

# **POSCO International Corporation and its subsidiaries**

Consolidated financial statements  
for the years ended December 31, 2021 and 2020  
with the independent auditor's report

POSCO International Corporation  
and its subsidiaries

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## Independent auditor's report

### The Shareholders and Board of Directors POSCO International Corporation

#### Opinion

We have audited the accompanying consolidated financial statements of POSCO International Corporation (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2021 and 2020, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2021 and 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("KIFRS").

#### Basis for opinion

We conducted our audit in accordance with Korean Auditing Standards ("KGAAS"). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Key audit matters

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

#### *Review of realizability of deferred tax assets*

The Group recognized deferred tax assets amounting to ₩ 254,865 million as of December 31, 2021 as described in Note 28. Recognition of deferred tax assets are significantly dependent on management's judgements related to probability and sufficiency of future taxable profit, utilization of deductible temporary differences, and constant tax planning and strategies. The Company also has uncertainties on future taxable profit in relation to evaluating the deferred tax assets. We identified the review of the probability of realizing deferred tax assets as significant risk as the account balance is significant, and significant management's judgements and complex estimation are involved in valuation of the account.

The major audit procedures we have performed in this regard are as follows:

- We reviewed the appropriateness of underlying data used to estimate future taxable profit by comparing the estimated and actual taxable profits of prior years.
- We reviewed expected tax rate by reviewing the business plan approved by management.
- We reviewed the expected tax rate which is to be applied on significant temporary differences to be utilized in subsequent years.

- We utilized our tax experts for verifying whether tax adjustments are correct.

### **Responsibilities of management and those charged with governance for the consolidated financial statements**

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with KIFRS, and for such internal control as management determines is necessary to enable the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

Those charged with governance are responsible for overseeing the Group's financial reporting process.

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

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

As part of an audit in accordance with KGAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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



The engagement partner on the audit resulting in this independent auditor's report is Yongwoo Lee.

*Ernst & Young Han Young*

March 11, 2022

This audit report is effective as of March 11, 2022, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the auditor's report date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

# **POSCO International Corporation and its subsidiaries**

Consolidated financial statements  
for the years ended December 31, 2021 and 2020

“The accompanying consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Company.”

Joo, Si-Bo  
Chief Executive Officer  
POSCO International Corporation

POSCO International Corporation and its subsidiaries  
Consolidated statements of financial position  
for the years ended December 31, 2021, and 2020

	Notes	Korean won in millions		U.S. dollar in thousands (Note 2)
		2021	2020	2021
<b>Assets</b>				
<b>Current assets</b>				
Cash and cash equivalents	4,30,31	₩ 521,160	₩ 679,304	\$ 439,612
Trade and other receivables, net	5,30,31	4,358,489	2,894,352	3,676,498
Other current financial assets	6,30,31	80,978	18,708	68,307
Derivative financial assets	19,30,31	61,539	113,411	51,910
Other current assets	7	228,839	129,394	193,032
Inventories, net	8	1,904,179	929,406	1,606,224
		₩ 7,155,184	₩ 4,764,575	\$ 6,035,583
<b>Non-current assets</b>				
Trade and other receivables, net	5,30,31	₩ 144,646	₩ 230,798	\$ 122,013
Other non-current financial assets	6,30,31	64,484	29,539	54,394
Investments in associates	9	359,634	342,796	303,361
Property, plant and equipment, net	10	1,353,149	1,325,419	1,141,416
Right-of-use assets, net	11	91,180	91,593	76,913
Intangible assets, net	12	1,189,369	1,129,385	1,003,264
Investment properties, net	13	142,991	147,594	120,617
Net defined benefit assets	17	9,052	-	7,635
Other non-current assets	7	1,459	65	1,231
Deferred tax assets	28	254,865	264,796	214,985
Current tax assets		4,721	1,479	3,982
		₩ 3,615,550	₩ 3,563,464	\$ 3,049,811
<b>Total assets</b>		<b>₩ 10,770,734</b>	<b>₩ 8,328,039</b>	<b>\$ 9,085,394</b>
<b>Liabilities and equity</b>				
<b>Current liabilities</b>				
Trade and other payables	14,30,31	₩ 2,913,929	₩ 1,774,107	\$ 2,457,975
Borrowings	15,30,31	1,894,385	796,038	1,597,963
Current portion of bonds	15,30,31	408,877	417,042	344,898
Derivative financial liabilities	19,30,31	76,303	90,254	64,364
Current provision	18	24,343	13,083	20,534
Other current liabilities	16	261,809	213,755	220,843
Current tax liabilities		89,693	93,084	75,658
		₩ 5,669,339	₩ 3,397,363	\$ 4,782,235
<b>Non-current liabilities</b>				
Trade and other payables	14,30,31	₩ 105,154	₩ 176,541	\$ 88,700
Borrowings	15,30,31	246,111	379,347	207,601
Bonds	15,30,31	1,143,578	1,107,420	964,638
Other non-current liabilities	16	1,538	704	1,297
Net defined benefit liabilities	17	5,411	11,254	4,564
Provisions	18,19	64,033	72,308	54,013
Deferred tax liabilities	28	23,430	22,228	19,764
		₩ 1,589,255	₩ 1,769,802	\$ 1,340,577
<b>Total liabilities</b>		<b>₩ 7,258,594</b>	<b>₩ 5,167,165</b>	<b>\$ 6,122,812</b>
<b>Equity</b>				
Issued capital	20	₩ 616,876	₩ 616,876	\$ 520,351
Capital surplus	20	558,242	558,027	470,892
Other components of equity	20	(8)	(8)	(7)
Accumulated other comprehensive income (loss)	6,21	18,775	(25,032)	15,837
Retained earnings	22	2,292,516	2,008,233	1,933,797
		₩ 3,486,401	₩ 3,158,096	\$ 2,940,870
<b>Equity attributable to equity holders of the parent</b>		<b>₩ 3,486,401</b>	<b>₩ 3,158,096</b>	<b>\$ 2,940,870</b>
Non-controlling interests		25,739	2,778	21,712
<b>Total equity</b>		<b>₩ 3,512,140</b>	<b>₩ 3,160,874</b>	<b>\$ 2,962,582</b>
<b>Total liabilities and equity</b>		<b>₩ 10,770,734</b>	<b>₩ 8,328,039</b>	<b>\$ 9,085,394</b>

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

POSCO International Corporation and its subsidiaries  
Consolidated statements of comprehensive income  
for the years ended December 31, 2021, and 2020

	Notes	Korean won in millions		U.S. dollar in thousands (Note 2)
		2021	2020	2021
<b>Sales</b>	3	₩ 33,948,865	₩ 21,472,386	\$ 28,636,748
<b>Cost of sales</b>	23	(32,814,146)	(20,547,321)	(27,679,583)
<b>Gross profit</b>		₩ 1,134,719	₩ 925,065	\$ 957,165
Selling and administrative expenses	23,24	(549,333)	(450,587)	(463,377)
<b>Operating profit</b>		₩ 585,386	₩ 474,478	\$ 493,788
Share of profit in associates	9	69,361	58,989	58,508
Share of loss in associates	9	(9,264)	(40,191)	(7,815)
Finance income	25	1,243,727	1,176,349	1,049,116
Finance costs	25	(1,319,082)	(1,260,552)	(1,112,680)
Other income	26	86,048	17,593	72,584
Other expenses	26	(167,476)	(99,497)	(141,270)
<b>Profit for the year before tax</b>	3	₩ 488,700	₩ 327,169	\$ 412,231
Income tax expenses	28	(132,212)	(97,645)	(111,524)
<b>Profit for the year</b>		₩ 356,488	₩ 229,524	\$ 300,707
<b>Other comprehensive income (loss):</b>				
<i>Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:</i>				
Equity adjustments in equity method	21,28	₩ 13,629	₩ (7,799)	\$ 11,497
Net loss on equity adjustments in equity method	21,28	2,869	(1,534)	2,420
Exchange difference on translation of foreign operations	21	34,945	(22,772)	29,477
Loss on valuation of derivatives	21	113	(84)	95
<i>Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods:</i>				
Loss on valuation of equity instruments at FVOCI	6,21,28	₩ 28	₩ (6,042)	\$ 24
Equity adjustments in equity method	21,28	(8,512)	(3,225)	(7,180)
Re-measurement loss on defined benefit liabilities	17,28	8,913	(551)	7,518
Exchange differences on translation of foreign operations	21	(19)	1,338	(16)
<b>Other comprehensive income(loss) for the year, net of tax</b>		₩ 51,966	₩ (40,669)	\$ 43,835
<b>Total comprehensive income for the year, net of tax</b>		₩ 408,454	₩ 188,855	\$ 344,542
Profit for the year attributable to:				
Owners of the parent		₩ 360,789	₩ 238,557	\$ 304,335
Non-controlling interests		(4,301)	(9,033)	(3,628)
Total comprehensive income attributable to:				
Owners of the parent		₩ 412,758	₩ 196,462	\$ 348,172
Non-controlling interests		(4,305)	(7,607)	(3,631)
Earnings per share (Korean won and U.S. dollar):				
Basic	29	₩ 2,924	₩ 1,934	\$ 2.47
Diluted	29	₩ 2,924	₩ 1,934	\$ 2.47

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

**POSCO International corporation and its subsidiaries**  
**Consolidated statements of changes in equity**  
**for the years ended December 31, 2021, and 2020**

	Korean won in millions								U.S. dollar in thousands
	Equity attributable to owners of the parent								(Note 2)
	Issued capital	Capital surplus	Other components of equity	Accumulated other comprehensive income (loss)	Retained earnings	Sub-total	Non-controlling interest	Total	Total
<b>As of January 1, 2020</b>	<b>₩ 616,876</b>	<b>₩ 557,760</b>	<b>₩ (8)</b>	<b>₩ 15,595</b>	<b>₩ 1,857,506</b>	<b>₩ 3,047,729</b>	<b>₩ 332</b>	<b>₩ 3,048,061</b>	<b>\$ 2,571,118</b>
Profit for the year	-	-	-	-	238,557	238,557	(9,033)	229,524	193,610
Net loss on valuation of equity instruments at FVOCI	-	-	-	(6,042)	-	(6,042)	-	(6,042)	(5,096)
Equity adjustments in equity method	-	-	-	(12,557)	-	(12,557)	-	(12,557)	(10,593)
Exchange differences on translation of foreign operations	-	-	-	(22,772)	-	(22,772)	1,338	(21,434)	(18,080)
Re-measurement net (loss) on defined benefit liabilities	-	-	-	-	(639)	(639)	88	(551)	(465)
Loss on valuation of derivatives	-	-	-	(84)	-	(84)	-	(84)	(71)
<b>Total comprehensive income</b>	<b>₩ -</b>	<b>₩ -</b>	<b>₩ -</b>	<b>₩ (41,455)</b>	<b>₩ 237,918</b>	<b>₩ 196,463</b>	<b>₩ (7,607)</b>	<b>₩ 188,856</b>	<b>\$ 159,305</b>
Dividends (DPS: ₩700)	-	-	-	-	(86,363)	(86,363)	-	(86,363)	(72,849)
Capital increase of subsidiaries	-	-	-	-	-	-	13,598	13,598	11,470
Acquisition of shares in subsidiaries	-	267	-	-	-	267	(3,545)	(3,278)	(2,765)
Reclassification arising from disposal of equity instruments at FVOCI	-	-	-	828	(828)	-	-	-	-
<b>As of December 31, 2020</b>	<b>₩ 616,876</b>	<b>₩ 558,027</b>	<b>₩ (8)</b>	<b>₩ (25,032)</b>	<b>₩ 2,008,233</b>	<b>₩ 3,158,096</b>	<b>₩ 2,778</b>	<b>₩ 3,160,874</b>	<b>\$ 2,666,279</b>
<b>As of January 1, 2021</b>	<b>₩ 616,876</b>	<b>₩ 558,027</b>	<b>₩ (8)</b>	<b>₩ (25,032)</b>	<b>₩ 2,008,233</b>	<b>₩ 3,158,096</b>	<b>₩ 2,778</b>	<b>₩ 3,160,874</b>	<b>\$ 2,666,279</b>
Profit for the year	-	-	-	-	360,789	360,789	(4,301)	356,488	300,707
Net loss on valuation of equity instruments at FVOCI	-	-	-	28	-	28	-	28	24
Equity adjustments in equity method	-	-	-	7,986	-	7,986	-	7,986	6,736
Exchange differences on translation of foreign operations	-	-	-	34,945	-	34,945	(19)	34,926	29,461
Re-measurement net (loss) on defined benefit liabilities	-	-	-	-	8,926	8,926	(13)	8,913	7,518
Loss on valuation of derivatives	-	-	-	84	-	84	28	112	95
<b>Total comprehensive income</b>	<b>₩ -</b>	<b>₩ -</b>	<b>₩ -</b>	<b>₩ 43,043</b>	<b>₩ 369,715</b>	<b>₩ 412,758</b>	<b>₩ (4,305)</b>	<b>₩ 408,453</b>	<b>\$ 344,541</b>
Dividends (DPS: ₩700)	-	-	-	-	(86,362)	(86,362)	-	(86,362)	(72,849)
Business combinations under common control	-	215	-	-	-	215	27,265	27,480	23,180
Disposal of shares in subsidiaries	-	-	-	1,695	-	1,695	-	1,695	1,430
Disposal of shares in associates	-	-	-	(888)	888	-	-	-	-
Reclassification arising from disposal of equity instruments at FVOCI	-	-	-	(42)	42	-	-	-	-
<b>As of December 31, 2021</b>	<b>₩ 616,876</b>	<b>₩ 558,242</b>	<b>₩ (8)</b>	<b>₩ 18,776</b>	<b>₩ 2,292,516</b>	<b>₩ 3,486,402</b>	<b>₩ 25,738</b>	<b>₩ 3,512,140</b>	<b>\$ 2,962,581</b>

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

**POSCO International corporation and its subsidiaries**  
**Consolidated statements of cash flows**  
**for the years ended December 31, 2021, and 2020**

	Korean won in millions		U.S. dollar in thousands	
	2021	2020	2021	
<b>Operating activities</b>				
Profit for the year	₩ 356,488	₩ 229,524	\$ 300,707	
Reconciliation of profit for the year to net cash flows provided by (used in) operating activities:				
Depreciation of property, plant and equipment	91,226	83,768	76,952	
Amortization of intangible assets	206,807	209,616	174,447	
Depreciation of right-of-use assets	42,735	35,092	36,048	
Depreciation of investment properties	3,066	4,263	2,586	
Retirement benefits	20,582	17,674	17,361	
Bad debt expenses	20,162	700	17,007	
Interest expenses	82,451	98,489	69,550	
Share of loss in associates	9,264	40,191	7,814	
Loss on disposal of investments in associates	1,513	54	1,276	
Impairment loss on investments in associates	-	29,168	-	
Loss on disposal of property, plant and equipment	3,440	450	2,902	
Impairment loss on property, plant and equipment	44,276	80	37,348	
Loss on disposal of intangible assets	-	41	-	
Impairment loss on intangible assets	25,485	8,926	21,497	
Reversal of impairment loss on intangible assets	(496)	-	(418)	
Impairment loss on right-of-use assets	793	-	669	
Loss on disposal of Investment properties	4	-	3	
Loss on foreign currency translation	130,163	134,929	109,796	
Loss(gain) on valuation of fair value of biological assets	-	1,693	-	
Loss on settlement of derivatives	457,490	348,945	385,905	
Loss on valuation of derivatives	178,698	147,171	150,736	
Loss on valuation of inventories	2,667	1,126	2,250	
Income tax expense	132,212	97,645	111,524	
Contingent losses	10,497	847	8,855	
Loss on valuation of trade receivables	1,548	216	1,306	
Loss on valuation of trade payables	1,027	-	866	
Loss on termination of lease contract	27,422	-	23,131	
Other bad debt expenses	7,535	50,882	6,355	
Loss on disposal on financial assets at FVPL	-	13	-	
Financial guarantee expense	302	1,253	255	
Increase in provision for restoration	4,193	500	3,537	
Gain on valuation of financial instruments at FVPL	(229)	(3)	(193)	
Interest income	(24,218)	(36,784)	(20,429)	
Share of profit of associates	(69,361)	(58,989)	(58,508)	
Gain on disposal of investments in associates	(3,868)	(1,016)	(3,263)	
Dividends income	(706)	(230)	(596)	
Gain on foreign currency translation	(102,368)	(132,095)	(86,350)	
Gain on fair value valuation of biological assets	(122)	-	(103)	
Gain on settlement of derivatives	(370,839)	(302,178)	(312,812)	
Gain on valuation of derivatives	(218,768)	(196,466)	(184,536)	
Gain on valuation of trade receivable	(14,185)	(3,474)	(11,965)	
Gain on valuation of trade payable	(23)	(544)	(19)	
Reversal of other allowance for doubtful accounts	(2,146)	(314)	(1,810)	
Gain on disposal of property, plant and equipment	(682)	(916)	(575)	
Gain on disposal of intangible assets	(96)	-	(81)	
Gain on disposal of Investment properties	(38)	-	(32)	
Reversal of provisions	(27,891)	(1,177)	(23,527)	
Gains on disposal of financial instruments measured at FVPL	-	-	-	
Reversal of loss on valuation of inventories	(2,436)	(3,552)	(2,055)	
Financial guarantee income	(77)	-	(65)	
Reversal of impairment loss on investment in associates	(9,407)	-	(7,935)	
Gain on termination of lease contract	(26,598)	-	(22,436)	
Gain on exemption of debts	(669)	-	(564)	
	₩ 630,335	₩ 575,994	\$ 531,704	

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**POSCO International corporation and its subsidiaries**  
**Consolidated statements of cash flows (cont'd)**  
**for the years ended December 31, 2021, and 2020**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Changes in operating assets and liabilities:			
Trade receivables	₩ (1,386,731)	₩ 557,615	\$ (1,169,745)
Other current receivables	(13,693)	(85,568)	(11,550)
Other current assets	(95,265)	48,039	(80,358)
Inventories	(956,247)	182,108	(806,619)
Derivative financial assets	(9,053)	(11,841)	(7,636)
Other non-current receivables	24,365	911	20,552
Other non-current assets	143	187	121
Trade payables	1,019,160	(304,167)	859,688
Other current payables	29,533	17,040	24,912
Other current liabilities	42,839	(37,283)	36,136
Other non-current payables	(164)	855	(138)
Other non-current liabilities	(863)	3,710	(728)
Retirement benefits paid	(1,888)	(756)	(1,593)
Increase in plan assets	(23,398)	(19,900)	(19,737)
Increase (decrease) in provisions	6,033	(8,689)	5,089
	₩ (1,365,229)	₩ 342,261	\$ (1,151,606)
Interest received	20,190	28,999	17,031
Dividends received	38,532	65,874	32,503
Interest paid	(60,242)	(77,123)	(50,816)
Income tax paid	(129,762)	(46,920)	(109,458)
<b>Net cash flows provided by operating activities</b>	<b>₩ (509,688)</b>	<b>₩ 1,118,609</b>	<b>\$ (429,935)</b>
<b>Investing activities</b>			
<b>Cash inflows from investing activities</b>			
Decrease in short-term financial instruments	₩ -	₩ 2,141	\$ -
Decrease in long-term financial instruments	-	65	-
Disposal of investments in associates	16,705	3,385	14,091
Collection of investment in associates	14,739	-	12,433
Disposal of financial assets at amortized cost	-	928	-
Disposal of financial assets at FVPL	12,830	4,247	10,822
Disposal of financial assets at FVOCI	-	-	-
Decrease in long-term guarantee deposits	-	166	-
Net decrease in short-term loans	54,328	54,242	45,827
Decrease in long-term loans	13,561	-	11,439
Proceeds from disposal of property, plant and equipment	30,502	3,067	25,729
Proceeds from disposal of intangible assets	9	1,157	8
Proceeds from disposal of investment properties	1,570	-	1,324
Decrease in finance lease receivables	97,701	61,567	82,413
Increase in net cash flows from business combination	6,506	-	5,488
<b>Cash outflows from investing activities</b>			
Increase in short-term financial instruments	(59,782)	-	(50,428)
Acquisition of investments in associates	(756)	(7,863)	(638)
Acquisition of financial assets at FVOCI	(8,063)	(5,102)	(6,801)
Acquisition of financial assets at FVPL	(27,063)	-	(22,828)
Increase in long-term other receivables	(32,219)	(9,425)	(27,178)
Increase in guarantee deposits	(970)	(1,851)	(818)
Increase in short-term loans	-	(1,382)	-
Increase in long-term loans	(4,667)	(2,823)	(3,937)
Increase in long-term guarantee deposits	(58)	-	(49)
Acquisition of property, plant and equipment	(182,877)	(73,248)	(154,261)
Acquisition of intangible assets	(284,217)	(138,808)	(239,744)
<b>Net cash flows used in investing activities</b>	<b>₩ (352,221)</b>	<b>₩ (109,537)</b>	<b>\$ (297,108)</b>

(Continued)

**POSCO International corporation and its subsidiaries**  
**Consolidated statements of cash flows (cont'd)**  
**for the years ended December 31, 2021, and 2020**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>Financing activities</b>			
<b>Cash inflows from financing activities</b>			
Net increase in short-term borrowings	₩ 992,920	₩ -	837,554
Increase in long-term borrowings	433,969	10,373	366,064
Issuance of bonds	436,321	298,995	368,048
Paid-in capital increase of subsidiaries	-	13,598	-
<b>Cash outflows from financing activities</b>			
Net decrease in short-term borrowings	-	(361,048)	-
Repayment of current Portion of long-term borrowings	(537,908)	(204,326)	(453,739)
Redemption of current Portion of bonds	(437,660)	(130,000)	(369,178)
Payment of lease liabilities	(108,068)	(94,920)	(91,158)
Dividends paid	(86,362)	(86,362)	(72,849)
Acquisition of subsidiaries' shares	-	(3,278)	-
<b>Net cash flows used in financing activities</b>	<b>₩ 693,212</b>	<b>₩ (556,968)</b>	<b>\$ 584,742</b>
Net increase in cash and cash equivalents	₩ (168,697)	₩ 452,104	\$ (142,301)
Cash and cash equivalents at January 1	679,304	236,089	573,011
Net foreign exchange difference	10,553	(8,889)	8,902
<b>Cash and cash equivalents at December 31</b>	<b>₩ 521,160</b>	<b>₩ 679,304</b>	<b>\$ 439,612</b>

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

## 1. Corporate information

### 1.1 The parent company

POSCO International Corporation (the “Company”) was incorporated on December 27, 2000 as a result of a spin-off of the trading segment of Daewoo Corporation.

The Company and its subsidiaries (collectively, the “Group”) engages in various business activities, such as providing international trade, export agency services, intermediary trading, manufacturing, distribution, natural resource development and lease service. The primary products sold by the Company include various industrial grade steel, metals, chemicals, auto parts, machinery, ships, plants, electronics, special materials, grain and petroleum.

The Company has listed its shares on the Korea Exchange since March 23, 2001. The Company’s issued capital as of December 31, 2021 amounts to ₩616,876 million. POSCO, the Company’s largest shareholder, owns 62.91% equity interest in the Company.

### 1.2 Consolidated subsidiaries

Subsidiaries	Business	Number of shares	Country of domicile	Equity ownership(%)	
				2021	2020
POSCO INTERNATIONAL AMERICA CORP.	Trading	555,000	USA	100	100
POSCO INTERNATIONAL DEUTSCHLAND GmbH	Trading	-	Germany	100	100
POSCO INTERNATIONAL JAPAN CORP.	Trading	9,600	Japan	100	100
POSCO INTERNATIONAL SINGAPORE PTE. LTD.	Trading	3,500,000	Singapore	100	100
POSCO INTERNATIONAL ITALIA S.R.L.	Trading	-	Italy	100	100
POSCO INTERNATIONAL CHINA CO., LTD.	Trading	-	China	100	100
POSCO INTERNATIONAL MYANMAR CO., LTD.	Trading	493,240	Myanmar	100	100
POSCO INTERNATIONAL MEXICO S.A. de C.V.	Trading	53,078	Mexico	100	100
POSCO INTERNATIONAL MALAYSIA SDN BHD	Trading	6,091,002	Malaysia	100	100
POSCO INTERNATIONAL SHANGHAI CO., LTD.	Trading	-	China	100	100
POSCO DAEWOO SHANGHAI WAIGAOQIAO CO., LTD.	Trading	-	China	100	100
POSCO INTERNATIONAL INDIA PVT., LTD.	Trading	8,940,000	India	100	100
POSCO INTERNATIONAL VIETNAM CO., LTD.	Trading	-	Vietnam	100	100
POSCO INTERNATIONAL (THAILAND) CO., LTD. (*1)	Trading	-	Thailand	100	100
POSCO INTERNATIONAL INDONESIA	Trading	111,672	Indonesia	100	100
POSCO SOUTH EAST ASIA PTE. LTD.	Trading	1,020,000	Singapore	100	100
POSCO MOBILITY SOLUTION (*4)	Steel manufacturing	1,000,000	Korea	100	-
POSCO INTERNATIONAL TEXTILE LLC.	Cotton	-	Uzbekistan	100	100
POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY. LTD. (*1)	Natural resource development	119,676,667	Australia	100	100
PI AAPC CORP.	Steel manufacturing	5,000	USA	100	100
PT. BIO INTI AGRINDO	Natural resource development	496,340	Indonesia	85	85
BRASIL SAOPAULO STEEL PROCESSING CENTER	Steel manufacturing	-	Brazil	51	51
POSCO INTERNATIONAL POWER(PNGPOM) LTD. (*3)	Service	16,791,045	Papua New Guinea	-	100
POSCO INTERNATIONAL POWER (PNGLAE) LTD.	Service	36,239,782	Papua New Guinea	100	100
POHANG SRDC CO., LTD.	Steel manufacturing	909,979	Korea	51	51
GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	Grain crop/Wholesales	60,000	Myanmar	60	60
POSCO INTERNATIONAL GLOBAL DEVELOPMENT PTE. LTD.	Hotel	44,379,098	Singapore	75	75
POSCO INTERNATIONAL AMARA CO., LTD. (*3)	Hotel	680,000	Myanmar	64	64
POSCO INTERNATIONAL UKRAINE LLC.	Grain procurement	-	Ukraine	100	100
POSCO TMC INDIA PVT. LTD.	Steel manufacturing	876,041	India	74	74
GRAIN TERMINAL HOLDING PTE. LTD.	Grain	75	Singapore	75	75
Mykolaiv Milling Works PJSC.	Grain	-	Ukraine	75	75
Yuzhnaya Stevedoring Company Limited LLC.	Grain	-	Ukraine	75	75
SUZHOU POSCO-CORE TECHNOLOGY CO., LTD. (*2)	Steel manufacturing	-	China	60	-
POSCO INTERNATIONAL E&P MALAYSIA SDN. BHD. (*2)	Natural resource	100	Malaysia	100	-
AGPA PTE. LTD. (*2)	Grain	100	Singapore	100	-

## 1.2 Consolidated subsidiaries (cont'd)

(\*1) POSCO International Australia Holdings Pty. Ltd. is the holding company that has 100% ownership interests in POSCO International Narrabri Investment Pty. Ltd. and POSCO International Australia Pty. Ltd.

(\*2) The investees were newly incorporated for the year ended December 31, 2021.

(\*3) The investees were liquidated for the year ended December 31, 2021.

