduce the carrying amount in the balance sheet.

The Group measures expected credit losses of a financial instrument in a way that reflects:

(a) an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
(b) the time value of money; and
(c) reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.

The loss allowance is measured as follows:

(a) At an amount equal to 12-month expected credit losses: the credit risk on a financial asset has not increased significantly since initial recognition or the financial asset is determined to have low credit risk at the reporting date. In addition, the Group measures the loss allowance for a financial asset at an amount equal to lifetime expected credit losses in the previous reporting period, but determines at the current reporting date that condition is no longer met.
(b) At an amount equal to the lifetime expected credit losses: the credit risk on a financial asset has increased significantly since initial recognition or financial asset that is purchased or originated credit-impaired financial asset.
(c) For trade receivables or contract assets arising from transactions within the scope of IFRS 15, the Group measures the loss allowance at an amount equal to lifetime expected credit losses.
(d) For impairment of lease receivable, the Group measures the loss allowance at an amount equal to lifetime expected credit losses.

At each reporting date, the Group needs to assess whether the credit risk on a financial asset has been increased significantly since initial recognition by comparing the risk of a default occurring at the reporting date and the risk of default occurring at initial recognition. Please refer to Note 12 for further details on credit risk.

C. Derecognition of financial assets

A financial asset is derecognized when:

(a) The rights to receive cash flows from the asset have expired
(b) The Group has transferred the asset and substantially all the risks and rewards of the asset have been transferred
(c) The Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

On derecognition of a financial asset in its entirety, the difference between the carrying amount and the consideration received or receivable including any cumulative gain or loss that had been recognized in other comprehensive income, is recognized in profit or loss.

D. Financial liabilities and equity

Classification between liabilities or equity

The Group classifies the instrument issued as a financial liability or an equity instrument in accordance with the substance of the contractual arrangement and the definitions of a financial liability, and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. The transaction costs of an equity transaction are accounted for as a deduction from equity (net of any related income tax benefit) to the extent they are incremental costs directly attributable to the equity transaction that otherwise would have been avoided.

Financial liabilities

Financial liabilities within the scope of IFRS 9 *Financial Instruments* are classified as financial liabilities at fair value through profit or loss or financial liabilities measured at amortized cost.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated at fair value through profit or loss.

A financial liability is classified as held for trading if:

(a) it is acquired or incurred principally for the purpose of selling or repurchasing it in the near term
(b) on initial recognition it is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking
(c) it is a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument)

Gains or losses on the subsequent measurement of liabilities at fair value through profit or loss including interest paid is recognized in profit or loss.

Financial liabilities at amortized cost

Financial liabilities measured at amortized cost include interest bearing loans and borrowings that are subsequently measured using the effective interest rate method after initial recognition. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through amortization process of the effective interest rate method.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or transaction costs.

Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified (whether or not attributable to the financial difficulty of the debtor), such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

E. Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the balance sheet if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

(9) Derivatives instrument and hedge accounting

The Group uses derivative instruments to hedge its price risk of products. A derivative is classified in the balance sheet as financial asset or financial liability at fair value through profit or loss except for derivatives that are designated effective hedging instruments which are classified as derivative financial assets or liabilities for hedging.

Derivative instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken directly to profit or loss, except for the effective portion of cash flow hedges, which is recognized in equity.

The Group's purpose of using hedge accounting is to hedge the risk of cash flows. Cash flow hedge is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction, or foreign exchange rate risk arising from an unrecognized commitment.

Hedges that meet the hedge accounting requirement should be treated as follows:

Cash flow hedge

Gains or losses arising from the effective portion of cash flow hedges are recognized in equity and gains or losses arising from the ineffective portion are recognized in profit or loss.

When the hedged transaction affected profit or loss, the gains or losses recognized in equity are transferred to profit or loss. When the hedged item is non-financial assets or non-financial liabilities, the gains or losses recognized in equity should be transferred to the book value of the hedged non-financial assets or non-financial liabilities.

When the expected transaction or commitment is not expected to happen, the gains or losses recognized in equity previously should be transferred to profit or loss. If the hedge instrument has expired, terminated or executed and not replaced or extended, or has cancelled the original designated hedge, then the gains or losses recognized in equity previously should remain in equity before the expected transaction or commitment affected profit or loss.

(10) Fair value measurement

A fair value measurement assumes that the asset or liability is exchanged in an orderly transaction between market participants to sell the asset or transfer the liability at the measurement date under current market conditions. A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either:

A. in the principal market for the asset or liability; or
B. in the absence of a principal market, in the most advantageous market for the asset or liability.

The main or the most advantageous market must enter by the group to conduct transaction.

An entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The group adopts the appropriate valuation technique(s) to use when measuring fair value. The valuation technique(s) used should maximize the use of relevant observable inputs and minimize unobservable inputs.

(11) Inventories

Inventories are valued at lower of cost and net realizable value item by item.

Costs incurred in bringing each inventory to its present location and condition is accounted for as follows:

Raw materials – Purchase cost on weighted average cost basis.

Finished goods and work in progress – Cost of direct materials and labor and a proportion of manufacturing overheads based on normal operating capacity but excluding borrowing costs. The fix manufacturing cost is allocated based on normal operating capacity. If the actual capacity exceeds the normal capacity, then the fix manufacturing cost is allocated based on the actual capacity. Finished goods and work in progress are based on weighted average method.

Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

Rendering of services is accounted in accordance with IFRS 15 but not within the scoping of inventories.

(12) Investments accounted for using the equity method

The Group's investment in its associate is accounted for using the equity method other than those that meet the criteria to be classified as held for sale. An associate is an entity over which the Group has significant influence.

Under the equity method, the investment in the associate is carried in the balance sheet at cost and adjusted thereafter for the post-acquisition change in the Group's share of net assets of the associate. After the interest in the associate is reduced to zero, additional losses are provided for, and a liability is recognized, only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate. Unrealized gains and losses resulting from transactions between the Group and the associate are eliminated to the extent of the Group's related interest in the associate.

When changes in the net assets of an associate occur and not those that are recognized in profit or loss or other comprehensive income and do not affects the Group's percentage of ownership interests in the associate, the Group recognizes such changes in equity based on its percentage of ownership interests. The resulting capital surplus recognized will be reclassified to profit or loss at the time of disposing the associate on a prorate basis.

When the associate issues new stock, and the Group's interest in an associate is reduced or increased as the Group fails to acquire shares newly issued in the associate proportionately to its original ownership interest, the increase or decrease in the interest in the associate is recognized in additional paid in capital and investment in associate. When the interest in the associate is reduced, the cumulative amounts previously recognized in other comprehensive income are reclassified to profit or loss or other appropriate items. The aforementioned capital surplus recognized is reclassified to profit or loss on a pro rata basis when the Group disposes of the associate.

The financial statements of the associate are prepared for the same reporting period as the Group. Where necessary, adjustments are made to bring the accounting policies in line with those of the Group.

The Group determines at each reporting date whether there is any objective evidence that the investment in the associate is impaired in accordance with IAS 28 *Investments in Associates and Joint Ventures*. If this is the case the Group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value and recognizes the amount in the 'share of profit or loss of an associate' in the statement of comprehensive income in accordance with IAS 36 Impairment of Assets. In determining the value in use of the investment, the Group estimates:

A. Its share of the present value of the estimated future cash flows expected to be generated by the associate, including the cash flows from the operations of the associate and the proceeds on the ultimate disposal of the investment.

B. The present value of the estimated future cash flows expected to arise from dividends to be received from the investment and from its ultimate disposal.

Because goodwill that forms part of the carrying amount of an investment in an associate is not separately recognized, it is not tested for impairment separately by applying the requirements for impairment testing goodwill in IAS 36 Impairment of Assets.

Upon loss of significant influence over the associate, the Group measures and recognizes any retaining investment at its fair value. Any difference between the carrying amount of the associate upon loss of significant influence and the fair value of the retaining investment and proceeds from disposal is recognized in profit or loss. The Group recognizes its interest in the jointly controlled entities using the equity method other than those that meet the criteria to be classified as held for sale. A jointly controlled entity is a joint venture that involves the establishment of a corporation, partnership or other entity.

(13) Property, plant and equipment

Property, plant and equipment are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of dismantling and removing the item and restoring the site on which it is located and borrowing costs for construction in progress if the recognition criteria are met. Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately. When significant parts of property, plant and equipment are required to be replaced in intervals, the Group recognized such parts as individual assets with specific useful lives and depreciation, respectively. The carrying amount of those parts that are replaced is derecognized in accordance with the derecognition provisions of IAS 16 Property, plant and equipment. When a major inspection is performed, its cost is recognized in the carrying amount of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in profit or loss as incurred.

Depreciation is calculated on a straight-line basis over the estimated economic lives of the following assets:

Buildings: 25~55 years
Machinery and equipment: 5~40 years
Transportation equipment: 3~15 years
Other equipment: 3~25 years
Right-of-use assets/leased assets (note): 2~20 years
Leasehold improvements: The shorter of lease terms or economic useful lives

Note: The Group reclassified the lease asset to right-of-use asset after the adoption of IFRS 16 from January 1, 2019.

An item of property, plant and equipment and any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset is recognized in profit or loss.

The assets' residual values, useful lives and methods of depreciation are reviewed at each financial year end and adjusted prospectively, if appropriate.

The Company changed the depreciation method from the straight-line method to the fixed-percentage-on-declining-base method on January 1, 2008 with respect to the related machines, transportation and other equipment of the Refinery and Oil Products Division (excluding the utilities factory and oil factory), Petrochemical Olefins Division and Maintenance Center in Mailiao plant. PP&E still in use after its service life are further depreciated over the newly estimated remaining useful lives.

(14) Investment property

The accounting policy from January 1, 2019 as follow:

The Group's owned investment properties are measured initially at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met and excludes the costs of day-to-day servicing of an investment property. Subsequent to initial recognition, other than those that meet the criteria to be classified as held for sale (or are included in a disposal group that is classified as held for sale) in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, investment properties are measured using the cost model in accordance with the requirements of IAS 16 *Property, plant and equipment* for that model. If investment properties are held by a lessee as right-of-use assets and is not held for sale in accordance with IFRS 5, investment properties are measured in accordance with the requirements of IFRS 16.

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in profit or loss in the period of derecognition.

The Group decides to transfer to or from investment properties based on the actual usage of the assets.

Properties are transferred to or from investment properties when the properties meet, or cease to meet, the definition of investment property and there is evidence of the change in use.

The accounting policy before January 1, 2019 as follow:

The Group's investment properties are measured initially at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met and excludes the costs of day-to-day servicing of an investment property. Subsequent to initial recognition, investment properties are measured using the cost model in accordance with the requirements of *IAS 16* for that model, other than those that meet the criteria to be classified as held for sale (or are included in a disposal group that is classified as held for sale) in accordance with *IFRS 5 Non-current Assets Held for Sale and Discontinued Operations.*

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in profit or loss in the period of derecognition.

The Group decides to transfer to or from investment properties based on the actual usage of the assets.

Properties are transferred to or from investment properties when the properties meet, or cease to meet, the definition of investment property and there is evidence of the change in use.

(15) Leases

The accounting policy from January 1, 2019 as follow:

For contracts entered on or after January 1, 2019, the Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset for a period of time, the Group assesses whether, throughout the period of use, has both of the following:

(a) the right to obtain substantially all of the economic benefits from use of the identified asset; and
(b) the right to direct the use of the identified asset.

The Group elected not to reassess whether a contract is, or contains, a lease on 1 January 2019. The Group is permitted to apply IFRS 16 to contracts that were previously identified as leases applying IAS 17 and IFRIC 4 but not to apply IFRS 16 to contracts that were not previously identified as containing a lease applying IAS 17 and IFRIC 4.

For a contract that is, or contains, a lease, the Group accounts for each lease component within the contract as a lease separately from non-lease components of the contract. For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components. The relative stand-alone price of lease and non-lease components shall be determined on the basis of the price the lessor, or a similar supplier, would charge the Group for that component, or a similar component, separately. If an observable stand-alone price is not readily available, the Group estimates the stand-alone price, maximising the use of observable information.

Group as a lessee

Except for leases that meet and elect short-term leases or leases of low-value assets, the Group recognizes right-of-use asset and lease liability for all leases which the Group is the lessee of those lease contracts.

At the commencement date, the Group measures the lease liability at the present value of the lease payments that are not paid at that date. The lease payments discount using the interest rate implicit in the lease, if that rate can be readily determined. If that rate cannot be readily determined, the Group uses its incremental borrowing rate. At the commencement date, the lease payments included in the measurement of the lease liability comprise the following payments for the right to use the underlying asset during the lease term that are not paid at the commencement date:

(a) fixed payments (including in-substance fixed payments), less any lease incentives receivable;
(b) variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
(c) amounts expected to be payable by the lessee under residual value guarantees;
(d) the exercise price of a purchase option if the Group is reasonably certain to exercise that option; and
(e) payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease.

After the commencement date, the Group measures the lease liability on an amortised cost basis, which is increasing the carrying amount to reflect interest on the lease liability by using an effective interest method; and reducing the carrying amount to reflect the lease payments made.

At the commencement date, the Group measures the right-of-use asset at cost. The cost of the right-of-use asset comprises:

(a) the amount of the initial measurement of the lease liability;
(b) any lease payments made at or before the commencement date, less any lease incentives received;
(c) any initial direct costs incurred by the lessee; and
(d) an estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

For subsequent measurement of the right-of-use asset, the Group measures the right-of-use asset at cost less any accumulated depreciation and any accumulated impairment losses. That is, the Group measures the right-of-use applying a cost model.

If the lease transfers ownership of the underlying asset to the Group by the end of the lease term or if the cost of the right-of-use asset reflects that the Group will exercise a purchase option, the Group depreciates the right-of-use asset from the commencement date to the end of the useful life of the underlying asset. Otherwise, the Group depreciates the right-of-use asset from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term.

The Group applies IAS 36 "Impairment of Assets" to determine whether the right-of-use asset is impaired and to account for any impairment loss identified.

Except for leases that meet and elect short-term leases or leases of low-value assets, the Group presents right-of-use assets and lease liabilities in the balance sheet and presents interest expense separately from the depreciation charge associate with those leases in the consolidated income statement.

For short-term leases or leases of low-value assets, the Group elects to recognize the lease payments associated with those leases as an expense on either a straight-line basis over the lease term or another systematic basis.

Group as a lessor

At inception of a contract, the Group classifies each of its leases as either an operating lease or a finance lease. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of an underlying asset. A lease is classified as an operating lease if it does not transfer substantially all the risks and rewards incidental to ownership of an underlying asset. At the commencement date, the Group recognizes assets held under a finance lease in its balance sheet and present them as a receivable at an amount equal to the net investment in the lease.

For a contract that contains lease components and non-lease components, the Group allocates the consideration in the contract applying IFRS 15.

The Group recognizes lease payments from operating leases as rental income on either a straight-line basis or another systematic basis. Variable lease payments for operating leases that do not depend on an index or a rate are recognized as rental income when incurred.

The accounting policy before January 1, 2019 as follow:

Group as a lessee

Finance leases which transfer to the Group substantially all the risks and benefits incidental to ownership of the leased item, are capitalized at the commencement of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are recognized in profit or loss.

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

Group as a lessor

The Group amortized lease revenue to each accounting period, in order to reflect the same return on net investment of lease. Leases in which the Group does not transfer substantially all the risks and benefits of ownership of the asset are classified as operating leases. Initial direct costs incurred in negotiating an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Rental revenue generated from operating leases was recognized over the lease term using the straight line method. Contingent rents are recognized as revenue in the period in which they are earned.

(16) Exploration and evaluation assets

Mineral resources means acquired mineral interests and the oil and gas wells and related facilities arising from oil and gas development activities. Necessary cost for the acquisition of mineral interest including acquisition, exploration, development and removal or restoration costs are capitalized as mineral resource assets.

(17) Impairment of non-financial assets

The Group assesses at the end of each reporting period whether there is any indication that an asset in the scope of IAS 36 *Impairment of Assets* may be impaired. If any such indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's ("CGU") fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such indication exists, the Group estimates the asset's or cash-generating unit's recoverable amount. A previously recognized impairment loss is reversed only if there has been an increase in the estimated service potential of an asset which in turn increases the recoverable amount. However, the reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years.

An impairment loss of continuing operations or a reversal of such impairment loss is recognized in profit or loss.

(18) Revenue recognition

The Group's revenue arising from contracts with customers mainly include sale of goods and rendering of services. The accounting policies for the Group's types of revenue are explained as follows:

Sales of goods

The Group manufactures and sells goods. Sales are recognized when control of the goods is transferred to the customer (meaning that the customer has control over the use of the product and claims almost all of the remaining benefit) and the goods are delivered to the customers. The main product of the Group is petrochemical products and revenue is recognized based on the consideration stated in the contract. The remaining sales transactions are usually accompanied by volume discounts (based on the accumulated total sales amount for a specified period). Therefore, revenue from these sales is recognized based on the price specified in the contract, net of the estimated volume discounts. Accumulated experience is used to estimate and provide for the discounts, using the expected value method. Revenue is only recognized to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. During the period specified in the contract, refund liability is recognized for the products expected to be returned.

The Group has not provided any warranty to its products.

The credit period of the Group's sale of goods is from 30 to 60 days. For most of the contracts, when the Group transfers the goods to customers and has a right to an amount of consideration that is unconditional, these contracts are recognized as trade receivables. The period between the Group transfers the goods to customers and when the customers pay for that goods is usually short and have no significant financing component to the contract. For a small part of the contracts, the Group has the right to transfer the goods to customers but does not has a right to an amount of consideration that is unconditional, these contacts should be presented as contract assets. Besides, in accordance with IFRS 9, the Group measures the loss allowance for a contract asset at an amount equal to the lifetime expected credit losses.

Rendering of services

The service provided by the Group is mainly terminal operations which have fixed price or negotiated price based on the number of times the service is provided. The performance obligation is fulfilled at a certain point, so the revenue should be recognized when the performance obligation is fulfilled.

Most of the contractual consideration of the Group are claimed after services have been rendered. When services have been performed but the Group does not have the right to the consideration unconditionally, contract assets should be recognized. For part of the contracts where consideration is claimed upon signing the contract, then the Group has the obligation to provide the services subsequently and contract liabilities should be recognized.

The period between the transfers of contract liabilities to revenue is usually within one year, and thus, no significant financing component is arised.

(19) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

(20) Post-employment benefits

All regular employees of the Company and its domestic subsidiaries are entitled to a pension plan that is managed by an independently administered pension fund committee. Fund assets are deposited under the committee's name in the specific bank account and hence, not associated with the Company and its domestic subsidiaries. Therefore, fund assets are not included in the Group's consolidated financial statements. Pension benefits for employees of the overseas subsidiaries and the branches are provided in accordance with the respective local regulations.

For the defined contribution plan, the Company and its domestic subsidiaries will make a monthly contribution of no less than 6% of the monthly wages of the employees subject to the plan. The Company recognizes expenses for the defined contribution plan in the period in which the contribution becomes due. Overseas subsidiaries and branches make contribution to the plan based on the requirements of local regulations.

Post-employment benefit plan that is classified as a defined benefit plan uses the Projected Unit Credit Method to measure its obligations and costs based on actuarial assumptions. Re-measurements, comprising of the effect of the actuarial gains and losses, the effect of the asset ceiling (excluding net interest) and the return on plan assets, excluding net interest, are recognized as other comprehensive income with a corresponding debit or credit to retained earnings in the period in which they occur. Past service costs are recognized in profit or loss on the earlier of:

A. the date of the plan amendment or curtailment, and
B. the date that the Group recognizes restructuring-related costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset, both as determined at the start of the annual reporting period, taking account of any changes in the net defined benefit liability (asset) during the period as a result of contribution and benefit payment.