(\*4) In January 2022, POSCO SPS changed its name to POSCO MOBILITY SOLUTION.

## 1.3 Summarized financial information of the subsidiaries

Summarized financial information of the subsidiaries for the year ended December 31, 2021 is as follows (Korean won in millions):

Subsidiaries	Assets	Liabilities	Equity	Sales	Net profit(loss)
POSCO INTERNATIONAL AMERICA CORP.	597,758	509,778	87,980	2,341,772	10,531
POSCO INTERNATIONAL DEUTSCHLAND GmbH	381,367	374,284	7,083	645,792	2,952
POSCO INTERNATIONAL JAPAN CORP.	228,615	218,718	9,897	892,322	5,821
POSCO INTERNATIONAL SINGAPORE PTE. LTD.	416,495	407,243	9,252	4,285,372	3,094
POSCO INTERNATIONAL ITALIA S.R.L.	247,485	236,625	10,860	678,388	1,494
POSCO INTERNATIONAL CHINA CO., LTD.	63,411	38,682	24,729	352,561	6,703
POSCO INTERNATIONAL MYANMAR CO., LTD	2,502	1,834	668	706	(957)
POSCO INTERNATIONAL MEXICO S.A. de C.V.	262,707	243,587	19,120	642,493	14,891
POSCO INTERNATIONAL MALAYSIA SDN BHD	24,215	21,479	2,736	346,271	81
POSCO INTERNATIONAL SHANGHAI CO., LTD.	59,700	49,128	10,572	152,676	1,811
DAEWOO INTERNATIONAL SHANGHAI WAIGAOQIAO CO., LTD.	19,099	19,250	(151)	62,215	629
POSCO INTERNATIONAL INDIA PVT., LTD.	13,263	19,775	(6,512)	29,093	(7,671)
POSCO INTERNATIONAL VIETNAM CO., LTD.	32,462	25,938	6,524	509,873	3,316
POSCO SOUTH EAST ASIA PTE. LTD.	7,569	13,384	(5,815)	-	(487)
POSCO INTERNATIONAL UKRAINE LLC.	3,828	2,917	911	12,802	(474)
POSCO INTERNATIONAL (THAILAND) CO., LTD.	52,693	45,308	7,385	261,097	1,832
PT POSCO INTERNATIONAL INDONESIA	13,836	4,023	9,813	60,977	555
POSCO INTERNATIONAL TEXTILE LLC.	128,848	15,326	113,522	190,309	37,004
POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY. LTD.	77,138	5,552	71,586	21,256	(28,859)
PT. BIO INTI AGRINDO	348,542	245,736	102,806	166,807	49,549
BRASIL SAOPAULO STEEL PROCESSING CENTER	2,846	25,199	(22,353)	-	(158)
POSCO INTERNATIONAL POWER (PNGLAE) LTD.	74,323	45,379	28,944	39,696	9,843
POHANG SRDC CO., LTD.	14,859	4,733	10,126	6,291	834
GOLDEN LACE POSCO INTERNATIONAL CO., LTD.	16,430	15,149	1,281	9,602	(5,287)
POSCO INTERNATIONAL GLOBAL DEVELOPMENT PTE. LTD.	269,051	244,330	24,721	152	(25,739)
POSCO INTERNATIONAL AMARA CO., LTD.	298,524	353,658	(55,134)	27,408	(26,954)
POSCO TMC INDIA PVT. LTD.	23,350	19,808	3,542	54,335	1,198
GRAIN TERMINAL HOLDING PTE. LTD.	66,313	42,917	23,396	-	39
Mykolaiv Milling Works PJSC.	55,173	67,825	(12,652)	7,583	(8,161)
Yuzhnaya Stevedoring Company Limited LLC.	23,212	561	22,651	632	760
POSCO MOBILITY SOLUTION	845,109	249,843	595,266	1,179,596	31,838
SUZHOU POSCO-CORE TECHNOLOGY CO., LTD.	119,404	49,681	69,723	36,236	315
POSCO INTERNATIONAL E&P MALAYSIA SDN. BHD.	185	88	97	-	(204)
AGPA PTE. LTD.	80,414	-	80,414	-	-

The financial information of PI AAPC Corp. is not presented as it is not material to the Group's consolidated financial statements.

## 2. Basis of preparation and summary of significant accounting policies

### 2.1 Basis of preparation

The Company and its subsidiaries (collectively referred to as, the “Group”) prepares statutory financial statements in accordance with Korean International Financial Reporting Standards (“KIFRS”) enacted by the *Act on External Audit of Stock Companies, etc.*

The consolidated financial statements have been prepared on a historical cost basis, except for derivative financial instruments, debt and equity instruments that have been measured at fair value. The carrying values of assets and liabilities that are designated as hedged items in fair value is not recorded at amortized cost but recorded reflecting changes in the fair values attributable to the risks that are being hedged. The consolidated financial statements are presented in Korean won (KRW), and the financial statements are presented in Korean won in thousands while all of notes in Korean won in millions, except when otherwise indicated.

#### 2.1.1 Financial statements translation

The accompanying consolidated financial statements are expressed in Korean won and, solely for the convenience of the readers, have been translated into United States dollars at the rate of ₩1,185.5 to US\$1, the exchange rate on December 31, 2021. Such translation should not be construed as a representation that the Korean won amounts can actually be converted into United States dollars at the exchange rate used for the purposes of such translation.

#### 2.1.2 Basis of consolidation

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries as of December 31 of each financial year. 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:

- Power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee)
- Exposure, or rights, to variable returns from its involvement with the investee
- The ability to use its power over the investee to affect its returns

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

- The contractual arrangement between with the other vote holders
- Rights arising from other contractual arrangements
- 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. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the statement of comprehensive income from the date the Group gains control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group’s accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full.

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

**POSCO International Corporation and its subsidiaries**  
**Note to the consolidated financial statements**  
**December 31, 2021 and 2020**

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If the Group loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any resultant gain or loss is recognized in profit or loss. Any remaining investment in the previous subsidiary is recognized at fair value.

## **2.2 Summary of significant accounting policies**

### **2.2.1 Business combinations and Goodwill**

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree at fair value or a proportionate share of the non-controlling interest in the acquiree's identifiable net assets. Acquisition-related costs are expensed when incurred.

The Group classifies or designates identifiable assets acquired and liabilities assumed at the acquisition date based on the terms and conditions of the acquisition, economic conditions, the acquirer's operating or accounting policies and other related conditions. This classification includes the separation of embedded derivatives from the acquiree's main contract.

If the acquirer has provided the acquiree with contingent consideration, the consideration is measured at its acquisition-date fair value and included in the consideration transferred and subsequent changes in the fair value of the contingent consideration classified as an asset or liability are recognized in profit or loss or other comprehensive income in accordance with KIFRS 1109. In addition, contingent consideration classified as equity is not remeasured but is accounted for within equity at the time of settlement. If the contingent consideration does not fall within the scope of KIFRS 1109, it is measured in accordance with the appropriate KIFRS.

Goodwill is measured in the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

After initial recognition, goodwill is measured at acquisition cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash generating units that are expected to benefit from the synergy effect of combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

When disposing of a business within a cash-generating unit to which goodwill is allocated, the goodwill related to the business to be disposed of is included in the carrying values of the business when determining the profit or loss on disposal, and is measured based on the relative value of the part that exists and the part that is disposed within the cash-generating unit.

### **2.2.2 Investment in associates and joint ventures**

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The Group's investments in its associate and joint venture are accounted for using the equity method. Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate or joint venture since the acquisition date. The goodwill associated with the associate or joint venture is included in the carrying values of the investment and does not carry out amortization or separate impairment testing.

## 2.2.2 Investment in associates and joint ventures (cont'd)

The statement of comprehensive income reflects the Group's share of the operating results of the associate or joint venture. Any change in OCI of those investees is presented as part of the Group's OCI. In addition, when there has been a change recognized directly in the equity of the associate or joint venture, the Group recognizes its share of any changes in the statement of changes in equity. Unrealized gains and losses resulting from transactions between the Group and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture.

The aggregate of the Group's share of profit or loss of an associate and a joint venture is shown in non-operating profit or loss in the consolidated statements of comprehensive income after deducting tax effects and non-controlling interests in the subsidiaries of the associate and the joint venture.

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

After application of the equity method, the Group determines whether it is necessary to recognize an impairment loss on its investment in its associate or joint venture. At each reporting date, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, then recognizes the loss as other expenses in the statement of comprehensive income.

Upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

## 2.2.3 Current versus non-current classification

The Group presents assets and liabilities in the statement of financial position based on current/non-current classification.

An asset is current when it is:

- Expected to be realized or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of short-term trading
- Expected to be realized within twelve months after the reporting period, or
- Cash or cash equivalent unless 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 current when:

- It is expected to be settled in the normal operating cycle
- It is held primarily for the purpose of short-term trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

## 2.2.4 Fair value measurement

The Group measures financial instruments such as derivatives at fair value as of the reporting date. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Group.

The fair value of an asset or a liability is measured 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 uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognized in the financial statements at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization based on the lowest level input that is significant to the fair value measurement at each reporting date.

For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy.

Fair value related disclosures for financial instruments and non-financial assets that are measured at fair value or where fair values are disclosed, are summarized in the following notes:

	Notes
Disclosure for valuation methods, significant estimates and assumptions	2, 6 and 30
Quantitative disclosures of fair value measurement hierarchy	30
Investment properties	13
Financial instruments (including those carried at amortized cost)	6 and 30

## 2.2.5 Revenue from contracts with customers

Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services.

### 2.2.5.1 Trade

#### (1) Classification and implementation of performance obligations

Performance obligations are identified in certain contracts with respect to (1) the sale of goods, and (2) transport services for the performance of their duties as part of their trade transactions with customers. The Group recognizes the transaction price allocated to these performance obligations as revenue upon completion of each performance obligation by applying the expected cost plus margin approach.

For the transactions of custom-made equipment, if the Group has no alternative use for assets created by fulfilling obligations and the Group has the enforceable right for the payment for the portion completed up to now, the revenue is recognized by the percentage-of-completion methods.

The Group provides guarantees for goods and services that are defective at the time of sale in accordance with the requirements of the law. Assurance type guarantees are accounted for in accordance with KIFRS 1037, 'Provisions, Contingent Liabilities and Contingent Assets.' Guarantees of the types of services classified as separate performance obligations are not recognized.

#### (2) Variable consideration

If the consideration in a contract includes a variable amount, the Group estimates the amount of consideration to which it will be entitled in exchange for transferring the goods to the customer. The variable consideration is estimated at contract inception and is included in the transaction price only to the extent that it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

In the case of a contract in which a right of return exists, for goods that are expected to be returned, instead of revenue, the Group recognizes it as a refund liability. A right of goods returned and corresponding adjustment to cost of sales are also recognized. If the Group receives short-term advances from its customers, the practical expedient is used, and the Group does not adjust the promised amount of consideration for the effects of a significant financing component if it expects, at contract inception, that the period between the transfer of the promised good or service to the customer and when the customer pays for that good or service will be one year or less.

#### (3) Judgment on principal versus agent

The Group controls each good or service prior to providing the goods or services to the customer, taking into account the main responsibilities and obligation of fulfilling the commitments in the trade transaction with the customer, and right to determine prices. Therefore, the Group has generally concluded that it is the principal in its revenue arrangements, except for the agency services, in which sales commission is recognized as revenue.

### 2.2.5.2 Resource development sector

Product distribution contracts in some of the contracts of the resource development transaction are not subject to the standard as the counterparties to the contract are not the "customers" as defined in KIFRS 1115. Revenue from gas sales is recognized when the control of goods is transferred.

### 2.2.5.3 Others

In addition to the above, the Group has manufacturing sectors, in which the revenue is recognized when the controls of goods or services are transferred.

## 2.2.6 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less.

## 2.2.7 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

### 2.2.7.1 Financial assets

#### (1) Initial recognition and measurement

Financial assets are classified, at initial recognition, as subsequently measured at amortized cost, fair value through other comprehensive income (OCI), and fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under KIFRS 1115.

In order for a financial asset to be classified and measured at amortized cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

#### (2) Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

- Financial assets at amortized cost (debt instruments)
- Financial assets at fair value through OCI with recycling of cumulative gains and losses (debt instruments)
- Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments)
- Financial assets at fair value through profit or loss

#### ***Financial assets at amortized cost (debt instruments)***

Financial assets at amortized cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified or impaired.

### 2.2.7.1 Financial assets (cont'd)

The Group's financial assets measured at amortized cost include cash and cash equivalents, trade receivables and other financial assets.

#### ***Financial assets at fair value through OCI (debt instruments)***

The Group measures debt instruments at fair value through OCI if both of the following conditions are met:

- The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling and
- 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.

For debt instruments at fair value through OCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss.

The Group's debt instruments at fair value through OCI are included under other non-current financial assets.

#### ***Financial assets designated at fair value through OCI (equity instruments)***

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under KIFRS 1032 'Financial Instruments: Presentation' and are not held for trading.

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the statement of profit or loss when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at fair value through OCI are not subject to impairment assessment.

The Group elected to classify irrevocably its non-listed equity investments under this category.

#### ***Financial assets at fair value through profit or loss***

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets upon initial recognition designated at fair value through profit or loss or required at fair value. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at fair value through profit or loss, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortized cost or at fair value through OCI, as described above, debt instruments may be designated at fair value through profit or loss on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch

Financial assets at fair value through profit or loss are carried in the statement of financial position at fair value with net changes in fair value recognized in profit or loss.

Derivatives and the listed equity investments that were not elected to classify to financial assets at fair value through OCI are included in this category. Dividends on the listed equity investments are recognized as profit or loss when the right is confirmed.

### 2.2.7.1 Financial assets (cont'd)

A derivative embedded in a hybrid contract is separated from the host and accounted for as a separate derivative if: the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if: the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss. Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows or a reclassification of a financial asset out of the fair value through profit or loss category.

A derivative embedded within a hybrid contract containing a financial asset host is not accounted for separately. The financial asset host together with the embedded derivative is required to be classified in its entirety as a financial asset at fair value through profit or loss.

### (3) Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the Group's consolidated statement of financial position) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if, and to what extent, it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, the Group continues to recognize the transferred asset to the extent of its continuing involvement. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

### (4) Impairment of financial assets

Disclosures related to impairment of financial assets are provided below:

- Disclosures for significant assumptions
- Debt instruments at fair value through OCI
- Trade receivables, including contract assets

The Group recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

### 2.2.7.1 Financial assets (cont'd)

ECLs are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For debt instruments at fair value through OCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the debt instrument is considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the internal credit rating of the debt instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group's debt instruments at fair value through OCI comprise solely of quoted bonds that are graded in the top investment category by the credit rating agency and, therefore, are considered to be low credit risk investments. It is the Group's policy to measure ECLs on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. The Group uses the ratings from the credit rating agency both to determine whether the debt instrument has significantly increased in credit risk and to estimate ECLs.

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

### 2.2.7.2 Financial liabilities

#### (1) Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

#### (2) Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

##### ***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 upon initial recognition as of fair value through profit or loss.

### 2.2.7.2 Financial assets (cont'd)

Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by KIFRS 1109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit or loss.

Financial liabilities designated at fair value through profit or loss are designated only at the initial date of recognition if the criteria in KIFRS 1109 are satisfied. The Group has not designated any financial liability as fair value through profit or loss.

#### **Loans and borrowings**

This is the category most relevant to the Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. This category generally applies to interest-bearing loans and borrowings.

### (3) Derecognition

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, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit or loss.

### 2.2.7.3 Offsetting of financial instruments

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

### 2.2.7.4 Derivative financial instruments and hedge accounting

#### (1) Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward currency contracts, interest rate swaps and forward commodity contracts, to hedge its foreign currency risks, interest rate risks and commodity price risks, respectively. Such derivative financial 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.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment
- Cash flow hedges when hedging the exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or the foreign currency risk in an unrecognized firm commitment
- Hedges of a net investment in a foreign operation

At the inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which the Group wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge.

#### 2.2.7.4 Derivative financial instruments and hedge accounting (cont'd)

The documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group will assess whether the hedging relationship meets the hedge effectiveness requirements (including the analysis of sources of hedge ineffectiveness and how the hedge ratio is determined). A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:

- There is 'an economic relationship' between the hedged item and the hedging instrument.
- The effect of credit risk does not 'dominate the value changes' that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

Hedges that meet the strict criteria for hedge accounting are accounted for, as described below:

##### (2) Fair value hedges

The change in the fair value of a hedging derivative is recognized in the statement of profit or loss. The change in the fair value of the hedged item attributable to the risk hedged is recorded as part of the carrying value of the hedged item and is also recognized in the statement of profit or loss

For fair value hedges relating to items carried at amortized cost, any adjustment to carrying value is amortized through profit or loss over the remaining term of the hedge using the EIR method. EIR amortization may begin as soon as an adjustment exists and no later than when the hedged item ceases to be adjusted for changes in its fair value attributable to the risk being hedged.

If the hedged item is derecognized, the unamortized fair value is recognized immediately in profit or loss.

When an unrecognized firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognized as an asset or liability with a corresponding gain or loss recognized in profit and loss.

##### (3) Cash flow hedges

The effective portion of the gain or loss on the hedging instrument is recognized in OCI in the cash flow hedge reserve, while any ineffective portion is recognized immediately in the statement of profit or loss. The cash flow hedge reserve is adjusted to the lower of the cumulative gain or loss on the hedging instrument and the cumulative change in fair value of the hedged item.

The Group uses forward currency contracts as hedges of its exposure to foreign currency risk in forecast transactions and firm commitments, as well as forward commodity contracts for its exposure to volatility in the commodity prices. The ineffective portion relating to foreign currency contracts is recognized as other expense and the ineffective portion relating to commodity contracts is recognized in other operating income or expenses.

The Group designates only the spot element of forward contracts as a hedging instrument. The forward element is recognized in OCI and accumulated in a separate component of equity under cost of hedging reserve.

The amounts accumulated in OCI are accounted for, depending on the nature of the underlying hedged transaction. If the hedged transaction subsequently results in the recognition of a non-financial item, the amount accumulated in equity is removed from the separate component of equity and included in the initial cost or other carrying amount of the hedged asset or liability. This is not a reclassification adjustment and will not be recognized in OCI for the period. This also applies where the hedged forecast transaction of a non-financial asset or non-financial liability subsequently becomes a firm commitment for which fair value hedge accounting is applied.

#### **2.2.7.4 Derivative financial instruments and hedge accounting (cont'd)**

For any other cash flow hedges, the amount accumulated in OCI is reclassified to profit or loss as a reclassification adjustment in the same period or periods during which the hedged cash flows affect profit or loss.

If cash flow hedge accounting is discontinued, the amount that has been accumulated in OCI must remain in accumulated OCI if the hedged future cash flows are still expected to occur. Otherwise, the amount will be immediately reclassified to profit or loss as a reclassification adjustment. After discontinuation, once the hedged cash flow occurs, any amount remaining in accumulated OCI must be accounted for depending on the nature of the underlying transaction as described above.

#### **2.2.8 Inventories**

Inventories are valued at the lower of cost and net realizable value. Acquisition costs for each inventory include purchase cost, conversion cost and other costs attributable to bringing the inventory to the location and condition. The unit cost of inventories is determined by the first-in-first-out method (individual method for materials-in-transit) and the weighted average method (Finished goods and Work-in-process).

#### **2.2.9 Non-current assets held for sale and discontinued operations**

The Group classifies non-current assets and disposal groups classified as held for sale or for distribution to equity holders of the parent if their carrying amounts will be recovered principally through a sale or distribution rather than through continuing use. Such non-current assets and disposal groups classified as held for sale or as held for distribution are measured at the lower of their carrying amount and fair value less costs to sell or to distribute. Costs to sell are the incremental costs directly attributable to the sales, excluding the finance costs and income tax expense.

The criteria for held for sale classification is regarded as met only when the sale is highly probable and the asset or disposal group is available for immediate sale in its present condition. Actions required to complete the sale should indicate that it is unlikely that significant changes to the sale will be made or that the sale will be withdrawn. The sale should be expected to be completed within one year from the date of the classification.

Property, plant and equipment and intangible assets are not depreciated or amortized once classified as held for sale or as held for distribution.

Assets and liabilities classified as held for sale or for distribution are presented separately as current items in the statement of financial position.

A disposal group qualifies as discontinued operation if it is:

- Represents a separate major line of business or geographical area of operations, or
- Is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations, or
- Is a subsidiary acquired exclusively with a view to resale

Discontinued operations are excluded from the results of continuing operations and are presented as a single amount as profit or loss after tax from discontinued operations in the statement of comprehensive income.

## 2.2.10 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and/or accumulated impairment losses, if any. These costs include alternative costs that meet the asset recognition criteria and borrowing costs for long-term construction projects. If a major part of an item of property, plant and equipment needs to be replaced periodically, the Group recognizes that part as an individual asset and depreciates it over its useful life. In addition, if an asset meets the recognition criteria, such as comprehensive inspection costs, it is included in the carrying amount of the property, plant and equipment, and all repair and maintenance costs are reflected in profit or loss when incurred. The present value of the expenditure is included in the acquisition cost of the property, plant and equipment if the estimated cost of removing, dismantling, or restoring the property to its original state after the economic use is terminated meets the recognition criteria of the provisions.

Land among property, plant and equipment is not depreciated, and property, plant and equipment other than land is estimated by individual assets and then depreciated using a straight-line method over the useful life.

	Useful life (years)
Buildings	40 ~ 50
Structures	8 ~ 30
Machinery	4 ~ 25
Others	4 ~ 5

Property, plant and equipment is derecognized on disposal (i.e., the date the acquirer obtains control of the asset) or when future economic benefits are not expected through use or disposal. The gain or loss arising from the removal of property, plant and equipment is determined by the difference between the net selling amount and the carrying amount and is recognized in profit or loss when the asset is derecognized.

The depreciation method, residual value, and useful life of property, plant and equipment are reviewed at the end of each fiscal year and are accounted for as a change in accounting estimates if appropriate.

## 2.2.11 Investment properties

Investment property is measured at the acquisition cost added to the related transaction cost and includes alternative costs that meet the asset recognition criteria when incurred. However, the costs incurred in daily management activities are recognized as expenses when incurred. Subsequent to initial recognition, investment properties are stated at cost, net of accumulated depreciation and/or accumulated impairment losses.

The Group derecognizes the investment property from its financial statements when it is expected that it will no longer be able to obtain future economic benefits through disposal (i.e., the date the acquirer obtains control of the asset) or use, and the resulting difference between the net disposal amount and the carrying amount is reflected in profit or loss at the time of derecognition. The amount of consideration to be included in the gain or loss arising from the derecognition of investment property is determined in accordance with the requirements in KIFRS 1115 for determining the transaction price.

In addition, only if the purpose of use of the asset has been changed, it is replaced by another account or investment property in another account.

## 2.2.12 Leases

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

### 2.2.12.1 Group as a lessee

The Group applies single recognition and measurement approach for all leases except for short-term leases and leases of low-value assets. The Group recognizes lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

#### (1) Right-of-use assets

The Group recognizes the right-of-use asset at the inception of the lease (i.e., when the underlying asset is available). The right-of-use assets are measured at cost and the cost model is applied for subsequent measurement. To apply the cost model, the accumulated depreciation and accumulated impairment losses are deducted, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets.

If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

Right-of-use assets are also subject to impairment and are described in the accounting policy for impairment of non-financial assets in Note 2-2-16.

#### (2) Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate.

Variable lease payments that do not depend on an index or a rate are recognized as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

The Group's lease liabilities are included in the interest-bearing borrowings.

#### (3) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of machinery and equipment (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office supplies that are considered to be low value. Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

#### **2.2.12.2 Group as a lessor**

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging 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. Contingent rents are recognized as revenue in the period in which they are earned.

#### **2.2.13 Intangible assets**

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses. Internally generated intangible assets, excluding development costs, are reflected in profit or loss in the period in which the expenditure is incurred.

Intangible assets are divided into intangible assets with finite useful lives and intangible assets with indefinite useful lives, and intangible assets with finite useful lives are amortized over the relevant useful life and are considered for impairment if an indication of impairment is identified. In addition, the useful life and amortization method is reviewed at least at the end of each fiscal year and is accounted for as a change in accounting estimates if changes are needed due to changes in the expected period of use or changes in the expected pattern of consumption of economic benefits. The amortization cost of an intangible asset is reflected in profit or loss as an expense cost item consistent with the function of intangible asset.

On the other hand, intangible assets with indefinite useful lives are not amortized but are carrying out impairment testing individually or in the cash-generating unit each year. In addition, whether it is appropriate to apply indefinite useful lives to such intangible assets is reviewed each year and, if not, those are changed to finite useful lives in a forward-looking manner.

An intangible asset is derecognized when it is disposed of (i.e., when the acquirer obtains control of the asset) or when no future economic benefits are expected from use or disposal. The Group shall reflect the profit or loss due to the difference between the net selling amount and the carrying amount when the intangible asset is derecognized in profit or loss at the time of derecognition.

#### **2.2.14 Exploration and evaluation assets, development assets, and mining rights**

The Group engages in the development of natural resources either by entering into contracts for sharing the extracted natural resources or by acquiring interests in the related projects. Expenditures related to natural resources are recognized as exploration and evaluation assets, development assets or mining rights. The nature of these intangible assets is as follows:

##### **2.2.14.1 Exploration and evaluation assets**

Exploration and evaluation assets consist of expenditures for topographical and geophysical studies and drilling and appraisal of oil fields. These assets are reclassified into development assets when the reserves are proven successful.

##### **2.2.14.2 Development assets**

Development assets consist of expenditures for fields, construction of production facilities, and others. These development assets are reclassified as mining rights at the inception of the commercial production.

### 2.2.14.3 Mining rights

Mining rights (production fields) consist of expenditure for improving productivity, oil reservoir management for prediction of oil output and production optimization, and increasing the return rate from crude oil. Mining rights are amortized using the unit of production method.

### 2.2.15 Biological assets

Consumable biological assets are measured at fair value less costs to sell. The fair value of consumable biological assets is measured by taking into account the expected fruit yield during the evaluation period based on the purchase price of the crop disclosed by the state, and the change in fair value is recognized as sales for the year. Cash flows over the life cycle of consumable biological assets are determined by taking into account the estimated production of agricultural crops and the published prices and estimated cultivation costs of the region in the main market for the crop. For bearer biological assets, it is measured at acquisition cost less accumulated depreciation and accumulated impairment losses.

### 2.2.16 Impairment of non-financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists or an annual impairment test of the asset is required, the Group estimates the recoverable amount of the asset. The recoverable amount of an asset is the larger of the net fair value of the asset or cash-generating unit, and is determined by individual assets, but is determined by the cash-generating unit to which the individual asset belongs if the cash inflows are not generated almost independently of those of other assets or groups of assets. If the carrying amount of the asset exceeds the recoverable amount, the asset is deemed impaired and the carrying amount of the asset is reduced to recoverable amount.

The value of use is assessed as the present value of the estimate of the expected future cash flows of the asset discounted at a pre-tax discount rate that reflects the time value of the currency and the market's assessment of the risk of the asset. Net fair value takes into consideration the latest transaction price. If no such transaction is identified, the decision is made using the appropriate evaluation model. These calculations use valuation multiples, market prices of listed shares, or other fair value indicators.

Impairment losses are reflected in profit or loss as a cost item consistent with the function of the impaired asset. However, if there is previously recognized revaluation surplus as an asset subject to the revaluation model, the impairment loss is offset with the revaluation surplus with the limit of the previous revaluation amount.

For assets other than goodwill, the Group assesses whether there are any indications at each reporting date that the impairment loss on previously recognized assets no longer exists or has decreased, and estimates recoverable amount if there are any such indications.

Impairment losses on assets other than previously recognized goodwill increase the carrying amount of the asset to the amount recoverable with the limit of amortized carrying amount of the asset that does not recognize the impairment losses, only if there is a change in the estimate used to determine the recoverable amount of the asset since the date of recognition of the impairment loss, and those reversal of Impairment Losses is reflected in profit or loss. However, in the case of assets subject to the revaluation model, the amount of the reversal is treated as an increase in the revaluation surplus.

### 2.2.17 Foreign currency translation

The Group's consolidated financial statements are presented in Korean won, which is also the parent 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.

The Group uses the direct consolidation method and reclassifies gains and losses reflecting the amount according to use of the direct consolidation method to profit or loss when disposing of overseas operations.

### **2.2.17.1 Transactions and balances**

In the preparation of financial statements of each entity in the Group, transactions made in currencies other than functional currencies are recorded by applying the exchange rate at the transaction date.

Monetary foreign currency assets and liabilities are translated to the functional currency exchange rate as of each reporting date.

The resulting translation differences are reflected in profit or loss. However, the translation differences arising from items for net investment hedges in overseas operations are directly reflected in equity by the time of disposal of the net investment and reflected in profit or loss at the time of disposal. The related tax effects are also treated as capital items.

On the other hand, non-monetary items denominated in foreign currency measured at historical cost are recognized by applying the exchange rate on the date of initial transaction and non-monetary items denominated in foreign currency at fair value are recognized by applying the exchange rate on the date of fair value measurement. Any gain or loss arising from the translation of non-monetary items is recognized in OCI or profit or loss in the same way as recognition item of gain or loss due to changes in the fair value of the item.

The transaction date for determining the exchange rate to be applied to the initial recognition of related assets, expenses, and revenues (or portions thereof) is the date on which the Group first recognizes a non-monetary asset or non-monetary liability by prepayment or advance receipt of the consideration. In the event of multiple prepayments or advance receipts, the Group shall determine the date of the transaction due to prepayment or advance receipt of the consideration respectively.

Any foreign exchange differences arising from monetary items that are part of the Group's net investment in overseas operations are recognized in OCI and reclassified from equity to profit or loss at the time of disposal of the net investment.

### **2.2.17.2 Translation of foreign operations**

The assets and liabilities of the foreign operations are translated to KRW by applying the average exchange rate for the year and the statement of comprehensive income items are translated to KRW, and the foreign exchange difference arising from such translation is recognized as a separate item of capital. On the other hand, the cumulative foreign exchange differences recognized in such capital are reflected in profit or loss at the time of disposal of the foreign operations.

The fair value adjustment for the carrying amount of goodwill, assets and liabilities arising from the acquisition of overseas operations is considered assets and liabilities of overseas operations and translated to a closing exchange rate.

### **2.2.18 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 incurred in relation to the borrowing of interest funds.

## 2.2.19 Government grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. Income-related grant is recognized as revenue according to systematic standards over the period necessary to respond to the related costs to be compensated with the grant, and asset-related grant is recognized as deferred income and the same amount is recognized as revenue each year for the useful life of the related assets.

When a non-monetary asset is received as a grant, the Group records the asset and grant as nominal amount and recognizes them as revenue in the income statement at a fixed amount over the estimated useful life of the related asset. The benefits of lower interest rates are recognized as additional government grant when loans with lower interest rates or similar support are provided.

## 2.2.20 Pension benefits

The Group operates a defined benefit pension plan, which requires contributions to be made.

The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method. Re-measurements, comprising of changes in actuarial gains and losses, the effect of the asset ceiling excluding net interest and the return on plan assets excluding net interest, are recognized immediately through OCI in the period in which they occur. Re-measurements are not reclassified to profit or loss in subsequent periods.

Past service costs are recognized in profit or loss on the earlier of:

- The date of the plan amendment or curtailment, and
- 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. The Group recognizes the net interest on the service cost and net defined benefit liability as selling and administrative expenses in profit or loss:

## 2.2.21 Taxes

### 2.2.21.1 Current tax

Current tax liabilities (assets) for the current and past periods are measured at the amount expected to be paid to or recovered from the tax authorities using the tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Current tax on items directly reflected in equity is reflected in equity and not in the income statement. The management periodically evaluates the recoverability of tax refunds in relation to the interpretation of the relevant tax code regulations and sets provisions if necessary.

### 2.2.21.2 Deferred tax

Deferred tax assets and liabilities are recognized for all temporary differences, which is the difference between the carrying amount and the tax base for the purpose of financial reporting of assets and liabilities.

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

- When deferred tax liability arises from the initial recognition of goodwill
- When 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
- 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

### 2.2.21.2 Deferred tax (cont'd)

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

- When deferred tax assets 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
- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, when temporary differences are improbable to reverse in the foreseeable future or taxable profit against which the temporary differences can be utilized is improbable to be available.

The carrying amount of deferred tax assets is reviewed at then each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

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.

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 OCI or directly in equity.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, would be recognized subsequently if the results of new information on the facts and circumstances existing at the acquisition date are recognized during the measurement period. The recognized deferred tax benefit is applied to reduce the carrying amount of goodwill related to the acquisition and, if the carrying amount of goodwill is zero, the remaining deferred tax benefit is recognized in profit or loss.

Deferred tax assets and deferred tax liabilities are offset; if the Group has a legally enforceable right to set off current tax assets against current tax liabilities; or if the taxable entity is the same; or if the taxable entity is different, but current tax liabilities and assets are intended to be settled net or a significant amount of deferred tax liabilities is settled or assets and liabilities are intended to be settled for each future accounting period in which the deferred tax assets are recovered, and the deferred tax assets and the deferred tax liabilities are related to the same taxation authority.

### 2.2.22 Provisions and contingent liabilities

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The amount of reimbursement is recognized and accounted for as a separate asset only when some or all of the expenditure required to settle the provision is expected to be paid by a third party and it is almost certain that Group will be reimbursed if it fulfills its obligations. Expenses recognized in the consolidated statement of comprehensive income related to provisions are offset against the amount recognized in relation to the third party's reimbursement.

If the time value of money is important, provisions are discounted at the current pre-tax rate reflecting the specific risk of debt. When a provision is valued at its present value, an increase in the carrying amount over the period is recognized as a finance cost.

## **2.2.22 Provisions and contingent liabilities (cont'd)**

### **(1) Provisions related to post-processing (restoration)**

A provision related to post-processing is recognized as the acquisition cost of assets related to resource development, if the project is obliged to be restored at the end of the project. Post-processing costs are calculated as the present value of the expected cost to fulfill the obligation using future expected cash flows, and the future expected cash flows are measured at a pre-tax rate that reflects the inherent risks of the relevant post-processing. The estimated cost of post-processing is reviewed and adjusted at each reporting date, and changes in the estimated cost or the discount rate to be applied are either added to or deducted from the cost of the asset.

### **(2) Onerous contract**

If the Group has entered into an onerous contract, the related present obligation is recognized and measured as a provision. Before recognizing a provision for an onerous contract, an impairment loss arising from the asset used to fulfill the onerous contract is recognized first.

An onerous contract is a contract in which the non-avoidable cost of fulfilling the contractual obligations exceeds the economic benefits expected to be received in that contract. The non-avoidable cost is the minimum net cost existing in the contract, which is the lower of the costs required to fulfill the contract and the compensation or penalty to be paid when the contract is not fulfilled.

## **2.3 Significant accounting judgments, estimates and assumptions**

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

Other disclosures relating to the Group's exposure to risks and uncertainties are disclosed in Capital management (Note 31-1) and financial risk management (Note 31-2).

### **2.3.1 Accounting judgments**

In the course of applying the accounting policies of the Group, the management's decisions that had the most significant impact on the amounts recognized in the financial statements are as follows;

#### **2.3.1.1 Calculation of the lease term for contracts with options for extension and termination - accounting as a lessee**

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

The Group has lease agreements that include the option for extension and termination. The Group applies judgement when assessing whether it is probable whether it will exercise the option to extend or terminate a lease. In other words, it considers all relevant facts and circumstances that create an economic incentive not to exercise the option for extension or exercise the option for termination. After the commencement date, the Group reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise or not to exercise the option to renew or to terminate (for example, significant lease improvements or significant customer customization of the leased asset).

### **2.3.1.1 Calculation of the lease term for contracts with options for extension and termination - accounting as a lessee (cont'd)**

The Group includes the renewal period as part of the lease term for the lease of facilities and machinery with a short non-cancellable period (e.g., 3 to 5 years). If alternative assets are not readily available, it has a significant negative effect on production. Therefore, the Group typically exercises the option to extend the lease. The extended term for a lease of facilities and machinery with a longer non-cancellable term (e.g., 10 to 15 years) is not part of the lease term because it is probable that the option for extension will not be exercised. In addition, the Group generally leases vehicles and transportation equipment for less than 5 years and does not exercise the option for extension, so the option for extension for leases of vehicles and transportation equipment is not included as part of the lease term. Furthermore, the term during which the termination option is applied is included as part of the lease term only if it is probable that it will not be exercised.

### **2.3.2 Accounting estimates and changes**

Other key sources of uncertainty in important assumptions and estimates for the future as of the end of the reporting period that pose significant risks that could lead to significant adjustments to the carrying amounts of assets and liabilities within the following fiscal year are. Assumptions and estimates are based on available variables at the time of preparation of financial statement. Assumptions on present and future conditions may change due to changes in the market or any conditions out of the control of the Group. When such changes occur, they are reflected in the assumption.

#### **2.3.2.1 Impairment of non-financial assets**

The Group assesses at each reporting date whether there is any indication that non-financial assets may be impaired. For goodwill and indefinite-lived intangibles, an impairment test is performed annually or if there is any indication of impairment. For other non-financial assets, an impairment test is performed when there is any indication that the carrying amount will not be recoverable. To calculate the value in use, the management shall estimate the expected future cash flows from the asset or the cash-generating unit and select an appropriate discount rate to calculate the present value of the expected cash flows.

#### **2.3.2.2 Provision for expected credit losses of trade receivables and contract assets**

The Group uses a provision matrix to calculate expected credit losses (ECL) for trade receivables and contract assets. The provision setting rate is based on the number of overdue days for a bundle of different customer segments (e.g., regional location, product type, customer type and credit rating, collateral or transaction credit insurance) with similar loss patterns.

The provision matrix is based on the Group's historical observed default rates. The Group will calibrate the matrix to adjust the historical credit loss experience with forward-looking information. For instance, if forecast economic conditions (i.e., gross domestic product) are expected to deteriorate in the future which can lead to an increased number of defaults in the manufacturing sector, the historical default rates are adjusted. At every reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analyzed.

The assessment of the correlation between historical observed default rates, forecast economic conditions and ECLs is a significant estimate. The amount of ECLs is sensitive to changes in circumstances and of forecast economic conditions. The Group's historical credit loss experience and forecast of economic conditions is not representative of customer's actual default in the future.

#### **2.3.2.3 Pension benefits**

The cost and present value of the defined benefit obligation is determined using actuarial valuations. An actuarial valuation involves making various assumptions. It includes the determination of the discount rate, future salary growth rate, mortality rate and future pension increase rate. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

#### 2.3.2.4 Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the statement of financial position cannot be derived from active markets, they are determined using valuation techniques including the discounted cash flow (DCF) model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

#### 2.3.2.5 Provisions for restoration

The Group accounts for the provisions for restoration related to resource development. This provision was calculated by applying the cost of removal and discount rates of resource development facilities based on management assumptions and estimates.

#### 2.3.2.6 Lease - Calculation of the incremental borrowing interest rate

The Group cannot readily determine the implicit interest rate of the lease, so it uses the incremental borrowing rate to measure the lease liability. The incremental borrowing interest rate is the interest rate that the Group would have to pay to borrow the funds required to acquire assets of similar value to those of right-of-use assets with similar collateral over a similar period of time in a similar economic environment. Thus, the incremental borrowing interest rate reflects the items that “would have to pay”, which requires estimation when there is no observable rate available (for subsidiaries that do not enter into financing transactions) or when the incremental borrowing interest rate must be adjusted to reflect the lease conditions (for example, if the lease is not in a functional currency of the subsidiary).

The Group shall, if possible, estimate the incremental borrowing interest rate using observable inputs (such as market interest rates) when available and make certain entity-specific estimates (such as the subsidiary’s stand-alone credit rating).

### 2.4. New and amended standards and interpretations

The Group applied for the first-time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2021.

#### 2.4.1 Interest Rate Benchmark Reform – Phase 2: Amendments to KIFRS 1109, KIFRS 1039, KIFRS 1107, KIFRS 1104 and KIFRS 1116

The amendments provide temporary reliefs which address the financial reporting effects when an interbank offered rate (IBOR) is replaced with an alternative nearly risk-free interest rate (RFR). The amendments include the following practical expedients:

- A practical expedient to require contractual changes, or changes to cash flows that are directly required by the reform, to be treated as changes to a floating interest rate, equivalent to a movement in a market rate of interest
- Permit changes required by IBOR reform to be made to hedge designations and hedge documentation without the hedging relationship being discontinued
- Provide temporary relief to entities from having to meet the separately identifiable requirement when an RFR instrument is designated as a hedge of a risk component

These amendments had no impact on the consolidated financial statements of the Group. The Group intends to use the practical expedients in future periods if they become applicable.

## 2.4. New and amended standards and interpretations (cont'd)

### 2.4.2 Amendments to KIFRS 1116 Covid-19 Related Rent Concessions beyond 30 June 2021

On 28 May 2020, the IASB issued Covid-19-Related Rent Concessions - amendment to KIFRS 1116 *Leases*. The amendments provide relief to lessees from applying KIFRS 11016 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a Covid-19 related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the Covid-19 related rent concession the same way it would account for the change under KIFRS 1116 if the change were not a lease modification.

The amendment was intended to apply until June 30, 2021, but as the impact of the COVID-19 pandemic is continuing, on March 31, 2021, the IASB extended the period of application of the practical expedient to June 30, 2022. The amendment applies to annual reporting periods beginning on or after April 1, 2021. However, the Group has not received COVID-19-related rent concessions, but plans to apply the practical expedient if it becomes applicable within allowed period of application.

## 2.5 Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's consolidated financial statements are disclosed below.

### **Amendments to KIFRS 1001 Presentation of Financial Statements - Classification of Liabilities as Current or Non-current**

In January 2020, the IASB issued amendments to paragraphs 69 to 76 of KIFRS 1001 to specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

- What is meant by a right to defer settlement
- That a right to defer must exist at the end of the reporting period
- That classification is unaffected by the likelihood that an entity will exercise its deferral right
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification

The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and must be applied retrospectively. The Group is currently assessing the impact the amendments will have on current practice and whether existing loan agreements may require renegotiation.

### **Amendments to KIFRS 1103 Business Combination – Reference to the Conceptual Framework**

The amendments are intended to replace a reference to the Framework for the Preparation and Presentation of Financial Statements, issued in 1989, with a reference to the Conceptual Framework for Financial Reporting issued in March 2018 without significantly changing its requirements. The Board also added an exception to the recognition principle of KIFRS 1103 to avoid the issue of potential 'day 2' gains or losses arising for liabilities and contingent liabilities that would be within the scope of KIFRS 1037 or KIFRS 2121 Levies, if incurred separately. At the same time, the Board decided to clarify existing guidance in KIFRS 1103 for contingent assets that would not be affected by replacing the reference to the Framework for the Preparation and Presentation of Financial Statements. The amendments are effective for annual reporting periods beginning on or after January 1, 2022 and apply prospectively.

## 2.5 Accounting standards published but not yet implemented (cont'd)

### **Amendments to KIFRS 1016 Property, Plant and Equipment - Proceeds before intended use**

In May 2020, the IASB issued Property, Plant and Equipment - Proceeds before Intended Use, which prohibits entities deducting from the cost of an item of property, plant and equipment, any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the costs of producing those items, in profit or loss.

The amendment is effective for annual reporting periods beginning on or after January 1, 2022 and must be applied retrospectively to items of property, plant and equipment made available for use on or after the beginning of the earliest period presented when the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

### **Amendments to KIFRS 1037 Provisions, Contingent Liabilities and Contingent Assets - Onerous Contracts: Cost of Fulfilling a Contract**

In May 2020, the IASB issued amendments to KIFRS 1037 to specify which costs an entity needs to include when assessing whether a contract is onerous or loss-making. The amendments apply a “directly related cost approach”. The costs that relate directly to a contract to provide goods or services include both incremental costs and an allocation of costs directly related to contract activities. General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The amendments are effective for annual reporting periods beginning on or after January 1, 2022. The Group will apply these amendments to contracts for which it has not yet fulfilled all its obligations at the beginning of the annual reporting period in which it first applies the amendments.

### **Amendments to KIFRS 1012 “Income Taxes” – Narrowing the scope of the initial recognition exception of deferred income taxes**

The amendments narrowed the scope of the initial recognition exemption so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary difference, thus to resolve accounting diversity in the recognizing of deferred tax assets and liabilities. Paragraphs 15 and 24 (initial recognition exemption of deferred income taxes) of KIFRS 1012 were amended to include an additional condition (3) where a deferred tax asset and liability shall be recognized for a temporary difference that arises on initial recognition of an asset or liability in a single transaction if that transaction give rise to equal amounts of taxable and deductible temporary differences. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 with earlier adoption permitted. The amendments are not expected to have a material impact on the Group.

### **Annual improvements to KIFRS 2018-2020**

#### **KIFRS 1101 First time Adoption of Korean International Financial Reporting Standards – Subsidiaries that are first-time adopters**

The amendment permits a subsidiary that elects to apply paragraph D16(a) of KIFRS 1101 to measure cumulative translation differences using the amounts reported by the parent, based on the parent's date of transition to KIFRS. This amendment is also applied to an associate or joint venture that elects to apply paragraph D16(a) of KIFRS 1101. The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted.

## 2.5 Accounting standards published but not yet implemented (cont'd)

### **KIFRS 1109 Financial Instruments – Fees related to the 10% test for derecognition of financial liabilities**

The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. An entity applies the amendment to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendment is effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. The Group will apply the amendments to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendments are not expected to have a material impact on the Group.

### **KIFRS 1041 Agriculture – Measuring fair value**

The amendment removes the requirement in paragraph 22 of KIFRS 1041 that entities exclude cash flows for taxation when measuring the fair value of assets within the scope of KIFRS 1041. An entity applies the amendment prospectively to fair value measurements on or after the beginning of the first annual reporting period beginning on or after January 1, 2022 with earlier adoption permitted. The amendments are not expected to have a material impact on the Group.

### **Definition of Accounting Estimates - Amendments to KIFRS 1008**

The amendments clarify the distinction between changes in accounting estimates and changes in accounting policies and the correction of errors. Also, they clarify how entities use measurement techniques and inputs to develop accounting estimates. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and apply to changes in accounting policies and changes in accounting estimates that occur on or after the start of that period. Earlier application is permitted as long as this fact is disclosed. The amendments are not expected to have a material impact on the Group.

### **Disclosure of Accounting Policies - Amendments to KIFRS 1001**

The amendments provide guidance and examples to help entities apply materiality judgements to accounting policy disclosures. The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their 'significant' accounting policies with a requirement to disclose their 'material' accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures. The amendments to KIFRS 1001 are applicable for annual periods beginning on or after January 1, 2023 with earlier application permitted.

The Group is currently assessing the impact of the amendments to determine the impact they will have on the Group's accounting policy disclosures.

## 2.6 Approval of consolidated financial statements

The consolidated financial statements of the Group are scheduled to be approved at the Group's general shareholders' meeting to be held on March 21, 2022.

### 3. Segment information

#### 3.1 Operating segment

For management purposes, the Group has three reportable operating segments (trading, natural resource development and others). Accounting policies of each segment are the same as those of the Group mentioned in Note 2.

#### 3.1.1 The financial performance of each segment for the years ended December 31, 2021 and 2020 is as follows:

	Korean won in millions					U.S. dollar in Thousands
	2021					2021
	Trading	National Resource Development	Others	Consolidation adjustment	Total	Total
Sales	₩ 40,291,258	₩ 1,447,642	₩ 1,752,555	₩ -	₩ 43,491,455	\$ 36,686,170
Inter-segment sales	(9,339,866)	-	(202,724)	-	(9,542,590)	(8,049,422)
Net sales	30,951,392	1,447,642	1,549,831	-	33,948,865	28,636,748
Profit (loss) for the year before tax	195,449	126,363	64,688	102,200	488,700	412,231

  

	Korean won in millions					U.S. dollar in Thousands
	2020					2020
	Trading	National Resource Development	Others	Consolidation adjustment	Total	Total
Sales	₩ 25,129,145	₩ 1,341,547	₩ 1,072,436	₩ -	₩ 27,543,128	\$ 23,233,343
Inter-segment sales	(5,904,722)	-	(166,020)	-	(6,070,742)	(5,120,828)
Net sales	19,224,423	1,341,547	906,416	-	21,472,386	18,112,515
Profit (loss) for the year before tax	65,554	213,365	(15,341)	63,591	327,169	275,976

For the year ended December 31, 2021, the segmentation of the Group has been changed, and the comparative operating segments for the year ended December 31, 2020, have been restated on the basis of the changed segment.

**3.1.2 The financial positions of each segment as of December 31, 2021 and 2020 are as follows:**

	Korean won in millions					U.S. dollar in Thousands
	2021					2021
	Trading	National Resource Development	Others	Consolidation adjustment	Total	Total
Total assets	₩ 8,894,944	₩ 2,168,301	₩ 2,637,426	₩ (3,189,524)	₩ 10,511,147	\$ 8,866,425
Total liabilities	6,065,098	562,811	1,394,020	(2,428,912)	5,593,017	4,717,855

  

	Korean won in millions					U.S. dollar in Thousands
	2020					2020
	Trading	National Resource Development	Others	Consolidation adjustment	Total	Total
Total assets	₩ 6,245,339	₩ 2,093,234	₩ 2,316,891	₩ (2,593,700)	₩ 8,061,764	\$ 6,800,307
Total liabilities	3,551,356	497,159	1,253,806	(1,774,930)	3,527,391	2,975,446

For the year ended December 31, 2021, the segmentation of the Group has been changed, and the comparative operating segments for the year ended December 31, 2020, have been restated on the basis of the changed segment.

**3.1.3 Adjustments and eliminations**

Current taxes, deferred taxes and certain financial assets and financial liabilities are not allocated to individual segments as they are accounted for at the entity level.

**3.1.3.1 The reconciliation of assets as of December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Segment operating assets	₩ 10,511,147	₩ 8,061,764	\$ 8,866,425
Current tax assets	4,722	1,479	3,983
Deferred tax assets	254,865	264,796	214,985
<b>Total assets</b>	<b>₩ 10,770,734</b>	<b>₩ 8,328,039</b>	<b>\$ 9,085,393</b>

**3.1.3.2 The reconciliation of liabilities as of December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Segment operating liabilities	₩ 5,593,017	₩ 3,527,391	\$ 4,717,855
Current tax liabilities	89,692	93,084	75,658
Deferred tax liabilities	23,430	22,228	19,764
Current portion of bonds	408,877	417,042	344,898
Non-current bonds	1,143,578	1,107,420	964,638
<b>Total liabilities</b>	<b>₩ 7,258,594</b>	<b>₩ 5,167,165</b>	<b>\$ 6,122,813</b>

### 3.2 Revenue from the contract with customers

Details of classification of sales except for rental revenue from investment properties of ₩7,234 million (₩7,673 million in 2020) for the year ended December 31, 2021 are as follows:

#### 3.2.1 Sales categorization based on the geographical locations

	Korean won in millions			U.S. dollar in thousands
	2021			2021
	Total sales	Inter-Segment sales	Net sales	Net sales
Domestic	₩ 6,290,773	₩ (1,098,564)	₩ 5,192,209	\$ 4,379,763
Asia (excluding China)	19,521,246	(4,318,466)	15,202,780	12,823,939
China	5,136,980	(305,019)	4,831,961	4,075,884
North America	4,806,948	(2,013,757)	2,793,191	2,356,129
Europe	3,773,930	(358,435)	3,415,495	2,881,059
Others	3,954,344	(1,448,349)	2,505,995	2,113,872
<b>Total sales</b>	<b>₩ 43,484,221</b>	<b>₩ (9,542,590)</b>	<b>₩ 33,941,631</b>	<b>\$ 28,630,646</b>
<b>U.S. dollar in thousands</b>	<b>\$ 36,680,068</b>	<b>\$ (8,049,422)</b>	<b>\$ 28,630,646</b>	

	Korean won in millions			U.S. dollar in thousands
	2020			2020
	Total sales	Inter-Segment sales	Net sales	Net sales
Domestic	₩ 3,667,952	₩ (747,632)	₩ 2,920,320	\$ 2,463,366
Asia (excluding China)	12,994,392	(3,155,699)	9,838,693	8,299,193
China	3,420,504	(257,413)	3,163,091	2,668,149
North America	2,435,284	(877,394)	1,557,890	1,314,121
Europe	3,156,598	(902,731)	2,253,867	1,901,195
Others	1,860,725	(129,873)	1,730,852	1,460,018
<b>Total sales</b>	<b>₩ 27,535,455</b>	<b>₩ (6,070,742)</b>	<b>₩ 21,464,713</b>	<b>\$ 18,106,042</b>
<b>U.S. dollar in thousands</b>	<b>\$ 23,226,871</b>	<b>\$ (5,120,828)</b>	<b>\$ 18,106,042</b>	

### 3.2.2 Sales categorization based on the major product and services

	Korean won in millions		U.S. dollar in thousands	
	2021		2021	
Steel	₩	29,263,419	\$	24,684,453
Energy		1,508,594		1,272,538
Food material		11,388,201		9,606,243
Others		1,324,007		1,116,834
Total sales	₩	43,484,221	\$	36,680,068
Inter-segment sales		(9,542,590)		(8,049,422)
<b>Total</b>	<b>₩</b>	<b>33,941,631</b>	<b>\$</b>	<b>28,630,646</b>

	Korean won in millions		U.S. dollar in thousands	
	2020		2020	
Steel	₩	14,748,750	\$	12,440,953
Energy		1,412,474		1,191,458
Food material		10,361,310		8,740,034
Others		1,012,921		854,425
Total sales	₩	27,535,455	\$	23,226,870
Inter-segment sales		(6,070,742)		(5,120,828)
<b>Total</b>	<b>₩</b>	<b>21,464,713</b>	<b>\$</b>	<b>18,106,042</b>

### 3.2.3 Sales categorization based on occurrence

	Korean won in millions		U.S. dollar in thousands	
	2021		2021	
Triangular	₩	27,223,552	\$	22,963,772
Export		10,715,106		9,038,470
Domestic		5,545,563		4,677,826
Total sales	₩	43,484,221	\$	36,680,068
Inter-segment sales		(9,542,590)		(8,049,422)
<b>Net sales</b>	<b>₩</b>	<b>33,941,631</b>	<b>\$</b>	<b>28,630,646</b>