Pension cost for an interim period is calculated on a year-to-date basis by using the actuarially determined pension cost rate at the end of the prior financial year, adjusted and disclosed for significant market fluctuations since that time and for significant curtailments, settlements, or other significant one-off events.

(21) Income taxes

Income tax expense (income) is the aggregate amount included in the determination of profit or loss for the period in respect of current tax and deferred tax.

Current income tax

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities, using the tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period. Current income tax relating to items recognized in other comprehensive income or directly in equity is recognized in other comprehensive income or equity and not in profit or loss.

The income tax for undistributed earnings is recognized as income tax expense in the subsequent year when the distribution proposal is approved by the shareholders' meeting.

Deferred tax

Deferred tax is provided on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

A. Where the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
B. In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognized for all deductible temporary differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized, except:

A. Where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss
B. In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted at the reporting date. The measurement of deferred tax assets and deferred tax liabilities reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction either in other comprehensive income or directly in equity. Deferred tax assets are reassessed at each reporting date and are recognized accordingly.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current income tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax expense for interim period should be accrued and disclosed using the tax rate applicable for the expected net income for the full fiscal year. Thus, the effective tax rate expected to be applicable for the full fiscal year should be applied to income before income tax of the interim period. When there is tax rate change in the interim periods, the effect on deferred tax asset should be recognized in profit or loss and other comprehensive income or in equity directly.

5. SIGNIFICANT ACCOUNTING JUDGEMENTS, ESTIMATES AND ASSUMPTIONS

The preparation of the Company's consolidated financial statements require management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumption and estimate could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

(1) Judgment

In the process of applying the Group's accounting policies, management has made the following judgments, which have the most significant effect on the amounts recognized in the consolidated financial statements:

Financing lease commitment — Group as the lessor

The Group has entered into commercial property leases. The Group has determined, based on an evaluation of the terms and conditions of the arrangements, that it retains all the significant risks and rewards of ownership of these properties and accounts for the contracts as financing leases.

(2) Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

A. Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the balance sheet cannot be derived from active markets, they are determined using valuation techniques including the income approach (for example the discounted cash flows model) or market approach. Changes in assumptions about these factors could affect the reported fair value of the financial instruments. Please refer to Note 12 for more details.

B. Pension benefits

The cost of post-employment benefit and the present value of the pension obligation under defined benefit pension plans are determined using actuarial valuations. An actuarial valuation involves making various assumptions. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases.

C. Revenue recognition — sales returns and allowance

The Group estimates sales returns and allowance based on historical experience and other known factors at the time of sale, which reduces the operating revenue. The aforementioned sales returns and allowance is estimated based on the assumption that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur.

D. Income tax

Uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate future adjustments to tax income and expense already recorded. The Group establishes provisions, based on reasonable estimates, for possible consequences of audits by the tax authorities of the respective counties in which it operates. The amount of such provisions is based on various factors, such as experience of previous tax audits and differing interpretations of tax regulations by the taxable entity and the responsible tax authority. Such differences of interpretation may arise on a wide variety of issues depending on the conditions prevailing in the respective Group's domicile.

Deferred tax assets are recognized for all carry forward of unused tax losses and unused tax credits and deductible temporary differences to the extent that it is probable that taxable profit will be available or there are sufficient taxable temporary differences against which the unused tax losses, unused tax credits or deductible temporary differences can be utilized. The amount of deferred tax assets determined to be recognized is based upon the likely timing and the level of future taxable profits and taxable temporary differences together with future tax planning strategies.

E. Accounts receivables–estimation of impairment loss

The Group estimates the impairment loss of accounts receivables at an amount equal to lifetime expected credit losses. The credit loss is the present value of the difference between the contractual cash flows that are due under the contract (carrying amount) and the cash flows that expects to receive (evaluate forward looking information). However, as the impact from the discounting of short-term receivables is not material, the credit loss is measured by the undiscounted cash flows. Where the actual future cash flows are lower than expected, a material impairment loss may arise. Please refer to Note 6 for more details.

F. Inventories

Estimates of net realisable value of inventories take into consideration that inventories may be damaged, become wholly or partially obsolete, or their selling prices have declined. The estimates are based on the most reliable evidence available at the time the estimates are made. Please refer to Note 6 for more details.

6. CONTENTS OF SIGNIFICANT ACCOUNTS

(1) Cash and cash equivalents

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Cash on hand and petty cash	$5,189	$5,135	$5,218
Checking accounts	2,226,322	125,618	531,922
Demand deposits	14,464,639	12,315,896	17,409,082
Time deposits	1,031,264	18,417,115	6,462,069
Commercial paper	3,871,410	5,561,602	4,255,724
Repurchase bonds	1,725,192	1,328,292	3,050,168
Total	$23,324,016	$37,753,658	$31,714,183

The above cash and cash equivalents were not pledged as collateral or restricted for uses.

(2) Financial assets at fair value through profit or loss — current

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Mandatorily measured at fair value through profit or loss:			
Funds	$4,142,698	$4,016,864	$4,027,243

The profit (loss) arising from financial assets at fair value through profit or loss were NT$23,834 thousand and NT$31,231 thousand for the period from July 1 to September 30, 2019 and 2018, respectively.

The profit (loss) arising from financial assets at fair value through profit or loss were NT$125,834 thousand and NT$169,906 thousand for the nine months ended September 30, 2019 and 2018, respectively.

Financial assets at fair value through profit or loss were not pledged.

(3) Financial assets at fair value through other comprehensive income — current and non-current

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Equity instruments investments measured at fair value through other comprehensive income:			
Listed companies stocks	$57,068,640	$51,304,527	$57,053,554
Unlisted companies stocks	19,569,445	22,051,740	21,600,187
Total	$76,638,085	$73,356,267	$78,653,741
Current	$57,068,640	$51,304,527	$57,053,554
Non-current	19,569,445	22,051,740	21,600,187
Total	$76,638,085	$73,356,267	$78,653,741

The Group classified part of its financial assets as financial assets at fair value through other comprehensive income. Please refer to Note 8 for more details on financial assets at fair value through other comprehensive income under pledge.

The Group's dividend income related to equity instrument investments measured at fair value through other comprehensive income for the periods from July 1 to September 30, 2019 and 2018, and for the nine-month periods ended September 30, 2019 and 2018 are as follow:

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
Related to investments held at the end of the reporting period	$4,152,181	$2,142,182	$4,464,038	$3,325,548

In consideration of the Group's investment strategy, the Group disposed and derecognized partial of equity instrument investments measured at fair value through other comprehensive income, details on derecognition of the investments for the nine-month periods ended September 30, 2019 and 2018 are as follow:

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
The fair value of the investments at the date of derecognition	$-	$-	$-	$21,752
The cumulative gain or loss on disposal	-	-	-	(1,653)

(4) Financial assets (liabilities) for hedging — current and non-current

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Financial assets for hedging			
Financial Derivatives			
Energy commodity swap contracts	$10,896	$13,353	$12,312
Current	$10,896	$13,353	$11,556
Non-current	-	-	756
Total	$10,896	$13,353	$12,312

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Financial liabilities for hedging			
Financial Derivatives			
Energy commodity swap contracts	$9,895	$95,472	$4,903
Current	$9,895	$95,472	$4,560
Non-current	-	-	343
Total	$9,895	$95,472	$4,903

Note: The Group applied hedge accounting according to IAS 39.

A. As of September 30, 2019, December 31, 2018 and September 30, 2018, there were 15, 48 and 33 energy commodity swap contracts outstanding. The Company used these contracts to hedge the fluctuations of international crude oil and petroleum product prices. The swap contracts entered into by the Company are highly correlated with the price movement of the hedged items and periodic reviews are conducted on the swap contracts undertaken. All energy commodity swap contracts currently held by the Company are held for purpose of hedging and hedge effective. Please refer to Note 12 for details of the company's financial risk management objectives and policies, hedging strategies and activities.

B. For hedging fluctuations of international crude oil and petroleum product prices, the outstanding energy commodity swap contracts were as follows:

		September 30, 2019		
			Book Value	
		Notional	Asset	Liability
Type of Transaction	Pricing Period	Quantity	NTD	NTD
Singapore gasoline / Dubai Crack Swap	Oct.1, 2019~ Dec.31, 2019	75 (1,000 bbls)	$8,506	$-
Singapore gasoline/ Brent Crack Swap	Oct.1, 2019~ Dec.31, 2019	150 (1,000 bbls)	-	9,251
Singapore jet fuel /diesel oil Crack Swap	Oct.1, 2019~ Dec.31, 2019	150 (1,000 bbls)	2,390	644
Total			10,896	9,895
Less: Financial assets (liabilities) for hedging — current			10,896	9,895
Financial assets (liabilities) for hedging — non-current			$-	$-

			December 31, 2018	
			Book Value	
		Notional	Asset	Liability
Type of Transaction	Pricing Period	Quantity	NTD	NTD
Singapore gasoline / Dubai Crack Swap	Jan.1, 2019~ Dec.31, 2019	300 (1,000 bbls)	$11,363	$200
Singapore gasoline/ Brent Crack Swap	Jan.1, 2019~ Dec.31, 2019	600 (1,000 bbls)	-	95,272
Singapore jet fuel /diesel oil Crack Swap	Jan.1, 2019~ Dec.31, 2019	300 (1,000 bbls)	1,990	-
Total			13,353	95,472
Less: Financial assets (liabilities) for hedging — current			13,353	95,472
Financial assets (liabilities) for hedging — non-current			$-	$-

			September 30, 2018	
			Book Value	
		Notional	Asset	Liability
Type of Transaction	Pricing Period	Quantity	NTD	NTD
Singapore diesel oil / Dubai Crack Swap	Oct.1, 2018~ Dec.31, 2018	75 (1,000 bbls)	$-	$3,742
Singapore gasoline/ Brent Crack Swap	Oct.1, 2018~ Dec.31, 2019	750 (1,000 bbls)	12,312	1,161
Total			12,312	4,903
Less: Financial assets (liabilities) for hedging – current			11,556	4,560
Financial assets (liabilities) for hedging – non-current			$756	$343

(5) Notes and accounts receivable

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
A. Notes receivable	$6,473	$1,775	$7,939
Less: Loss allowance	-	-	-
Notes receivable, net	$6,473	$1,775	$7,939
B. Notes receivable – related parties	$1,792,974	$1,722,460	$1,960,987
Less: Loss allowance	-	-	-
Notes receivable – related parties, net	$1,792,974	$1,722,460	$1,960,987
C. Accounts receivable	$28,116,204	$24,280,011	$32,282,882
Less: Loss allowance	(507,589)	(604,912)	(726,029)
Accounts receivable, net	$27,608,615	$23,675,099	$31,556,853
D. Accounts receivable – related parties	$19,316,768	$28,415,749	$32,473,641
Less: Loss allowance	-	-	-
Accounts receivable – related parties, net	$19,316,768	$28,415,749	$32,473,641

Notes receivable and accounts receivable were from operations and were not held as collateral by any financial institution.

Accounts receivable are generally on 30~60 day terms. As of September 30, 2019, December 31, 2018 and September 30, 2018, the book value were NT$49,232,419 thousand and NT$54,419,995 thousand and NT$66,725,449 thousand, respectively. Please refer to Note 6.18 for more details on loss allowance of trade receivables for the periods from July 1 to September 30, 2019 and 2018, and for the nine-month periods ended September 30, 2019 and 2018. Please refer to Note 12 for more details on credit risk management.

(6) Lease receivables

As of September 30, 2019, December 31, 2018 and September 30, 2018, the Group's non-cancellable capital leases of vessels were as follows:

	As of					
	September 30, 2019 (Note)		December 31, 2018		September 30, 2018	
	Lease payments receivable gross	Lease payments receivable	Lease payments receivable gross	Lease payments receivable	Lease payments receivable gross	Lease payments receivable
Not later than one year			$426,267	$276,137	$423,742	$271,622
Later than one year and not later than five years			1,706,235	1,228,586	1,696,130	1,208,499
Later than five years			2,319,818	2,203,100	2,412,887	2,273,140
Total minimum lease payments			4,452,320	3,707,823	4,532,759	3,753,261
Less: Unearned finance income on finance lease			(744,497)	-	(779,498)	-
Present value of minimum lease payments			$3,707,823	$3,707,823	$3,753,261	$3,753,261

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(7) Inventories

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Raw materials	$21,818,977	$23,226,125	$34,429,774
Supplies	5,751,493	4,775,465	5,688,298
Work in process	10,645,633	10,317,733	16,196,998
Finished goods	20,441,986	22,060,891	21,759,491
Goods in transit	2,800,671	496,724	3,476,411
By-product	2,231	1,983	3,458
Consignment inventories	-	-	86
Total	$61,460,991	$60,878,921	$81,554,516

A. The cost of inventories (operating cost) recognized in expenses amounted to NT$148,399,243 thousand and NT$176,422,832 thousand for the periods from July 1 to September 30, 2019 and 2018, including the expense (benefit) from inventory diluted to its respective net realizable value of NT$242,643 thousand and NT$21,683 thousand for the periods from July 1 to September 30, 2019 and 2018, respectively.

B. The cost of inventories (operating cost) recognized in expenses amounted to NT$459,344,982 thousand and NT$494,526,361 thousand for the nine months ended September 30, 2019 and 2018, including the expense (benefit) from inventory diluted to its respective net realizable value of NT$(2,638,681) thousand and NT$6,404 thousand for the nine months ended September 30, 2019 and 2018, respectively.

C. Because of the rising prices of the crude oil and naphtha, the Group had recognized gain from price recovery of inventory in the amount of NT$2,638,681 thousand for the nine months ended September 30, 2019.

No inventories were pledged as of September 30, 2019, December 31, 2018 and September 30, 2018.

(8) Prepaid expense

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Prepaid expense – Maintenance	$5,147,629	$3,356,613	$3,706,411
Prepaid expense – Material	1,868,384	1,846,855	924,090
Prepaid expense – Rent	25,899	64,630	56,948
Prepaid expense – Others	1,962,310	2,579,882	2,778,566
Total	$9,004,222	$7,847,980	$7,466,015

(9) Investments accounted for using the equity method

The following table lists the investments accounted for using the equity method of the Group:

	As of					
	September 30, 2019		December 31, 2018		September 30, 2018	
Investee	NTD	Percentage of Ownership (%)	NTD	Percentage of Ownership (%)	NTD	Percentage of Ownership (%)
Investments in associates						
Mai-Liao Power Corporation	$11,578,895	24.94	$11,164,325	24.94	$11,191,438	24.94
Yi-Chi Construction Corporation	89,696	40.55	89,396	40.55	89,320	40.55
Mailiao Harbor Administration Corporation	2,340,801	44.96	2,375,960	44.96	2,291,439	44.96
Formosa Development Corporation	755,113	45.99	797,630	45.99	915,023	45.99
Formosa Marine Corporation	73,990	20.00	73,928	20.00	126,850	20.00
Simosa Oil Corporation	517,442	20.00	486,284	20.00	574,400	20.00
Formosa Environmental Technology Corporation	226,065	24.34	225,861	24.34	226,983	24.34
Formosa Plastics Synthetic Rubber	250,980	33.33	253,916	33.33	216,577	33.33
Formosa Plastics Synthetic Rubber (HK)	2,418,662	32.53	2,517,381	32.53	552,802	31.82
Whale Home International Corp.	226,184	69.49	218,170	66.92	216,862	66.92
TMS Corp.	45,039	49.00	47,307	49.00	45,487	49.00
Formolight Technologies, Inc.	55,921	39.43	63,272	39.43	62,055	39.43
Formosa Resources Corporation	6,857,892	25.00	5,370,047	25.00	5,380,093	25.00
Formosa Group (Cayman) Limited	669,433	25.00	631,060	25.00	681,604	25.00
Subtotal	26,106,113		24,314,537		22,570,933	
Investments in jointly controlled entities						
Caltex Taiwan Corporation	79,016	50.00	99,251	50.00	84,599	50.00
Neumin Oil and Gas, LLC.	20,365	50.00	20,162	50.00	20,059	50.00
Formosa Kraton Chemical Co., Ltd.	1,183,019	50.00	982,213	50.00	921,463	50.00
Idemitsu Formosa Specialty Chemicals Corp.	584,091	50.00	627,463	50.00	643,332	50.00
Formosa Falkor Engineering Corporation	7,601	50.00	9,920	50.00	10,754	50.00
NKFG	819,009	50.00	2,479	100.00	13,890	100.00
Subtotal	2,693,101		1,741,488		1,694,097	
Total	$28,799,214		$26,056,025		$24,265,030	

A. Investments in associates

(a) The associates of the Group were not significant. The summary financial information of related party was listed below:

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
Net income	$415,788	$286,080	$800,925	$508,710
Other comprehensive income (loss), net	(396,219)	(865,771)	(209,918)	(479,621)
Comprehensive income (loss) for the period	$19,569	$(579,691)	$591,007	$29,089

(b) The associates of the Group have no publicly quoted prices.

(c) During October of 2018, Formosa Plastics Synthetic Rubber (HK) increased capital by issuing new shares. The Group did not acquire the newly issued shares proportionately to its original ownership interest and thus, its ownership interest changes. Therefore, the Group wrote off capital surplus and investments accounted for using equity method by NT$36,153 thousand.

B. Investments in joint venture entities of the Group

(a) The joint venture of the group was not significant. The summary financial information of joint venture was listed below:

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
Net income	$88,380	$29,871	$184,731	$59,203
Other comprehensive income, net	-	-	-	-
Comprehensive income for the period	$88,380	$29,871	$184,731	$59,203

(b) During September of 2019, NKFG increased capital by issuing new shares. The Group did not acquire the newly issued shares proportionately to its original ownership interest and thus, its ownership interest changes. Therefore, the Group increase capital surplus and investments accounted for using equity method by NT$ 13,652 thousand.

C. The associates and joint ventures had no contingent liability, committed capital or provided guarantee on September 30, 2019, December 31, 2018 and September 30, 2018. The joint venture could not distribute profits before obtaining all partners' consent.

The above-mentioned investment under the equity method amounted to NT$28,799,214 thousand and NT$24,265,030 thousand as of September 30, 2019 and 2018, respectively. The related share of profit or loss of associates and joint ventures accounted for using the equity method amounted to NT$504,168 thousand and NT$315,951 thousand for the periods from July 1 to September 30, 2019 and 2018, respectively. The related share of profit or loss of associates and joint ventures accounted for using the equity method amounted to NT$985,656 thousand and NT$567,913 thousand for the nine months ended September 30, 2019 and 2018, respectively. The share of other comprehensive income of associates and joint ventures accounted for using the equity method amounted to NT$(396,219) thousand and NT$(865,771) thousand for the periods from July 1 to September 30, 2019 and 2018, respectively. The share of other comprehensive income of associates and joint ventures accounted for using the equity method amounted to NT$(209,918) thousand and NT$(479,621) thousand for the nine months ended September 30, 2019 and 2018, respectively. The financial statements of these investee were unreviewed.

D. Whale Home International Corp. was not included in the consolidated financial statements. Please refer to Note 4.(3).C。

E. To develop UVLED business in collaboration with other companies, the Group established NKFG in July 2018. The Group was the sole owner of NKFG initially. According to the investment agreement, NKFG has received capital injection on September 20, 2019. The Group and the other investor of NKFG both have 50% of ownership, therefore, NKFG is essentially a joint venture rather than a consolidated entity.

F. Long-term equity investments are not pledged as collaterals for bank loans as of September 30, 2019 and 2018.

(10) Property, plant and equipment

The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16. As of September 30, 2019, the property, plant and equipment for operating leases, representing 0% of total property, plant and equipment. Therefore, it is not intended to separately list Statement of changes in property, plant and equipment for operating leases.

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	Land and land improvements	Buildings	Machinery and equipment	Other equipment	Transportation equipment	Lease assets (Note)	Leasehold Improvement	Construction in progress	Total
Cost:									
2019.1.1	$26,646,165	$44,362,688	$353,894,819	$4,034,412	$948,689		$325,432	$11,007,482	$441,219,687
Additions	20,784	-	58,738	107,485	16,829		-	5,315,138	5,518,974
Transfer	-	198,350	7,431,365	127,857	33,418		-	(7,979,122)	(188,132)
Disposals	(23,161)	-	(66,983)	(45,061)	(67,715)		(9,842)	(2,036)	(214,798)
Exchange differences	35,661	-	-	200	-		-	12,451	48,312
2019.9.30	$26,679,449	$ 44,561,038	$361,317,939	$4,224,893	$931,221		$315,590	$8,353,913	$446,384,043
2018.1.1	$22,114,812	$43,177,508	$349,827,530	$3,890,223	$868,463	$2,909,571	$348,026	$8,625,393	$431,761,526
Additions	3,639,985	1,031,698	42,867	99,830	85,296	-	-	4,899,511	9,799,187
Transfer	-	153,900	2,847,869	1,502	32,785	-	2,010	(3,038,066)	-
Disposals	-	-	(85,173)	(55,455)	(62,163)	-	(14,916)	-	(217,707)
Exchange differences	62,542	-	-	34	-	68,528	-	21,853	152,957
2018.9.30	$25,817,339	$44,363,106	$352,633,093	$3,936,134	$924,381	$2,978,099	$335,120	$10,508,691	$441,495,963
Depreciation and impairment:									
2019.1.1	$-	$26,298,329	$305,042,793	$3,206,494	$635,019		$268,142	$-	$335,450,777
Depreciation	-	1,387,740	6,433,399	172,689	42,047		7,987	-	8,043,862
Disposals	-	-	(64,318)	(45,047)	(66,578)		(9,834)	-	(185,777)
Transfer	-	(32)	(224)	225	31		-	-	-
Exchange differences	-	-	-	15	-		-	-	15
2019.9.30	$-	$27,686,037	$311,411,650	$3,334,376	$610,519		$266,295	$-	$343,308,877
2018.1.1	$-	$24,469,525	$294,263,157	$3,071,651	$656,222	$1,163,829	$278,844	$-	$323,903,228
Depreciation	-	1,367,705	8,373,621	151,448	32,477	145,978	10,834	-	10,082,063
Disposals	-	-	(70,762)	(55,252)	(62,163)	-	(14,915)	-	(203,092)
Transfer	-	-	(238)	238	-	-	-	-	-
Exchange differences	-	-	-	14	-	30,338	-	-	30,352
2018.9.30	$-	$25,837,230	$302,565,778	$3,168,099	$626,536	$1,340,145	$274,763	$-	$333,812,551
Net carrying amount as of:									
2019.9.30	$26,679,449	$16,875,001	$49,906,289	$890,517	$320,702		$49,295	$8,353,913	$103,075,166
2018.12.31	$26,646,165	$18,064,359	$48,852,026	$827,918	$313,670	$1,597,781	$57,290	$11,007,482	$107,366,691
2018.9.30	$25,817,339	$18,525,876	$50,067,315	$768,035	$297,845	$1,637,954	$60,357	$10,508,691	$107,683,412

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

Capitalized borrowing costs of property, plant and equipment are as follows:

Item	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
Construction in progress	$1,542	$1,536
Capitalisation rate of borrowing costs	2.22%~3.00%	1.59%~2.65%

A. Please refer to Note 8 for details of the property, plant and equipment pledged as collaterals.

B. Interest expenses before capitalization were NT$458,952 thousand and NT$538,920 thousand for nine months ended September 30, 2019 and 2018, respectively.

(11) Investment property and other non-current assets

A. Investment property:

	2019.1.1	Additions	Disposals	2019.9.30
Land:				
Cost	$946,818	$-	$-	$946,818

	2019.1.1	Impairment	Reversal of impairment loss	2019.9.30
Land:				
Accumulated impairment	$572,737	$7,837	$-	$580,574

	2019.1.1	2019.9.30
Land:		
Net carrying amount as of	$374,081	$366,244

	2018.1.1	Additions	Disposals	2018.9.30
Land:				
Cost	$1,051,556	$-	$(104,738)	$946,818

	2018.1.1	Impairment	Disposals	2018.9.30
Land:				
Accumulated impairment	$588,008	$42,046	$(57,317)	$572,737

	2018.1.1	2018.9.30
Land:		
Net carrying amount as of	$463,548	$374,081

(a) The Group's investment property was not pledged as collaterals.

(b) The Group measures its investment property not by the fair value, however it discloses its information by the fair value, and it is belong to level 3. The fair value of the investment property held by the Group amounted to NT$366,244 thousand, NT$374,081 thousand and NT$374,081 thousand as of September 30, 2019, December 31, 2018 and September 30, 2018, respectively. The fair value of investment property was valued by an independent external appraisal expert - Cushman & Wakefield Appraisers Firm and Euro-Asia Real Estate Appraisers Firm. The fair value was determined based on the market evidence, and the evaluation method was the comparison method, which input is estimated by the price of square meters.

B. Other non-current assets:

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Refundable deposits	$533,549	$714,438	$1,175,681
Prepaid expense – land and equipment	3,947,716	3,887,919	3,889,626
Advance	101,684	97,545	80,381
Others	3,683,762	3,343,344	2,802,263
Total	$8,266,711	$8,043,246	$7,947,951

As of September 30, 2019, December 31, 2018 and September 30, 2018, the above land was temporarily registered under a third party's name, all at cost amounting to NT$9,823 thousand. A lien has been created on the land through the land administration authority of the government, and the registered amounts of the lien were all NT$90,360 thousand in order to protect the interest of the Company. The land was accounted for as the other non-current asset.

(12) Short-term loans and short-term notes and bills payable

		As of		
		September 30, 2019	December 31, 2018	September 30, 2018
	Interest Rate	NTD	NTD	NTD
Purchase loans	0.850%~1.200%	$918,485	$552,502	$-
Others	1.07%	239,064	207,369	207,451
Total		$1,157,549	$759,871	$207,451

A. The Group's unused short-term lines of credits amounted to NT$18,327,555 thousand, NT$2,947,498 thousand and NT$3,666,120 thousand as of September 30, 2019, December 31, 2018 and September 30, 2018, respectively.

B. Please refer to Note 8 for more details on Stock of Nan Ya Plastics Corporation pledged as security for purchase loans.

(13) Bonds payable

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Domestic unsecured unconvertible bonds	$17,900,000	$14,450,000	$14,450,000
Less: current portion	(3,200,000)	(7,650,000)	(7,650,000)
Long-term bonds payable	$14,700,000	$6,800,000	$6,800,000

As of September 30, 2018, the terms of the domestic bonds were as follows:

Domestic unsecured unconvertible bonds

Item	Unsecured Bonds No.33	Unsecured Bonds No.34	Unsecured Bonds No.35		Unsecured Bonds No.36		
Type of bonds	Bond B	Bond B	Bond B	Bond C	Bond A	Bond B	Bond C
Issue date	2013.3.12	2013.06.26	2014.9.12	2014.9.12	2019.7.24	2019.7.24	2019.7.24
Principal amount	2,000,000	4,400,000	2,200,000	1,400,000	4,500,000	4,500,000	2,100,000
Ending balance	1,000,000	2,200,000	2,200,000	1,400,000	4,500,000	4,500,000	2,100,000
Face value	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Issue price	Par value	Par value	Par value	Par value	Par value	Par value	Par value
Maturity	7 years	7 years	10 years	12 years	5 years	7 years	10 years
Coupon rate	Fixed rate 1.37%	Fixed rate 1.41%	Fixed rate 1.90%	Fixed rate 1.99%	Fixed rate 0.72%	Fixed rate 0.78%	Fixed rate 0.87%
Interest payment	Annually	Annually	Annually	Annually	Annually	Annually	Annually
Repayment	Repay 50% of the principal at the end of the 6th and 7th year	Repay 50% of the principal at the end of the 6th and 7th year	Repay 50% of the principal at the end of the 9th and 10th year	Repay 50% of the principal at the end of the 11th and 12th year	Repay 50% of the principal at the end of the 4th and 5th year	Repay 50% of the principal at the end of the 6th and 7th year	Repay 50% of the principal at the end of the 9th and 10th year
Conversion exchange or stock warrants	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Securities and Futures Bureau approved document number	Financial Supervisory Commission approved document No. 1010059946, January 7, 2013	Financial Supervisory Commission approved document No. 1020011470, April 11, 2013	Financial Supervisory Commission approved document No. 1030029158, July 31, 2014	Financial Supervisory Commission approved document No. 1030029158, July 31, 2014	Taipei Exchange approved document No. 10800082232, July 22, 2019	Taipei Exchange approved document No. 10800082232, July 22, 2019	Taipei Exchange approved document No. 10800082232, July 22, 2019

(14) Long-term loans

A. Long-term loans :

			As of					
			September 30, 2019		December 31, 2018		September 30, 2018	
Banks	Repayment Method	Types	NTD	Interest Rate	NTD	Interest Rate	NTD	Interest Rate
Bank of Taiwan and the other 20 banks	The period of the loan is from December 31, 2013 to December 31, 2020. Interest is payable monthly. After receive the loan three years later, the principal should be repaid semi-annually. All long-term loans were repaid in 2018.	Land mortgage loan	$-	-	$-	-	$4,333,333	1.632%
Total			-		-		4,333,333	
Less: Current portion reclassified to current liability			-		-		(4,333,333)	
Long-term loans – due after one year			$-		$-		$-	

B. Refer to Note 8 for collateral for long-term loans.

(15) Post-employment benefits

A. Defined contribution plan

Expenses under the defined contribution plan were NT$68,740 thousand and NT$64,306 thousand for the period from July 1 to September 30, 2019 and 2018, respectively. Expenses under the defined contribution plan were NT$201,267 thousand and NT$190,718 thousand for the nine months ended September 30, 2019 and 2018, respectively.

B. Defined benefits plan

Expenses under the defined benefits plan were NT$25,544 thousand and NT$25,648 thousand for the period from July 1 to September 30, 2019 and 2018, respectively. Expenses under the defined benefits plan were NT$78,525 thousand and NT$76,947 thousand for the nine months ended September 30, 2019 and 2018, respectively.

(16) Equities

A. Common stock

The Company's authorized and issued capital all amounted to NT$95,259,597 thousand and consisted of 9,525,960 thousand shares at $10 par value each as of September 30, 2019, December 31, 2018 and September 30, 2018, respectively. Each share has one vote and the right to receive dividends.

B. Capital surplus

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Additional paid-in capital-premium in excess of the par value of shares issued	$24,864,000	$24,864,000	$24,864,000
Additional paid-in capital-bond conversion	6,379,284	6,379,284	6,379,284
Joint venture and associates change in equity under equity method	153,141	139,488	175,641
Subsidiary change in equity	2,994	2,994	2,994
Others	529	231	231
Total	$31,399,948	$31,385,997	$31,422,150

According to the Company Act, the capital reserve shall not be used except for making good the deficit of the company. When a company incurs no loss, it may distribute the capital reserves related to the income derived from the issuance of new shares at a premium or income from endowments received by the company. The distribution could be made in cash or in the form of dividend shares to its shareholders in proportion to the number of shares being held by each of them. Also, the capital reserve arisen from equity investments cannot be used for any purpose.

C. Retained earnings and dividend policies

Pursuant to the Company's Articles of Incorporation, current year's earnings, if any, shall be appropriated in the following order:

(a) Payments of all taxes, if any
(b) To offset prior year's deficit, if any
(c) To set aside 10% of the remaining amount as legal reserve after deducting items (a) and
(d) To set aside special reserve, if required
(e) To set aside an amount for dividends
(f) The remaining amount (the "appropriable after-dividend earnings"), if any, combination with prior year's accumulated unappropriated earnings is appropriated based on the appropriation of shareholders' bonuses plan drafted by the board of directors under the ordinary shareholders' meeting.

The above special reserve includes:

(a) Reserve recorded for special purposes
(b) Investment income recognized under equity method
(c) Net assessment income arising from financial transactions, however, when the cumulative decreases, the special reserve should be reduced accordingly to the extent that has been set aside;
(d) The special reserve required by other laws and regulations.

The Company's business is in its maturity stage. As a result, the dividends can be distributed in a combination of cash and capital increase out of earnings and paid-in capital. The total amount distributed should be at least 50% of the earnings available after setting aside legal reserve and special reserve, provided that cash dividends take precedence and capital increase out of earnings and paid-in capital do not exceed 50% of the total distribution.

According to the Company Act, the Company needs to set aside amount to legal reserve unless where such legal reserve amounts to the total authorized capital. The legal reserve can be used to make good the deficit of the Company. When the Company incurs no loss, it may distribute the portion of legal serve which exceeds 25% of the paid-in capital by issuing new shares or by cash in proportion to the number of shares being held by each of the shareholders.

After the adoption of International Financial Reporting Standards, in accordance with Order No. 1010012865 issued by FSC on April 6, 2012, at the first-time adoption of IFRSs, an entity shall appropriate a corresponding amount to special reserve same as the IFRS adjustment, in which case an entity elects to use exemption application specified in IFRS 1 and resets unrealized revaluation increment and cumulative translation differences under shareholders' equity to zero, and its retained earnings is being increased accordingly. However, if the retained earnings' arising from IFRS adjustment at the first-time adoption is insufficient, special reserve shall be appropriated by the amount that retained earnings increase from the IFRS adjustment. The provision of the letter has no impact on the Company.

For the years ended December 31, 2018 and 2017, the details of earnings distribution and dividends per share resolved by the shareholder's meeting on May 31, 2019 and June 14, 2018, were as follows:

	Appropriation of earnings		Dividend per share	
	2018	2017	2018	2017
Legal reserve	$6,009,022	$8,017,015		
Common stock-cash dividend	45,724,607	60,013,546	$4.80	$6.30
Total	$51,733,629	$68,030,561		

Please refer to Note 6.20 for details of bonus to employee.

D. Non-controlling interests

	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD
Beginning balance	$2,917,972	$2,859,884
Effects of retrospective application and retrospective restatement	-	(300)
Beginning balance after adjustment	2,917,972	2,859,584
Cash dividends from Subsidiaries	(2,143)	(4,810)
Net income (loss) attributed to the non-controlling interest	(43,290)	(15,329)
Other comprehensive income attributed to the non-controlling interest:		
Remeasurements of defined benefit plans	-	106
Share of other comprehensive income of associates and joint ventures accounted for using equity method	-	75
Exchange differences resulting from translating the financial statements of a foreign operation	34,351	66,331
Acquisition of new shares in a subsidiary in proportionate to ownership interest	995,751	-
Ending balance	$3,902,641	$2,905,957

(17) Operating revenues

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Customer contract revenue				
Sales revenue				
Gasoline	$22,644,862	$30,373,747	$70,203,856	$81,107,773
Petrochemical products (ethylene and propylene, etc.)	39,122,082	57,603,591	131,232,286	167,375,940
Diesel oil	45,390,661	51,483,241	132,623,760	140,612,029
Jet fuel	11,268,171	12,246,118	32,091,658	35,593,479
Electricity	7,022,826	7,266,621	17,532,138	19,321,774
Steam	3,647,406	3,671,240	11,007,980	10,967,762
Others	30,689,674	38,235,909	99,836,077	119,731,434
Subtotal	159,785,682	200,880,467	494,527,755	574,710,191
Service revenues	226,306	238,599	724,077	813,365
Total	$160,011,988	$201,119,066	$495,251,832	$575,523,556

Analysis of revenue from contracts with customers during the year is as follows:

(1) Disaggregation of revenue

For the period from July 1 to September 30, 2019

	Petrochemical Division	Utility Division	Others	Total
Sales				
Gasoline	$19,488,459	$-	$3,156,403	$22,644,862
Petrochemical products (ethylene and propylene, etc.)	39,122,082	-	-	39,122,082
Diesel oil	44,278,671	-	1,111,990	45,390,661
Jet fuel	11,268,171	-	-	11,268,171
Electricity	-	7,022,826	-	7,022,826
Steam	-	3,647,406	-	3,647,406
Others	30,290,813	292,158	106,703	30,689,674
Subtotal	144,448,196	10,962,390	4,375,096	159,785,682
Service revenues	-	-	226,306	226,306
Total	$144,448,196	$10,962,390	$4,601,402	$160,011,988
Revenue recognition point:				
At a point in time	$144,448,196	$10,962,390	$4,601,402	$160,011,988

For the period from July 1 to September 30, 2018

	Petrochemical Division	Utility Division	Others	Total
Sales				
Gasoline	$27,092,024	$-	$3,281,723	$30,373,747
Petrochemical products (ethylene and propylene, etc.)	57,603,591	-	-	57,603,591
Diesel oil	50,334,401	-	1,148,840	51,483,241
Jet fuel	12,246,118	-	-	12,246,118
Electricity	-	7,266,621	-	7,266,621
Steam	-	3,671,240	-	3,671,240
Others	37,868,726	310,468	56,715	38,235,909
Subtotal	185,144,860	11,248,329	4,487,278	200,880,467
Service revenues	-	-	238,599	238,599
Total	$185,144,860	$11,248,329	$4,725,877	$201,119,066
Revenue recognition point:				
At a point in time	$185,144,860	$11,248,329	$4,725,877	$201,119,066

For the nine months ended September 30, 2019

	Petrochemical Division	Utility Division	Others	Total
Sales				
Gasoline	$61,029,697	$-	$9,174,159	$70,203,856
Petrochemical products (ethylene and propylene, etc.)	131,232,286	-	-	131,232,286
Diesel oil	129,364,956	-	3,258,804	132,623,760
Jet fuel	32,091,658	-	-	32,091,658
Electricity	-	17,532,138	-	17,532,138
Steam	-	11,007,980	-	11,007,980
Others	98,640,120	905,160	290,797	99,836,077
Subtotal	452,358,717	29,445,278	12,723,760	494,527,755
Service revenues	-	-	724,077	724,077
Total	$452,358,717	$29,445,278	$13,447,837	$495,251,832
Revenue recognition point:				
At a point in time	$452,358,717	$29,445,278	$13,447,837	$495,251,832

For the nine months ended September 30, 2018

	Petrochemical Division	Utility Division	Others	Total
Sales				
Gasoline	$71,656,627	$-	$9,451,146	$81,107,773
Petrochemical products (ethylene and propylene, etc.)	167,375,940	-	-	167,375,940
Diesel oil	137,303,005	-	3,309,024	140,612,029
Jet fuel	35,593,479	-	-	35,593,479
Electricity	-	19,321,774	-	19,321,774
Steam	-	10,967,762	-	10,967,762
Others	118,624,888	929,253	177,293	119,731,434
Subtotal	530,553,939	31,218,789	12,937,463	574,710,191
Service revenues	48,676	-	764,689	813,365
Total	$530,602,615	$31,218,789	$13,702,152	$575,523,556
Revenue recognition point:				
At a point in time	$530,602,615	$31,218,789	$13,702,152	$575,523,556

(2) Contract balances

Contract liabilities — current

	As of			
	September 30, 2019	December 31, 2018	September 30, 2018	January 1, 2018
Sales of goods	$223,537	$274,843	$393,738	$98,263

The significant changes in the Group's balances of contract liabilities for the nine-month periods ended September 30, 2019 and 2018 are as follows:

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Revenue recognized during the year that was included in the balance at the beginning of the year	$-	$-	$274,843	$295,475

(3) Transaction price allocated to unsatisfied performance obligations

The Group's contracts are all shorter than one year, there is not to provide information on outstanding performance obligations.