	Korean won in millions		U.S. dollar in thousands	
	2020		2020	
Triangular	₩	17,537,520	\$	14,793,353
Export		6,825,012		5,757,075
Domestic		3,172,923		2,676,443
Total sales	₩	27,535,455	\$	23,226,871
Inter-segment sales		(6,070,742)		(5,120,828)
<b>Net sales</b>	<b>₩</b>	<b>21,464,713</b>	<b>\$</b>	<b>18,106,043</b>

### 3.2.4 Sales categorization based on revenue recognition period

	Korean won in millions		U.S. dollar in thousands	
	2021		2021	
Sales recognized at a point in time	₩	42,063,490	\$	35,481,645
Sales recognized over time		1,420,731		1,198,423
Total sales	₩	43,484,221	\$	36,680,068
Inter-segment sales		(9,542,590)		(8,049,422)
<b>Net sales</b>	<b>₩</b>	<b>33,941,631</b>	<b>\$</b>	<b>28,630,646</b>

  

	Korean won in millions		U.S. dollar in thousands	
	2020		2020	
Sales recognized at a point in time	₩	26,678,312	\$	22,503,848
Sales recognized over time		857,143		723,022
Total sales	₩	27,535,455	\$	23,226,870
Inter-segment sales		(6,070,742)		(5,120,828)
<b>Net sales</b>	<b>₩</b>	<b>21,464,713</b>	<b>\$</b>	<b>18,106,042</b>

### 3.3 Contract balance

Details of contract assets and liabilities arising from revenue from contracts with customers for the year ended December 31, 2021 and 2020 are as follows:

		Korean won in millions				U.S. dollar in thousands	
		2021				2021	
		Beginning balance	Increase	Decrease	Ending balance	Ending balance	
Contract assets	Due from customers	₩ 49,586	₩ 11,100	₩ (13,931)	₩ 46,755	\$	39,439
Contract liabilities	Advances received	124,127	5,996,078	(5,959,548)	160,657		135,518
	Unearned revenues	48,222	53,932	(24,638)	77,516		65,387

  

		Korean won in millions				U.S. dollar in thousands	
		2020				2020	
		Beginning balance	Increase	Decrease	Ending balance	Ending balance	
Contract assets	Due from customers	₩ 137,932	₩ 24,665	₩ (113,011)	₩ 49,586	\$	41,827
Contract liabilities	Advances received	169,077	1,902,766	(1,947,716)	124,127		104,704
	Unearned revenues	54,436	3,128	(9,342)	48,222		40,677

#### 4. Cash and cash equivalents

The Group's cash and cash equivalents of the Group are managed in the same amount in the consolidated statements of financial position and cash flows. Cash and cash equivalents as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Cash	₩ 6,672	₩ 2,840	\$ 5,628
Savings account and checking account	442,096	640,047	372,919
Other cash equivalents	72,392	36,417	61,065
<b>Total</b>	<b>₩ 521,160</b>	<b>₩ 679,304</b>	<b>\$ 439,612</b>

#### 5. Trade and other receivables

5.1 Trade and other receivables as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>Current</b>			
Trade receivables	₩ 4,092,530	₩ 2,617,683	\$ 3,452,155
Allowance for doubtful accounts	(45,874)	(23,690)	(38,696)
Other receivables	199,215	183,654	168,043
Allowance for doubtful accounts	(3,771)	(3,154)	(3,181)
Accrued income	167	78	141
Short-term guarantee deposits	3,701	2,271	3,122
Short-term loans	1,522	1,787	1,284
Current portion of lease bonds	63,568	68,199	53,621
Current portion of long-term loans	47,431	47,524	40,009
	<b>₩ 4,358,489</b>	<b>₩ 2,894,352</b>	<b>\$ 3,676,498</b>
<b>Non-current</b>			
Long-term trade receivables	9,047	14,977	7,631
Allowance for doubtful accounts	(6,717)	(4,880)	(5,666)
Long-term loans	1,772	80,996	1,495
Allowance for doubtful accounts	(273)	(25,889)	(230)
Long-term other receivables	127,716	119,568	107,732
Allowance for doubtful accounts	(81,607)	(71,266)	(68,838)
Long-term finance lease receivables	80,318	128,366	67,750
Allowance for doubtful accounts	-	(25,413)	-
Long-term guarantee	14,390	14,339	12,138
	<b>₩ 144,646</b>	<b>₩ 230,798</b>	<b>\$ 122,012</b>
	<b>₩ 4,503,135</b>	<b>₩ 3,125,150</b>	<b>\$ 3,798,510</b>

5.2 Changes in allowance for doubtful accounts related to trade receivables for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Beginning balance	₩ 28,570	₩ 39,683	\$ 24,100
Bad debt expenses	20,162	700	17,007
Write-off	(553)	(9,412)	(466)
Foreign exchange translation loss(profit)	852	(4,328)	719
Others	3,560	1,927	3,003
<b>Ending balance</b>	<b>₩ 52,591</b>	<b>₩ 28,570</b>	<b>\$ 44,363</b>

### 5.3 Financial assets transferred but not derecognized

As of December 31, 2021, the Group has continued to recognize the book value of trade receivables of ₩258,284 million (\$217,869 thousand) (₩118,543 million (\$99,994 thousand) in 2020) that was disposed of by the Group but was not derecognized. The cash proceeds received from factoring of such receivables are accounted for as short-term borrowings.

The Group factored the above trade receivables to financial institutions with recourse and, accordingly, the Group retains the risk of ownership arising from credit risk, such as default by the debtors. The fair values of the above receivables transferred and the related borrowings are not significantly different from their book values.

## 6. Other financial assets

### 6.1 Other current financial assets as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Deposits in financial institutions	₩ 80,978	₩ 18,708	\$ 68,307

### 6.2 Other non-current financial assets as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Financial assets at FVOCI	₩ 36,749	₩ 28,865	\$ 30,999
Financial assets at FVPL (long-term investment)	467	647	394
Financial assets at FVPL (other securities)	27,258	17	22,993
Deposits in financial institutions	10	10	8
<b>Total</b>	<b>₩ 64,484</b>	<b>₩ 29,539</b>	<b>\$ 54,394</b>

## 6.2.1 Financial instruments at fair value

Details of financial instruments measured at fair value as of December 31, 2021 and 2020 are as follows:

	Number of shares	Equity ownership (%)	Korean won in million				U.S. Dollar
			Acquisition cost	2021		2020	in thousand
				Fair value or net asset value	book value	book value	2021
						book value	
<b>FVOCI securities</b>							
<b>Marketable securities</b>							
Maruichi Steel Tube Ltd.	120,000	0.13	₩ 2,933	₩ 3,155	₩ 3,155	₩ 2,895	\$ 2,661
Kumho Petro Chemical Co., Ltd. (*1)	37,000	0.12	8,063	6,142	6,142	-	5,181
			₩ 10,996	₩ 9,297	₩ 9,297	₩ 2,895	\$ 7,842
<b>Non-marketable securities</b>							
Daewoo Songdo development	285	-	₩ 26	₩ -	₩ -	₩ -	\$ -
Zyle Daewoo Motor Sales Corp.	401	-	3	2	2	2	2
DW Development Co., Ltd. - Engineering & Construction (Common Share)	70	-	1	1	1	1	1
DW Development Co., Ltd. - Engineering & Construction (Preferred Share)	70	-	1	1	1	1	1
N.I. CO., LTD. (*3)	-	50.00	3,099	-	-	-	-
The Korea Economic Daily	178,881	0.96	1,952	974	974	974	822
Central Corporation	100,474	9.67	1,859	-	-	-	-
Hanmi ADM Co., Ltd.	10,000	12.70	1,000	1,000	1,000	1,000	844
S&S INC	8,149	0.17	113	113	113	113	95
Doscover Mixtech Manufacturing (*2)	-	-	-	-	-	-	-
POSCO Humans Co., Ltd.	88,000	3.29	454	454	454	454	383
Innovated Technology Inc.	111,111	10.00	5,000	5,000	5,000	5,000	4,218
Dowon SF	607	1.26	-	-	-	-	-
FOSTEC	43,877	0.24	-	-	-	-	-
Hangang Steel	1,232	1.97	-	-	-	-	-
CJ PHILIPPINES, INC.	109,200	10.00	349	349	349	349	294
DONGJIN VIETNAM Co., Ltd	20,000	10.00	803	803	803	803	677
POSCO ASSAN TST STEEL INDUSTRY A.S.	24,096,526	10.00	15,460	11,951	11,951	11,951	10,081
DAEWOO EL SALVADOR S.A. DE C.V. (*4)	31,262	88.00	3,021	-	-	-	-
TES MI s.r.o.	750	3.00	523	523	523	523	441
K. K. KOREA KAMCHATKA CO., LTD.	328	10.00	-	-	-	-	-
KNOC INAM LTD.	10	10.00	-	-	-	-	-
POSCO AAPC, LLC.	-	13.10	4,712	6,281	6,281	4,799	5,298
			₩ 38,376	₩ 27,452	₩ 27,452	₩ 25,970	\$ 23,157
<b>FVPL other securities</b>							
Korea Investment Private Placement KEXIM Carbon Credit Special Asset Fund No.1	-	2.13	₩ 182	₩ 17	₩ 17	₩ 17	\$ 14
Exchangeable bonds of Erae cs Co.,Ltd. (*1)	-	-	27,000	27,229	27,229	-	22,968
Hansung Steel Co., Ltd. (*1)	-	-	12	12	12	-	10
			₩ 27,194	₩ 27,258	₩ 27,258	₩ 17	\$ 22,992
<b>FVPL investments</b>							
POSCO Agricultural Products Export Fund	-	10.00	₩ 300	₩ 300	₩ 300	₩ 530	\$ 253
Korea Dic & Mold Industry Cooperative	-	-	1	1	1	1	1
Korea Speciality Contractor Financial Cooperative	-	-	166	166	166	116	140
			₩ 467	₩ 467	₩ 467	₩ 647	\$ 394
			₩ 77,033	₩ 64,474	₩ 64,474	₩ 29,529	\$ 54,385

(\*1) The Group newly invested the shares for the year ended December 31, 2021.

(\*2) The Group disposed the shares for the year ended December 31, 2021.

(\*3) N.I.CO., LTD. is classified as FVOCI securities as it cannot exercise significant influence on major decision-making.

(\*4) DAEWOO EL SALVADOR S.A. DE C.V. is in the process of liquidation and is classified as FVOCI securities as the remaining assets and liabilities are insignificant.

### 6.2.1 Financial instruments at fair value (cont'd)

Maruichi Steel Pipe Ltd. and Kumho Petro Chemical Co., Ltd., which are listed stocks among financial assets at FVOCI, were valued at their closing prices as of December 31, 2021, and the resulting loss ₩1,270 million was reflected in accumulated other comprehensive income after deducting the effect of deferred income tax of ₩416 million from the actual ₩1,661 million and adding the effect of the change in the average tax rate of ₩25 million. POSCO AAPC, LLC was measured using the discounted cash flow model and market approach, and recognized a valuation gain of ₩218 million. Deferred income tax was not recognized as the temporary difference is not expected to disappear in the foreseeable future.

In addition, the Group has assessed using the base price as of December 31, 2021, its investments in Korea Investment Private Placement KEXIM Carbon Credit Special Asset Fund No.1 classified as financial assets at FVPL. Exchangeable bonds of Erae cs Co., Ltd. were measured at fair value by applying the bond valuation model to the main contract of compound instruments and the option valuation model to embedded derivatives among the earnings approach.

Among financial assets at FVOCI, ₩43 million from the disposal of Discover Mixtech Manufacturing was reflected in retained earnings.

### 6.3 Restricted deposits

As of December 31, 2021, the Group has deposits of ₩5,207 million (\$4,392 thousand) (₩3,023 million (\$2,550 thousand in 2020) in financial institutions that are restricted in use due to financial arrangements, provision of collateral and others.

## 7. Other assets

Other current and non-current assets as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Other current assets			
Advanced payments	₩ 115,245	₩ 58,292	\$ 97,212
Allowance for doubtful accounts	(2,853)	(2,560)	(2,407)
Prepaid expenses	96,831	56,056	81,679
Allowance for doubtful accounts	(1,898)	(1,869)	(1,601)
Others (*)	21,514	19,475	18,148
	₩ 228,839	₩ 129,394	\$ 193,031
Other non-current assets			
Long-term prepaid expenses	₩ 1,459	₩ 65	\$ 1,231
	₩ 230,298	₩ 129,459	\$ 194,262

(\*) Consumable biological assets are included. Consumable biological assets are measured at fair value less costs to sell, and changes in fair value are recognized in profit or loss. Cash flows over the life cycle of biological assets are determined by taking into account the estimated production, market prices and estimated cultivation costs of agricultural crops.

	Korean won in millions			U.S. dollar in thousands
	2020	Increase	2021	2021
Fair value less costs to sell of consumable biological assets	₩ 12,043	₩ 122	₩ 12,165	\$ 10,261

## 8. Inventories

Inventories as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Merchandise	₩ 901,201	₩ 495,770	\$ 760,186
Valuation allowance	(477)	(2,772)	(402)
Finished goods	62,772	34,386	52,950
Valuation allowance	(4,086)	(3,359)	(3,447)
Semi-finished goods and Work-in-process	48,208	30,403	40,665
Valuation allowance	(1,391)	(1,083)	(1,173)
Raw materials	195,169	103,982	164,630
Valuation allowance	(2,745)	(1,113)	(2,315)
Materials-in-transit	688,262	260,656	580,567
Others	17,330	12,741	14,618
Valuation allowance	(64)	(205)	(54)
	<u>₩ 1,904,179</u>	<u>₩ 929,406</u>	<u>\$ 1,606,225</u>

The Group recognized a loss on valuation of inventories of ₩2,667 million (\$2,250 thousand) and ₩1,126 million (\$950 thousand) in cost of sales for the years ended December 31, 2021 and 2020, respectively. A reversal of valuation allowance for inventories valuation recognized for the years ended December 31, 2021 and 2020 amounted to ₩2,436 million (\$2,055 thousand) and ₩3,552 million (\$2,996 thousand), respectively.

POSCO International Corporation and its subsidiaries  
 Note to the consolidated financial statements  
 December 31, 2021 and 2020

9. Investments in associates

9.1 Investments in associates as of December 31, 2021 and 2020 are as follows:

	Nationality	Number of shares	Equity owner-ship (%)	Korean won in millions						U.S. dollar in thousand
				2021			2020			2021
				Acquisition cost	Net asset value	Book value	Book value	Book value		
Shanghai Lansheng Daewoo Corp	China	-	49.0	₩ 5,312	₩ 1,199	₩ -	₩ -	\$ -		
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	China	-	49.0	161	1,760	1,659	1,578	1,399		
KOREA LNG LTD.	Bermuda	2,400	20.0	-	26,995	31,340	42,222	26,436		
GENERAL MEDICINES CO., LTD.	Sudan	9,702	33.0	736	3,994	4,058	5,187	3,423		
POSCO IJPC	Indonesia	11,693,706	21.7	13,475	12,213	12,115	10,055	10,219		
DMSA/AMSA (*1)(*2)(*5)	Madagascar	-	3.9	346,880	24,139	24,144	31,075	20,366		
POSCO MEXICO PROCESSING CENTER HOLDING, LLC (*1)	Mexico	-	19.6	14,004	17,585	17,548	15,429	14,802		
POSCO-ESDC LTD.	Slovenia	-	20.0	757	1,834	1,758	1,642	1,483		
GLOBAL KOMSCO DAEWOO LLC	Uzbekistan	-	35.0	4,445	6,782	6,773	5,331	5,713		
SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD Blue Ocean Recovery PEF No.1	Hongkong	50,082	25.0	132,907	238,603	238,601	199,341	201,266		
SPH Co., Ltd.	Korea	333	27.5	33,300	34,159	-	-	-		
PT. BATUTUA TEMBAGA RAYA	Korea	100,000	50.0	500	3,643	500	500	422		
YULCHON MEXICO S.A. DE C.V. (*1)	Indonesia	128,285	22.0	14,785	-	-	-	-		
HyunSon Engineering & Construction (*1)	Mexico	18,267,000	6.2	1,349	764	1,132	993	955		
Quro Co. (*1)	Algerie	2,369	4.9	281	477	468	167	395		
Inco tech Inc. (*1)	Korea	1,215,863	0.5	882	637	682	669	575		
KWANIKA COPPER CORP.	Korea	350,000	10.0	350	(612)	-	-	-		
Hunchun POSCO HYUNDAI International Logistics (*1)(*4)	Canada	8,445,200	34.0	7,359	7,795	1,399	1,236	1,180		
POSCO-MALAYSIA SDN.BHD. (*1)	China	-	10.0	11,488	9,649	9,263	7,517	7,814		
POSCO-ITPC S.p.A (*1)	Malaysia	24,128,000	13.6	7,905	(254)	5,553	3,897	4,684		
TK-Chemical (*1)(*3)	Italy	-	10.0	781	2,042	2,070	1,132	1,746		
SHINPOONG DAEWOO PHARMA CO., LTD. (*1)	Korea	8,000,000	5.0	8,428	-	-	14,350	-		
	Vietnam	-	3.4	343	555	571	474	482		
				<b>₩ 606,428</b>	<b>₩ 393,959</b>	<b>₩ 359,634</b>	<b>₩ 342,795</b>	<b>\$ 303,360</b>		
Less: Government grants (*2)				(10,986)	-	-	-	-		
				<b>₩ 595,442</b>	<b>₩ 393,959</b>	<b>₩ 359,634</b>	<b>₩ 342,795</b>	<b>\$ 303,360</b>		

**9.1 Investments in associates as of December 31, 2021 and 2020 are as follows: (cont'd)**

(\*1) These securities are classified as investments in associates even though the Group's equity ownership is below 20%, as the Group is able to exercise significant influence over the investee.

(\*2) It is the difference between the nominal amount and the fair value of borrowings related to the acquisition of interests in DMSA/AMSA

(\*3) The investments in investees were disposed of for the year ended December 31, 2021.

(\*4) Additional acquisition of investee was made for the year ended December 31, 2021.

(\*5) In order to defer the repayment of borrowings, the Group was providing a replenishment agreement to investors in a joint agreement. However, the Group is proceeding with arbitration because the resolution to provide replenishment is invalid, and as a result of the final judgment in favor, the previously paid supplemental amount was returned, and the carrying amount was deducted by changing the equity ratio.

**9.2 Details of the carrying amount and recoverable amounts of investments in associates, which the Group recognized impairment loss for the year ended December 31, 2021 are as follows:**

	2021			U.S. dollar in thousands
	Korean won in millions			
	Book value before the impairment	Recoverable amount	Reversal of impairment loss	Recoverabl e amount
DMSA/AMSA (*)	₩ 14,737	₩ 24,144	₩ 9,407	\$ 20,366

(\*) For the year ended December 31, 2021, there were impairment indicators to DMSA/AMSA shares due to changes in production plans and the conclusion of the 3rd Sponsor Funding Agreement (SFA), and signs of a decrease in previously recognized impairment losses due to an increase in nickel prices. Accordingly, damage inspection of the investee was performed by external expert. The recoverable amount of the investments was determined based on the calculation of the value in use, and the value in use was calculated as the present value obtained by applying a discount rate of 19.66% to the expected future cash flows from the date of the impairment test, and an impairment loss was recognized.

9.3 Changes in the carrying amount of investments in associates for the years ended December 31, 2021 and 2020 are as follows: (Korean won in millions)

	2021							Ending balance								
	Beginning balance	Acquisition and transfer	Disposal	Share of the associate's profit (loss)	Reversal (impairment)	Dividends	Others									
Shanghai Lansheng Daewoo Corp	₩	-	₩	-	₩	-	₩	-	₩	-						
Shanghai Waigaoqiao Free Trade Zone																
Lansheng Daewoo Int'l Trading Co., Ltd.		1,578	-	-	(96)	-	-	177		1,659						
KOREA LNG LTD.		42,222	-	-	9,145	-	(9,178)	(10,849)		31,340						
GENERAL MEDICINES CO., LTD.		5,187	-	-	6,822	-	(224)	(7,727)		4,058						
POSCO IJPC		10,055	-	-	1,135	-	-	925		12,115						
DMSA/AMSA POSCO MEXICO PROCESSING CENTER HOLDING, LLC		31,075	-	(14,739)	(8,734)	9,407	-	7,135		24,144						
POSCO-ESDC LTD.		15,429	-	-	747	-	-	1,372		17,548						
GLOBAL KOMSCO DAEWOO LLC		1,642	-	-	151	-	(38)	3		1,758						
SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD.		5,331	-	-	116	-	-	1,326		6,773						
Blue Ocean Recovery PEF No. 1		199,341	-	-	48,158	-	(27,828)	18,930		238,601						
SPH Co., Ltd. PT. BATUTUA TEMBAGA RAYA		-	-	-	-	-	-	-		-						
YULCHON MEXICO S.A. DE C.V.		500	-	-	-	-	-	-		500						
HyunSon Engineering & Construction		-	-	-	-	-	-	-		-						
Quro Co. Inco tech Inc. (*1)		993	-	-	99	-	-	40		1,132						
KWANIKA COPPER CORP.		167	-	-	292	-	-	9		468						
Hunchun POSCO HYUNDAI International Logistics		669	-	-	(2)	-	-	15		682						
POSCO MALAYSIA SDN.BHD.		-	-	-	-	-	-	-		-						
POSCO-ITPC S.p.A		1,236	-	-	-	-	-	163		1,399						
TK-Chemical SHINPOONG DAEWOO PHARMA CO.,LTD.		7,517	756	-	(433)	-	-	1,423		9,263						
		3,897	-	-	1,709	-	-	(53)		5,553						
		1,132	-	-	943	-	-	(5)		2,070						
		14,350	-	(14,350)	-	-	-	-		-						
		474	-	-	46	-	-	51		571						
	₩	342,795	₩	756	₩	(29,089)	₩	60,098	₩	9,407	₩	(37,268)	₩	12,935	₩	359,634
U.S. dollar in thousand	\$	289,156	\$	638	\$	(24,537)	\$	50,694	\$	7,935	\$	(31,437)	\$	10,911	\$	303,361

(\*1) As of December 31, 2021, the cumulative unrecognized loss due to the discontinuing the use of the equity method was ₩612 million (\$516 thousand).

**9.3 Changes in the carrying amount of investments in associates for the years ended December 31, 2021 and 2020 are as follows: (Korean won in millions) (cont'd)**

	2020							Ending balance
	Beginning balance	Acquisition and transfer	Disposal	Share of the associate's profit (loss)	Impairment	Dividends	Others	
Shanghai Lansheng Daewoo Corp	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -	₩ -
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	1,695	-	-	(159)	-	-	42	1,578
KOREA LNG LTD.	46,557	-	-	7,674	-	(7,755)	(4,254)	42,222
GENERAL MEDICINES CO., LTD.	3,142	-	-	3,312	-	(252)	(1,015)	5,187
POSCO IJPC	3,723	7,522	-	(115)	-	-	(1,075)	10,055
DMSA/AMSA	12,189	60,278	-	(31,788)	(1,545)	-	(8,059)	31,075
POSCO MEXICO PROCESSING CENTER HOLDING, LLC	15,432	-	-	1,014	-	-	(1,017)	15,429
POSCO-ESDC LTD.	1,570	-	-	76	-	(57)	53	1,642
KG Power(M) SDN. BHD GLOBAL KOMSCO DAEWOO LLC	5,248	-	-	436	-	-	(353)	5,331
SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD.	225,933	-	(2,992)	45,940	-	(56,760)	(12,780)	199,341
Blue Ocean Recovery PEF No. 1	-	-	-	-	(12,788)	-	12,788	-
SPH Co., Ltd. PT. BATUTUA TEMBAGA RAYA	500	-	-	-	-	-	-	500
YULCHON MEXICO S.A. DE C.V.	14,717	-	-	(6,498)	(8,450)	-	231	-
HyunSon Engineering & Construction	811	300	-	(34)	-	-	(84)	993
Quro Co. Inco tech Inc. (*1)	164	-	-	33	-	-	(30)	167
KWANIKKA COPPER CORP.	195	923	(41)	(29)	-	-	(379)	669
Hunchun POSCO HYUNDAI International Logistics	196	-	-	(196)	-	-	-	-
POSCO-MALAYSIA SDN.BHD.	7,677	-	-	3	(6,385)	-	(59)	1,236
POSCO-ITPC S.p.A	7,656	-	-	(206)	-	-	67	7,517
TK-Chemical Daewoo-hanil Co., Ltd.	3,343	-	-	467	-	-	87	3,897
SHINPOONG DAEWOO PHARMA CO., LTD.	1,215	-	-	(124)	-	-	41	1,132
	15,361	-	-	(1,040)	-	-	29	14,350
	-	-	-	-	-	-	-	-
	470	-	-	32	-	-	(28)	474
	<u>₩ 367,794</u>	<u>₩ 69,023</u>	<u>₩ (3,033)</u>	<u>₩ 18,798</u>	<u>₩ (29,168)</u>	<u>₩ (64,824)</u>	<u>₩ (15,795)</u>	<u>₩ 342,795</u>
U.S. dollar in thousand	<u>\$ 310,244</u>	<u>\$ 58,223</u>	<u>\$ (2,558)</u>	<u>\$ 15,857</u>	<u>\$ (24,604)</u>	<u>\$ (54,681)</u>	<u>\$ (13,323)</u>	<u>\$ 289,156</u>

**9.4 Unrealized gains and losses reflected in gain or loss on investments in associates for the years ended December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
POSCO-Malaysia	₩ (66)	₩ 90	\$ (56)
POSCO-ITPC	(60)	131	(51)
GENERAL MEDECINES CO., LTD.	22	27	19
GLOBAL KOMSCO DAEWOO LLC	7	23	6
POSCO IJPC	(222)	75	(187)
POSCO MEXICO PROCESSING CENTER HOLDING, LLC	(489)	1,079	(412)
DMSA/AMSA	7	28	6
	<u>₩ (801)</u>	<u>₩ 1,453</u>	<u>\$ (675)</u>

**9.5 The summarized financial information of associates as of and for the year ended December 31, 2021 is as follows:**

Subsidiaries	2021			
	Korean won in millions			Net profit(loss)
	Assets	Liabilities	Sales	
Shanghai Lansheng Daewoo Corp	4,389	1,942	-	-
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	48,311	44,719	-	(196)
KOREA LNG LTD.	157,060	357	47,843	45,722
GENERAL MEDICINES CO., LTD.	14,364	2,261	41,748	20,606
POSCO IJPC	182,287	125,991	218,107	6,254
DMSA/AMSA	3,631,856	2,068,847	749,634	636,113
POSCO MEXICO PROCESSING CENTER HOLDING, LLC	421,707	332,152	596,680	6,296
POSCO-ESDC LTD.	12,025	2,853	21,714	753
GLOBAL KOMSCO DAEWOO LLC SOUTH-EAST ASIA GAS PIPELINE COMPANY LTD	1,604,624	651,752	439,974	192,322
Blue Ocean Recovery PEF No. 1	323,584	199,463	-	-
SPH Co., Ltd.	31,661	24,374	-	381
YULCHON MEXICO S.A. DE C.V.	37,461	25,210	21,406	1,587
HyunSon Engineering & Construction	296,464	286,702	5,971	5,971
Quro Co.	176,736	57,689	74,317	(291)
Inco tech Inc.	52,522	58,646	-	(2,715)
KWANIKA COPPER CORP.	22,949	47	-	-
Hunchun POSCO HYUNDAI International Logistics	107,135	10,643	579	(4,326)
POSCO-MALAYSIA SDN.BHD.	95,843	97,703	160,222	13,017
POSCO-ITPC S.p.A	95,854	75,432	113,426	10,032
SHINPOONG DAEWOO PHARMA CO., LTD.	17,101	867	1,348	1,349