(4) Assets recognized from costs to fulfil a contract

None.

(18) Expected credit losses/ (gains)

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Operating expenses - Expected credit losses/(gains)				
Accounts receivable	$(18,546)	$36,589	$(51,622)	$96,204

The Group does not expect that any significant losses will incur because the counterparty fail to fulfill the agreement. Please refer to Note 12 for information of credit risks.

The Group measures the loss allowance of receivables (including notes and accounts receivable) at an amount equal to lifetime expected credit losses. The explanation of the loss allowance measured as of September 30, 2019 and 2018 are as follows:

A. By expected credit losses approximately 1% (including historical and forward-looking information, which refers to chemical material price index) as of September 30, 2019 and 2018.

B. The Group needs to consider the grouping of receivables by past experiences and its loss allowance is measured by using a provision matrix, details as follows:

As at September 30, 2019		Past due				
	Neither past due	Within 30 days	31-60 days	61-90 days	Over 90 days	Total
Gross carrying amount	$44,450,336	$4,684,547	$97,457	$-	$79	$49,232,419
Loss ratio	1%	1%	1%	-	100%	
Lifetime expected credit losses	459,690	46,845	975	-	79	507,589
Total	$43,990,646	$4,637,702	$96,482	$-	$-	$48,724,830

As at December 31, 2018		Past due				
	Neither past due	Within 30 days	31-60 days	61-90 days	Over 90 days	Total
Gross carrying amount	$52,100,908	$2,274,583	$-	$-	$44,504	$54,419,995
Loss ratio	1%	1%	-	-	100%	
Lifetime expected credit losses	537,662	22,746	-	-	44,504	604,912
Total	$51,563,246	$2,251,837	$-	$-	$-	$53,815,083

As at September 30, 2018		Past due				
	Neither past due	Within 30 days	31-60 days	61-90 days	Over 90 days	Total
Gross carrying amount	$64,712,036	$1,968,814	$95	$-	$44,504	$66,725,449
Loss ratio	1%	1%	1%	-	100%	
Lifetime expected credit losses	661,836	19,688	1	-	44,504	726,029
Total	$64,050,200	$1,949,126	$94	$-	$-	$65,999,420

As of September 30, 2019 and 2018, the movement in the provision for impairment of notes receivable and accounts receivable are as follows:

	Receivables
Balance as at January 1, 2019	$604,912
Addition/(reversal) for the current period	(51,622)
Write off	(45,701)
Balance as at September 30, 2019	$507,589
Balance as at January 1, 2018 (in accordance with IAS 39)	$629,825
Transition adjustment to retained earnings as at Jan 1, 2018	-
Beginning balance (in accordance with IFRS 9)	629,825
Addition/(reversal) for the current period	96,204
Balance as at September 30, 2018	$726,029

(19) Lease

(1) Group as lessee (applicable to the disclosure requirement in IFRS 16)

The Group has entered into commercial leases on certain motor vehicles and items of machinery. These leases have an average life of more than one to twenty years with no renewal option included in the contracts. There are no restrictions placed upon the Group by entering into these leases.

The effect that leases have on the financial position, financial performance and cash flows of the Group are as follow:

A. Amounts recognized in the balance sheet

(a) Right-of-use asset

The carrying amount of right-of-use asset

	As of		
	September 30, 2019	December 31, 2018(Note)	September 30, 2018(Note)
	NTD	NTD	NTD
Land	$42,622		
Buildings	106,049		
Machinery and equipment	3,333		
Transportation equipment	3,528,687		
Gas station	3,907,172		
Total	$7,587,863		

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

During the nine-month periods ended September 30, 2019, the additions to right-of-use assets of the Group amounting to NT$470,556 thousand.

(b) Lease liability

	As of		
	September 30, 2019	December 31, 2018(Note)	September 30, 2018(Note)
	NTD	NTD	NTD
Lease liability	$7,769,943		
Current	$1,089,226		
Non-current	6,680,717		

Please refer to Note 6 (21)(c) for the interest on lease liability recognized during the period from July 1 to September 30, 2019 and the nine-month periods ended September 30, 2019, and besides, refer to Note 12 (5) for the maturity analysis for lease liabilities at September 30, 2019.

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

B. Amounts recognized in the statement of profit or loss

Depreciation charge for right-of-use assets

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018(Note)	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018(Note)
Land	$3,401		$10,192	
Buildings	5,859		17,749	
Machinery and equipment	667		2,000	
Transportation equipment	117,758		351,574	
Gas station	155,260		454,937	
Total	$282,945		$836,452	

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

C. Income and costs relating to leasing activities

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018 (Note)	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018(Note)
The expense relating to short-term leases	$60,609		$191,335	

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

The Group has no committed short-term lease combination for the nine months ended September 30, 2019.

D. Cash outflow relating to leasing activities

During the nine-month periods ended September 30, 2019, the Group's total cash outflow for leases amounting to NT$873,076 thousand and short-term leases NT$202,845 thousand.

E. Other information relating to leasing activities

None.

(2) Operating lease commitments - Group as lessee (applicable to the disclosure requirement in IAS 17)

The Group has entered into commercial leases on certain land and Buildings. These leases have an average life of one to twenty years with no renewal option included in the contracts. There are no restrictions placed upon the Group by entering into these leases.

Future minimum rentals payable under non-cancellable operating leases as at September 30, 2019, December 31, 2018 and September 30, 2018 are as follows:

	As of		
	September 30, 2019 (Note)	December 31, 2018	September 30, 2018
Not later than one year		$1,163,742	$565,363
Later than one year and not later than five years		3,776,802	4,763,434
Later than five years		2,292,993	2,033,510
Total		$7,233,537	$7,362,307

Operating lease expenses recognized are as follows:

	For the period from July 1 to September 30, 2019 (Note)	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019(Note)	For the nine months ended September 30, 2018
Minimum lease payments		$300,659		$909,510

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(3) Group as lessor (applicable to the disclosure requirement in IFRS 16)

The Group has entered into leases on certain equipment of vessel equipment and automated storage and retrieval systems. These leases have terms of between ten years and fifteen years, respectively. These leases are classified as finance leases as they do transfer substantially all the risks and rewards incidental to ownership of underlying assets.

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018(Note)	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018(Note)
Lease income for finance leases				
Finance income on the net investment in the lease	$39,257		$115,796	

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

For finance leases entered by the Group, the undiscounted lease payments to be received and a total of the amounts for the remaining years as at September 30, 2019 are as follow:

	As of		
	September 30, 2019	December 31, 2018(Note)	September 30, 2018(Note)
Not later than one year	$446,784		
Later than one year but not later than two years	445,603		
Later than two years but not later than three years	445,603		
Later than three years but not later than four years	445,603		
Later than four years but not later than five years	446,783		
Later than five years	2,166,676		
Total undiscounted lease payments	4,397,052		
Less: Unearned finance income to finance leases	(673,919)		
Net investment in the lease (Finance lease receivables)	$3,723,133		
Current	$299,120		
Non-current	3,424,013		

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(4) Operating lease commitments - Group as lessor (applicable to the disclosure requirement in IAS 17)

According to the non-cancellable ship finance lease contract, please refer to Note 6(6).

(20) Summary statement of employee benefits, depreciation and amortization expenses by function is as follows:

Function / Description	For the period from July 1 to September 30, 2019			For the period from July 1 to September 30, 2018		
	Operating Cost (NTD)	Operating Expense (NTD)	Total (NTD)	Operating Cost (NTD)	Operating Expense (NTD)	Total (NTD)
Employee benefits expense	$1,277,819	$882,800	$2,160,619	$1,374,289	$910,627	$2,284,916
Salaries and wages	1,105,358	774,548	1,879,906	1,204,352	807,704	2,012,056
Labor and health insurance	81,387	55,189	136,576	80,042	52,253	132,295
Pension	59,171	35,113	94,284	56,937	33,017	89,954
Other employee benefits expense	31,903	17,950	49,853	32,958	17,653	50,611
Depreciation and depletion	2,681,684	378,962	3,060,646	3,000,917	279,148	3,280,065
Amortization	405,010	31,477	436,487	340,264	31,477	371,741

Function / Description	For the nine months ended September 30, 2019			For the nine months ended September 30, 2018		
	Operating Cost (NTD)	Operating Expense (NTD)	Total (NTD)	Operating Cost (NTD)	Operating Expense (NTD)	Total (NTD)
Employee benefits expense	$3,773,407	$2,613,087	$6,386,494	$3,891,627	$2,585,528	$6,477,155
Salaries and wages	3,258,881	2,294,792	5,553,673	3,386,372	2,283,203	5,669,575
Labor and health insurance	242,516	162,838	405,354	236,141	152,411	388,552
Pension	176,106	103,686	279,792	170,292	97,373	267,665
Other employee benefits expense	95,904	51,771	147,675	98,822	52,541	151,363
Depreciation and depletion	7,843,165	1,127,968	8,971,133	9,299,071	829,934	10,129,005
Amortization	1,128,199	94,430	1,222,629	1,499,846	94,430	1,594,276

The amortization recognized as non-operating income and expenses are NT$4,371 thousand and NT6,586 thousand for the nine months ended September 30, 2019 and 2018, respectively.

According to the Company's Articles of Incorporation, 0.02% to 0.1% of the profit of the period should be distributed as employee's compensation. However, if there is accumulated deficit, the deficit should be covered first. The Company may, by a resolution adopted by a majority vote at a meeting of Board of Directors attended by two-thirds of the total number of directors, have the profit distributable as employees' compensation in the form of shares or in cash; and in addition thereto a report of such distribution is submitted to the shareholders' meeting. Information on the board of directors' resolution regarding the employee compensation can be obtained from the "Market Observation Post System" on the website of the TWSE.

The Company's employee compensation was NT$2,870 thousand, estimated as 0.02% of the Company's net profit and recognized as employee's compensation for the period from July 1 to September 30, 2019. The Company's employee compensation was NT$7,234 thousand, estimated as 0.02% of the Company's net profit and recognized as employee's compensation for the nine months ended September 30, 2019. The Company's employee compensation was NT$5,046 thousand, estimated as 0.02% of the Company's net profit and recognized as employee's compensation for the period from July 1 to September 30, 2018. The Company's employee compensation was NT$15,943 thousand, estimated as 0.02% of the Company's net profit and recognized as employee's compensation for the nine months ended September 30, 2018.

The company resolved to distribute NT$14,905 thousand of employee compensation in cash on the board of director's meeting on March 11, 2019, and announced the resolution on the shareholder's meeting on May 31, 2019. There is no difference between the employee bonus 2018 paid and the employee bonus recognized as expense on the financial report of 2018.

(21) Non-operating income and expenses

A. Other income

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Rental income	$277,897	$289,044	$852,808	$878,899
Interest income				
Bank interest income	33,405	63,985	219,543	244,445
Interest income － due from affiliates	57,620	70,204	168,710	284,977
Interest for finance leases	39,257	40,361	115,796	118,697
Other interest income	6,587	13,854	29,084	47,012
Subtotal	136,869	188,404	533,133	695,131
Others	186,524	204,231	646,675	656,861
Dividends income	4,152,181	2,142,182	4,464,038	3,325,548
Total	$4,753,471	$2,823,861	$6,496,654	$5,556,439

B. Other gains and losses

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Gains (losses) on disposal and abandon of property, plant and equipment	$7,305	$4,293	$38,535	$(4,865)
Gains (losses) on disposal of investment property	-	-	-	5,908
Foreign exchange (losses) gains, net	292,172	383,789	1,240,921	1,591,254
Impairment loss Investment property	-	-	(7,837)	(42,046)
Other gains (losses) — others	(26,055)	(33,377)	(133,880)	(144,457)
Gains (losses) on financial assets at fair value through profit or loss (Note)	23,834	31,231	125,834	169,906
Total	$297,256	$385,936	$1,263,573	$1,575,700

Note: Balance in current period arose from financial assets mandatorily measured at fair value through profit or loss.

C.Financial costs

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Interest on borrowings from bank	$4,536	$17,822	$5,809	$101,425
Interest on bonds payable	50,385	61,964	155,698	230,731
Interbank loans with interest	17,644	16,993	41,528	41,979
Interest for lease liabilities	31,128	(Note)	94,129	(Note)
Interest for finance leases	(Note)	10,174	(Note)	30,520
Other interest expenses	48,892	52,038	160,246	132,729
Total finance costs	$152,585	$158,991	$457,410	$537,384

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(22) Components of other comprehensive income

For the period from July 1 to September 30, 2019

	Arising during the period	Reclassification adjustments during the period	Other comprehensive income, before tax	Income tax relating to components of other comprehensive income	Other comprehensive income, net of tax
Items that will not be reclassified to profit or loss					
Unrealized gains (losses) from equity instruments investments in measured at fair value through other comprehensive income	$(2,086,023)	$-	$(2,086,023)	$-	$(2,086,023)
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	(436,165)	-	(436,165)	-	(436,165)
Items that may be reclassified subsequently to profit or loss:					
Exchange differences arising from translation of foreign operations	(23,071)	-	(23,071)	-	(23,071)
Gains (losses) on hedging instrument	27,600	(13,572)	14,028	2,805	11,223
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	39,946	-	39,946	-	39,946
Total	$(2,477,713)	$(13,572)	$(2,491,285)	$2,805	$(2,494,090)

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For the period from July 1 to September 30, 2018

	Arising during the period	Reclassification adjustments during the period	Other comprehensive income, before tax	Income tax relating to components of other comprehensive income	Other comprehensive income, net of tax
Items that will not be reclassified to profit or loss					
Unrealized gains (losses) from equity instruments investments in measured at fair value through other comprehensive income	$(12,229,554)	$-	$(12,229,554)	$-	$(12,229,554)
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	(869,767)	-	(869,767)	-	(869,767)
Items that may be reclassified subsequently to profit or loss:					
Exchange differences arising from translation of foreign operations	42,106	-	42,106	-	42,106
Gains (losses) on hedging instrument	28,455	(5,528)	22,927	4,586	18,341
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	3,996	-	3,996	-	3,996
Total	$(13,024,764)	$(5,528)	$(13,030,292)	$4,586	$(13,034,878)

For the nine months ended September 30, 2019

	Arising during the period	Reclassification adjustments during the period	Other comprehensive income, before tax	Income tax relating to components of other comprehensive income	Other comprehensive income, net of tax
Items that will not be reclassified to profit or loss					
Unrealized gains (losses) from equity instruments investments in measured at fair value through other comprehensive income	$3,116,746	$-	$3,116,746	$-	$3,116,746
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	(319,344)	-	(319,344)	-	(319,344)
Items that may be reclassified subsequently to profit or loss:					
Exchange differences arising from translation of foreign operations	254,808	-	254,808	-	254,808
Gains (losses) on hedging instrument	73,107	10,013	83,120	16,625	66,495
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	109,426	-	109,426	-	109,426
Total	$3,234,743	$10,013	$3,244,756	$16,625	$3,228,131

For the nine months ended September 30, 2018

	Arising during the period	Reclassification adjustments during the period	Other comprehensive income, before tax	Income tax relating to components of other comprehensive income	Other comprehensive income, net of tax
Items that will not be reclassified to profit or loss					
Remeasurement of defined benefit plan	$-	$-	$-	$(33,448)	$33,448
Unrealized gains (losses) from equity instruments investments in measured at fair value through other comprehensive income	(4,480,459)	-	(4,480,459)	-	(4,480,459)
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	(623,762)	-	(623,762)	-	(623,762)
Items that may be reclassified subsequently to profit or loss:					
Exchange differences arising from translation of foreign operations	612,369	-	612,369	-	612,369
Gains (losses) on hedging instrument	(17,539)	(15,347)	(32,886)	(5,368)	(27,518)
Share of other comprehensive income of associates and joint ventures accounted for using the equity method	144,141	-	144,141	-	144,141
Total	$(4,365,250)	$(15,347)	$(4,380,597)	$(38,816)	$(4,341,781)

(23) Income taxes

Based on the amendments to the Income Tax Act announced on February 7, 2018, the Company's applicable corporate income tax rate for the year ended December 31, 2018 has changed from 17% to 20%. The corporate income surtax on undistributed retained earnings has changed from 10% to 5%.

The major components of income tax expense (income) were as follows:

Income tax expense (income) recognized in profit or loss

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Current income tax expense (income):				
Current income tax charge	$1,843,390	$4,572,402	$5,547,129	$15,907,801
Adjustments in respect of current income tax of prior periods	-	-	12,108	397,825
Deferred tax expense (income):				
Deferred tax expense (income) relating to origination and reversal of temporary differences	133,078	(20,785)	995,955	(105,691)
Deferred tax expense (income) relating to changes in tax rate	-	-	-	(665,274)
Others	(52,560)	(13,858)	(28,250)	(9,103)
Total income tax expense (income)	$1,923,908	$4,537,759	$6,526,942	$15,525,558

Income tax relating to components of other comprehensive income

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Deferred tax expense (income) :				
Cash flow hedge in an effective hedge interest hedging instruments	$2,805	$4,586	$16,625	$(5,368)
Gains (losses) on remeasurements of defined benefit	-	-	-	(33,448)
Income tax relating to components of other comprehensive income	$2,805	$4,586	$16,625	$(38,816)

The assessment of income tax returns

As of September 30, 2019, the assessment of the income tax returns of the Company and its subsidiaries was as follows:

	The assessment of income tax returns
The Company	Assessed and approved up to 2016
Subsidiary- Formosa Oil (Asia Pacific) Corporation	Assessed and approved up to 2017
Subsidiary- Formosa Petrochemical Transportation Corporation	Assessed and approved up to 2017

(24) Earnings per share

Basic earnings per share amounts are calculated by dividing net profit attributable to ordinary equity holders of the parent entity by the weighted average number of ordinary shares outstanding during the year.

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Basic/Diluted earnings per share				
Profit attributable to ordinary equity holders of the Company (in thousands)	$12,443,538	$20,706,689	$29,694,929	$64,233,953
Weighted average number of ordinary shares outstanding for basic/diluted earnings per share (in thousands)	9,525,960	9,525,960	9,525,960	9,525,960
Basic/Diluted earnings per share	$1.31	$2.17	$3.12	$6.74

There have been no other transactions involving ordinary shares or potential ordinary shares between the reporting date and the date of completion of the financial statements.

(25) Subsidiaries that have material non-controlling interests

The Group does not have subsidiaries that have material non-controlling interests.