## 10. Property, plant and equipment

### 10.1 Property, plant and equipment as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Acquisition cost	₩ 2,160,444	₩ 1,954,149	\$ 1,822,391
Accumulated depreciation	(726,390)	(594,481)	(612,729)
Accumulated impairment loss	(80,817)	(34,086)	(68,171)
Government grants	(88)	(163)	(74)
<b>Book value</b>	<b>₩ 1,353,149</b>	<b>₩ 1,325,419</b>	<b>\$ 1,141,417</b>

### 10.2 Changes in the carrying amount of property, plant and equipment for the years ended December 31, 2021 and 2020 are as follows:

#### 10.2.1 Changes in the acquisition cost

	2021					
	Korean won in millions					
	Beginning balance	Business combination	Acquisition	Disposal	Transfer and others	Ending balance
Land	₩ 151,915	₩ -	₩ 3,114	₩ (102)	₩ 70	₩ 154,997
Buildings	579,296	10,279	24,029	(5,002)	36,119	644,721
Machinery	776,625	33,334	87,040	(3,334)	(13,310)	880,355
Others	195,506	3,331	25,035	(8,317)	9,727	225,282
Construction-in-progress	79,647	3,621	41,502	(187)	(54,728)	69,855
Bearer plants	171,160	-	-	(26,634)	40,708	185,234
	<b>₩ 1,954,149</b>	<b>₩ 50,565</b>	<b>₩ 180,720</b>	<b>₩ (43,576)</b>	<b>₩ 18,586</b>	<b>₩ 2,160,444</b>
U.S. dollar in thousands	<b>\$ 1,648,375</b>	<b>\$ 42,653</b>	<b>\$ 152,442</b>	<b>\$ (36,757)</b>	<b>\$ 15,678</b>	<b>\$ 1,822,391</b>

  

	2020					
	Korean won in millions					
	Beginning balance	Business combination	Acquisition	Disposal	Transfer and others	Ending balance
Land	₩ 148,555	₩ -	₩ 2,473	₩ -	₩ 887	₩ 151,915
Buildings	585,998	-	4,263	(71)	(10,894)	579,296
Machinery	797,973	-	7,709	(12,063)	(16,994)	776,625
Others	196,720	-	13,287	(5,960)	(8,541)	195,506
Construction-in-progress	105,463	-	45,574	(941)	(70,449)	79,647
Bearer plants	138,818	-	116	(172)	32,398	171,160
	<b>₩ 1,973,527</b>	<b>₩ -</b>	<b>₩ 73,422</b>	<b>₩ (19,207)</b>	<b>₩ (73,593)</b>	<b>₩ 1,954,149</b>
U.S. dollar in thousands	<b>\$ 1,664,721</b>	<b>\$ -</b>	<b>\$ 61,933</b>	<b>\$ (16,202)</b>	<b>\$ (62,078)</b>	<b>\$ 1,648,375</b>

## 10.2.2 Changes in accumulated depreciation

2021						
Korean won in millions						
	Beginning balance	Business combination	Depreciation	Disposal	Transfer and others	Ending balance
Buildings	₩ 84,535	₩ 5,751	₩ 15,190	₩ (2,160)	₩ 4,733	₩ 108,049
Machinery	372,626	20,645	44,841	(2,109)	15,152	451,155
Bearer plants	21,195	-	9,264	(1,758)	1,852	30,553
Others	116,125	1,987	22,007	(6,754)	3,268	136,633
	<b>₩ 594,481</b>	<b>₩ 28,383</b>	<b>₩ 91,302</b>	<b>₩ (12,781)</b>	<b>₩ 25,005</b>	<b>₩ 726,390</b>
U.S. dollar in thousands	<b>\$ 501,460</b>	<b>\$ 23,942</b>	<b>\$ 77,016</b>	<b>\$ (10,781)</b>	<b>\$ 21,092</b>	<b>\$ 612,729</b>

  

2020						
Korean won in millions						
	Beginning balance	Business combination	Depreciation	Disposal	Transfer and others	Ending balance
Buildings	₩ 72,567	₩ -	₩ 14,850	₩ (22)	₩ (2,860)	₩ 84,535
Machinery	358,938	-	40,862	(10,564)	(16,610)	372,626
Bearer plants	14,625	-	7,971	(17)	(1,384)	21,195
Others	110,260	-	20,161	(5,669)	(8,627)	116,125
	<b>₩ 556,390</b>	<b>₩ -</b>	<b>₩ 83,844</b>	<b>₩ (16,272)</b>	<b>₩ (29,481)</b>	<b>₩ 594,481</b>
U.S. dollar in thousands	<b>\$ 469,329</b>	<b>\$ -</b>	<b>\$ 70,725</b>	<b>\$ (13,726)</b>	<b>\$ (24,868)</b>	<b>\$ 501,460</b>

## 10.2.3 Changes in accumulated impairment loss

2021						
Korean won in millions						
	Beginning balance	Business combination	Impairment loss	Disposal	Other	Ending balance
Buildings (*1)	₩ 28,493	₩ -	₩ 15,552	₩ -	₩ 3,007	₩ 47,052
Machinery	4,144	-	2,457	(717)	39	5,923
Others (*2)	1,449	-	26,267	-	126	27,842
	<b>₩ 34,086</b>	<b>₩ -</b>	<b>₩ 44,276</b>	<b>₩ (717)</b>	<b>₩ 3,172</b>	<b>₩ 80,817</b>
U.S. dollar in thousands	<b>\$ 28,752</b>	<b>\$ -</b>	<b>\$ 37,348</b>	<b>\$ (605)</b>	<b>\$ 2,676</b>	<b>\$ 68,171</b>

  

2020						
Korean won in millions						
	Beginning balance	Business combination	Impairment loss	Disposal	Other	Ending balance
Buildings	₩ 30,243	₩ -	₩ -	₩ -	₩ (1,750)	₩ 28,493
Machinery	4,607	-	80	(335)	(208)	4,144
Others	1,613	-	-	(78)	(86)	1,449
	<b>₩ 36,463</b>	<b>₩ -</b>	<b>₩ 80</b>	<b>₩ (413)</b>	<b>₩ (2,044)</b>	<b>₩ 34,086</b>
U.S. dollar in thousands	<b>\$ 30,757</b>	<b>\$ -</b>	<b>\$ 67</b>	<b>\$ (348)</b>	<b>\$ (1,724)</b>	<b>\$ 28,752</b>

(\*1) For the year ended December 31, 2021, the Group conducted an appraisal of the assets of POSCO International Amara, a sub-subsidiary, by an external expert, taking into consideration of comparable sales in the same industry in the vicinity. The recoverable amount of the asset has been determined based on fair value calculation, and impairment loss has been recognized for the amount that is less than the carrying amount.

(\*2) As decrease in the price of bituminous coal for the year ended December 31, 2021, the Group conducted impairment tests on investments in POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY. LTD. using internal and external experts as there were indicators of impairment. The recoverable amount of the investments was determined based on the calculation of the value in use, and the value in use was calculated as the present value obtained by applying a discount rate of 8.25% to the expected future cash flows from the date of the impairment test, and an impairment loss was recognized.

#### 10.2.4 Changes in government grants

		2021			
		Korean won in millions			
		Beginning balance	Depreciation	Change in scope of consolidation	Ending balance
Others		₩ 163	₩ (75)	₩ -	₩ 88
<b>U.S. dollar in thousands</b>		<b>\$ 137</b>	<b>\$ (63)</b>	<b>\$ -</b>	<b>\$ 74</b>
		2020			
		Korean won in millions			
		Beginning balance	Depreciation	Change in scope of consolidation	Ending balance
Machinery		₩ 1	₩ (1)	₩ -	₩ -
Others		238	(75)	-	163
		<b>₩ 239</b>	<b>₩ (76)</b>	<b>₩ -</b>	<b>₩ 163</b>
<b>U.S. dollar in thousands</b>		<b>\$ 202</b>	<b>\$ (64)</b>	<b>\$ -</b>	<b>\$ 137</b>

10.3 The details of property, plant and equipment pledged as collateral for the Group's borrowings are as follows.

Collateral provided by	Creditor	Pledged assets	Description	Korean won in millions, U.S. dollar in thousands			
				Borrowing amount	Maximum pledge amount		
					2021	2020	
POSCO MOBILITY SOLUTION	Woori bank	Land and Buildings	Borrowings	KRW 45,000	KRW 60,000	KRW 60,000	
	Kookmin Bank	Land and Buildings			KRW 60,000	KRW -	
POSCO International Textile LLC	Hamkor bank	Buildings and Machinery	Trade payables	USD 2,500	USD 6,644	USD 6,872	

## 11. Leases

### 11.1 Accounting as a lessee

11.1.1 The carrying amount and changes in right-of-use assets and lease liabilities for the year ended December 31, 2021 and 2020 are as follows:

	2021						
	Right-of-use assets					Lease receivables	Lease liabilities
	Land	Building and structure	Aircraft	Others	Total		
Beginning balance	₩ 37,646	₩ 24,105	₩ 7,845	₩ 21,997	₩ 91,593	₩ 196,565	₩ 265,703
Acquisition	5,459	10,528	2,194	22,278	40,459	82,445	54,990
Contract termination or cancel	-	(2,378)	-	(34)	(2,412)	(53,045)	(44,163)
Depreciation	(857)	(11,407)	(5,211)	(25,260)	(42,735)	-	-
Interest income	-	-	-	-	-	6,514	-
Interest expense	-	-	-	-	-	-	9,739
Translation	-	-	-	-	-	9,109	11,386
Lease payment	-	-	-	-	-	-	(108,068)
Lease receipt	-	-	-	-	-	(97,702)	-
Impairment loss	(793)	-	-	-	(793)	-	-
Change in the scope of consolidation	1,906	-	-	-	1,906	-	-
Others	2,550	795	-	(183)	3,162	-	(4,325)
Ending balance	<u>₩ 45,911</u>	<u>₩ 21,643</u>	<u>₩ 4,828</u>	<u>₩ 18,798</u>	<u>₩ 91,180</u>	<u>₩ 143,886</u>	<u>₩ 185,262</u>
U.S. dollar in thousands	<u>\$ 38,727</u>	<u>\$ 18,256</u>	<u>\$ 4,073</u>	<u>\$ 15,857</u>	<u>\$ 76,913</u>	<u>\$ 121,371</u>	<u>\$ 156,272</u>
Current						<u>₩ 63,568</u>	<u>₩ 91,392</u>
U.S. dollar in thousands						<u>\$ 53,621</u>	<u>\$ 77,092</u>
Non-current						<u>₩ 80,318</u>	<u>₩ 93,870</u>
U.S. dollar in thousands						<u>\$ 67,750</u>	<u>\$ 79,182</u>
	2020						
	Right-of-use assets					Lease receivables	Lease liabilities
	Land	Building and structure	Aircraft	Others	Total		
Beginning balance	₩ 40,961	₩ 19,825	₩ 13,139	₩ 1,348	₩ 75,273	₩ 228,059	₩ 278,902
Acquisition	212	17,164	-	38,371	55,747	36,121	91,688
Contract termination or cancel	-	(1,275)	-	-	(1,275)	-	(1,521)
Depreciation	(1,010)	(11,428)	(4,957)	(17,697)	(35,092)	-	-
Interest income	-	-	-	-	-	7,631	-
Interest expense	-	-	-	-	-	-	13,761
Translation	-	-	-	-	-	(13,679)	(18,449)
Lease payment	-	-	-	-	-	-	(94,920)
Lease receipt	-	-	-	-	-	(61,567)	-
Others	(2,517)	(181)	(337)	(25)	(3,060)	-	(3,758)
Ending balance	<u>₩ 37,646</u>	<u>₩ 24,105</u>	<u>₩ 7,845</u>	<u>₩ 21,997</u>	<u>₩ 91,593</u>	<u>₩ 196,565</u>	<u>₩ 265,703</u>
U.S. dollar in thousands	<u>\$ 31,755</u>	<u>\$ 20,333</u>	<u>\$ 6,617</u>	<u>\$ 18,555</u>	<u>\$ 77,261</u>	<u>\$ 165,808</u>	<u>\$ 224,127</u>
Current						<u>₩ 68,199</u>	<u>₩ 99,909</u>
U.S. dollar in thousands						<u>\$ 57,528</u>	<u>\$ 84,276</u>
Non-current						<u>₩ 128,366</u>	<u>₩ 165,794</u>
U.S. dollar in thousands						<u>\$ 108,280</u>	<u>\$ 139,852</u>

11.1.2 The amount recognized in profit or loss for the year ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>&lt;Revenues&gt;</b>			
Interest on lease receivables	₩ 6,514	₩ 7,631	\$ 5,495
<b>&lt;Expenses&gt;</b>			
Depreciation of right-of-use assets	₩ (42,735)	₩ (35,092)	\$ (36,048)
Interest of lease liabilities	(9,739)	(13,761)	(8,215)
Short-term lease	(1,601)	(645)	(1,350)
Leases of low-value assets	(1,198)	(1,460)	(1,011)
	₩ (55,273)	₩ (50,958)	\$ (46,624)
<b>Net profit or loss</b>	<b>₩ (48,759)</b>	<b>₩ (43,327)</b>	<b>\$ (41,129)</b>

## 11.2 Accounting as a lesser

11.2.1. Details of finance lease receivables as of December 31, 2021 and 2020 are as follows:

	2021	
	Current	Non-current
Finance lease receivables	₩ 63,568	₩ 80,318
Allowance for doubtful accounts	-	-
	<b>₩ 63,568</b>	<b>₩ 80,318</b>
<b>U.S. dollar in thousands</b>	<b>\$ 53,621</b>	<b>\$ 67,750</b>

	2020	
	Current	Non-current
Finance lease receivables	₩ 68,199	₩ 128,366
Allowance for doubtful accounts	-	(25,413)
	<b>₩ 68,199</b>	<b>₩ 102,953</b>
<b>U.S. dollar in thousands</b>	<b>\$ 57,528</b>	<b>\$ 86,844</b>

11.2.2 Details of maturity profile of finance lease receivables for the year ended December 31, 2021 and 2020 are as follows. The maturity amount is an undiscounted contractual cash flow that includes interest receipt.

	2021	
	Korean won in millions	U.S. dollar in thousands
Within 1year	₩ 64,779	\$ 54,643
More than 1year and within 5years	60,658	51,167
More than 5years	52,634	44,398
	<b>₩ 178,071</b>	<b>\$ 150,208</b>

	2020	
	Korean won in millions	U.S. dollar in thousands
Within 1year	₩ 70,378	\$ 59,366
More than 1year and within 5years	129,971	109,634
More than 5years	9,969	8,409
	<b>₩ 210,318</b>	<b>\$ 177,409</b>

11.2.3 The Group recognized rental income of ₩7,234 million (\$6,102 thousand) and ₩7,673 million (\$6,472 thousand) in relation to operating lease arrangements for the years ended December 31, 2021 and 2020, respectively.

## 12. Intangible assets

12.1 Changes in the net book value of intangible assets for the years ended December 31, 2021 and 2020 are as follows:

		2021							
		Korean won in million							
	Beginning balance	Business combination	Acquisition	Disposal and transfer	Amortization	Impairment	Others	Ending balance	
Goodwill	₩ 31,356	₩ -	₩ -	₩ -	₩ -	₩ (4,397)	₩ 2,699	₩ 29,658	
Industrial property rights	1,539	-	539	-	(483)	-	47	1,642	
Mining rights (*1)	1,029,053	-	280,046	-	(201,668)	(20,006)	1,301	1,088,726	
Exploration and evaluation assets	39,494	-	-	-	-	(374)	(273)	38,847	
Membership	12,903	163	1,604	(9)	(68)	(212)	74	14,455	
Development assets	-	-	691	-	-	-	-	691	
Software	8,959	289	2,936	-	(4,588)	-	1,129	8,725	
Land use right	2,401	-	-	-	-	-	214	2,615	
Harbor policy usage rights	3,680	-	-	-	-	-	330	4,010	
	<b>₩ 1,129,385</b>	<b>₩ 452</b>	<b>₩ 285,816</b>	<b>₩ (9)</b>	<b>₩ (206,807)</b>	<b>₩ (24,989)</b>	<b>₩ 5,521</b>	<b>₩ 1,189,369</b>	
U.S. dollar in thousand	<b>\$ 952,666</b>	<b>\$ 381</b>	<b>\$ 241,093</b>	<b>\$ (8)</b>	<b>\$ (174,447)</b>	<b>\$ (21,079)</b>	<b>\$ 4,657</b>	<b>\$ 1,003,264</b>	
		2020							
		Korean won in million							
	Beginning balance	Business combination	Acquisition	Disposal and transfer	Amortization	Impairment	Others	Ending balance	
Goodwill	₩ 38,219	₩ -	₩ -	₩ -	₩ -	₩ (780)	₩ (6,083)	₩ 31,356	
Industrial property rights	1,596	-	440	-	(455)	-	(42)	1,539	
Mining rights	1,106,501	-	135,345	-	(204,593)	(7,727)	(473)	1,029,053	
Exploration and evaluation assets	71,346	-	-	-	-	-	(31,852)	39,494	
Development assets	-	-	-	(1,198)	-	-	-	-	
Membership	14,833	-	40	-	(25)	(419)	(328)	12,903	
Software	10,835	-	2,724	-	(4,543)	-	(57)	8,959	
Land use right	2,552	-	-	-	-	-	(151)	2,401	
Harbor policy usage rights	3,913	-	-	-	-	-	(233)	3,680	
	<b>₩ 1,249,795</b>	<b>₩ -</b>	<b>₩ 138,549</b>	<b>₩ (1,198)</b>	<b>₩ (209,616)</b>	<b>₩ (8,926)</b>	<b>₩ (39,219)</b>	<b>₩ 1,129,385</b>	
U.S. dollar in thousand	<b>\$ 1,054,235</b>	<b>\$ -</b>	<b>\$ 116,870</b>	<b>\$ (1,011)</b>	<b>\$ (176,817)</b>	<b>\$ (7,529)</b>	<b>\$ (33,082)</b>	<b>\$ 952,666</b>	

(\*) As the price of bituminous coal fell for the year ended December 31, 2021, there were impairment indicators relating to the mining rights of POSCO INTERNATIONAL AUSTRALIA HOLDINGS PTY, and impairment test was conducted through internal and external experts. The recoverable amount of the mining rights was determined based on the calculation of the value in use, and the value in use was calculated as the present value obtained by applying a discount rate of 8.25% to the expected future cash flows from the base date of the impairment test, and an impairment loss was recognized.

**12.2 Book value of goodwill allocated to Group's CGU as of December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
PT. Bio Inti Agrindo (*1)	₩ 7,468	₩ 6,955	\$ 6,299
GRAIN TERMINAL HOLDINGS PTE., LTD. (*2)	22,190	24,401	18,718
	<b>₩ 29,658</b>	<b>₩ 31,356</b>	<b>\$ 25,017</b>

(\*1) Recoverable amount of PT. Bio Inti Agrindo is determined based on a value in use calculation by the independent valuers. The value in use is measured by using the future cash flows for the period from 2021 to 2043 based on the management's future business plans. The discount rate applied to the future cash flows is 12.0%. As of December 31, 2021, although the assessed recoverable amount of CGU exceeds the carrying amount, the excess amount may be offset as a result of reasonable changes in key assumptions used in value in use calculation.

(\*2) The recoverable amount of subsidiary GRAIN TERMINAL HOLDINGS PTE., LTD. is determined based on the calculation of value in use with the help of independent external experts. The value in use is calculated based on the management's business plan, and the future cash flows from 2022 to 2026 are applied at a discount rate of 10.39%, the business structure of 2026 is maintained and perpetual growth rate of 1% applied to operating profit for the last year of the estimated period. ₩4,397 million was recognized as an impairment loss by comparing the carrying amount and the recoverable amount of the cash-generating unit evaluated as of December 31, 2021, and there is a possibility that the excess will be offset by reasonable changes in key assumptions.

**12.3 Joint arrangement**

The mining rights of intangible assets and the machinery of property, plant and equipment include the Group's share of the jointly held assets held under joint arrangements. The major joint arrangements of the Group as of December 31, 2021 are as follows:

	Activities	Equity interest (%)	Location
Myanmar A-1/A-3 area	Development and production for gas area	51	Myanmar
Offshore midstream	Gas transmission facilities	51	Myanmar

### 13. Investment properties

13.1 Acquisition costs of investment properties as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Acquisition cost	₩ 164,026	₩ 166,030	\$ 138,360
Accumulated depreciation	(21,035)	(18,437)	(17,744)
<b>Book value</b>	<b>₩ 142,991</b>	<b>₩ 147,593</b>	<b>\$ 120,616</b>

13.2 Changes in the book value of investment properties for the years ended December 31, 2021 and 2020 are as follows:

#### 13.2.1 Changes in the acquisition cost

	2021			Ending balance
	Beginning balance	Acquisition	Disposal	
Land	₩ 50,368	₩ -	₩ -	₩ 50,368
Building	115,662	-	(2,004)	113,658
	<b>₩ 166,030</b>	<b>₩ -</b>	<b>₩ (2,004)</b>	<b>₩ 164,026</b>
<b>U.S. dollar in thousands</b>	<b>\$ 140,051</b>	<b>\$ -</b>	<b>\$ (1,690)</b>	<b>\$ 138,360</b>

	2020			Ending balance
	Beginning balance	Acquisition	Others	
Land	₩ 51,249	₩ -	₩ (881)	₩ 50,368
Building	116,693	-	(1,031)	115,662
Structure	21	-	(21)	-
	<b>₩ 167,963</b>	<b>₩ -</b>	<b>₩ (1,933)</b>	<b>₩ 166,030</b>
<b>U.S. dollar in thousands</b>	<b>\$ 141,681</b>	<b>\$ -</b>	<b>\$ (1,631)</b>	<b>\$ 140,051</b>

#### 13.2.2 Changes in accumulated depreciation

	2021			Ending balance
	Beginning balance	Depreciation	Disposal	
Building	₩ 18,437	₩ 3,066	₩ (468)	₩ 21,035
<b>U.S. dollar in thousands</b>	<b>\$ 15,552</b>	<b>\$ 2,586</b>	<b>\$ (395)</b>	<b>\$ 17,743</b>

	2020			Ending balance
	Beginning balance	Depreciation	Others	
Building	₩ 15,789	₩ 4,263	₩ (1,615)	₩ 18,437
Structure	6	-	(6)	-
	<b>₩ 15,795</b>	<b>₩ 4,263</b>	<b>₩ (1,621)</b>	<b>₩ 18,437</b>
<b>U.S. dollar in thousands</b>	<b>\$ 13,323</b>	<b>\$ 3,596</b>	<b>\$ (1,367)</b>	<b>\$ 15,552</b>

### 13.3 The fair value of investment properties

The fair value of investment property amount to ₩171,828 million (\$144,941 thousand) as of December 31, 2021.

### 13.4 The income and expense arising from investment properties for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Rental income	₩ 7,234	₩ 7,673	\$ 6,102
Rental expense	(3,438)	(4,438)	(2,900)
	<b>₩ 3,796</b>	<b>₩ 3,235</b>	<b>\$ 3,202</b>

### 13.5 Joint arrangement

The Group owns POSCO Tower Songdo, a real estate property, located in Yeonsu-gu, Incheon, under a joint arrangement. As of December 31, 2021, the Group owns 60% of the real estate property and has classified the asset as property, plant and equipment and investment properties. Such joint arrangements are accounted for as joint operations, and rental income generated and expenses incurred as a result of the joint operation are recognized as income and expenses in proportion to the Group's shares.