7. RELATED PARTY TRANSACTIONS

Information of the related parties that had transactions with the Group during the financial reporting period is as follows:

Name and nature of relationship of the related parties

Name of the related parties	Nature of relationship of the related parties
Formosa Plastics Corporation	Significant influence over the Company
Formosa Chemicals & Fibre Corporation	Significant influence over the Company
Nan Ya Plastics Corporation	Significant influence over the Company
Whale Home International Corp.	Associate
Mai-Liao Power Corporation	Associate
Mailiao Harbor Administration Corporation	Associate
Formosa Marine Corporation	Associate
Simosa Oil Corporation	Associate
Formosa Environmental Technology Corporation	Associate
TMS Corp.	Associate
Formosa Group (Cayman) Limited	Associate
Formosa Resources Corporation	Associate
Caltex Taiwan Corporation	Joint venture
NEUMIN OIL AND GAS, LLC.	Joint venture
Formosa Kraton Chemical Co., Ltd.	Joint venture
Idemitsu Formosa Specialty Chemicals Corporation	Joint venture
NKFG	Joint venture
Formosa FCFC Carpet Corporation	Other
Formosa Chemicals Industries (Ningbo) Co., Ltd.	Other
Formosa Biomedical Technology Corp.	Other
Formosa BP Chemicals Corporation	Other
Formosa Taffeta Co., Ltd	Other
Formosa Hatinh (Cayman) Limited	Other
Hong Jing Resource Co., Ltd	Other
Nan Ya Printed Circuit Board Corporation	Other
Nan Chung Petrochemical Corp.	Other
Formosa Heavy Industries Corporation	Other
Hwa Ya Power Corporation	Other
National Petroleum Co., Ltd.	Other
Formosa Plastics Maritime Corporation	Other
Nan Ya Photonics Incorporation	Other
Chang Gung Medical Foundation	Other
Simosa Shipping Co., Ltd	Other

Significant transactions with the related parties

(1) Sales

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Entity with joint control or significant influence over the Company				
Formosa Chemicals & Fibre Corporation	$22,135,445	$38,148,179	$77,259,331	$111,592,515
Formosa Plastics Corporation	19,617,689	27,830,887	68,146,216	82,379,460
Nan Ya Plastics Corporation	9,072,928	12,133,981	29,336,326	36,473,854
Subtotal	50,826,062	78,113,047	174,741,873	230,445,829
Associate	1,858,280	1,464,021	5,175,817	4,110,173
Joint venture	2,398,983	2,569,905	7,066,109	7,117,057
Others	10,062,698	12,545,917	31,391,171	32,860,468
Total	$65,146,023	$94,692,890	$218,374,970	$274,533,527

The terms and conditions of sales (including prices) to related parties are similar to those with non-related parties. The credit term is 30 days from the day the related party confirms the sale.

(2) Purchase

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Entity with joint control or significant influence over the Company	$4,567,025	$10,335,058	$19,229,805	$29,226,509
Joint venture	138	-	187	-
Others	119,856	178,894	512,835	529,845
Total	$4,687,019	$10,513,952	$19,742,827	$29,756,354

The Company and subsidiaries did not receive special discounts when purchasing from the related parties. Payment term is 30 days after receiving the goods.

(3) Notes receivable – related parties

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Others			
National Petroleum Co., Ltd.	$1,792,974	$1,722,460	$1,960,987
Total	1,792,974	1,722,460	1,960,987
Less: loss allowance	-	-	-
Net	$1,792,974	$1,722,460	$1,960,987

(4) Accounts receivable – related parties

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Entity with joint control or significant influence over the Company			
Formosa Chemicals & Fibre Corporation	$6,233,986	$11,687,951	$13,716,139
Formosa Plastics Corporation	5,248,690	8,653,783	9,746,657
Nan Ya Plastics Corporation	2,694,225	3,485,652	3,713,061
Subtotal	14,176,901	23,827,386	27,175,857
Associate	560,626	427,334	407,448
Joint venture	1,516,664	827,423	844,048
Others	3,062,577	3,333,606	4,046,288
Total	19,316,768	28,415,749	32,473,641
Less: loss allowance	-	-	-
Net	$19,316,768	$28,415,749	$32,473,641

(5) Accounts payable – related parties

	As of		
	September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Entity with joint control or significant influence over the Company			
Formosa Chemicals & Fibre Corporation	$617,481	$2,373,456	$3,096,621
Others	405,196	587,747	841,118
Subtotal	1,022,677	2,961,203	3,937,739
Associate	76,354	76,012	65,443
Joint venture	14,067	51,458	54,808
Others	8,005	53,877	61,733
Total	$1,121,103	$3,142,550	$4,119,723

(6) Transaction of property, plant and equipment

Commissioned construction

The Company commissioned the following related parties to construct items of property, plant and equipment:

	Items	For the period from July 1 to September 30, 2019 NTD	For the period from July 1 to September 30, 2018 NTD	For the nine months ended September 30, 2019 NTD	For the nine months ended September 30, 2018 NTD
Entity with joint control or significant influence over the Company	Maintenance	$21,235	$48,538	$162,704	$82,858
Entity with joint control or significant influence over the Company	Expansion of facilities	8,632	22,550	34,137	36,939
Others	Maintenance	69,158	58,778	246,735	192,582
Others	Expansion of facilities	287,318	76,831	795,980	360,425
Total		$386,343	$206,697	$1,239,556	$672,804

The Company followed the general procedures to commission Formosa Heavy Industries Corporation and Nan Ya Plastics Corporation to expand its facilities and the maintenance of them. The payment period is one month after the acceptance of the construction work.

(7) Financing

Other receivables - due from affiliates

	As of September 30, 2019 NTD	As of December 31, 2018 NTD	As of September 30, 2018 NTD
Associate	$503,900	$507,700	$1,509,900
Others			
Formosa Heavy Industries Corporation	4,680,000	4,990,000	7,270,000
Total	$5,183,900	$5,497,700	$8,779,900

The lending of funds condition to the associates was charged in accordance with the contract schedule after loan received. For the nine months ended September 30, 2019 and 2018, interest income from related parties were NT$46,669 thousand and NT$181,671 thousand, respectively. And interest charged at the rate of 1.414%~1.418% and 1.408%~1.411%, respectively.

(8) Other receivables, other payables

Receivables from/payables to related parties bear no interest.

A. Other receivables – sale of raw materials, etc.

	As of					
	September 30, 2019		December 31, 2018		September 30, 2018	
	Amount NTD	%	Amount NTD	%	Amount NTD	%
Entity with joint control or significant influence over the Company	$12,907	0.07	$15,434	0.10	$35,071	0.18
Associate	17,691	0.10	26,429	0.17	50,896	0.26
Joint venture	34,315	0.19	6,651	0.04	8,530	0.04
Others	8,508	0.05	35,270	0.23	8,696	0.04
Total	$73,421	0.41	$83,784	0.54	$103,193	0.52

They are payments received from selling raw material. The payment term is within 30 days following confirmation with the counterparty.

B. Other payables

	As of					
	September 30, 2019		December 31, 2018		September 30, 2018	
	Amount NTD	%	Amount NTD	%	Amount NTD	%
Associate	$15,010	0.09	$21,249	0.16	$14,040	0.10
Joint venture	91	-	2,986	0.03	-	-
Others	445,452	2.82	705,428	5.39	670,404	4.82
Total	$460,553	2.91	$729,663	5.58	$684,444	4.92

Other payables are purchases of raw material for construction. The payment term is within 30 days after inspection and approval of accepting the materials.

(9) Lease

A. Group as a lessee (applicable to the disclosure requirement in IFRS 16)

(a) Right-of-use asset

The carrying amount of right-of-use asset

	As of		
	September 30, 2019	December 31, 2018(Note)	September 30, 2018(Note)
	NTD	NTD	NTD
Entity with joint control or significant influence over the Company	$4,552		
Associate	242,422		
Other	3,528,687		
Total	$3,775,661		

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(b) Lease liability

	As of		
	September 30, 2019	December 31, 2018(Note)	September 30, 2018(Note)
	NTD	NTD	NTD
Entity with joint control or significant influence over the Company	$4,580		
Associate	244,087		
Other	3,757,327		
Total	$4,005,994		
Current	$511,882		
Non-current	3,494,112		

Note:The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(c) Interest for lease liabilities

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018(Note)	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018(Note)
	NTD	NTD	NTD	NTD
Entity with joint control or significant influence over the Company	$21		$72	
Associate	1,171		3,656	
Other	20,624		63,393	
Total	$21,816		$67,121	

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(d) The expense relating to short-term leases

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018 (Note)	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018 (Note)
	NTD	NTD	NTD	NTD
Entity with joint control or significant influence over the Company	$13,319		$ 39,959	

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

B. Group as a lessee (applicable to the disclosure requirement in IAS 17)

(a) Capital lease

Simosa Shipping Co. Ltd. leased vessel and equipment to the Company. The lease term is from January 2012 to December 2026 at US$33,500 per day. When the lease expires, the ownership of the shipping equipment will transfer to the Company. As the contract was amended in January 2014, the Group recalculates the present value of the minimum lease payment. The detail of reconciliations of lease obligation is as follows:

	As of					
	September 30, 2019(Note)		December 31, 2018		September 30, 2018	
	Minimum payment	Present value of payment	Minimum payment	Present value of payment	Minimum payment	Present value of payment
	NTD	NTD	NTD	NTD	NTD	NTD
Not later than one year			$246,786	$210,021	$245,325	$207,665
Later than one year and not later than five years			987,820	887,169	981,970	877,217
Later than five years			741,034	717,128	798,481	770,698
Total minimum lease payments			1,975,640	1,814,318	2,025,776	1,855,580
Less: finance charges on finance lease			(161,322)	-	(170,196)	-
Present value of minimum lease payments			$1,814,318	$1,814,318	$1,855,580	$1,855,580

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(b) Rental expenses

Details of the office premises leased from related parties are as follows:

	For the period from July 1 to September 30, 2019 (Note)		For the period from July 1 to September 30, 2018	
	Amount NTD	%	Amount NTD	%
Entity with joint control or significant influence over the Company			$13,319	5.84

	For the nine months ended September 30, 2019 (Note)		For the nine months ended September 30, 2018	
	Amount NTD	%	Amount NTD	%
Entity with joint control or significant influence over the Company			$39,959	5.72

Rents of the office premises leased from related parties are based on the local standard and are payable semi-annually.

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

C. Group as a lessor (applicable to the disclosure requirement in IFRS 16)

(a) The revenue relating to short-term leases

The Group derived the following rental income from leasing oil storage facilities and land to related parties:

	As of	
	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018 (Note)
	NTD	NTD
Entity with joint control or significant influence over the Company	$40,090	
Associate	4,097	
Joint venture	8,121	
Others	136	
Total	$52,444	

	As of	
	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018 (Note)
	NTD	NTD
Entity with joint control or significant influence over the Company	$120,136	
Associate	12,291	
Joint venture	24,363	
Others	408	
Total	$157,198	

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(b) The income relating to finance leases

The Group derived the following rental income from leasing automated storage and retrieval systems to related parties:

	As of	
	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018 (Note)
	NTD	NTD
Joint venture	$1,169,213	

	As of	
	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018 (Note)
	NTD	NTD
Joint venture	$1,169,213	

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

D. Group as a lessor (applicable to the disclosure requirement in IAS 17)

The Group derived the following rental income from leasing oil storage facilities and land to related parties:

	For the period from July 1 to September 30, 2019 (Note)		For the period from July 1 to September 30, 2018	
	Amount NTD	%	Amount NTD	%
Entity with joint control or significant influence over the Company			$59,055	20.43
Associate			4,097	1.42
Joint venture			8,121	2.81
Total			$71,273	24.66

	For the nine months ended September 30, 2019 (Note)		For the nine months ended September 30, 2018	
	Amount NTD	%	Amount NTD	%
Entity with joint control or significant influence over the Company			$128,765	14.65
Associate			12,291	1.40
Joint venture			24,363	2.77
Total			$165,419	18.82

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(10) Other related party transactions

A. Use of labor

The details of use of the related parties' labor force are as follows:

	Items	For the period from July 1 to September 30, 2019 NTD	For the period from July 1 to September 30, 2018 NTD	For the nine months ended September 30, 2019 NTD	For the nine months ended September 30, 2018 NTD
Associate	Harbor Labor force	$399,506	$429,484	$1,301,289	$1,315,285
Joint venture	Refuel, Labor force	15,586	65,270	63,986	93,789
Others	Labor force	489	399	1,229	1,338
	Total	$415,581	$495,153	$1,366,504	$1,410,412

The payments include harbor usage, towage, and fuel delivery. The payment is mutually agreed to be made one month after the monthly closing.

B. Notes endorsements and guarantees

	As of September 30, 2019 NTD	As of December 31, 2018 NTD	As of September 30, 2018 NTD
Associate	$11,097,515	$22,511,923	$22,378,608
Joint venture	1,235,000	2,750,000	2,750,000
Subsidiary	-	40,000	40,000
Others	21,398,790	15,915,686	15,821,434
Total	$33,731,305	$41,217,609	$40,990,042

C. Property transactions

Details of the Company disposing land to related parties are as follows:

	For the period from July 1 to September 30, 2019		For the period from July 1 to September 30, 2018	
	Consideration	Gain / Loss	Consideration	Gain / Loss
Associate	$-	$4,011	$-	$-

	For the nine months ended to September 30, 2019		For the nine months ended to September 30, 2018	
	Consideration	Gain / Loss	Consideration	Gain / Loss
Associate	$60,225	$30,493	$-	$-

(11) Key management personnel compensation

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Short-term employee benefits	$10,339	$11,190	$47,307	$45,908

8. PLEDGED ASSETS

The following assets were pledged to banks as collaterals for bank loans:

		As of		
		September 30, 2019	December 31, 2018	September 30, 2018
Pledged Assets	Contents	NTD	NTD	NTD
Financial assets at fair value through other comprehensive income – current	Stock of Nan Ya Plastics Corporation	$5,652,670	$6,254,873	$7,025,341
Financial assets at fair value through other comprehensive income – current	Stock of Formosa Chemicals & Fibre Corporation	-	3,780	4,608
Subtotal		5,652,670	6,258,653	7,029,949
Other current assets	Certificates of time deposit	253,528	199,211	205,740
Property, plant and equipment	Land	-	19,118,886	19,118,886
	Machinery and equipment	-	5,878,052	6,241,556
	Other equipment	-	145,467	150,273
Subtotal		-	25,142,405	25,510,715
Total		$5,906,198	$31,600,269	$32,746,404

9. SIGNIFICANT COMMITMENTS AND CONTINGENT LIABILITIES

As of September 30, 2019, the Group's commitments and contingent liabilities were as follows:

(1) Finance lease commitments: Please refer to related Note 7.9.B(a).

(2) Guarantee notes received from counterparties as collateral for payment, construction completion commitment and others for operational needs were NT$521,524 thousand.

(3) Guarantee notes issued for borrowings (financing) were NT$162,180,068 thousand.

(4) The unutilized portion of letters of credit issued by banks for importing raw materials was NT$2,121,159 thousand.

(5) Due to the funding demand of the investments in Formosa Ha Tinh Steel Corporation, Formosa Group (Cayman) limited, an investee of the Group, applied a credit line within one to five years. The Group provides a loan guarantee with 25% of the loan to meet the bank's requirement.

(6) Due to the funding demand of the investments in Formosa Ha Tinh Steel Corporation, Formosa Group (Cayman) limited, an investee of the Group, issues US$1 billion 10 years corporate bonds in April 14, 2015. The Group provides a guarantee of payment obligation with 25% of the bonds.

(7) The Group invested in Formosa Ha Tinh (Cayman) Limited with an equity interest of 11.432% through its joint venture Formosa Petrochemical International (Cayman) Limited. Due to the funding demand of Formosa Ha Tinh (Cayman) Limited's investee Formosa Ha Tinh Steel Corporation, Formosa Ha Tinh (Cayman) Limited plans to apply a 5-year syndicated credit line led by Sumitomo Mitsui Banking Corporation. Also, to cover the capital expenditure of investing in Formosa Ha Tinh (Cayman) Limited and repay the loans for Formosa Ha Tinh (Cayman) Limited, the Group plans to apply a 7-year syndicated credit line led by Hua Nan Bank. To support the above credit line, the Group provides loan guarantee according to equity interest. Formosa Ha Tinh (Cayman) Limited applied a 5-year credit line from Bank of China (Hong-Kong) where the Group provides loan guarantee according to equity interest.

(8) To expand the investment in mineral resources and increase the level of working capital, the Group through its joint venture, Formosa Resources Corporation applied a credit line of amount US$430 million led by Crédit Agricole Corporate & Investment Bank. To support the above credit line, the Group provides loan guarantee according to equity interest.

10. SIGNIFICANT DISASTER LOSSES

None.

11. SIGNIFICANT SUBSEQUENT EVENTS

None.

12. OTHERS

(1) Categories of financial instruments

Financial Assets	As of September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Financial assets at fair value through profit or loss:			
Mandatorily measured at fair value through profit or loss	$4,142,698	$4,016,864	$4,027,243
Financial assets at fair value through other comprehensive income	76,638,085	73,356,267	78,653,741
Financial assets at amortised cost			
Cash and cash equivalents (excluding cash on hand)	23,318,827	37,748,523	31,708,965
Notes and accounts receivable, net (including related party)	48,724,830	53,815,083	65,999,420
Lease receivables	(Note)	3,707,823	3,753,261
Financing lease receivables	3,723,133	(Note)	(Note)
Other receivables	17,751,510	15,522,723	19,724,310
Subtotal	93,518,300	110,794,152	121,185,956
Financial assets for hedging	10,896	13,353	12,312
Total	$174,309,979	$188,180,636	$203,879,252

Financial Liabilities	As of September 30, 2019	December 31, 2018	September 30, 2018
	NTD	NTD	NTD
Financial liabilities at amortized cost:			
Short-term borrowings	$1,157,549	$759,871	$207,451
Notes and accounts payable (including related party)	15,477,016	20,323,669	30,947,847
Bonds payable (including current portion)	17,900,000	14,450,000	14,450,000
Long-term borrowings (including current portion)	-	-	4,333,333
Lease liabilities	7,769,943	(Note)	(Note)
Lease payables	(Note)	1,814,318	1,855,580
Subtotal	42,304,508	37,347,858	51,794,211
Financial liabilities for hedging	9,895	95,472	4,903
Total	$42,314,403	$37,443,330	$51,799,114

Note: The Group adopted IFRS 16 since January 1, 2019. The Group elected not to restate prior periods in accordance with the transition provision in IFRS 16.

(2) Financial risk management objectives and policies

The Group's principal financial risk management objective is to manage the market risk, credit risk and liquidity risk related to its operating activates. The Group identifies measures and manages the aforementioned risks based on the Group's policy and risk appetite.

The Group has established appropriate policies, procedures and internal controls for financial risk management. Before entering into significant transactions, due approval process by audit committee and the Company's board of directors must be carried out based on related protocols and internal control procedures. The Group complies with its financial risk management policies at all times.

(3) Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of the changes in market prices. Market prices comprise currency risk, interest rate risk and other price risk (such as equity risk).

In practice, it is rarely the case that a single risk variable will change independently from other risk variable, there are usually interdependencies between risk variables. However, the sensitivity analysis disclosed below does not consider the interdependencies between risk variables.

Foreign currency risk

The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities (when revenue or expense are denominated in a different currency from the Group's functional currency) and the Group's net investments in foreign subsidiaries.

The Group has certain foreign currency receivables to be denominated in the same foreign currency with certain foreign currency payables, therefore natural hedge is received. The Group also uses forward contracts to hedge the foreign currency risk on certain items denominated in foreign currencies. Hedge accounting is not applied as they did not qualify for hedge accounting criteria. Furthermore, as net investments in foreign subsidiaries are for strategic purposes, they are not hedged by the Group.

The foreign currency sensitivity analysis of the possible change in foreign exchange rates on the Group's profit is performed on significant monetary items denominated in foreign currencies as at the end of the reporting period. The Group's foreign currency risk is mainly related to the volatility in the exchange rates for a foreign currency: US dollars. The information of the sensitivity analysis is as follows:

When NTD appreciate/depreciate against US dollars by NT$1, the profit decreased/ increased by NT$551,337 thousand and NT$537,652 thousand for the nine months ended September 30, 2019 and 2018, respectively.

Interest rate risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's loans and receivables at variable interest rates, bank borrowings with fixed interest rates and variable interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable loans and borrowings and entering into interest rate swaps. Hedge accounting does not apply to these swaps as they do not qualify for it.

The interest rate sensitivity analysis is performed on items exposed to interest rate risk as at the end of the reporting period, including investments and borrowings with variable interest rates and interest rate swaps. At the reporting date, a change of 25 basis points of interest rate in a reporting period could cause the profit to decrease/increase by NT$1,722 thousand and NT$8,125 thousand for the nine months ended September 30, 2019 and 2018, respectively.

Equity price risk

The Group's listed and unlisted equity securities are susceptible to market price risk arising from uncertainties about future values of the investment securities. The Group's listed equity securities are classified under held for trading financial assets or available-for-sale financial assets, while unlisted equity securities are classified as available-for-sale. The Group manages the equity price risk through diversification and placing limits on individual and total equity instruments. Reports on the equity portfolio are submitted to the Group's senior management on a regular basis. The Group's board of directors reviews and approves all equity investment decisions.

The Group did not hold for trading any listed and OTC equity securities.

When the price of the listed equity securities at fair value through other comprehensive income increases/ decreases 1%, it could have impacts of NT$570,686 thousand and NT$570,536 thousand for the nine months ended September 30, 2019 and 2018, on the profit/loss or equity attributable to the Group.

(4) Credit risk management

Credit risk is the risk that a counterparty will not meet its obligations under a contract, leading to a financial loss. The Group is exposed to credit risk from operating activities (primarily for accounts receivables and notes receivables) and from its financing activities, including bank deposits and other financial instruments.

Customer credit risk is managed by each business unit subject to the Group's established policy, procedures and control relating to credit risk management. Credit limits are established for all counter parties based on their financial position, rating from credit rating agencies, historical experience, prevailing economic condition and the Group's internal rating criteria etc. Certain counter parties' credit risk will also be managed by taking credit enhancing procedures, such as requesting for prepayment or insurance.

As of September 30, 2019, December 31, 2018 and September 30, 2018, accounts receivable from top ten customers represented 61.47%, 72.36% and 70.91% of the total accounts receivable of the Group, respectively. The credit concentration risk of other accounts receivable is insignificant.

Credit risk from balances with banks, fixed income securities and other financial instruments is managed by the Group's treasury in accordance with the Group's policy. The Group only transacts with counterparties approved by the internal control procedures, which are banks and financial institutions, companies and government entities with good credit rating. Consequently, there is no significant credit risk for these counterparties.

The Group did not hold any debt instrument investments which were measured at fair value through profit or loss for the nine months ended September 30, 2019.

(5) Liquidity risk management

The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of cash and cash equivalents, highly liquid equity investments, bank borrowings, convertible bonds and finance leases. The table below summarizes the maturity profile of the Group's financial liabilities based on the contractual undiscounted payments and contractual maturity. The payment amount includes the contractual interest. The undiscounted payment relating to borrowings with variable interest rates is extrapolated based on the estimated interest rate yield curve as of the end of the reporting period.

Non-derivative financial instruments

	Less than 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	> 5 years	Total
September 30, 2019							
Borrowings	$1,167,272	$-	$-	$-	$-	$-	$1,167,272
Accounts payable	15,477,016	-	-	-	-	-	15,477,016
Bonds payable	3,244,160	-	-	3,396,230	3,396,230	8,110,400	18,147,020
Lease liabilities	1,234,846	1,183,987	1,148,337	1,113,235	1,000,350	2,725,864	8,406,619
December 31, 2018							
Borrowings	$762,151	$-	$-	$-	$-	$-	$762,151
Accounts payable	20,323,669	-	-	-	-	-	20,323,669
Bonds payable	7,764,750	3,248,000	-	-	-	3,654,000	14,666,750
Lease payable	246,786	247,462	246,786	246,786	246,786	741,034	1,975,640

	Less than 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	> 5 years	Total
September 30, 2018							
Borrowings	$4,615,073	$-	$-	$-	$-	$-	$4,615,073
Accounts payable	30,947,847	-	-	-	-	-	30,947,847
Bonds payable	7,763,985	3,247,680	-	-	-	3,661,200	14,672,865
Lease payable	245,325	245,997	245,325	245,325	245,325	798,481	2,025,778

Derivative financial instruments

	Less than 1 year	2 to 3 years	4 to 5 years	> 5 years	Total
September 30, 2019					
Inflows	$10,896	$-	$-	$-	$10,896
Outflows	(9,895)	-	-	-	(9,895)
Net	$1,001	$-	$-	$-	$1,001
December 31, 2018					
Inflows	$13,353	$-	$-	$-	$13,353
Outflows	(95,472)	-	-	-	(95,472)
Net	$(82,119)	$-	$-	$-	$(82,119)
September 30, 2018					
Inflows	$11,556	$756	$-	$-	$12,312
Outflows	(4,560)	(343)	-	-	(4,903)
Net	$6,996	$413	$-	$-	$7,409

The table above contains the undiscounted net cash flows of derivative financial instruments.

(6) Reconciliations of the liabilities from financing activities

Reconciliations of the liabilities for the nine months ended September 30, 2019:

	Short-term loans	Other payables to related parties	Bonds payable (including current portion)	Lease liabilities (current and non-current)	Increase (decrease) in other non-current liabilities	Total liabilities from financing activities
2019.1.1	$759,871	$729,663	$14,450,000	$8,131,266	$1,391,669	$25,462,469
Cash flows	397,678	(269,110)	(3,450,000)	(873,076)	(29,775)	2,675,717
Non-cash changes	-	-	-	470,556	-	470,556
Exchange rate changes	-	-	-	41,197	-	41,197
2019.9.30	$1,157,549	$460,553	$17,900,000	$7,769,943	$1,361,894	$28,649,939

Reconciliations of the liabilities for the nine months ended September 30, 2018:

	Short-term loans	Other payable to related parties	Long-term loans (including current portion)	Bonds payable (including current portion)	Lease payable (current and non-current)	Increase (decrease) in other non-current liabilities	Total liabilities from financing activities
2018.1.1	$580,066	$201,165	$15,896,216	$25,700,000	$1,961,733	$1,384,554	$45,723,734
Cash flows	(372,615)	483,279	(11,566,667)	(11,250,000)	(152,357)	(7,951)	(22,866,311)
Non-cash changes	-	-	3,784	-	-	-	3,784
Exchange rate changes	-	-	-	-	46,204	-	46,204
2018.9.30	$207,451	$684,444	$4,333,333	$14,450,000	$1,855,580	$1,376,603	$22,907,411

(7) Fair values of financial instruments

A. The methods and assumptions applied in determining the fair value of financial instruments:

The fair value of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The following methods and assumptions were used to estimate the fair values:

(a) The carrying amount of cash and cash equivalents, accounts receivables, accounts payable and other current liabilities approximate their fair value because of its shorter maturities.

(b) For financial assets and liabilities traded in an active market with standard terms and conditions, their fair value is determined based on market quotation price (including listed equity securities, beneficiary certificates, bonds and futures etc.) at the reporting date.

(c) Fair value of equity instruments without market quotations (including private placement of listed equity securities and unquoted public company) are estimated using the market method valuation techniques based on parameters such as prices based on market transactions of equity instruments of identical or comparable entities and other relevant information (for example, inputs such as discount for lack of marketability, P/E ratio of similar entities and Price-Book ratio of similar entities).

(d) The fair value of bank loans, corporate bonds and lease payables is determined by the counterparty's quotation or valuation technique. The valuation technique is discounted cash flow analysis with interest and discount rate selected with reference to those of similar financial instruments (E.g. the yield curve reference of Taipei Exchange, average prices for Fixed Rate Commercial Paper published by Reuters and credit risk, etc.)

(e) The fair value of derivative financial instrument is based on market quotations.

B. Fair value of financial instruments measured at amortized cost

The carrying amount of the Group's financial assets (including held-to-maturity financial assets, loans and receivables) and liabilities (including loan, bonds payable, lease liabilities before January 1, 2019, lease payable) measured at amortized cost approximate their fair value.

C. Information about financial instrument fair value level

The information of financial level value please refer to related note 12(9).

(8) Derivatives financial instruments the Group holds for trading are mainly energy commodity contracts. Please refer to Note 6(4) for related information.

(9) Level of fair value

A. Definition

For the assets and liabilities measured and disclosed under fair value, the fair value hierarchy is categorized on the basis of the lowest level input that is significant to the fair value measurement in its entirety. The inputs of each level are as follows:

Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities that the entity can access at the measurement date.
Level 2: inputs other than quoted market prices included within level 1 that are observable for the asset or liability, either directly or indirectly.
Level 3: unobservable inputs for the asset or liabilities.

At the end of each reporting period, the fair value hierarchy for each financial instrument is revaluated to decide if there is any transfer into or out of any hierarchy.

B. The fair value at each fair value hierarchy for financial instruments of the Group are as follows:

September 30, 2019

	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at fair value through profit or loss				
Funds	$-	$4,142,698	$-	$4,142,698
Financial assets at fair value through other comprehensive income				
Investments in equity instruments measured at fair value through other comprehensive income	57,068,640	-	19,569,445	76,638,085
Financial assets for hedging				
Energy commodity swap contracts	10,896	-	-	10,896
Financial liabilities:				
Financial liabilities for hedging				
Energy commodity swap contracts	$9,895	$-	$-	$9,895

December 31, 2018

	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at fair value through profit or loss				
Funds	$-	$4,016,864	$-	$4,016,864
Financial assets at fair value through other comprehensive income				
Investments in equity instruments measured at fair value through other comprehensive income	51,304,527	-	22,051,740	73,356,267
Financial assets for hedging				
Energy commodity swap contracts	13,353	-	-	13,353
Financial liabilities:				
Financial liabilities for hedging				
Energy commodity swap contracts	$95,472	$-	$-	$95,472

September 30, 2018

	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at fair value through profit or loss				
Funds	$60,509	$3,966,734	$-	$4,027,243
Financial assets at fair value through other comprehensive income				
Investments in equity instruments measured at fair value through other comprehensive income	57,053,554	-	21,600,187	78,653,741
Financial assets for hedging				
Energy commodity swap contracts	12,312	-	-	12,312
Financial liabilities:				
Financial liabilities for hedging				
Energy commodity swap contracts	$4,903	$-	$-	$4,903

Fair value hierarchy transfer between level 1input and level 2 input

The group had no recurring assets and liabilities transfer between level 1 input and level 2 input for the nine months ended September 30, 2019 and 2018.

Movements of fair value measurements in Level 3 of the fair value hierarchy

Reconciliation for fair value measurements in Level 3 of the fair value hierarchy for movements during the period is as follows:

	Asset
	At fair value through other comprehensive income
	Stocks
2019.1.1	$22,051,740
Amount recognized in OCI (presented in "Unrealized gains (losses) from equity instruments investments measured at fair value through other comprehensive income)	(2,647,367)
Effects of exchange rates	165,072
2019.9.30	$19,569,445

	Asset
	At fair value through other comprehensive income
	Stocks
2017.12.31	$-
Effects of retrospective application and retrospective restatement	22,798,267
2018.1.1	22,798,267
Amount recognized in OCI (presented in "Unrealized gains (losses) from equity instruments investments measured at fair value through other comprehensive income)	(3,291,848)
Acquisition	1,676,070
Disposal	(21,752)
Reclassification due to disposal	(1,878)
Effects of exchange rates	441,328
2018.9.30	$21,600,187

Information on significant unobservable inputs to valuation

Description of significant unobservable inputs to valuation of recurring fair value measurements categorized within Level 3 of the fair value hierarchy is as follows:

As at September 30, 2019:

	Valuation technique	Material unobservable inputs	Quantitative information	Inputs and the fair value relationship	Inputs and the fair value relationship's sensitivity analysis value relationship
Financial assets :					
Financial assets at fair value through other comprehensive income					
Stocks	Market approach	Discount for lack of marketability	8.42%~20%	The higher the discount for lack of marketability, the lower the fair value of the stocks	10% increase (decrease) in the discount for lack of marketability would result in decrease/increase in the Group's equity by NT$2,147,685 thousand
Stocks	Assets approach	Discount for lack of marketability	20%	The higher the discount for lack of marketability, the lower the fair value of the stocks	10% increase (decrease) in the discount for lack of marketability would result in decrease/increase in the Group's equity by NT$39,782 thousand

As at December 31, 2018:

	Valuation technique	Material unobservable inputs	Quantitative information	Inputs and the fair value relationship	Inputs and the fair value relationship's sensitivity analysis value relationship
Financial assets：					
Financial assets at fair value through other comprehensive income					
Stocks	Market approach	Discount for lack of marketability	10.47%~20%	The higher the discount for lack of marketability, the lower the fair value of the stocks	10% increase (decrease) in the discount for lack of marketability would result in decrease/increase in the Group's equity by NT$2,435,151 thousand
Stocks	Assets approach	Discount for lack of marketability	20%	The higher the discount for lack of marketability, the lower the fair value of the stocks	10% increase (decrease) in the discount for lack of marketability would result in decrease/increase in the Group's equity by NT$47,545 thousand

As at September 30, 2018:

	Valuation technique	Material unobservable inputs	Quantitative information	Inputs and the fair value relationship	Inputs and the fair value relationship's sensitivity analysis value relationship
Financial assets：					
Financial assets at fair value through other comprehensive income					
Stocks	Market approach	Discount for lack of marketability	10.47%~20%	The higher the discount for lack of marketability, the lower the fair value of the stocks	10% increase (decrease) in the discount for lack of marketability would result in decrease/increase in the Group's equity by NT$2,369,968 thousand
Stocks	Assets approach	Discount for lack of marketability	20%	The higher the discount for lack of marketability, the lower the fair value of the stocks	10% increase (decrease) in the discount for lack of marketability would result in decrease/increase in the Group's equity by NT$64,006 thousand

Valuation process used for fair value measurements categorized within Level 3 of the fair value hierarchy

The Group's accounting department is responsible for validating the fair value measurements and ensuring that the results of the valuation are in line with market conditions, based on independent and reliable inputs which are consistent with other information, and represent exercisable prices. The Department analyses the movements in the values of assets and liabilities which are required to be re-measured or re-assessed as per the Group's accounting policies at each reporting date.

C. Not measure by the fair value but have to disclose by the fair value hierarchy information

September 30, 2019

	Level 1	Level 2	Level 3	Total
Only disclose fair value of assets:				
Investment property				
(please refer to note 6(11))	$-	$-	$366,244	$366,244
Only disclose fair value of liabilities:				
Loans	$-	$1,157,549	$-	$1,157,549
Lease liabilities	-	7,769,943	-	7,769,943
Bonds payable	-	17,900,000	-	17,900,000

December 31, 2018

	Level 1	Level 2	Level 3	Total
Only disclose fair value of assets:				
Investment property				
(please refer to note 6(11))	$-	$-	$374,081	$374,081
Only disclose fair value of liabilities:				
Loans	$-	$759,871	$-	$759,871
Lease payable	-	1,814,318	-	1,814,318
Bonds payable	-	14,450,000	-	14,450,000

September 30, 2018

	Level 1	Level 2	Level 3	Total
Only disclose fair value of assets:				
Investment property				
(please refer to note 6(11))	$-	$-	$374,081	$374,081
Only disclose fair value of liabilities:				
Loans	$-	$4,540,784	$-	$4,540,784
Lease payable	-	1,855,580	-	1,855,580
Bonds payable	-	14,450,000	-	14,450,000

(10) Significant assets and liabilities denominated in foreign currencies

Information regarding the significant assets and liabilities denominated in foreign currencies is listed below:

	September 30, 2019			December 31, 2018			September 30, 2018		
	Foreign currency	Exchange rate	NTD	Foreign currency	Exchange rate	NTD	Foreign currency	Exchange rate	NTD
Financial assets									
Monetary items:									
USD	$996,784	31.042	$30,942,169	$1,141,296	30.733	$35,075,450	$1,348,402	30.551	$41,195,030
EUR	14,008	33.944	475,488	289	35.167	10,163	12,401	35.529	440,595
YEN	10,046	0.288	2,893	8,123	0.277	2,250	142,147	0.269	38,238
Long-term equity Investments--equity method									
USD	$100,137	31.042	$3,108,453	$103,101	30.733	$3,168,603	$41,061	30.551	$1,254,455
Financial liabilities									
Monetary items:									
USD	$445,447	31.042	$13,827,566	$492,480	30.733	$15,135,388	$810,750	30.551	$24,769,223
EUR	14,068	33.944	477,524	17,847	35.167	627,625	12,503	35.529	444,219
YEN	80,616	0.288	23,217	310,526	0.277	86,016	215,634	0.269	58,006

The above information is disclosed based on book value transferred to functional currency.

The foreign exchange gains (losses) that was material and recognized are NT$292,172 thousand and NT$383,789 thousand for the period from July 1 to September 30, 2019 and 2018, respectively. The foreign exchange gains (losses) that was material and recognized are NT$1,240,921 thousand and NT$1,591,254 thousand for the nine months ended September 30, 2019 and 2018, respectively.

(11) Capital management

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize shareholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may adjust dividend payment to shareholders, return capital to shareholders or issue new shares.

13. OTHER DISCLOSURE

(1) Significant transaction information

A. Financings provided to others

No. (Note 1)	Financing Company	Counterparty	Financial Statement Account (Note 2)	Related Party	Maximum Balance for the Period (Approved by the Board) (Note 3)	Ending Balance (Approved by the Board) (Note 8)	Amount Actually Drawn	Interest Rate%	Nature of Financing (Note 4)	Reason for Financing (Note 6)	Loss allowance	Collateral Item	Collateral Value	Limit of Financing Amount for Individual Counterparty (Note 7)	Limit of Total Financial Amount for Financing Company (Note 7)
0	The Company	Formosa Plastics Corporation	Other receivables from related parties	Yes	8,000,000	6,000,000	-	-	(2)	Need for operating	N/A	N/A	N/A	Financing to individual entity is limited to 10% of the Company's net asset 32,491,626 thousand; financing to related party and party with business transaction is limited to 25% of the Company's net asset 81,229,065 thousand; financing to others is limited to 20% of the Company's net asset 64,983,252 thousand.	Financing to others is limited to 50% of the Company's net asset 162,458,131 thousand; financing to nonbusiness but in need for capital is limited to 40% of the Company's net asset 129,966,504 thousand.
0	The Company	Nan Ya Plastics Corporation	Other receivables from related parties	Yes	8,000,000	6,000,000	-	-	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Formosa Chemicals & Fibre Corporation	Other receivables from related parties	Yes	8,000,000	6,000,000	-	-	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Formosa Marine Corporation	Other receivables from related parties	Yes	1,000,000	500,000	500,000	1.414~1.418	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Formosa Plastics Marine Corporation	Other receivables from related parties	No	8,255,697	7,410,066	5,670,066	1.414~1.418	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Formosa Group Ocean Investment Corporation	Other receivables from related parties	No	3,111,228	2,732,564	2,042,564	1.414~1.418	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Nan Ya Technology Corporation	Other receivables from related parties	No	1,500,000	-	-	-	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Formosa Heavy Industries Corporation	Other receivables from related parties	Yes	9,800,000	8,180,000	4, 680,000	1.414~1.418	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Formosa Oil (Asia Pacific) Corporation (Note 9)	Other receivables from related parties	Yes	1,000,000	1,000,000	-	-	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	Formosa Petrochemical Transportation Corporation (Note 9)	Other receivables from related parties	Yes	250,000	250,000	-	-	(2)	Need for operating	N/A	N/A	N/A		
0	The Company	FPCC Marine Corporation (Note 9,10)	Other receivables from related parties	Yes	5,700,000	5,700,000	3,135,242	1.414~1.418	(2)	Need for operating	N/A	N/A	N/A		
					Total	$43,772,630	$16,027,872								

Note 1: The Company and its subsidiaries are coded as follows:

(1) The Company is coded "0".