## 14. Trade and other payables

Trade and other payables as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>&lt;Current&gt;</b>			
Trade payables	₩ 2,512,974	₩ 1,407,951	\$ 2,119,759
Other payables	261,560	229,402	220,633
Accrued expenses	37,448	31,782	31,588
Guarantee deposits received	10,555	5,063	8,903
Current portion of lease liabilities	91,392	99,909	77,092
	<b>₩ 2,913,929</b>	<b>₩ 1,774,107</b>	<b>\$ 2,457,975</b>
<b>&lt;Non-current&gt;</b>			
Long-term Other payables	₩ 2,216	₩ 2,209	\$ 1,869
Long-term accrued expenses	1,692	1,617	1,427
Guarantee deposits received	7,272	6,740	6,134
Long-term financial guarantee liabilities	104	181	88
Long-term lease liabilities	93,871	165,794	79,183
	<b>₩ 105,155</b>	<b>₩ 176,541</b>	<b>\$ 88,701</b>
<b>Total</b>	<b>₩ 3,019,084</b>	<b>₩ 1,950,648</b>	<b>\$ 2,546,676</b>

## 15. Borrowings

### 15.1 Borrowings as of December 31, 2021 and 2020 are as follows:

Creditor	Annual interest rates	The longest maturity	Korean won in millions		U.S. dollar in thousands	
			2021	2020	2021	
<b>&lt;Current borrowings&gt;</b>						
<b>Short-term borrowings:</b>						
Banker's usance and others	Wooribank and others	Libor (by period) + 0.32~0.60 %	-	₩ 183,418	₩ 69,951	154,718
General borrowings	HSBC and others	1.17% and others	-	205,132	81,946	173,034
NEGO borrowings	Wooribank and others	Libor (by period) + 0.51~0.93 %	-	₩ 1,155,036	₩ 388,417	\$ 974,303
				<b>₩ 1,543,586</b>	<b>₩ 540,314</b>	<b>\$ 1,302,055</b>
Current-portion of long-term borrowings:						
Energy special account financing loan	Korea Energy Agency and others	3year government bond yield- 2.25% and others	2022.09.30	4,949	5,524	4,175
Other borrowings	Korea Rural Community Corporation and others	2.00% and others	2022.10.04	216,202	3,385	182,372
Forgivable borrowings	Korea Energy Agency	3year government bond yield- 2.25% and others	2022.12.31	1,465	2,765	1,236
Facility borrowings	Korea Development Bank and others	2.18% and others	2022.10.19	128,387	244,238	108,298
Less: present value discount				(204)	(188)	(172)
				<b>₩ 350,799</b>	<b>₩ 255,724</b>	<b>\$ 295,909</b>
				<b>₩ 1,894,385</b>	<b>₩ 796,038</b>	<b>\$ 1,597,964</b>

15.1 Borrowings as of December 31, 2021 and 2020 are as follows: (cont'd)

	Creditor	Annual interest rates	The longest maturity	Korean won in millions		U.S. dollar in thousands
				2021	2020	2021
<b>&lt;Non-current borrowings&gt;</b>						
<b>Long-term borrowings denominated in Korean won:</b>						
Energy special account financing loan	Korea Energy Agency	3year government bond yield-2.25% and others	2027.12.15	₩ 3,643	4,698	\$ 3,073
Forgivable borrowings	Korea Energy Agency	3year government bond yield-1.25% and others	Undecided	38,547	40,271	32,515
Other borrowings	Korea Rural Community Cooperation	2.00%	2035.9.15	35,877	34,027	30,263
				<b>₩ 78,067</b>	<b>₩ 78,996</b>	<b>\$ 65,851</b>
<b>Long-term borrowings denominated in foreign currency:</b>						
Energy special account	Korea Energy Agency	3year government bond yield-2.25% and others	2027.12.15	6,761	9,779	5,703
Forgivable borrowings	Korea Energy Agency	3year government bond yield-2.25%	Undecided	60,925	48,940	51,392
Other borrowings	Korea Development Bank and others	3.42% and others 3M	2022.10.04	49,015	82,073	41,345
Other borrowings	Korea EXIM Bank and others	Libor+2.58% and others	2026.03.15	51,375	160,026	43,336
				₩ 168,076	₩ 300,818	\$ 141,776
				₩ 246,143	₩ 379,814	\$ 207,627
Less: present value discount				(32)	₩ (467)	\$ (27)
				<b>₩ 246,111</b>	<b>₩ 379,347</b>	<b>\$ 207,600</b>
<b>Total borrowings</b>				<b>₩ 2,140,496</b>	<b>₩ 1,175,385</b>	<b>\$ 1,805,564</b>

15.2 Details of bonds as of December 31, 2021 and 2020 are as follows:

	Annual interest rates	Maturity	Korean won in millions		U.S. dollar in thousands
			2021	2020	2021
<b>Current Portion of bonds:</b>					
16-2nd unsecured bond	2.69%	2022.07.17	₩ 70,000	₩ -	\$ 59,047
18-1st unsecured bond	2.67%	2021.03.02	-	130,000	-
19-1st unsecured bond	2.22%	2021.09.13	-	70,000	-
20th unsecured bond	3M Libor + 90bp	2021.10.15	-	217,600	-
21-1st unsecured bond	2.12%	2022.03.07	120,000	-	101,223
22-1st unsecured bond	1.68%	2022.07.04	70,000	-	59,047
23th unsecured bond	6M SGD SOR + 100bp	2022.10.25	149,114	-	125,782
			₩ 409,114	₩ 417,600	\$ 345,099
Less: present value discount on bonds			(237)	(558)	(200)
			₩ 408,877	₩ 417,042	\$ 344,899
<b>Non-current bonds:</b>					
16-2nd unsecured bond	2.69%	2022.07.17	₩ -	₩ 70,000	\$ -
18-2nd unsecured bond	3.08%	2023.03.02	70,000	70,000	59,047
19-2nd unsecured bond	2.53%	2023.09.13	80,000	80,000	67,482
21-1st unsecured bond	2.12%	2022.03.07	-	120,000	-
21-2nd unsecured bond	2.27%	2024.03.07	130,000	130,000	109,658
22-1st unsecured bond	1.68%	2022.07.04	-	70,000	-
22-2nd unsecured bond	1.73%	2024.07.04	80,000	80,000	67,482
22-3rd unsecured bond	1.95%	2026.07.04	50,000	50,000	42,176
23th unsecured bond	6M SGD SOR + 100bp	2022.10.25	-	139,777	-
24-1st unsecured bond	1.75%	2023.05.26	250,000	250,000	210,881
24-2nd unsecured bond	1.94%	2025.05.28	50,000	50,000	42,176
25-1st unsecured bond	1.51%	2024.03.19	70,000	-	59,047
25-2nd unsecured bond	2.18%	2026.03.19	80,000	-	67,482
25-3rd unsecured bond	2.47%	2028.03.17	50,000	-	42,176
26th unsecured bond	1.68%	2024.10.14	237,100	-	200,000
			₩ 1,147,100	₩ 1,109,777	\$ 967,607
Less: present value discount on bonds			(3,522)	(2,357)	(2,971)
			₩ 1,143,578	₩ 1,107,420	\$ 964,636
			₩ 1,552,455	₩ 1,524,462	\$ 1,309,535

16. Other liabilities

Other liabilities as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>Current:</b>			
Advances received	₩ 160,657	₩ 124,127	\$ 135,518
Unearned revenue	77,516	48,222	65,387
Withholdings	23,636	41,406	19,938
	₩ 261,809	₩ 213,755	\$ 220,843
<b>Non-current:</b>			
Long-term withholdings	1,538	704	1,297
	₩ 263,347	₩ 214,459	\$ 222,140

## 17. Retirement benefits

The Group operates a defined benefit pension plan and a defined contribution pension plan for its employees and uses the projected unit credit method in the actuarial valuation of plan assets and the defined benefit obligation.

**17-1 The amounts recognized in the consolidated statement of financial position related to net defined benefit liabilities (assets) as of December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Present value of defined benefit obligation	₩ 184,553	₩ 187,185	\$ 155,675
Fair value of plan assets	(188,194)	(175,931)	(158,747)
Net defined benefit liabilities	5,411	11,254	4,564
Net defined benefit assets	(9,052)	-	(7,636)

**17.2 Changes in the present value of the defined benefit obligation for the years ended at December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Beginning balance	₩ 187,185	₩ 173,708	\$ 157,895
Current service cost	20,851	17,725	17,588
Past service cost	-	-	-
Interest cost	2,655	2,838	2,240
Benefits paid	(14,631)	(11,656)	(12,342)
Re-measurement loss(gain) in OCI:			
- Actuarial changes arising from changes in demographic assumptions	(235)	(4,673)	(198)
- Actuarial changes arising from changes in financial assumptions	(10,395)	3,218	(8,768)
- Others	(839)	2,370	(708)
Others	(38)	3,655	(32)
<b>Ending balance</b>	<b>₩ 184,553</b>	<b>₩ 187,185</b>	<b>\$ 155,675</b>

17.3 Changes in fair value of plan assets for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Beginning balance	₩ 175,931	₩ 164,375	\$ 148,402
Contribution by the employer	15,528	15,100	13,098
Interest income	2,924	1,980	2,466
Benefits paid	(14,068)	(10,900)	(11,867)
Re-measurement gain (loss) in OCI:			
- Actuarial changes arising from changes in financial assumptions	496	359	418
Others	7,383	5,017	6,228
<b>Ending balance</b>	<b>₩ 188,194</b>	<b>₩ 175,931</b>	<b>\$ 158,745</b>

17.4 The Gains and losses recognized in relation to defined benefit plans for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Current service cost	₩ 20,851	₩ 17,385	\$ 17,588
Net interest on net defined benefit	(269)	289	(227)
	<b>₩ 20,582</b>	<b>₩ 17,674</b>	<b>\$ 17,361</b>

17.5 Details of re-measurement gain (loss) recorded in other comprehensive income for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Re-measurement of defined benefit obligation	₩ 11,469	₩ (915)	\$ 10,541
Re-measurement of plan assets	496	359	456
	₩ 11,965	₩ (556)	\$ 10,997
Income tax effect	(3,052)	5	(2,805)
<b>Other comprehensive income</b>	<b>₩ 8,913</b>	<b>₩ (551)</b>	<b>\$ 8,192</b>

**17.6 Principal assumptions used in actuarial valuation as of December 31, 2021 and 2020 are as follows:**

	<u>2021</u>	<u>2020</u>
Discount rate	2.60 ~ 2.62%	1.80 ~ 2.00%
Expected future salary growth rate	3.82 ~ 5.00%	3.62 ~ 5.00%

**The sensitivity analysis of defined benefit obligation arising from changes in principal assumptions as of December 31, 2021 is as follows:**

	<u>Discount rate</u>		<u>Expected future salary growth rate</u>	
	<u>1% point increase</u>	<u>1% point decrease</u>	<u>1% point increase</u>	<u>1% point decrease</u>
Amount (Korean won in millions)	₩ (33,168)	₩ 29,818	₩ 30,047	₩ (32,801)
Amount (U.S. dollar in thousands)	\$ (27,978)	\$ 25,152	\$ 25,345	\$ (27,668)
Rate	(17.97%)	16.16%	16.28%	(17.77%)

**17.7 Details of impact on defined benefit plans for future cash flows are as follows:**

The estimated contribution by the Group as of December 31, 2022 amounts to ₩5,670 million (\$4,783 thousand). The maturity profile of the Group's un-discounted pension benefit payments for the year ended December 31, 2021 is as follows:

	<u>Korean won in millions</u>			
	<u>Less than 1year</u>	<u>1year to 5years</u>	<u>Over 5years</u>	<u>Total</u>
Benefits paid	₩ 10,749	₩ 46,865	₩ 353,680	₩ 411,294
U.S. dollar in thousands	\$ 9,067	\$ 39,532	\$ 298,338	\$ 346,937

The weighted average maturity period of defined benefit obligations of the Group ranges from 9.28 years.

18. Provisions

18.1 Provisions as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>Current:</b>			
Current portion of provisions	₩ 24,343	₩ 13,083	\$ 20,534
<b>Non-current:</b>			
Provision for contingency	₩ 25,379	₩ 41,485	\$ 21,408
Provision for restoration	34,959	28,680	29,489
Provision for sales guarantee	1,338	594	1,129
Other long-term provisions	2,357	1,549	1,988
	₩ 64,033	₩ 72,308	\$ 54,014
<b>Total: Provisions</b>	<b>₩ 88,376</b>	<b>₩ 85,391</b>	<b>\$ 74,548</b>

18.2 Changes in provisions for the year ended December 31, 2021 and 2020 are as follows:

	2021					
	Korean won in millions					
	Current portion of provisions	Provision for contingency	Provision for restoration	Provision for sales guarantee	Other long-term provisions	Total
Beginning balance	₩ 13,083	₩ 41,485	₩ 28,680	₩ 594	₩ 1,549	₩ 85,391
Increase	24,332	10,497	4,453	-	1,244	40,526
Reversal	-	(25,758)	-	-	-	(25,758)
Used	(19,238)	(1,939)	(801)	744	(443)	(21,677)
Foreign currency translation	6,166	1,094	2,627	-	7	9,894
<b>Ending balance</b>	<b>₩ 24,343</b>	<b>₩ 25,379</b>	<b>₩ 34,959</b>	<b>₩ 1,338</b>	<b>₩ 2,357</b>	<b>₩ 88,376</b>
<b>U.S. dollar in thousands</b>	<b>\$ 20,534</b>	<b>\$ 21,408</b>	<b>\$ 29,489</b>	<b>\$ 1,129</b>	<b>\$ 1,988</b>	<b>\$ 74,547</b>
	2020					
	Korean won in millions					
	Current portion of provisions	Provision for contingency	Provision for restoration	Provision for sales guarantee	Other long-term provisions	Total
Beginning balance	₩ 19,705	₩ 50,343	₩ 29,829	₩ -	₩ 4,291	₩ 104,168
Increase	13,733	1,182	680	594	1,304	17,493
Reversal	-	(1,177)	-	-	-	(1,177)
Used	(19,156)	(6,118)	(110)	-	(4,035)	(29,419)
Foreign currency translation	(1,199)	(2,745)	(1,719)	-	(11)	(5,674)
<b>Ending balance</b>	<b>₩ 13,083</b>	<b>₩ 41,485</b>	<b>₩ 28,680</b>	<b>₩ 594</b>	<b>₩ 1,549</b>	<b>₩ 85,391</b>
<b>U.S. dollar in thousands</b>	<b>\$ 11,036</b>	<b>\$ 34,994</b>	<b>\$ 24,192</b>	<b>\$ 501</b>	<b>\$ 1,307</b>	<b>\$ 72,030</b>

## 19. Commitments and contingencies

### 19.1 Provision for contingencies

Changes in provision for contingencies for the year ended December 31, 2021 are as follows:

	Beginning balance	Increase	Reversal	Used	Translation	Ending balance	Principal debt amount
Daewoo Corp. (EXIM India, etc.)	₩ 27,331	₩ -	₩ (24,888)	₩ -	₩ 176	₩ 2,619	₩ 269,893
Legal proceeding provisions, etc.	-	1,364	-	-	(3)	1,360	-
Provision for loss	14,027	9,133	(870)	(1,938)	920	21,273	-
Provisions for construction warranties	127	-	-	-	-	127	-
	<u>₩ 41,485</u>	<u>₩ 10,497</u>	<u>₩ (25,758)</u>	<u>₩ (1,938)</u>	<u>₩ 1,093</u>	<u>₩ 25,379</u>	<u>₩ 269,893</u>
U.S. dollar in thousands	<u>\$ 34,994</u>	<u>\$ 8,854</u>	<u>\$ (21,728)</u>	<u>\$ (1,635)</u>	<u>\$ 922</u>	<u>\$ 21,408</u>	<u>\$ 227,662</u>

#### 19.1.1 Contingent liabilities carried over from Daewoo Corporation prior to the spin-off

On July 22, 2000, Daewoo Corporation, prior to the spin-off, approved a proposal to divide the company into one surviving company and two newly incorporated companies, which each company engages in the trade and construction sector, respectively. On December 27, 2000, the Group was newly incorporated as Daewoo International Corporation through a spin-off of Daewoo Corporation's trade sector. Under the proposal, the Group and Daewoo Engineering & Construction Co., Ltd., the newly incorporated companies, were not obliged to repay other debts of Daewoo Corporation that were not transferred to the newly incorporated companies.

Daewoo Corporation, prior to the spin-off, sent notifications to the unsecured creditors and guaranteed creditors whether they are willing to raise any objection. As a result, several objections were raised by certain creditors, including domestic and foreign creditors who did not join the workout arrangement. Accordingly, part of the borrowings related to these creditors were either recognized as borrowings of the newly incorporated companies, or their payment guarantee obligations were transferred to the newly incorporated companies upon their incorporation.

Accordingly, the Group has made reasonable estimates of the amount of payment obligations for the debts payable to the creditors based on the information available and agreement made with the creditors. As of December 31, 2021, the Group has recognized ₩2,619 million (\$2,209 thousand) as provision for contingent losses.

For the initial liability for contingent losses related to Daewoo Co., Ltd., the total amount of contingent losses was divided equally between the Group and Daewoo E&C in the ratio of 34 to 66. After the ruling of the relevant lawsuit was declared in 2021, the Group recorded the amount of contingent losses by additionally reflecting the amount reasonably estimated from the divided amount.

IDBI, a creditor of Daewoo Motor India (DMIL), to which Daewoo Corporation provided debt guarantees, filed a lawsuit against DMIL, Daewoo Corporation, Daewoo Engineering & Construction and the Group in Delhi in May 2002 with regards to the disposition of assets and confirmation of the debt. Accordingly, the Group has reasonably estimated the outcome of the lawsuit and reflected the estimated legal claim in the provision for contingent losses. And in February 2021, a court of India issued a final judgment to pay the proceeds from the sale of DMIL-owned real estate to the litigation representative. And in February 2021, a court of India issued a final judgment to pay the proceeds from the sale of DMIL-owned real estate to the litigation representative. As a result of consulting with domestic and foreign law firms on the judgment, we received the opinion that the actual enforcement of the judgment is extremely low, and that even if it is enforced, it can be enforced in a limited way for the Indian assets held by the Group. Accordingly, the Group reasonably estimated the probability and amount of the occurrence and reflected it in the provision for contingent losses.

On May 25, 2006, Daewoo Corporation applied for bankruptcy in the Seoul Central District Court pursuant to the Debtor Rehabilitation and Bankruptcy Act, and on June 16, 2006, the bankruptcy proceedings were concluded, and the bankruptcy was terminated on May 25, 2017.

## 19.2 Pending litigations

As of December 31, 2021, the Group is a defendant in pending lawsuits involving 36 claims (domestic: 11 claims and overseas: 25 claims). The total claim amount of the lawsuits is ₩26,535 million, USD 88,711 thousand, INR 4,469,396 thousand, CAD 79,000 thousand, CNY 39,217 thousand, PKR 124,775 thousand, BRL 73,113 thousand, VND 579,407 thousand and IDR 50,000,000 thousand. The Group is involved in 32 pending lawsuits as a plaintiff as of December 31, 2021. As the ultimate outcome of these lawsuits could not be determined as of December 31, 2021, the Group has not reflected the potential impact that may arise as a result of the above litigations in the consolidated financial statements. As of December 31, 2021, The Group has recognized ₩3,979 million expected to be paid in accordance with some litigation cases as provisions for contingent losses and ₩8,512 million as allowances for doubtful accounts.

## 19.3 Credit facilities

As of December 31, 2021, the Group has letter of credit facilities ("L/C") with Woori Bank and others, document against acceptance facilities ("D/A") and other trading facilities as follows (Korean won in millions, USD in thousands):

Description	Bank	Currency	Credit line amount
Local L/C	Woori bank and others	USD	195,000
L/C	Woori bank and others	USD	1,746,663
D/A	Woori bank and others	USD	2,264,563
Credit line in foreign currency	Woori bank and others	USD	971,345
P bond and others	Woori bank and others	USD	447,526
Credit line in Korean currency	Woori bank and others	KRW	170,000
Overdraft and others	Woori bank and others	KRW	7,000

## 19.4 Collateral

The Group has pledged 30 blank promissory notes and 23 blank checks as collateral to Korea Energy Agency and others for the contract performance guarantees and other purposes as of December 31, 2021.

## 19.5 Derivatives

The Group entered into currency forwards contracts and commodity futures contracts with financial institutions to hedge the foreign exchange risks and inventory price risks, and details on the maximum credit line amounts are as follows:

19.5.1 Details of unsettled derivatives (Korean won in millions):

Contract	Currency unit	Unsettled contractual amount		Accumulated valuation gain(loss)	
		Long position	Short position		
Currency forwards	USD	853,845	2,602,886	(14,273)	
	EUR	169,251	3,644,476	13,970	
	JPY	744,350,523	3,844,891	352	
	CNY	193,351	7,818,316	1,254	
	AED	155	-	-	
	THB	5,793	14,907	322	
	CAD	-	6,315	(52)	
	GBP	5,273	36,592	(450)	
	AUD	-	7,398	(149)	
	SGD	425	254	(2)	
	CHF	4,605	794	63	
	PLN	2,535	4,805	72	
					<b>1,107</b>
Commodity futures	Aluminum	159,093	214,488	(2,030)	
	Propane	12,600	-	4,738	
	Copper	106,771	229,384	1,296	
	Corn	3,469	116,539	(6,535)	
	Nickel	62,577	62,202	(2,368)	
	Tin	19,412	48,007	(13)	
	Soybean	32,412	282,400	(12,202)	
	Gasoil	9,722	8,422	(98)	
	Soft red	-	15,660	790	
	winter wheat				
	Fuel oil	2,742	-	(267)	
	Marine fuel oil (ICE)	2,533	336	70	
	Marine fuel oil (OME)	1,166	-	34	
				<b>(16,585)</b>	

Unsettled currency swap for the year ended December 31, 2021 are as follows: (Korean won in millions, USD in thousands and SGD in thousands)

Bank	Unsettled Contractual Amount				Expiration date	Interest swap	Accumulated valuation gain (loss)
	Payment	Receipt					
UOB	USD 74,823	SGD 102,000			Oct.25, 2022	Pay 6M US\$ Libor+1.25% Receive 6M SGD SOR+1.00%	₩ 567
Credit Agricole	USD 49,627	SGD 68,000			Oct.25, 2022	Pay 6M US\$ Libor+1.25% Receive 6M SGD SOR+1.00%	650
							<b>₩ 1,217</b>
							<b>\$ 1,027</b>

Unsettled interest rate swap for the year ended December 31, 2021 are as follows: (Korean won in millions, USD in thousands and SGD in thousands)

Bank	Amount	Expiration date	Interest swap	Accumulated valuation gain (loss)
ING	USD 75,000	Oct. 1, 2022	Receive 3M US\$ Libor+1.33% Pay 1.645%	₩ 25
				<b>\$ 21</b>

### 19.5.2 Derivatives trading and valuation gains and losses

Changes in the book value of derivative financial assets (liabilities) for the year ended December 31, 2021 are as follows:

	Korean won in millions					
	Beginning balance	Settlement	Valuation gain	Valuation loss	Ending balance	
Currency forwards	₩ 25,741	₩ (25,741)	₩ 27,041	₩ (25,934)	₩ 1,107	
Commodity futures	6,375	(6,375)	20,982	(37,567)	(16,585)	
Firm commitment contracts	(12,488)	(45,983)	169,485	(111,543)	(529)	
Currency and interest rate swap	3,528	109	1,260	(3,654)	1,243	
	<u>₩ 23,156</u>	<u>₩ (77,990)</u>	<u>₩ 218,768</u>	<u>₩ (178,698)</u>	<u>₩ (14,764)</u>	
<b>U.S. dollar in thousands</b>	<u><b>\$ 19,533</b></u>	<u><b>\$ (65,787)</b></u>	<u><b>\$ 184,536</b></u>	<u><b>\$ (150,736)</b></u>	<u><b>\$ (12,454)</b></u>	

The Group has entered into product futures and other commitments for fair value hedges when hedging the exposure to changes in the fair value of firm sales and purchase contracts arising from fluctuations in product price, and applied fair value hedges using firm commitments as hedging methods and product futures and other commitments as hedging targets.

### 19.6 Guarantee obligations

Guarantees provided by the Group to certain creditors on behalf of associates/debtors as of December 31, 2021 are as follows: (Korean won in millions, Foreign currency in thousands)

Debtor	Creditor	Limit amount		outstanding balance		Year of expiration
		Foreign currency amounts	Korean won equivalent	Foreign currency amounts	Korean won equivalent	
GLOBAL KOMSOO Daewoo LLC	Hana Bank (Bahrain)	USD 8,225	9,751	USD 7,700	8,299	2022
AMBATO VY HOLDINGS II LIMITED	Korea EXIM Bank	USD 21,818	25,865	USD 1,724	2,044	2023
POSCO ASSAN TST STEEL INDUSTRY	ING (Seoul) and others	USD 14,653	17,317	USD 14,653	17,371	2023
KSU Mandob Sejatera	Bank Muamalat	IDR 80,000,000	6,648	IDR 80,000,000	6,648	2026
			<u>59,635</u>		<u>34,362</u>	

As of December 31, 2021, assets provided as collateral in relation to the borrowings of DMSA/AMSA, an associate, are as follows:

Debtor	Collateralized Assets	Korean won in millions	U.S. dollar in thousands	Creditor	Details
		Book value	Book value		
DMSA/AMSA	DMSA/AMSA shares	24,144	20,366	PF major shareholder	PF collateral

## **19.7 Other commitments**

### **19.7.1 Commitments to supplement funds for Korea Ambatovy Consortium (KAC)**

The Group invested in the Ambatovy Nickel Project (DMSA / ASMA) in Madagascar through Korea Ambatovy Consortium (KAC), which is composed of Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR) and STX Co., Ltd. Sherritt International Corp., the operator, has partially transferred the shares in the project Sumitomo and AHL (Ambatovy Holdings Limited) in November 2017 and transferred the remaining shares to Sumitomo and AHL2 (Ambatovy Holdings II Limited) in August 2020. KAC has the rights and obligations to 15.33% of the project's shares held by AHL and AHL2.

### **19.7.2 Environmental restoration expenses of Peru Block 8 and termination of mining contract**

The Operator entered into a contract on the ratio of paying for environmental restoration cost with former operators. However, as the cost of environment restoration is expected to increase due to the revision of the local environmental law, the former operator refused to pay, and the Group applied for an arbitration. As a result of the arbitration in June 2018, the former operator is obligated for 94% of the cost for the pollution-prone areas where the responsibility of the former operator has already been proven and areas where the responsibility for pollution is proven in the future. As the procedure to obtain approval from the Peruvian government is in progress, the environmental restoration cost to be borne by the Group, the other participant and the former operator has not yet been determined.

The Peruvian Environmental Supervision Authority (El Organismo de Evaluación y Fiscalización Ambiental, OEFA) has been imposing fines for environmental pollution on operators from 2020, and the fines imposed are shared by the participating companies if the operator makes a claim to the participating companies in proportion to their shares. The operator is not responsible for the pollution and is taking legal action arguing that the Environmental Supervision Administration unreasonably demands restoration and imposes a fine, but the fine continues to be imposed.

The operator notified the start of liquidation in December 2020 due to deterioration of business feasibility and the imposition of unreasonable fines by the Environmental Supervision Administration, and insisted on automatic termination of the mining rights contract in Peru Block 8. Perupetro, a mining rights management agency under the Peruvian government, opposed the termination of the mining rights contract and filed an international arbitration with the International Chamber of Commerce (ICC) against the mining companies. Korean participants are responding by jointly appointing arbitration agents.

### **19.7.3 Transfer of contract status on ship purchase agreement**

The Group operates the chartered ship. The Group, the ship owner, and the shipping company have entered into a ship purchase agreement, under which, the shipping company is obliged to pay the contract amount to the ship owner and take over the ownership of the ship from the ship owner at the end of the contract period due to the expiration or termination of the agreement. If the shipping company fails to fulfill its obligation to purchase ships, such as payment of the acquisition price of ships, the Group is obliged to take over the ship with the transfer of the shipping company's contractual obligations and rights. The details of the ship purchase arrangement concluded as of December 31, 2021 as follows.

**19.7.3 Transfer of contract status on ship purchase agreement (cont'd)**

Ship	Ship owner	Shipping company	Arrangement period	U.S. dollar in thousands
				Book value
Containership Heung-A Janice	D&G Shipping SA	Heung A Line Co., Ltd.	2014.10.28 ~ 2025.03.16	\$ 7,700
Containership Heung-A Haiphong	D&M Shipping SA	Heung A Line Co., Ltd.	2014.12.29 ~ 2025.03.16	7,700
Containership Heung-A Xiamen	D&F Shipping SA	Heung A Line Co., Ltd.	2015.02.05 ~ 2025.05.16	7,700
Containership Heung-A Akita	D&S Shipping SA	Heung A Line Co., Ltd.	2015.03.05 ~ 2025.05.16	7,700
Containership MSC Paloma	HDM No.1 SA	MSC	2013.12.23 ~ 2023.12.20	69,500
Containership MSC Melatilde	HDM No.2 SA	MSC	2013.12.23 ~ 2023.12.20	69,500
				<b>\$ 169,800</b>

**20. Issued capital and capital surplus**

**20.1 Issued capital as of December 31, 2021 is as follows (Korean won in millions, Korean won for Par Value amount):**

	Number of shares authorized	Maturity	Par value	Issued capital	Paid-in capital in excess of par value (capital surplus)
Ordinary shares	500,000,000	123,375,149	₩ 5,000	₩ 616,876	₩ 518,848
U.S. dollar in thousands				\$ 520,351	\$ 437,662

**20.2 Capital surplus as of December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Paid-in capital in excess of par value	₩ 518,848	₩ 518,848	\$ 437,662
Other capital surplus	39,394	39,179	33,230
	<b>₩ 558,242</b>	<b>₩ 558,027</b>	<b>\$ 470,892</b>

**20.3 Other capital components as of December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Treasury stock	₩ (6)	₩ (6)	\$ (5)
Other capital adjustments	(2)	(2)	(2)
	<b>₩ (8)</b>	<b>₩ (8)</b>	<b>\$ (7)</b>

**21. Other components of equity and accumulated other comprehensive income**

Accumulated other comprehensive income as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Gains or losses on equity financial assets at fair value through OCI	₩ (6,940)	₩ (6,925)	\$ (5,854)
Change in equity adjustment in equity method	38,322	34,093	32,326
Negative change in equity adjustment in equity method	(26,337)	(29,206)	(22,216)
Cumulative exchange differences on translations of foreign operations	13,730	(22,910)	11,582
Loss on valuation of derivatives	-	(84)	-
	<b>₩ 18,775</b>	<b>₩ (25,032)</b>	<b>\$ 15,838</b>

## 22. Retained earnings

22.1 Details of retained earnings as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Legal reserve (*1)	₩ 70,894	₩ 61,893	\$ 59,801
Voluntary reserve (*2)	1,710,400	1,600,400	1,442,767
Unappropriated retained earnings	511,223	345,940	431,230
	<b>₩ 2,292,517</b>	<b>₩ 2,008,233</b>	<b>\$ 1,933,798</b>

(\*1) In accordance with the Commercial law, the Group is required to accumulate at least 10% of the dividend from cash dividends at each balance sheet as reserve for profits until the balance reaches 50% of the paid-in capital. It can be used to transfer capital or to protect deficits.