(2) The subsidiaries are coded starting from "1" in the order.

Note 2: Total amount of the financing is disclosed herein if the financing related to business transactions.

Note 3: Maximum financing balance provided to others for the period.

Note 4: Nature of financing is coded as follows:

(1) The financing occurred due to business transactions is coded "1" .

(2) The financing occurred due to short-term financing is coded "2".

Note 5: Total amount of the business transactions between financing company and counterparty should be disclosed herein if the financing occurred due to business transactions.

Note 6: The necessity and rationality of the loan application should be specifically illustrated herein if the financing occurred due to short-term financing.

Note 7: The limits and the calculation methods of financing amount for individual counterparty and total financing amount for financing company are disclosed in accordance with company's operating procedure of financing.

Note 8: According to Paragraph 1, Article 14 of Guidelines for Lending of Capital, Endorsements and Guarantees by Public Companies, each financing should be approved by the board of directors. To fairly expose the company's risk, even if the fund doesn't be utilized, the financing amount approved by the board of directors still includes in the financing balance. To reflect the adjustment of the company's risk, while the counterparty repays the fund, it should disclose the balance after the repayment. Although the chairman is authorized to handle the financing in installment or revolver under the specific amount approved by the board of directors within one year, according to Paragraph 2, Article 14 of Guidelines for Lending of Capital, Endorsements and Guarantees by Public Companies, it still uses the financing amount approved by the board of directors as the reporting balance. While the counterparty repays the fund, considering the possibility of another utilization, it still uses the financing amount approved by the board of directors as the reporting balance.

Note 9: All transactions listed above are eliminated in the consolidated financial statements.

Note10: Formosa Dredging Corporation was renamed FPCC Marine Corporation on May 14, 2019.

B. Endorsement/guarantee provided to others

No. (Note1)	Endorser/ Guarantor	Receiving Party: Company Name	Receiving Party: Relationship (Note2)	Limit of the Endorsement / Guarantee Amount for Receiving Party (Note3)	Maximum Balance for the Period (Note4)	Ending Balance (Note5)	Actual Amount Borrowed (Note6)	Amount of Collateral	Percentage	Limit on the Endorsement/Guarantee Amount (Note3)	Parent Company Endorsed / Guaranteed for the Subsidiaries (Note7)	Subsidiaries Endorsed/Guaranteed for the Parent Company (Note7)	Endorsement or Guarantee for Entities in China (Note7)
0	The Company	Formosa Oil (Asia Pacific) Corporation	(2)	$211,195,570	$40,000	$-	$-	N/A	-	The Company may provide endorsement/guarantee to others but shall not exceed 130% of its net assets. The limit is 422,391,139 thousand. For endorsement/ guarantee to individual entity, the amount is limited to 50% of the limit.	Y	N	N
0	The Company	Formosa Kraton Chemical Co., Ltd.	(6)	211,195,570	2,750,000	1,235,000	1,235,000	N/A	0.38	〃	N	N	N
0	The Company	Formosa Resources Corporation	(6)	211,195,570	3,398,290	3,337,015	3,337,015	N/A	1.03	〃	N	N	N
0	The Company	Formosa Group (Cayman) Limited	(6)	211,195,570	19,315,625	7,760,500	7,760,500	N/A	2.39	〃	N	N	N
0	The Company	Formosa Ha Tinh (Cayman) Limited	(6)	211,195,570	21,791,720	21,398,790	21,398,790	N/A	6.59	〃	N	N	N

Note 1: The Company and its subsidiaries are coded as follows:

(1) The Company is coded "0".

(2) The subsidiaries are coded starting from "1" in the order.

Note 2: Relationship between the endorser/guarantor and the party being endorsed/guaranteed is classified into the following seven categories

(1) Having business relationship.

(2) The endorser/guarantor parent company owns directly more than 50% voting shares of the endorsed/guaranteed subsidiary.

(3) The endorser/guarantor parent company and its subsidiaries jointly own more than 50% voting shares of the endorsed/guaranteed company.

(4) The endorser/guarantor company and endorsed/guaranteed company both are owned directly or indirectly more than 90% voting shares by the company.

(5) Mutual guarantee of the trade as required by the construction contract.

(6) Due to joint venture, each shareholder provides endorsements/guarantees to the endorsed/guaranteed company in proportion to its ownership.

(7) Jointly guarantee of the pre-construction real estate sales contract in accordance with Consumer Protection Law.

Note 3: The limits and the calculation methods of endorsement/guarantee amount for individual counterparty and maximum balance are disclosed in accordance with company's operating procedure of endorsement/guarantee.

Note 4: Maximum balance of endorsement/guarantee provided to others for the period.

Note 5: It should be filled in the amount which approved by the board of directors. However, it should be filled in the amount which utilized by the chairman, whom authorized by the board of directors in accordance with Subparagraph 8, Article 12 of Guidelines for Lending of Capital, Endorsements and Guarantees by Public Companies.

Note 6: It should be filled in the amount which is actual utilized by the endorsed/guaranteed company within the limit of endorsement/guarantee amount.

Note 7: It should be filled in "Y", if it is the public parent company endorsed/guaranteed for the subsidiaries, subsidiaries endorsed/guaranteed for the public parent company, or endorsement or guarantee for entities in china.

C. Securities held as of September 30, 2019 (not including subsidiaries, associates and joint ventures)

Shares: In thousand

Company	Type and Name of the Securities (Note 1)	Relationship (Note 2)	Financial Statement Account	As of September 30, 2019 Shares	Carrying Value (Note 3)	Percentage of Ownership (%)	Market Value (Note 4)	Note
The Company	Stock － Formosa Plastics Corporation	Entity with joint control or significant influence over the Company	Financial assets at fair value through other comprehensive income-current	131,460	12,423,004	2.07%	94.5	
The Company	Stock － Nan Ya Plastics Corporation	Entity with joint control or significant influence over the Company	Financial assets at fair value through other comprehensive income-current	179,214	12,491,245	2.26%	69.7	(Note 5)
The Company	Stock － Formosa Chemicals & Fibre Corporation	Entity with joint control or significant influence over the Company	Financial assets at fair value through other comprehensive income-current	48,568	4,210,809	0.83%	86.7	
The Company	Stock － National Petroleum Co., Ltd.	Others	Financial assets at fair value through other comprehensive income-current	20,000	819,000	6.47%	40.95	
The Company	Stock － Nan Ya Technology Corporation	-	Financial assets at fair value through other comprehensive income-current	334,815	26,952,640	10.90%	80.5	
The Company	Fund－Mega USD Fend-Shou Private Market Fund	-	Financial assets at fair value through profit or loss-current	12,478	4,142,698	-	332.00	
The Company	Stock － Nan Ya Photonics Inc.	Others	Financial assets at fair value through other comprehensive income-non-current	6,591	103,744	14.30%	15.74	
The Company	Stock － Asia Pacific Investment Corporation	-	Financial assets at fair value through other comprehensive income-non-current	8,950	298,124	2.11%	33.31	
The Company	Stock － Formosa Network Technology Corporation	-	Financial assets at fair value through other comprehensive income-non-current	2,925	74,286	12.50%	25.40	
The Company	Stock － Formosa Heavy Industries Corporation	Others	Financial assets at fair value through other comprehensive income-non-current	24,981	300,443	1.26%	12.03	
The Company	Stock － Formosa Ocean Group Marine Investment Corporation	-	Financial assets at fair value through other comprehensive income-non-current	3	5,218,456	19.00%	1,990,258.00	
The Company	Stock － Amtrust Capital Corporation	-	Financial assets at fair value through other comprehensive income-non-current	5,000	27,930	3.91%	5.59	
The Company	Stock － Mega Growth Venture Capital Co., Ltd.	-	Financial assets at fair value through other comprehensive income-non-current	2,500	20,125	1.97%	8.05	

Note 1: Marketable securities in the table refer to stocks, bonds, beneficiary certificates and other related derivative securities, as defined in IFRS 9 "Financial Instruments".

Note 2: If the securities listed above are issued by related parties, the column is specified with further information.

Note 3: For securities measured at fair value, fill in the book value column with fair value of the securities less accumulated impairment. For securities not measured at fair value, fill in the book value column with the original cost or amortized cost less accumulated impairment.

Note 4: Fill in the fair value in the following ways:

(1) For securities with quoted prices in active markets, fair value is the closing price at the balance sheet date. However, for open-end funds, fair value is the net asset value of the fund.

(2) For securities without quoted prices in an active market, doesn't have be filled unless the security is stock. Fill in the book value column with book value per share if it is stock.

Note 5: Stocks for collateral are as follows:

Holding Nan Ya Plastics Corporation 179,214 thousand shares with 81,100 thousand shares for collateral.

D. Individual securities acquired or disposed of with accumulated amount exceeding NT$300 million or 20 percent of the Company's paid-in capital:

Company	Securities Category (Note 1)	Financial Statement Account	Counterparty (Note 2)	Relationship (Note 2)	As January 1, 2019		Purchase (Note 3)		Sell (Note 3)				As September 30, 2019 (Note 6)	
					Shares (In thousand)	Amount	Shares (In thousand)	Amount	Shares (In thousand)	Price	Book Cost	Gain / Loss	Shares (In thousand)	Amount
The Company	Stock	Investments accounted for using the equity method	FG INC. (Note 6)	Subsidiary	11	$3,785,225 (Note 5)	-	$1,319,949	-	$-	$-	$-	11	$5,105,174 (Note 5)
The Company	Stock	Investments accounted for using the equity method	NKFG	Joint venture	1,500	15,000 (Note 5)	81,600	816,000	-	-	-	-	83,100	831,000 (Note5)
The Company	Stock	Investments accounted for using the equity method	Formosa Resources Corporation	Associate	584,594	5,845,940 (Note 5)	156,930	1,569,300	-	-	-	-	741,524	7,415,240 (Note5)

Note 1: Marketable securities in the table refer to stocks, bonds, beneficiary certificates and other related derivative securities.

Note2: If the securities listed above are investments accounted for using the equity method, fill in the second column.

Note3: The accumulated consideration of acquisition or sale should be calculated separately at their market values to verify whether they individually reach NT$300 million or 20% of paid-in capital or more.

Note 4: The Company's paid-in capital means the parent's paid-in capital. If the stock has no par value or the par value do not equal to NT$10, according to the regulation of 20% paid-in capital transaction amount, the par value will be calculated by 10% of the total parent equity.

Note 5: Beginning balance and ending balance herein is disclosed in original cost.

Note 6: All transactions are eliminated in the consolidated financial statements.

E. Acquisition of property with the amount exceeding NT $300 million or 20% of the Company's paid-in capital:

Company	Property Name	Transaction Date	Transaction Amount	Status Payment	Counterparty	Relationship with the company	Disclosure of Information on Previous Transfer of Property is Required for Related Parties who are also the Counterparty				Reference for Determining Price	Purpose of Acquisition and Current Condition	Other
							Owner	Relationship with the Company	Date of Transfer	Amount			
The Company	The engineering of desalination plant	2019.08.05	$1,900,397	Unpaid	Wanchi Steel Industrial Co LTD.	N/A	-	-	-	-	Open bid	Desalination plant construction	N/A

Note 1: Acquisition of assets, which is regulated to be appraisal, should note the appraisal results in the "References for Determining Price" column.

Note 2: The Company's paid-in capital means the parent's paid-in capital. If the stock has no par value or the par value do not equal to NT$10, according to the regulation of 20% paid-in capital transaction amount, the par value will be calculated by 10% of the total parent equity.

Note 3: Transaction date is the earliest date of the contract date, payment date, deal closing date, transfer date, board resolution date or another date that the transaction counterparty and transaction amount can be determined.

F. Disposal of property with amount exceeding NT $300 million or 20% of the Company's paid-in capital: None.

G. Purchases or sales of goods from or to related parties reaching NT$100 million or 20% of paid-in capital or more

Purchaser / Seller	Counterparty	Relationship with the counterparty	Transaction				Differences in transaction terms compared to third party transactions		Notes/accounts receivable (payable)		Note
			Purchases (Sales)	Amount	Percentage of total purchases (sales)	Credit term	Unit price	Credit term	Balance	Percentage of total notes/accounts receivable (payable)	
The Company	Formosa Plastics Corporation	Entity with joint control or significant influence over the Company	Sales Purchases	68,146,216 5,611,691	13.76 1.33	30 days after receiving the goods	N/A	N/A	5,248,690 371,967	11.19 2.40	
The Company	Nan Ya Plastics Corporation	Entity with joint control or significant influence over the Company	Sales Purchases	29,336,326 844,666	5.92 0.20	30 days after receiving the goods	N/A	N/A	2,694,225 33,229	5.74 0.21	
The Company	Formosa Chemicals & Fiber Corporation	Entity with joint control or significant influence over the Company	Sales Purchases	77,259,331 12,773,448	15.60 3.03	30 days after receiving the goods	N/A	N/A	6,233,986 617,481	13.28 3.99	
The Company	National Petroleum Co., Ltd.	Others	Sales Purchases	15,297,984 -	3.09 -	45 days after receiving the goods	N/A	N/A	1,938,708 1,792,974 (Note Receivable) -	4.13 99.64 -	
The Company	Formosa Oil (Asia Pacific) Corporation	Subsidiary	Sales Purchases	11,079,843 -	2.24 -	30 days after receiving the goods	N/A	N/A	1,335,466 -	2.85 -	(Note)
The Company	Formosa Taffeta Co., Ltd	Others	Sales Purchases	8,069,789 18,159	1.63 -	30 days after receiving the goods	N/A	N/A	436,180 2,987	0.93 0.02	
The Company	Nan Chung Petrochemical Corp.	Others	Sales Purchases	4,332,839 -	0.87 -	30 days after receiving the goods	N/A	N/A	576,126 -	1.23 -	
The Company	Caltex Taiwan Corporation	Joint venture	Sales Purchases	6,386,198 -	1.29 -	30 days after receiving the goods	N/A	N/A	1,431,398 5,655	3.05 0.04	
The Company	Simosa Oil Corporation	Associate	Sales Purchases	3,572,158 -	0.72 -	30 days after receiving the goods	N/A	N/A	485,681 -	1.04 -	
The Company	Formosa BP Chemicals Corporation	Others	Sales Purchases	1,509,589 396,866	0.30 0.09	30 days after receiving the goods	N/A	N/A	20,500 1,214	0.04 0.01	
The Company	Formosa Chemicals Industries (Ningbo) Co., Ltd.	Others	Sales Purchases	2,086,163 -	0.42 -	30 days after receiving the goods	N/A	N/A	84,222 -	0.18 -	
The Company	TMS Corp.	Associate	Sales Purchases	1,141,699 -	0.23 -	30 days after receiving the goods	N/A	N/A	26,585 -	0.06 -	
The Company	Formosa Kraton Chemical Co., Ltd.	Joint venture	Sales Purchases	650,955 -	0.13 -	30 days after receiving the goods	N/A	N/A	73,516 -	0.16 -	
The Company	Formosa Marine Corporation (Note 2)	Associate	Sales Purchases	180,176 -	0.04 -	30 days after receiving the goods	N/A	N/A	34,386 -	0.07 -	
The Company	Mai-Liao Power Corporation	Associate	Sales Purchases	153,385 -	0.03 -	30 days after receiving the goods	N/A	N/A	9,557 -	0.02 -	
The Company	Mailiao Harbor Administration Corporation	Associate	Sales Purchases	127,947 -	0.03 -	30 days after receiving the goods	N/A	N/A	4,417 -	0.01 -	

Note: All transactions are eliminated in the consolidated financial statements.

H. Receivables from related parties with amounts exceeding NT$100 million or 20 percent of capital stock

Creditor	Counterparty	Relationship with the counterparty	Balance	Turnover rate	Overdue receivables		Amount collected subsequent to the balance sheet date	Loss Allowance	Note
					Amount	Action taken			
	Accounts receivable								
The Company	Formosa Chemicals & Fibre Corporation	Entity with joint control or significant influence over the Company	6,233,986	12.73	-	-	6,232,473	N/A	
The Company	Formosa Plastics Corporation	Entity with joint control or significant influence over the Company	5,248,690	12.69	-	-	5,248,690	N/A	
The Company	Nan Ya Plastics Corporation	Entity with joint control or significant influence over the Company	2,694,225	12.73	-	-	2,694,225	N/A	
The Company	National Petroleum Co., Ltd.	Others	3,731,682	5.45	-	-	1,792,974	N/A	
The Company	Formosa Oil (Asia Pacific) Corporation	Subsidiary	1,335,466	11.00	-	-	1,335,466	N/A	(Note 1)
The Company	Formosa Taffeta Co., Ltd	Others	436,180	21.02	-	-	436,180	N/A	
The Company	Caltex Taiwan Corporation	Joint venture	1,431,398	8.64	-	-	1,431,398	N/A	
The Company	Nan Chung Petrochemical Corp.	Others	576,126	13.82	-	-	576,126	N/A	
The Company	Simosa Oil Corporation	Associate	485,681	14.73	-	-	479,471	N/A	
	Other receivables from related parties								
The Company	FPCC Marine Corporation (Note 2)	Subsidiary	3,135,242	-	-	-	31,084	N/A	(Note 1)
The Company	Formosa Marine Corporation	Associate	500,000	-	-	-	-	N/A	
The Company	Formosa Heavy Industries Corporation	Others	4,680,000	-	-	-	480,000	N/A	

Note 1: All transactions are eliminated in the consolidated financial Statements.

Note 2: Formosa Dredging Corporation was renamed FPCC Marine Corporation on May 14, 2019.

I. Derivative financial instruments undertaken: Please refer to Notes 6(4) and 12.

J. Significant intercompany transactions between consolidated entities

No. (Note 1)	Company name	Counterparty	Relationship (Note 2)	Transaction			
				Account	Amount	Transaction terms	Percentage of consolidated total operating revenues or total assets (Note3)
0	The Company	Formosa Oil (Asia Pacific) Corporation	1	Sales revenue	11,079,843	Prices similar to those with non-related parties	2.24%
				Accounts receivable	1,335,466	Receive in the following month	0.33%
1	Formosa Oil (Asia Pacific) Corporation	The Company	2	Labor force revenue	50,901	Receive in the following month	0.01%
2	Formosa Petrochemical Transportation Corporation	The Company	2	Labor force revenue	300,328	Receive in the following month	0.06%
				Accounts receivable	4,113	-	-
3	FPCC Marine Corporation (Note 5)	The Company	2	Labor force revenue	1,907,477	Receive in the following month	0.39%
				Accounts receivable	450,368	-	0.11%
				Other payables	3,138,974	-	0.79%
4	FG INC.	FPCC USA, INC.	3	Other receivable	248,336	-	0.06%

Note 1: The numbers filled in for the transaction company in respect of inter-company transactions are as follows:
(1) Parent Company is coded "0".
(2) The subsidiaries are coded starting from "1" in the order.