(\*2) The voluntary reserve for the Group is the full amount of the business expansion reserves.

22.2 Details of dividends declared for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Dividends per share (Korean won and %)	₩ 800(16%)	₩ 700(14%)	\$ 0.67
Number of shares	123,374,891	123,374,891	123,374,891
Dividends	<b>₩ 98,699,913</b>	<b>₩ 86,362,424</b>	<b>\$ 83,255,937</b>

## 23. Expenses disclosed by nature

Expenses disclosed by the nature of expense (cost of sales and selling and administrative expense) for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Cost of goods sold	₩ 30,968,559	₩ 19,154,607	\$ 26,122,783
Material costs	817,275	511,384	689,393
Changes in inventories	43,043	(95,067)	36,308
Employee benefits	325,511	270,747	274,577
Depreciation of property, plant and equipment	91,227	83,768	76,952
Amortization of intangible assets	206,807	209,616	174,447
Depreciation of investment properties	3,066	4,263	2,586
Others	907,991	858,590	765,914
	<b>₩ 33,363,479</b>	<b>₩ 20,997,908</b>	<b>\$ 28,142,960</b>

## 24. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Salaries	₩ 228,106	₩ 202,453	\$ 192,413
Retirement benefits	16,564	16,963	13,972
Employee welfare	49,408	40,494	41,677
Travel	3,857	3,215	3,253
Communication	4,915	5,147	4,146
Utilities	3,315	3,615	2,796
Taxes and dues	5,963	6,031	5,030
Rents	8,996	9,039	7,588
Depreciation	19,571	20,622	16,509
Amortization	6,390	6,837	5,390
Depreciation of right-of-use assets	11,819	11,056	9,970
Repairs	1,560	1,631	1,316
Insurance	36,106	25,465	30,456
Entertainment	1,790	1,319	1,510
Advertising	1,576	1,005	1,329
Packaging	-	386	-
Shipping	61,440	42,720	51,826
Commissions	56,229	41,478	47,431
Bad debt expenses	20,162	700	17,007
Supplies expenses	2,054	2,187	1,733
Vehicles maintenance	1,597	1,678	1,347
Publication expenses	418	368	353
Training expenses	2,477	2,355	2,089
Development expenses	737	495	622
Sales promotional expenses	2,555	2,301	2,155
Miscellaneous expenses	739	459	623
Other selling and administrative expenses	989	568	834
	<b>₩ 549,333</b>	<b>₩ 450,587</b>	<b>\$ 463,375</b>

25. Finance income and costs

25.1 Details of finance income for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>&lt;Finance income&gt;</b>			
Interest income	₩ 24,218	₩ 36,784	\$ 20,429
Financial guarantee income	77	147	65
Dividends income	706	230	596
Gains on foreign currency transactions	512,314	504,425	432,150
Gains on foreign currency translation	102,368	132,095	86,350
Gains on valuation of derivatives	218,768	196,466	184,536
Gains on settlement of derivatives	370,839	302,178	312,812
Gains on valuation of trade payable	23	544	19
Gains on valuation of trade receivables	14,185	3,474	11,965
Gains on valuation of financial assets at FVPL	229	3	193
Gains on disposal of financial assets at FVPL	-	3	-
	<b>₩ 1,243,727</b>	<b>₩ 1,176,349</b>	<b>\$ 1,049,115</b>

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>&lt;Finance cost&gt;</b>			
Losses on disposal of trade receivables	₩ 15,182	₩ 12,670	12,806
Interest expenses	82,451	98,489	69,550
Financial guarantee expenses	302	1,400	255
Losses on foreign currency transactions	452,016	516,718	381,287
Losses on foreign currency translation	130,164	134,930	109,797
Losses on valuation of derivatives	178,698	147,171	150,736
Losses on settlement of derivatives	457,490	348,945	385,905
Losses on valuation on trade payables	1,027	-	866
Losses on valuation on trade receivables	1,548	216	1,306
Losses on valuation on financial assets at FVPL	138	-	116
Losses on disposal of financial assets at FVPL	66	13	56
	<b>₩ 1,319,082</b>	<b>₩ 1,260,552</b>	<b>\$ 1,112,680</b>

25.2 Details of interest income for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Interest income on cash equivalents	₩ 2,199	₩ 2,774	\$ 1,855
Other interest income	22,019	34,010	18,574
	<b>₩ 24,218</b>	<b>₩ 36,784</b>	<b>\$ 20,429</b>

25.3 Details of interest expenses for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Interest on borrowings and bonds	₩ 82,451	₩ 98,489	\$ 69,550

26. Other income and expenses

Details of other income for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>&lt;Other income&gt;</b>			
Gain on disposal of property, plant and equipment	₩ 682	₩ 914	\$ 575
Gain on disposal of intangible assets	96	-	81
Reversal of loss on impairment of intangible assets	496	-	418
Gain on disposal of other investment properties	38	-	32
Gain on termination of lease contract	26,598	-	22,436
Gain on disposal of other non-current assets	-	2	-
Reversal of provisions for contingencies	27,891	1,177	23,527
Reversal of other allowance for doubtful accounts	2,146	314	1,810
Gain on disposal of investments in associates	3,868	1,016	3,263
Reversal of impairment loss on investment in associates	9,407	-	7,935
Rental income	63	-	53
Insurance benefits	10	312	8
Gain on exemption of debt	669	-	564
Miscellaneous income	14,084	13,858	11,880
	<b>₩ 86,048</b>	<b>₩ 17,593</b>	<b>\$ 72,582</b>

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
<b>&lt;Other expenses&gt;</b>			
Contribution to provisions for restoration	₩ 4,193	₩ 500	\$ 3,537
Other bad debt expenses	7,535	50,882	6,356
Loss on disposal of property, plant and equipment	3,440	450	2,902
Loss on impairment of property, plant and equipment	44,276	80	37,348
Loss on disposal of intangible assets	-	41	-
Loss on impairment of intangible assets	25,485	8,926	21,497
Loss on disposal of other investment properties	4	-	3
Loss on termination of lease contract	27,422	-	23,131
Loss on disposal of other non-current assets	-	3	-
Loss on impairment of right-of-use assets	793	-	669
Donations	32,503	1,836	27,417
Contingencies	10,497	847	8,854
Loss on disposal of investments in associates	1,513	54	1,276
Loss on impairment of investments in associates	-	29,168	-
Miscellaneous expenses	9,815	6,710	8,279
	<b>₩ 167,476</b>	<b>₩ 99,497</b>	<b>\$ 141,269</b>

## 27. Impairment loss on financial instruments

Details of impairment loss on financial instruments for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Bad debt expenses	₩ 20,162	₩ 700	\$ 17,007
Other bad debt expenses	7,535	50,882	6,356
Less: reversal of allowance for doubtful accounts	(2,146)	(314)	(1,810)
	<u>₩ 25,551</u>	<u>₩ 51,268</u>	<u>\$ 21,553</u>

## 28. Income taxes

28.1 The major components of income tax expenses for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Current income taxes	₩ 129,718	₩ 136,823	\$ 109,420
Changes in deferred income tax arising from temporary differences	10,467	(43,628)	8,829
Income tax charged directly to equity	(7,973)	4,450	(6,725)
Income tax expenses	<u>₩ 132,212</u>	<u>₩ 97,645</u>	<u>\$ 111,524</u>

28.2 A reconciliation between income tax expenses at the effective income tax rates of the Group and income before income taxes at the Korea statutory tax rate for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Accounting profit before income tax	₩ 488,700	₩ 327,169	\$ 412,231
Tax at the statutory income tax rate	₩ 124,031	₩ 79,610	\$ 104,623
Adjustments:			
Non-taxable income	(38)	(7)	(32)
Non-deductible expenses	732	3,851	617
Tax credits	(46,458)	(66,139)	(39,189)
Others	53,945	80,330	45,504
<b>Income tax expense</b>	<u>₩ 132,212</u>	<u>₩ 97,645</u>	<u>\$ 111,523</u>
<b>Effective income tax rates</b>	<u>27.05%</u>	<u>29.85%</u>	<u>27.05%</u>

**28.3 Income tax charged directly to equity for the years ended December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Loss (gain) on financial asset valuation at FVOCI	₩ 391	₩ 1,745	\$ 330
Re-measurement loss (gain) on defined benefit liabilities	(3,008)	4	(2,537)
Equity adjustments in equity method	(3,223)	2,964	(2,719)
Exchange differences on translation of foreign operations	(2,120)	(550)	(1,788)
Reclassification arising from disposal of financial asset at FVOCI	(13)	287	(11)
	<b>₩ (7,973)</b>	<b>₩ 4,450</b>	<b>\$ (6,725)</b>

**28.4 Changes in deferred tax assets and liabilities for the years ended December 31, 2021 and 2020 are as follows:**

	2021				
	Beginning balance	Business combination	Recognized in profit or loss	Recognized directly to equity	Ending balance
Valuation of derivatives	₩ 1,521	₩ -	₩ (299)	₩ -	₩ 1,222
Loss on impairment of investments	52,818	-	(1,463)	-	51,355
Equity in equality methods	60,317	-	(30,361)	(3,223)	26,733
Provisions of severance liability	44,931	-	4,284	(3,008)	46,207
Severance insurance deposits	(41,107)	-	(3,709)	-	(44,816)
Debt restructuring	(4,103)	-	42	-	(4,061)
Extraordinary loss	4,883	-	1,422	-	6,305
Allowance for doubtful accounts	27,284	-	(9,524)	-	17,760
Depreciation	57,288	-	9,506	-	66,794
Capitalized borrowing costs	(14,769)	-	2,643	-	(12,126)
Accrued expenses	11,810	-	5,451	-	17,261
Foreign currency translation	569	-	17	-	586
Equity instruments valuation at FVOCI	2,398	-	-	391	2,789
Financial guarantee liabilities	3,137	-	(921)	-	2,216
Borrowings with low interest rates	(166)	-	105	-	(61)
Forgivable borrowings	4,582	-	4,420	-	9,002
Others	66,533	(666)	12,168	(2,133)	75,902
	₩ 277,926	₩ (666)	₩ (6,219)	₩ (7,973)	₩ 263,068
Tax credit carryforwards	(35,358)	-	3,725	-	(31,633)
	<b>₩ 242,568</b>	<b>₩ (666)</b>	<b>₩ (2,494)</b>	<b>₩ (7,973)</b>	<b>₩ 231,435</b>
<b>U.S. dollar in thousands</b>	<b>\$ 204,612</b>	<b>\$ (562)</b>	<b>\$ (2,104)</b>	<b>\$ (6,725)</b>	<b>\$ 195,221</b>

**28.4 Changes in deferred tax assets and liabilities for the years ended December 31, 2021 and 2020 are as follows: (cont'd)**

	2020				
	Beginning balance	Business combination	Recognized in profit or loss	Recognized directly to equity	Ending balance
Valuation of derivatives	₩ 1,625	₩ -	₩ (104)	₩ -	₩ 1,521
Loss on impairment of investments	48,437	-	4,381	-	52,818
Equity in equality methods	82,732	-	(25,379)	2,964	60,317
Provisions of severance liability	35,383	-	9,544	4	44,931
Severance insurance deposits	(36,900)	-	(4,207)	-	(41,107)
Debt restructuring	(4,163)	-	60	-	(4,103)
Extraordinary loss	7,880	-	(2,997)	-	4,883
Allowance for doubtful accounts	11,092	-	16,192	-	27,284
Depreciation	39,644	-	17,644	-	57,288
Capitalized borrowing costs	(17,964)	-	3,195	-	(14,769)
Accrued expenses	15,608	-	(3,798)	-	11,810
Foreign currency translation	666	-	(97)	-	569
Equity instruments valuation at FVOCI	653	-	(287)	2,032	2,398
Financial guarantee liabilities	479	-	2,658	-	3,137
Borrowings with low interest rates	(319)	-	153	-	(166)
Forgivable borrowings	2,199	-	2,383	-	4,582
Others	44,318	-	22,765	(550)	66,533
	₩ 231,370	₩ -	₩ 42,106	₩ 4,450	₩ 277,926
Tax credit carryforwards	(32,430)	-	(2,928)	-	(35,358)
	<u>₩ 198,940</u>	<u>₩ -</u>	<u>₩ 39,178</u>	<u>₩ 4,450</u>	<u>₩ 242,568</u>
<b>U.S. dollar in thousands</b>	<u>\$ 167,811</u>	<u>\$ -</u>	<u>\$ 33,048</u>	<u>\$ 3,754</u>	<u>\$ 204,612</u>

**29. Earnings per share**

**29.1 Earnings per share**

Details of earnings per share for the years ended December 31, 2021 and 2020 are as follows (Korean won in millions, except for per share amounts):

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Profit for the year attributable to ordinary equity holders of the parent	₩ 360,789	₩ 238,557	\$ 304,335
Weighted average number of ordinary shares outstanding	123,374,891	123,374,891	123,374,891
Basic earnings per share (Korean won, U.S dollar)	2,924	1,934	2.47

**29.2 Diluted earnings per share**

Diluted earnings per share are consistent with basic earnings per share because there is no potential common stock that can be converted into common stock for the years ended December 31, 2021 and 2020.

### 30. Fair value measurement

#### 30.1 Carrying amount and fair value of financial instruments

The book value and fair value of financial instruments of the Group as of December 31, 2021 and 2020 are as follows:

	2021			
	Korean won in million		U.S. dollar in thousand	
	Book value	Fair value	Book value	Fair value
<b>&lt;Financial assets&gt;</b>				
Financial asset at amortized costs				
- Cash and Cash equivalents	₩ 521,160	₩ 521,160	\$ 439,612	\$ 439,612
- Trade and other receivables (*1)	4,159,799	4,159,799	3,508,898	3,508,898
- Other current financial assets	80,978	80,978	68,307	68,307
- Long-term trade and other receivables (*1)	144,646	144,646	122,013	122,013
- Other non-current financial assets	10	10	8	8
	<u>₩ 4,906,593</u>	<u>₩ 4,906,593</u>	<u>\$ 4,138,838</u>	<u>\$ 4,138,838</u>
Financial asset at fair value				
- Trade and other receivables	₩ 198,690	₩ 198,690	\$ 167,600	\$ 167,600
- Derivative financial assets	61,539	61,539	51,910	51,910
- Financial assets at FVOCI (equity instruments)	36,749	36,762	30,999	31,010
- Financial assets at FVPL (long-term investment)	467	340	394	287
- Financial assets at FVPL(other securities)	27,258	27,246	22,993	22,983
	<u>₩ 324,703</u>	<u>₩ 324,577</u>	<u>\$ 273,896</u>	<u>\$ 273,790</u>
<b>Total: Financial assets</b>	<b><u>₩ 5,231,296</u></b>	<b><u>₩ 5,231,170</u></b>	<b><u>\$ 4,412,734</u></b>	<b><u>\$ 4,412,628</u></b>
<b>&lt;Financial liabilities&gt;</b>				
Financial liabilities amortized cost				
- Trade and other payables (*2)	₩ 2,895,244	₩ 2,895,244	\$ 2,442,213	\$ 2,442,213
- Borrowings	1,894,385	1,894,385	1,597,963	1,597,963
- Current-portion of bonds	408,877	410,073	344,898	345,907
- Long-term trade and other payables (*2)	105,155	105,155	88,701	88,701
- Long-term borrowings	246,111	246,111	207,601	207,601
- Bonds	1,143,578	1,138,280	964,638	960,169
	<u>₩ 6,693,350</u>	<u>₩ 6,689,248</u>	<u>\$ 5,646,014</u>	<u>\$ 5,642,554</u>
Financial liabilities at fair value				
- Trade and other payables	₩ 18,685	₩ 18,685	\$ 15,761	\$ 15,761
- Derivative financial liabilities	₩ 76,303	₩ 76,303	\$ 64,364	\$ 64,364
	<u>₩ 94,988</u>	<u>₩ 94,988</u>	<u>\$ 80,125</u>	<u>\$ 80,125</u>
<b>Total: Financial liabilities</b>	<b><u>₩ 6,788,338</u></b>	<b><u>₩ 6,784,236</u></b>	<b><u>\$ 5,726,139</u></b>	<b><u>\$ 5,722,679</u></b>

(\*1) Trade and other receivables and long-term trade and other receivables include ₩63,568 million (\$53,621 thousand) of current portion of lease receivables and ₩80,318 million (\$ 67,750 thousand) of long-term lease receivables respectively.

(\*2) Trade and other payables and long-term trade and other payables include ₩91,392 million (\$77,092 thousand) of current portion of lease liabilities and ₩93,871 million (\$79,183 thousand) of long-term lease liabilities respectively.

30.1 Carrying amount and fair value of financial instruments (cont'd)

	2020			
	Korean won in million		U.S. dollar in thousand	
	Book value	Fair value	Book value	Fair value
<Financial assets>				
Financial asset at amortized costs				
- Cash and Cash equivalents	₩ 679,304	₩ 679,304	\$ 573,011	\$ 573,011
- Trade and other receivables	2,875,783	2,875,783	2,425,798	2,425,798
- Other current financial assets	18,708	18,708	15,781	15,781
- Long-term trade and other receivables	230,798	230,798	194,684	194,684
- Other non-current financial assets	10	10	8	8
	<u>₩ 3,804,603</u>	<u>₩ 3,804,603</u>	<u>\$ 3,209,282</u>	<u>\$ 3,209,282</u>
Financial asset at fair value				
- Trade and other receivables	₩ 18,569	₩ 18,569	\$ 15,663	\$ 15,663
- Derivative financial assets	113,411	113,411	95,665	95,665
- Financial assets at FVOCI (equity instruments)	28,942	28,942	24,413	24,413
- Financial assets at FVPL (long-term investment)	570	570	481	481
- Financial assets at FVPL(other securities)	17	17	14	14
	<u>₩ 161,509</u>	<u>₩ 161,509</u>	<u>\$ 136,236</u>	<u>\$ 136,236</u>
<b>Total: Financial assets</b>	<b><u>₩ 3,966,112</u></b>	<b><u>₩ 3,966,112</u></b>	<b><u>\$ 3,345,518</u></b>	<b><u>\$ 3,345,518</u></b>
<Financial liabilities>				
Financial liabilities amortized cost				
- Trade and other payables	₩ 1,774,107	₩ 1,774,107	\$ 1,496,505	\$ 1,496,505
- Borrowings	796,038	796,038	671,479	671,479
- Current-portion of bonds	417,042	418,358	351,786	352,896
- Long-term trade and other payables	176,541	176,541	148,917	148,917
- Long-term borrowings	379,347	379,347	319,989	319,989
- Bonds	1,107,420	1,124,976	934,137	948,946
	<u>₩ 4,650,495</u>	<u>₩ 4,669,367</u>	<u>\$ 3,922,813</u>	<u>\$ 3,938,732</u>
Financial liabilities at fair value				
- Derivative financial liabilities	₩ 90,255	₩ 90,255	\$ 76,132	\$ 76,132
<b>Total: Financial liabilities</b>	<b><u>₩ 4,740,750</u></b>	<b><u>₩ 4,759,622</u></b>	<b><u>\$ 3,998,945</u></b>	<b><u>\$ 4,014,864</u></b>

### 30.2 Fair value hierarchy

The following are the criteria for classifying fair value from Level 1 to Level 3, depending on how observable it is in the market.

- Level1 - Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level2 - Input variables for assets or liabilities observable either directly (e.g., price) or indirectly (e.g., derived from the price), except for the quoted prices included in Level
- Level3 - Input variables for assets or liabilities that are not based on observable market data (unobservable inputs)

The measurements according to the above hierarchy of assets and liabilities that are measured at fair value or for which fair values are disclosed as of December 31, 2021 and 2020 are as follows:

	2021				U.S. dollar in thousand	
	Korean won in millions				Total	
	Level 1	Level 2	Level 3	Total	Total	
<b>Assets</b>						
Biological assets	₩ -	₩ -	₩ 12,165	₩ 12,165	\$	10,261
Trade and other receivables	-	-	198,690	198,690		167,600
Financial assets at FVOCI	9,297	-	-	9,297		7,842
Financial assets at FVPL	-	17	27,229	27,246		22,983
Derivative financial assets	-	61,539	-	61,539		51,910
<b>Liabilities</b>						
Trade and other payables	₩ -	₩ -	₩ 18,685	₩ 18,685	\$	15,761
Derivative financial liabilities	-	₩ 76,303	-	76,303	\$	64,364
<b>2020</b>						
	Korean won in millions				U.S. dollar in thousand	
	Total				Total	
	Level 1	Level 2	Level 3	Total	Total	
<b>Assets</b>						
Biological assets	₩ -	₩ -	₩ 12,043	₩ 12,043	\$	10,159
Trade and other receivables	-	-	18,569	18,569		15,663
Financial assets at FVOCI	2,895	-	-	2,895		2,442
Financial assets at FVPL	-	17	-	17		14
Derivative financial assets	-	113,411	-	113,411		95,665
<b>Liabilities</b>						
Derivative financial liabilities	₩ -	₩ 90,255	₩ -	₩ 90,255	\$	76,132

### 30.3 Assumption used for fair value valuation technique

The fair value of financial instruments that are traded in active markets is determined based on quoted market prices at the end of reporting period. These instruments are included in Level 1, mostly are classified into financial assets at fair value which are listed stocks.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. This valuation technique fully makes use of observable market information as possible and internal information at minimum. When every significant input variable required for measuring fair value of the instrument is observable, the instrument is classified into Level 2.

When one or more significant input variables are not based on observable market information, the instrument is classified into Level 3.

### 30.3 Assumption used for fair value valuation technique (cont'd)

Valuation techniques used to measure fair values of instruments are:

- Quoted prices or dealer price of similar instrument
- Present value discounted by forward exchange rate as the end of reporting period is used for fair value of derivative instrument
- Discounted cash flow and other techniques are used for other instruments

Book values of instruments which are classified into same category with trade and other receivables are estimated as reasonable approximate values of fair value.

The Group considered the maturity interest rate of the Group in determining the fair value of the derivative financial assets, liabilities and bonds valued at Level 2 hierarchy

## 31. Financial instruments risk management

### 31.1 Capital risk management

The purpose of the Group's capital management is to maintain an optimal capital structure to protect the ability to continue to provide benefits to shareholders and stakeholders as a continuing entity and to reduce capital costs. In order to maintain or adjust the capital structure, the Group applies policies such as adjusting dividends.

Capital structure of the Group is composed of net borrowings, which are borrowings less cash and cash equivalents and equity. The Group maintains the same capital risk management policies as 2020. Details of the capital components managed by the Group as of December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Total borrowings	₩ 3,692,951	₩ 2,699,847	\$ 3,115,100
Less: Cash and cash equivalents	(521,160)	(679,304)	(439,612)
<b>Net borrowings</b>	<b>₩ 3,171,791</b>	<b>₩ 2,020,543</b>	<b>\$ 2,675,488</b>
<b>Total equity</b>	<b>₩ 3,512,140</b>	<b>₩ 3,160,874</b>	<b>\$ 2,962,581</b>
<b>Gearing ratio</b>	<b>90.31%</b>	<b>63.92%</b>	<b>90.31%</b>

### 31.2 Financial risk management

The Group is exposed to market risk (foreign currency risk and interest rate risk), credit risk, and liquidity risk. The purpose of Group's financial risk management is to detect potential risk which could decrease the Group's profit and to eliminate, reduce and hedge such risk to an acceptable level. The Group uses derivative financial instruments for hedging special risk such as foreign currency risk. Financial risk management policy of the Group has been consistent with the policy of 2020.

#### 31.2.1 Market risk

Market risk is the risk that the fair value of financial instrument will fluctuate because of changes in market prices. Market prices comprise three types of risk: foreign currency risk, interest rate risk and other price risk.

### 31.2.1.1 Foreign currency risk

The Group is exposed to the risk of exchange rate fluctuations because it has transactions denominated in foreign currency. The book values of monetary assets and liabilities denominated in major foreign currencies other than functional currencies as of December 31, 2021 and 2020 are as follows:

	Korean won in million				U.S. dollar in thousand	
	2021		2020		2021	
	Asset	Liability	Asset	Liability	Asset	Liability
USD	₩ 3,160,388	₩ 2,512,137	₩ 2,360,691	₩ 1,649,466	\$ 2,665,869	\$ 2,119,053
JPY	131,343	112,569	98,615	54,511	110,791	94,955
EUR	592,988	363,486	521,256	211,639	500,201	306,610
CNY	192,095	288,631	79,697	69,565	162,037	243,468

The effect that fluctuation in the exchange rate of 10% of the functional currency on each foreign currency has on profit or loss as of December 31, 2021 is as follows:

	Korean won in million		U.S. dollar in thousand	
	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%
USD	₩ 64,825	₩ (64,825)	\$ 54,682	\$ (54,682)
JPY	1,877	(1,877)	1,583	(1,583)
EUR	22,950	(22,950)	19,359	(19,359)
CNY	(9,654)	9,654	(8,143)	8,143

### 31.2.1.2 Interest rate risk

The interest rate risk of the Group arises from borrowings and bonds. Due to short-term borrowings issued at floating interest rates, the Group is exposed to cash flow interest rate risk.

As of December 31, 2021, with all other variables remain constant, a change of 1% in the floating interest rate on borrowings will have an effect of ₩8,579 million (\$7,237 thousand) decrease or increase in the Group's income before income taxes.

### 31.2.2 Credit risk

Credit risk is the risk that counterparties will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group's exposure to the credit risk relates to operating and financial activities.

#### 31.2.2.1 Trade and other receivables

It is the principle for the Group to conduct transactions only with those with sound financial status by performing credit verification procedures for all counterparties that desire credit transactions with the Group. In addition, the Group manages the balance of accounts receivable by continuously reevaluating credit ratings so that the level of the Group's exposure to the credit risk is maintained at an insignificant level.

#### 31.2.2.2 Other assets

Credit risks associated with the Group's other assets which consist of cash, short-term deposits and short-term and long-term loans arise from the default by the counterparties. Maximum exposure to credit risks will be the book value of the other assets. The Group deposits cash and cash equivalents and short-term financial products at financial institutions such as Woori Bank, and deals with financial institutions with excellent credit ratings. So, credit risk from financial institutions is limited.

### 31.2.2.3 Maximum exposure to credit risk

The book value of a financial asset represents the maximum exposure to a credit risk. If a financial guarantee is provided, the maximum exposure to credit risk is the maximum amount due on the claims of the assured. For borrowing arrangements, the maximum exposure to credit risk is the total commitment amount. In addition, in the case of a borrowing agreement, the maximum exposure amount of credit risk is the balance of the applicable borrowing as of the end of the current year, and the limit of the agreement amount is detailed in Note 19.