Note 2: Relationship between transaction company and counterparty is classified into the following three categories:
(1) Parent company to subsidiary.
(2) Subsidiary to parent company
(3) Subsidiary to subsidiary.

Note 3: Regarding percentage of transaction amount to consolidated total operating revenues or total assets, it is computed based on period-end balance of transaction to consolidated total assets for balance sheet accounts and based on accumulated transaction amount for the period to consolidated total operating revenues for income statement accounts.

Note 4: Whether the Company discloses the significant transaction in this sheet is according to materiality principle.

Note 5: Formosa Dredging Corporation was renamed FPCC Marine Corporation on May 14, 2019.

(2) Investee information

A. Names, locations and related information of investee companies as of September 30, 2019 (excluding Mainland China)

Investor	Investee (Note1、2)	Region	Main Business	Original cost: Balance at September 30, 2019	Original cost: Balance at December 31, 2018	At the end of period: Number of shares (in thousand)	At the end of period: Percentage	At the end of period: Amount	Investees company net income (Note2(2))	Share of Profits/Losses (Note2(3))	Note
The Company	Formosa Oil (Asia Pacific) Corporation	ROC	Retail of petrochemical	$1,097,992	$1,097,992	100,000	100.00	1,378,218	207,278	207,278	
The Company	Formosa Petrochemical Transportation Corporation	ROC	Transportation	176,019	176,019	19,378	88.00	291,164	40,249	35,419	
The Company	FPCC USA, INC.	US	Oil drilling	1,390,387	1,350,885	10	100.00	777,855	56,455	56,455	
The Company	FPCC Marine Corporation(Note3)	BVI	Ship chartering	100,440	100,440	10	100.00	371,867	75,502	75,502	
The Company	Formosa Petrochemical International (Cayman) Limited	Cayman	Investing	19,232,310	19,232,310	50	100.00	13,497,973	-	-	
The Company	FG INC.	US	Investing	5,105,174	3,785,225	11	57.00	5,120,638	(111,908)	(63,788)	
The Company	Mai-Liao Power Corporation	ROC	Electricity generation	5,985,979	5,985,979	547,070	24.94	11,578,895	2,495,404	622,451	
The Company	Yi-Chi Construction Corporation	ROC	Construction	80,500	80,500	8,050	40.55	89,696	741	300	
The Company	Mailiao Harbor Administration Corporation	ROC	Harbor manage	1,348,137	1,348,137	98,907	44.96	2,340,801	631,667	283,997	
The Company	Formosa Development Corporation	ROC	Development of land	229,970	229,970	38,953	45.99	755,113	76,958	35,396	
The Company	Formosa Marine Corporation	ROC	Transportation	20,000	20,000	3,238	20.00	73,990	423,535	84,707	
The Company	Simosa Oil Corporation	ROC	Retail of other oil products and manufacturing	54,000	54,000	41,748	20.00	517,442	155,791	31,158	
The Company	Caltex Taiwan Corporation	ROC	Retail of petrochemical products and airport refueling	21,501	21,501	2,400	50.00	79,016	85,482	42,741	
The Company	Formosa Environmental Technology Corporation	ROC	Crop cultivating, Disposals of waste and sewage	417,145	417,145	41,714	24.34	226,065	837	204	
The Company	Formosa Plastics Synthetic Rubber	ROC	Synthetic Rubber Manufacturing	400,000	400,000	40,000	33.33	250,980	(1,496)	(498)	
The Company	Formosa Plastics Synthetic Rubber(HK)	HK	Investing	4,192,221	4,192,221	135,000	32.53	2,418,662	(381,631)	(124,144)	
The Company	Formosa Kraton Chemical Co., Ltd.	ROC	Synthetic Rubber Manufacturing	1,237,500	1,237,500	123,750	50.00	1,183,019	401,611	200,806	
The Company	Formolight Technologies, Inc.	ROC	LED	80,361	80,361	8,036	39.43	55,921	(18,642)	(7,351)	
The Company	Formosa Resources Corporation	ROC	Mining	7,415,240	5,845,940	741,524	25.00	6,857,892	(661,394)	(165,348)	
The Company	Formosa Group (Cayman) Limited	Cayman	Investing	377	377	13	25.00	669,433	128,234	32,059	
The Company	Idemitsu Formosa Specialty Chemicals Corp.	ROC	Retail of petrochemical products	750,000	750,000	75,000	50.00	584,091	(86,744)	(43,372)	
The Company	NKFG	ROC	Electronic components manufacturing & selling	831,000	15,000	83,100	50.00	819,009	(15,261)	(13,123)	
Formosa Oil (Asia Pacific) Corporation	Formosa Falkor Engineering Corporation	ROC	Piping component	11,500	11,500	1,150	50.00	7,601	(4,642)	(2,321)	
Formosa Oil (Asia Pacific) Corporation	TMS Corp.	ROC	Vehicle and parts export and import	40,000	40,000	3,430	49.00	45,039	6,927	3,394	
Formosa Oil (Asia Pacific) Corporation	Whale Home International Corp.	ROC	Retail of petrochemical	167,323	158,891	16,463	53.80	175,114	6,593	3,547	
Formosa Petrochemical Transportation Corporation	Whale Home International Corp.	ROC	Retail of petrochemical	48,209	48,209	4,801	15.69	51,070	6,711	1,053	
FPCC USA, INC.	NEUMIN OIL AND GAS, LLC	US	Oil drilling	305,191	305,191	60	50.00	20,365	-	-	
FG INC.	FG LA LLC	US	Petrochemical products manufacturing & selling	7,123,493	6,495,813	-	100.00	7,226,700	(96,736)	(96,736)	
FPCC Marine Corporation (Note 3)	Formosa Petrochemical Marine Company Limited (Note 4)	HK	Transportation	-	-	-	-	-	-	-	

Note 1: If a public company has holding company in other country and had issued consolidated financial statement under local regulations, about these investees could disclosed their holding company's relevant information.

Note 2: If not belong to Note 1, filled in by the following rules

(1) In "Investee", "Region", "Main Business", "Original cost" and "At the end of period" columns should filled in in order follow the company invest directly or invest indirectly and explain each relationship in 'Note" column.
(2) In "Investees company net income" column should filled in each investee net income.
(3) In "Share of Profits/Losses" column only need to filled in the company recognized each subsidiaries and the company under equity method's profits or loss. Make sure it had contained each subsidiaries had contained their investee profit or loss in their net income.

Note 3: Formosa Dredging Corporation was renamed FPCC Marine Corporation on May 14, 2019.

Note 4: Formosa Petrochemical Marine Company Limited has been dissolved on September 20,2019.

B. The company has controlling power over Formosa Petrochemical Transportation Corporation, Formosa Oil (Asia Pacific) Corporation, FPCC USA, INC., FPCC Marine Corporation (Note1), Formosa Petrochemical International (Cayman) Limited, FG INC., FG LA LLC and Formosa Petrochemical Marine Company Limited (Note2). Although the total assets and total operating revenue has not reached 10% of the company's account, but the significant transaction should be disclosed.

Note1: Formosa Dredging Corporation was renamed FPCC Marine Corporation on May 14, 2019

Note2: Formosa Petrochemical Marine Company Limited has been dissolved on September 20,2019

(a) Financing provided to others

No (Note1)	Creditor	Borrower	General Leger account (Note2)	Related party	Maximum outstanding balance during the three month period ended September 30, 2019	Balance at September 30, 2019 (Credits approved by the Boards) (Note 8)	Actual amount	Interest rate%	Nature for Financing (Note 4)	Reason for Financing (Note 6)	Loss Allowance	Collateral Item	Collateral Value	Financing Limits for Each Borrowing Company (Note 7)	Financing Company's Total Financing Amount Limits (Note 7)
1	Formosa Oil (Asia Pacific) Corporation	Whale Home International Corp.	Other receivables from related parties	yes	$50,000	$3,900	$3,900	1.414~1.418	(2)	Need for operating	N/A	N/A	N/A	$344,554	$689,109
2	FG LA LLC	FPCC USA, INC. (Note 9)	Other receivables from related parties	yes	173,866	-	-	2.796~3.169	(2)	Need for operating	N/A	N/A	N/A	1,806,675	3,613,350
3	FG INC.	FPCC USA, INC. (Note 9)	Other receivables from related parties	yes	376,920	248,336	248,336	2.628~2.904	(2)	Need for operating	N/A	N/A	N/A	2,245,894	4,491,787

Note 1: The Company and its subsidiaries are coded as follows:
(1) The Company is coded "0".
(2) The subsidiaries are coded starting from "1" in the order.

Note 2: Total amount of the financing is disclosed herein if the financing related to business transactions.

Note 3: Maximum financing balance provided to others for the period.

Note 4: Nature of financing is coded as follows:
(1) The financing occurred due to business transactions is coded "1" .
(2) The financing occurred due to short-term financing is coded "2".

Note 5: Total amount of the business transactions between financing company and counterparty should be disclosed herein if the financing occurred due to business transactions.

Note 6: The necessity and rationality of the loan application should be specifically illustrated herein if the financing occurred due to short-term financing.

Note 7: The limits and the calculation methods of financing amount for individual counterparty and total financing amount for financing company are disclosed in accordance with company's operating procedure of financing.

Note 8: According to Paragraph 1, Article 14 of Guidelines for Lending of Capital, Endorsements and Guarantees by Public Companies, each financing should be approved by the board of directors. To fairly expose the company's risk, even if the fund doesn't be utilized, the financing amount approved by the board of directors still includes in the financing balance. To reflect the adjustment of the company's risk, while the counterparty repays the fund, it should disclose the balance after the repayment. Although the chairman is authorized to handle the financing in installment or revolver under the specific amount approved by the board of directors within one year, according to Paragraph 2, Article 14 of Guidelines for Lending of Capital, Endorsements and Guarantees by Public Companies, it still uses the financing amount approved by the board of directors as the reporting balance. While the counterparty repays the fund, considering the possibility of another utilization, it still uses the financing amount approved by the board of directors as the reporting balance.

Note 9: All transactions listed above are eliminated in the consolidated financial statements.

(b) Endorsement/guarantee provided to others for the nine months ended September 30, 2019: None.

(c) Securities held as of September 30, 2019

Holding Company	Type and Name of the Securities	Relationship	Financial Statement Account	As September 30, 2019			
				Shares (thousands)	Carrying Value	Percentage of Ownership (%)	Market Value
Formosa Oil (Asia Pacific) Corporation	Stock－National Petroleum Co., Ltd.	Others	Financial assets at fair value through other comprehensive income-current	72	2,942	0.02%	40.95
Formosa Oil (Asia Pacific) Corporation	Stock－North-Star Petroleum Co., Ltd.	-	Financial assets at fair value through other comprehensive income-current	10,000	169,000	5.21%	16.90
Formosa Oil (Asia Pacific) Corporation	Stock－Tai Yi Feng Corporation	-	Financial assets at fair value through other comprehensive income-non-current	1,500	28,507	5.00%	19.00
Formosa Petrochemical International (Cayman) Limited	Stock-Formosa Ha Tinh (Cayman) Limited	Others	Financial assets at fair value through other comprehensive income-non-current	621,178	13,497,830	11.43%	21.73

(d) Individual securities acquired or disposed of with accumulated amount exceeding NT$300 million or 20 percent of the capital stock: None.

Company	Securities Category (Note 1)	Financial Statement Account	Counterparty (Note 2)	Relationship (Note 2)	As January 1, 2019		Purchase (Note 3)		Sell (Note 3)				As September 30, 2019	
					Shares (In thousand)	Amount	Shares (In thousand)	Amount	Shares (In thousand)	Price	Book Cost	Gain / Loss	Shares (In thousand)	Amount
FG Inc.	Stock	Investments accounted for using the equity method	FG LA LLC	Subsidiary	-	$6,495,813 (Note5)	-	$672,680	-	$-	$-	$-	-	$7,123,493 (Note 5)

Note 1: Marketable securities in the table refer to stocks, bonds, beneficiary certificates and other related derivative securities.

Note 2: If the securities listed above are long-term investments, fill in the second column.

Note 3: The accumulated consideration of acquisition or sale should be calculated separately at their market values to verify whether they individually reach NT$300 million or 20% of paid-in capital or more.

Note 4: It's the parent's paid-in capital. If the stock has no par value or the par value do not equal to NT$10, according to the regulation of 20% paid-in capital transaction amount, the par value will be calculated by 10% of the total parent equity.

Note 5: Beginning balance and ending balance herein is disclosed in original cost.

(e) Acquisition of real estate reaching NT$300 million or 20% of paid-in capital or more: None.

(f) Disposal of real estate reaching NT$300 million or 20% of paid-in capital or more: None.

(g) Purchases or sales of goods from or to related parties reaching NT$100 million or 20% of paid-in capital or more: None.

(h) Receivables from related parties reaching NT$100 million or 20% of paid-in capital or more: None.

(i) Derivative financial instruments undertaken: None.

(j) Significant inter-company transactions: None.

C. Investment in Mainland China as of September 30, 2019

Investee company	Main Businesses and Products	Total Amount of Paid-in Capital	Method of Investment (Note1)	Accumulated Outflow of Investment from Taiwan as of January 1, 2019	Investment Flows		Accumulated Outflow of Investment from Taiwan as of September 30, 2019	Investees company net income (Note2)	Percentage of Ownership	Share of Profits/Losses (Note2)	Carrying Amount as of September 30, 2019	Accumulated Inward Remittance of Earnings as of September 30, 2019
					Outflow	Inflow						
Formosa Plastics Synthetic Rubber(Ningbo)	Synthetic Rubber Manufacturing	US$415,000 NT$12,882,430	(2)	US$135,000 NT$4,192,221	-	-	US$135,000 NT$4,192,221	NT$(381,631)	32.53%	NT$(124,144)	NT$2,418,662	$-

Accumulated Investment in Mainland China	Investment Amounts Authorized by Investment Commission, MOEA	Upper Limit on Investment (Note3)
US$135,000 NT$4,192,221	US$135,000 NT$4,192,221	NT$194,949,757

Note1: The methods for engaging in investment in Mainland China include the following:
(1) Directly invested in China
(2) Investment in Mainland China companies through a company invested and established in a third region (The third region company is Formosa Plastics Synthetic Rubber(HK))
(3) Other method

Note2: Recognized based on valuation in financial statements audited by investee companies' independent accountants.

Note3: According to MOEA's regulation, the company set its upper limit on investment is based on 60% of equity.

14. OPERATING SEGMENT INFORMATION

For management purposes, the Group is organized into business units based on its products and services and has two reportable segments as follows:

A. Petrochemical segment: Producing and selling petroleum, and petrochemical products.
B. Public utility segment: Producing and selling water, electricity and steam.

For information regarding the segment reporting and operating activities, please refer to "Other" section of the Note.

Management monitors the operating results of its business units separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on operating profit or loss and is measured consistently with operating profit or loss in the consolidated financial statements. However, group finance costs, finance income and income taxes are managed on a group basis and are not allocated to operating segments.

The transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

(1) Information about reportable segment profit or loss, assets and liabilities

For the period from July 1 to September 30, 2019

	Petrochemical Division	Utility Division	Others	Adjustment and eliminations	Consolidated Amount
Revenues					
External customer	$144,448,196	$10,962,390	$4,601,402	$-	$160,011,988
Inter-segment	3,801,294	3,166,600	1,240,395	(8,208,289)	-
Total revenues	$148,249,490	$14,128,990	$5,841,797	$(8,208,289)	$160,011,088
Segment profit or loss	$4,810,842	$4,450,284	$172,151	$4,917,797	$14,351,074

For the period from July 1 to September 30, 2018

	Petrochemical Division	Utility Division	Others	Adjustment and eliminations	Consolidated Amount
Revenue					
External customer	$185,144,860	$11,248,329	$4,725,877	$-	$201,119,066
Inter-segment	3,999,659	3,016,951	1,113,413	(8,130,023)	-
Total revenues	$189,144,519	$14,265,280	$5,839,290	$(8,130,023)	$201,119,066
Segment profit or loss	$20,171,524	$1,845,634	$242,209	$2,978,230	$25,237,597

Information for the nine months ended September 30, 2019

	Petrochemical Division	Utility Division	Others	Adjustment and eliminations	Consolidated Amount
Revenue					
External customer	$452,358,717	$29,445,278	$13,447,837	$-	$495,251,832
Inter-segment	11,079,843	8,989,523	3,369,190	(23,438,556)	-
Total revenues	$463,438,560	$38,434,801	$16,817,027	$(23,438,556)	$495,251,832
Segment profit or loss	$16,615,253	$8,914,480	$555,501	$10,093,347	$36,178,581

Information for the nine months ended September 30, 2018

	Petrochemical Division	Utility Division	Others	Adjustment and eliminations	Consolidated Amount
Revenue					
External customer	$530,602,615	$31,218,789	$13,702,152	$-	$575,523,556
Inter-segment	11,451,147	8,339,287	3,214,985	(23,005,419)	-
Total revenues	$542,053,762	$39,558,076	$16,917,137	$(23,005,419)	$575,523,556
Segment profit or loss	$67,667,771	$5,145,077	$783,838	$6,147,496	$79,744,182

Note1: Revenues were from segments below the quantitative thresholds, such as load and unload process, transportation services and sales of petroleum products. None of those segments has ever met the quantitative thresholds for determining reportable segments assets.

Note2: Inter-segment revenues are eliminated upon consolidation and reflected in the 'adjustments and eliminations' section. All other adjustments and eliminations are part of detailed reconciliations presented further below.

Note3: Profit or loss of each reportable segment does not include the share of profits of associates and joint venture and the foreign currency exchange gains and losses.

The reportable segment assets and liabilities as of September 30, 2019, December 31, 2018 and September 30, 2018 are as follows:

Reportable segment assets

	Petrochemical Division	Utility Division	Others	Adjustment and eliminations	Consolidated Amount
September 30, 2019	$185,800,606	$43,325,470	$196,673,901	$(26,614,929)	$399,185,048
December 31, 2018	$201,667,818	$37,478,836	$194,794,154	$(28,171,353)	$405,769,455
September 30, 2018	$227,007,420	$36,006,030	$204,592,427	$(28,223,042)	$439,382,835

Reportable segment liabilities

	Petrochemical Division	Utility Division	Others	Adjustment and eliminations	Consolidated Amount
September 30, 2019	$49,800,272	$6,838,896	$18,904,193	$(5,177,215)	$70,366,146
December 31, 2018	$49,874,344	$4,051,550	$16,465,003	$(5,277,622)	$65,113,275
September 30, 2018	$71,519,237	$3,705,458	$19,991,407	$(6,315,078)	$88,901,024

Reconciliations of reportable segment profit or loss:

	For the period from July 1 to September 30, 2019	For the period from July 1 to September 30, 2018	For the nine months ended September 30, 2019	For the nine months ended September 30, 2018
	NTD	NTD	NTD	NTD
Total profit or loss for reportable segments	$9,261,126	$22,017,158	$25,529,733	$72,812,848
Other profit	172,151	242,209	555,501	783,838
Unallocated amounts:				
Share of profits of associates and joint venture	504,168	315,951	985,656	567,913
Gain (loss) on foreign exchange	292,172	383,789	1,240,921	1,591,254
Other corporate revenue (expenses)	4,121,457	2,278,490	7,866,770	3,988,329
Income before tax from continuing operations	$14,351,074	$25,237,597	$36,178,581	$79,744,182