The maximum exposure to credit risk of the Group as of December 31, 2021 and 2020 is as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2020
Trade and other receivables (*)	₩ 4,358,489	₩ 2,894,352	\$ 3,676,499
Other current financial assets	80,978	18,708	68,307
Derivative financial assets	61,539	113,411	51,910
Long-term trade and other receivables (*)	144,646	230,798	122,013
Other non-current financial assets	64,484	29,539	54,394
Financial guarantee contract	34,362	53,797	28,985
	<b>₩ 4,744,498</b>	<b>₩ 3,340,605</b>	<b>\$ 4,002,108</b>

(\*) Trade and other receivables and long-term trade and other receivables include ₩63,568 million (\$53,621 thousand) of current lease receivables and ₩80,318 million (\$67,750 thousand) of long-term lease receivables before allowance for bad debts, respectively.

### 31.2.2.4 Aging analysis of non-derivative financial instruments

Aging analysis of non-derivative financial instruments as of December 31, 2021 is as follows:

	Not Past due	Past due				Total
		Within 1 month	1 to 3 months	3 to 12 months	Over 12 months	
Cash and cash equivalents	₩ 521,160	₩ -	₩ -	₩ -	₩ -	₩ 521,160
Trade and other receivables	4,249,575	63,354	5,200	21,616	18,744	4,358,489
Other current financial assets	80,978	-	-	-	-	80,978
Long-term trade and other receivables	119,628	1,048	32	13,674	10,264	144,646
Other non-current financial assets	64,484	-	-	-	-	64,484
	<b>₩ 5,035,825</b>	<b>₩ 64,402</b>	<b>₩ 5,232</b>	<b>₩ 35,290</b>	<b>₩ 29,008</b>	<b>₩ 5,169,757</b>
<b>U.S. dollar in thousand</b>	<b>\$ 4,247,849</b>	<b>\$ 54,325</b>	<b>\$ 4,413</b>	<b>\$ 29,768</b>	<b>\$ 24,469</b>	<b>\$ 4,360,824</b>

### 31.2.3 Liquidity risk

The Group establishes short and long-term capital management plans and analyzes and reviews cash flow budgets against actual cash outflows in order to match the maturity of financial liabilities and financial assets. The Group believes that it has sufficient cash inflows from operating activities and financial assets to redeem financial liabilities that become due.

#### 31.2.3.1 The maturity analysis based on the maturity of the remaining contract of the financial liability outstanding as of December 31, 2021 is as follows. The maturity amount is an undiscounted contractual cash flow that includes interest payments.

	<u>Within 1 year</u>	<u>1 to 5 years</u>	<u>Over 5 years</u>	<u>Total</u>
Trade and other payables (*)	₩ 2,913,929	₩ -	₩ -	₩ 2,913,929
Derivative financial liabilities	76,303	-	-	76,303
Borrowings	1,655,999	419,191	127,522	2,202,712
Bonds	435,616	1,127,865	52,471	1,615,952
Long-term trade and other payables (*)	-	104,633	417	105,050
	<u>₩ 5,081,847</u>	<u>₩ 1,651,689</u>	<u>₩ 180,410</u>	<u>₩ 6,913,946</u>
<b>U.S. dollar in thousand</b>	<u><b>\$ 4,286,670</b></u>	<u><b>\$ 1,393,243</b></u>	<u><b>\$ 152,181</b></u>	<u><b>\$ 5,832,093</b></u>

(\*) The Trade and other payables and the long-term trade and other payables include ₩92,907 million (\$78,369 thousand) of current portion of lease liabilities and ₩97,823 million (\$82,516 thousand) of long-term lease liabilities, respectively.

#### 31.2.3.2 The maturity analysis based on the guarantee period of the financial guarantee contract as of December 31, 2021 is as follows:

	<u>Within 1 year</u>	<u>1 to 5 years</u>	<u>Over 5 years</u>	<u>Total</u>
Financial guarantee contract (*)	₩ 34,362	₩ 26,063	₩ -	₩ 60,425
U.S. dollar in thousand	<u>\$ 28,985</u>	<u>\$ 21,985</u>	<u>\$ -</u>	<u>\$ 50,970</u>

(\*) The Group provides arrangements of guarantee obligations and fund supplementary to the associate and other related parties, and for further information, see Note 19 of contingent liabilities and commitments.

## 32. Related party transactions

### 32.1 Details of related parties as of December 31, 2021 and 2020 are as follows:

	2021	2020
Parent	POSCO Co., Ltd.	POSCO Co., Ltd.
Associates	Blue Ocean Corporate's Financial Stabilization Private Equity Fund No. 1 POSCO MEXICO PROCESSING CENTER HOLDING,LLC. POSCO-ESDC LTD. POSCO IJPC Shanghai Lansheng DAEWOO Corp Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd. GENERAL MEDICINES CO.,LTD. KOREA LNG LTD. KWANIKA COPPER CORP. GLOBAL KOMSCO DAEWOO LLC SOUTH-EAST ASIA GAS PIPELINE CO.,LTD. HyunSon Engineering & Construction SPH Co, Ltd. YULCHON MEXICO S. A. DE C. V. DMSA/AMSA - (*) Inco tech Inc. - (*) SHINPOONG DAEWOO PHARMA CO.,LTD. POSCO-MALAYSIA SDN.BHD. POSCO-ITPC S.p.A Hunchun POSCO HYUNDAI International Logistics Quro Co.	Blue Ocean Corporate's Financial Stabilization Private Equity Fund No. 1 POSCO MEXICO PROCESSING CENTER HOLDING,LLC. POSCO-ESDC LTD. POSCO IJPC Shanghai Lansheng DAEWOO Corp Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd. GENERAL MEDICINES CO.,LTD. KOREA LNG LTD. KWANIKA COPPER CORP. GLOBAL KOMSCO DAEWOO LLC SOUTH-EAST ASIA GAS PIPELINE CO.,LTD. HyunSon Engineering & Construction SPH Co, Ltd. YULCHON MEXICO S. A. DE C. V. DMSA/AMSA PT. BATUTUA TEMBAGA RAYA Inco tech Inc. TK-Chemical Corp. SHINPOONG DAEWOO PHARMA CO.,LTD. POSCO-MALAYSIA SDN.BHD. POSCO-ITPC S.p.A Hunchun POSCO HYUNDAI International Logistics Quro Co.
Others	POSCO C&C POSCO AMERICA CORP. POSCO ASIA CO., LTD. ZHANGJIAGANG POHANG STAINLESS STEEL CO., LTD. POSCO ENERGY CO., LTD POSCO-Foshan Steel Processing Center CO., LTD. POSCO-VIETNAM CO.,LTD. COMPANHIA SIDERURGICA DO PECEM POSCO-THAINOX POSCO VST CO., LTD. POSCO Maharashtra Steel PVT. LTD. POSCO HUMANS CO., LTD POSCO-AAPC POSCO SS-VINA PT. KRAKATAU POSCO POSCO ASSAN TST STEEL INDUSTRY DAEWOO LOGISTICS CORP. etc.	POSCO C&C POSCO AMERICA CORP. POSCO ASIA CO., LTD. ZHANGJIAGANG POHANG STAINLESS STEEL CO., LTD. POSCO ENERGY CO., LTD POSCO-Foshan Steel Processing Center CO., LTD. POSCO-VIETNAM CO.,LTD. COMPANHIA SIDERURGICA DO PECEM POSCO-THAINOX POSCO VST CO., LTD. POSCO Maharashtra Steel PVT. LTD. POSCO HUMANS CO., LTD POSCO-AAPC POSCO SS-VINA PT. KRAKATAU POSCO POSCO ASSAN TST STEEL INDUSTRY DAEWOO LOGISTICS CORP. etc.

(\*) The Group disposed the shares for the year ended December 31, 2021.

**32.2 Significant transactions with related parties for the years ended December 31, 2021 and 2020 are as follows:**

	2021					
	Sales and others			Purchase and others		
	Sales	Others	Total	Purchase	Others	Total
Parent company						
POSCO (*)	₩ 3,091,897	₩ 2,929	₩ 3,094,826	₩ 9,913,345	₩ 679,735	₩ 10,593,080
Associates						
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	₩ 491,594	₩ -	₩ 491,594	₩ 3,342	₩ 192	₩ 3,534
SPH CO., LTD	100	74	174	-	-	-
POSCO-ESDC LTD.	17	38	55	-	5,261	5,261
POSCO IJPC GENERAL	430,055	-	430,055	18	-	18
MEDICINES CO., LTD.	7,513	224	7,737	-	-	-
KOREA LNG LTD.	-	9,178	9,178	-	-	-
DMSA/AMSA SOUTH-EAST ASIA GAS PIPELINE CO., LTD.	-	-	-	10,085	-	10,085
GLOBAL PIPELINE CO., LTD.	-	35,506	35,506	-	-	-
KOMSCO DAEWOO LLC	-	28	28	18,509	-	18,509
YULCHON MEXICO S.A. DE C.V.	1,215	-	1,215	-	-	-
POSCO-Malaysia SDN. BHD.	147,081	-	147,081	12,844	-	12,844
POSCO-ITPC S.p.A	109,882	-	109,882	3,571	-	3,571
Quro Co.	-	-	-	100	-	100
Others						
POSCO ASIA CO., LTD.	₩ 497	₩ -	₩ 497	₩ 7,023	₩ 1,089	₩ 8,112
POSCO-VIETNAM CO., LTD.	513,301	-	513,301	189,449	-	189,449
POSCO-THAINOX	404,422	-	404,422	121,840	-	121,840
POSCO ASSAN TST STEEL INDUSTRY	536,799	49	536,848	113,048	-	113,048
POSCO-AAPC	165,497	-	165,497	6,717	5	6,722
POSCO C&C	149,692	-	149,692	351,263	74	351,337
POSCO AMERICA CORP.	-	-	-	2,627	-	2,627
ZHANGJIAGANG POHANG STAINLESS STEEL CO., LTD.	104,444	-	104,444	262,488	-	262,488
POSCO-Foshan Steel Processing Center CO., LTD.	304,749	-	304,749	5,986	-	5,986
COMPANHIA SIDERURGICA DO PECÉM	2,504	-	2,504	96,179	-	96,179
POSCO Energy Co., Ltd.	332,034	-	332,034	-	-	-
POSCO VST CO., LTD.	402,918	-	402,918	58,099	1,772	59,871
POSCO SS-VINA	293,675	-	293,675	35,250	102	35,352
PT. KRAKATAU POSCO	1,347,407	-	1,347,407	409,431	277	409,708
POSCO Maharashtra Steel PVT.LTD.	15	-	15	95,132	-	95,132
Others	2,823,851	55	2,823,906	703,505	60,324	763,829
	<b>₩ 11,661,159</b>	<b>₩ 48,081</b>	<b>₩ 11,709,240</b>	<b>₩ 12,419,851</b>	<b>₩ 748,831</b>	<b>₩ 13,168,682</b>
	<b>\$ 9,836,490</b>	<b>\$ 40,558</b>	<b>\$ 9,877,048</b>	<b>\$ 10,476,466</b>	<b>\$ 631,658</b>	<b>\$ 11,108,125</b>

**32.2 Significant transactions with related parties for the years ended December 31, 2021 and 2020 are as follows: (cont'd)**

	2020											
	Sales and others			Purchase and others								
	Sales	Others	Total	Purchase and others	Others	Total						
Parent company												
POSCO (*)	₩	1,005,205	₩	2,229	₩	1,007,434	₩	5,777,670	₩	137,617	₩	5,915,287
Associates												
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	₩	269,881	₩	-	₩	269,881	₩	424	₩	42	₩	466
SPH CO., LTD		100		49		149		-		-		-
PT BATUTUA TEMBAGA RAYA		-		1,075		1,075		28,174		-		28,174
POSCO-ESDC LTD.		-		57		57		-		3,488		3,488
POSCO IJPC GENERAL MEDICINES CO., LTD.		204,788		-		204,788		2,419		-		2,419
KOREA LNG LTD.		9,790		253		10,043		-		-		-
DMSA/AMSA SOUTH-EAST ASIA GAS PIPELINE CO., LTD.		-		7,755		7,755		-		-		-
GLOBAL KOMSCO DAEWOO LLC		-		60		60		29,202		-		29,202
YULCHON MEXICO S.A. DE C.V.		15		69,925		69,940		-		-		-
POSCO-Malaysia SDN. BHD.		-		29		29		17,094		-		17,094
POSCO-ITPC S.p.A		1,099		-		1,099		-		-		-
TK-Chemical Co., Ltd.		72,591		-		72,591		6,533		-		6,533
Quro Co.		53,229		-		53,229		2,339		-		2,339
Others		104,749		-		104,749		26,863		-		26,863
POSCO ASIA CO., LTD.	₩	71,280	₩	-	₩	71,280	₩	205,620	₩	242	₩	205,862
POSCO-VIETNAM CO., LTD.		143,802		-		143,802		59,292		-		59,292
POSCO-THAINOX		115,190		-		115,190		129,907		-		129,907
POSCO ASSAN TST STEEL INDUSTRY		49,439		48		49,487		53,516		-		53,516
POSCO-AAPC		63,051		-		63,051		6		125		131
POSCO C&C		37,870		-		37,870		204,750		27		204,777
POSCO AMERICA CORP.		131,096		-		131,096		78,897		8		78,905
ZHANGJIAGANG POHANG STAINLESS STEEL CO., LTD.		33,058		-		33,058		1,759		-		1,759
POSCO-Foshan Steel Processing Center CO., LTD.		63,050		-		63,050		1,487		-		1,487
COMPANHIA SIDERURGICA DO PECÉM		13,544		-		13,544		159,548		-		159,548
POSCO Energy Co., Ltd.		126,505		-		126,505		97		-		97
POSCO VST CO., LTD.		280,747		-		280,747		53,698		-		53,698
POSCO SS-VINA		242,393		-		242,393		16,609		-		16,609
PT. KRAKATAU POSCO		92,530		-		92,530		156,454		11		156,465
POSCO Maharashtra Steel PVT.LTD.		168,158		-		168,158		20,957		-		20,957
Others		1,416,977		2,630		1,419,607		340,307		70,120		410,427
	₩	<b>4,770,241</b>	₩	<b>84,110</b>	₩	<b>4,854,351</b>	₩	<b>7,373,805</b>	₩	<b>211,680</b>	₩	<b>7,585,485</b>
	\$	<b>4,023,822</b>	\$	<b>70,949</b>	\$	<b>4,094,771</b>	\$	<b>6,219,996</b>	\$	<b>178,558</b>	\$	<b>6,398,553</b>

(\*) In addition to the above transactions, dividends paid to POSCO for the years ended December 31, 2021 and 2020 amounted to ₩54,331 million (\$45,830 thousand) and ₩54,331 million(\$45,830 thousand), respectively.

**32.3 Significant balances of receivables and payables outstanding with related parties as of December 31, 2021 and 2020 are summarized as follows:**

	2021					
	Receivables (*)			Payables		
	Trade receivables	Others	Total	Trade payables	Others	Total
Parent company						
POSCO	₩ 183,098	₩ 5,261	₩ 188,359	₩ 1,359,614	₩ 55,441	₩ 1,415,055
Associates						
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	₩ 76,036	₩ -	₩ 76,036	₩ 272	₩ 1,553	₩ 1,825
SPH CO., LTD	2	-	2	-	17	17
POSCO-ESDC LTD.	-	-	-	176	837	1,013
POSCO IJPC Shanghai	75,335	-	75,335	-	336	336
Lansheng DAEWOO Corp Shanghai	2,606	-	2,606	-	353	353
Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	-	-	-	-	582	582
GENERAL MEDICINES CO., LTD.	340	-	340	-	131	131
KOREA LNG LTD.	-	877	877	-	-	-
DMSA/AMSA SOUTH-EAST ASIA GAS PIPELINE CO., LTD.	-	47,423	47,423	-	-	-
GLOBAL KOMSCO DAEWOO LLC YULCHON	-	1,623	1,623	806	12	818
MEXICO S.A. DE C.V.	462	-	462	-	21	21
POSCO-Malaysia SDN. BHD.	47,039	-	47,039	-	246	246
POSCO-ITPC S.p.A	19,106	-	19,106	998	55	1,053
Quro Co.	-	-	-	5	-	5
Others						
POSCO ASIA CO., LTD.	₩ -	₩ 6	₩ 6	₩ -	₩ 135,918	₩ 135,918
POSCO-VIETNAM CO., LTD.	8,444	1,011	9,455	2,188	-	2,188
POSCO-THAINOX	5,816	-	5,816	16,067	269	16,336
POSCO ASSAN TST STEEL INDUSTRY	152,910	161	153,071	7,521	1,324	8,845
POSCO-AAPC	15,774	30	15,804	1	1,475	1,476
POSCO C&C	6,031	975	7,006	37,672	4	37,676
POSCO AMERICA CORP.	-	-	-	-	121	121
ZHANGJIAGANG POHANG STAINLESS STEEL CO., LTD.	5,364	28	5,392	25,101	-	25,101
POSCO-Foshan Steel Processing Center CO., LTD.	18,562	-	18,562	-	202	202
POSCO Energy Co., Ltd.	-	-	-	-	1,694	1,694
POSCO VST CO., LTD.	980	431	1,411	6,351	1,799	8,150
POSCO SS-VINA	11,249	-	11,249	1,711	12	1,723
PT. KRAKATAU POSCO	558,512	305	558,817	-	-	-
POSCO Maharashtra Steel PVT.LTD.	-	-	-	11,649	-	11,649
Others	496,124	109,016	605,140	34,342	41,193	75,535
	<b>₩ 1,683,790</b>	<b>₩ 167,147</b>	<b>₩ 1,850,937</b>	<b>₩ 1,504,474</b>	<b>₩ 243,595</b>	<b>₩ 1,748,069</b>
	<b>\$ 1,420,321</b>	<b>\$ 140,993</b>	<b>\$ 1,561,313</b>	<b>\$ 1,269,063</b>	<b>\$ 205,479</b>	<b>\$ 1,474,542</b>

**32.3 Significant balances of receivables and payables outstanding with related parties as of December 31, 2021 and 2020 are summarized as follows: (cont'd)**

	2020					
	Receivables (*)			Payables		
	Trade receivables	Others	Total	Trade payables	Others	Total
Parent company						
POSCO	₩ 55,081	₩ 794	₩ 55,875	₩ 596,874	₩ 9,486	₩ 606,360
Associates						
POSCO MEXICO PROCESSING CENTER HOLDING, LLC.	₩ 87,023	₩ -	₩ 87,023	₩ 117	₩ 809	₩ 926
SPH CO., LTD	2	-	2	-	73	73
PT BATUTUA TEMBAGA RAYA	-	47,689	47,689	-	-	-
POSCO-ESDC LTD.	-	-	-	-	610	610
POSCO IJPC	26,693	-	26,693	46	161	207
Shanghai Lansheng DAEWOO Corp	2,606	-	2,606	-	324	324
Shanghai Waigaoqiao Free Trade Zone Lansheng Daewoo Int'l Trading Co., Ltd.	-	-	-	-	534	534
GENERAL MEDICINES CO., LTD.	1,342	-	1,342	-	11	11
KOREA LNG LTD.	-	696	696	-	-	-
DMSA/AMSA SOUTH-EAST ASIA GAS PIPELINE CO., LTD.	102	-	102	-	-	-
GLOBAL KOMSCO DAEWOO LLC	-	91,003	91,003	-	-	-
YULCHON MEXICO S.A. DE C.V.	-	2,830	2,830	351	40	391
POSCO-Malaysia SDN. BHD.	323	-	323	-	11	11
POSCO-ITPC S.p.A	21,130	4	21,134	446	83	529
TK-Chemical Co., Ltd.	13,409	-	13,409	577	205	782
Quro Co.	21,916	-	21,916	429	-	429
	-	-	-	5	-	5
Others						
POSCO ASIA CO., LTD.	₩ 4,286	₩ 115	₩ 4,401	₩ 52,235	₩ 17,453	₩ 69,688
POSCO-VIETNAM CO., LTD.	4,571	999	5,570	9,666	-	9,666
POSCO-THAINOX	4,248	-	4,248	44,272	14	44,286
POSCO ASSAN TST STEEL INDUSTRY	29,844	172	30,016	2,987	231	3,218
POSCO-AAPC	21,145	-	21,145	-	-	-
POSCO C&C	6,071	510	6,581	14,588	20	14,608
POSCO AMERICA CORP.	182	-	182	25	-	25
ZHANGJIAGANG POHANG STAINLESS STEEL CO., LTD.	3,827	8	3,835	-	-	-
POSCO-Foshan Steel Processing Center CO., LTD.	14,642	-	14,642	9	88	97
POSCO Energy Co., Ltd.	20,267	3,014	23,281	-	1,694	1,694
POSCO VST CO., LTD.	109,029	108	109,137	4,132	27	4,159
POSCO SS-VINA	48,573	-	48,573	967	1,122	2,089
PT. KRAKATAU POSCO	45,098	449	45,547	9,185	21	9,206
POSCO Maharashtra Steel PVT.LTD.	-	-	-	5,828	-	5,828
Others	251,490	90,999	342,489	15,231	30,668	45,899
	<b>₩ 792,900</b>	<b>₩ 239,390</b>	<b>₩ 1,032,290</b>	<b>₩ 757,970</b>	<b>₩ 63,685</b>	<b>₩ 821,655</b>
	<b>\$ 668,832</b>	<b>\$ 201,932</b>	<b>\$ 870,763</b>	<b>\$ 639,367</b>	<b>\$ 53,720</b>	<b>\$ 693,087</b>

**32.3 Significant balances of receivables and payables outstanding with related parties as of December 31, 2021 and 2020 are summarized as follows: (cont'd)**

Allowance for doubtful accounts for the above receivables as of December 31, 2021 and 2020 amount to ₩76,468 million (\$64,503 thousand) and ₩97,713 million (\$82,423 thousand), respectively.

(\*) Other receivables include the amount of loan investment under the relevant agreement, and details of the changes for the year ended December 31, 2021 are as follows.

	Korean won in million			
	Beginning balance	Reversal	Foreign exchange translation and others	Ending balance
SOUTH-EAST ASIA GAS PIPELINE CO., LTD.	₩ 91,003	₩ (47,552)	₩ 3,972	₩ 47,423
U.S. dollar in thousand	\$ 76,763	\$ (40,111)	\$ 3,350	\$ 40,003

**32.4 Key management personnel compensation**

Compensations for key management personnel for the years ended December 31, 2021 and 2020 are as follows:

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Salaries	₩ 12,823	₩ 14,026	\$ 10,817
Long-term employee benefits	1,220	1,272	1,029
Retirement benefits	1,358	1,607	1,146
	₩ 15,401	₩ 16,905	\$ 12,992

**32.5 Guarantees provided to the related parties**

Guarantees provided to the related parties as of December 31, 2021 and 2020 are disclosed in Note 19.6.

### 33. Statement of Cash Flows

#### 33.1 Changes in liabilities arising from financing activities for the years ended December 31, 2021 and 2020 are as follows: (Korean won in millions)

	2021					
	Beginning balance	Cash flows arising from financing activities	Reclassification	Exchange rate fluctuation	Others	Ending balance
Current portion of lease liabilities	₩ 99,909	₩ (108,068)	₩ 78,244	₩ 794	₩ 20,513	₩ 91,392
Short-term borrowings	540,314	992,920	-	771	9,581	1,543,586
Current portion of long-term borrowings	255,724	(537,908)	630,822	2,161	-	350,799
Current portion of bonds	417,042	(437,660)	405,527	23,200	768	408,877
Long-term lease liabilities	165,794	-	(78,244)	3,998	2,323	93,871
Bonds	1,107,420	436,321	(405,527)	4,309	1,055	1,143,578
Long-term borrowings	379,347	433,969	(630,822)	46,159	17,458	246,111
	<b>₩ 2,965,550</b>	<b>₩ 779,574</b>	<b>₩ -</b>	<b>₩ 81,392</b>	<b>₩ 51,698</b>	<b>₩ 3,878,214</b>
<b>U.S. dollar in thousand</b>	<b>\$ 2,501,518</b>	<b>\$ 657,591</b>	<b>\$ -</b>	<b>\$ 68,656</b>	<b>\$ 43,609</b>	<b>\$ 3,271,374</b>
	2020					
	Beginning balance	Cash flows arising from financing activities	Reclassification	Exchange rate fluctuation	Others	Ending balance
Current portion of lease liabilities	₩ 59,897	₩ (94,920)	₩ 129,108	₩ (7,779)	₩ 13,603	₩ 99,909
Short-term borrowings	916,414	(361,048)	-	(15,052)	-	540,314
Current portion of long-term borrowings	108,287	(204,326)	352,103	(339)	(1)	255,724
Current portion of bonds	130,042	(130,000)	430,702	(13,960)	258	417,042
Long-term lease liabilities	219,005	-	(129,108)	(10,670)	86,567	165,794
Bonds	1,243,688	298,995	(430,702)	(6,157)	1,596	1,107,420
Long-term borrowings	734,573	10,373	(352,103)	(18,502)	5,006	379,347
	<b>₩ 3,411,906</b>	<b>₩ (480,926)</b>	<b>₩ -</b>	<b>₩ (72,459)</b>	<b>₩ 107,029</b>	<b>₩ 2,965,550</b>
<b>U.S. dollar in thousand</b>	<b>\$ 2,878,031</b>	<b>\$ (405,674)</b>	<b>\$ -</b>	<b>\$ (61,121)</b>	<b>\$ 90,282</b>	<b>\$ 2,501,518</b>

**33.2 Major investing activities and financing activities that are accompanied by non-cash transactions for the years ended December 31, 2021 and 2020 are as follows:**

	Korean won in millions		U.S. dollar in thousands
	2021	2020	2021
Reclassification of current portion of long-term trade receivables	₩ 16,752	₩ 44,897	\$ 14,131
Write-off of trade receivables	3,471	10,536	2,928
Debt-equity swaps of long-term loans	-	60,278	-
Reclassification of current portion of long-term loans	48,750	50,271	41,122
Reclassification of national subsidies for long-term deposits	704	31,852	594
Reclassification of current portion of long-term borrowings	630,822	352,103	532,115
Reclassification of current portion of long-term bonds	405,527	430,702	342,073
Reclassification of current portion of lease receivables	59,506	78,513	50,195
Reclassification of current portion of lease liabilities	78,244	129,108	66,001
Recognition of right-of-use assets and lease liabilities through acquisition	122,644	55,747	103,453

**34. Business combination**

For the years ended December 31, 2021, the Group absorbed and merged POSCO America Comercializadora, S. de R.L. de C.V. located in Mexico and acquired 60% of the shares by participating in the capital increase of SUZHOU POSCO-CORE TECHNOLOGY CO., LTD. The transaction was a business combination under common control, and the assets/liabilities of the acquired business were recognized as the carrying amounts in the consolidated financial statements of the parent company, and the difference from the consideration transferred was reflected as capital surplus.

The fair values of the identifiable assets and liabilities of POSCO America Comercializadora, S. de R.L. de C.V. and SUZHOU POSCO-CORE TECHNOLOGY CO., LTD. as of the date of acquisition were:

	POSCO America Comercializadora, S. de R.L. de C.V.		SUZHOU POSCO-CORE TECHNOLOGY CO., LTD.	
	Korean won in millions	U.S. dollar in thousands	Korean won in millions	U.S. dollar in thousands
<b>Assets:</b>				
Cash and cash equivalents	₩ 389	\$ 328	₩ 282	\$ 238
Trade and other receivables	25,456	21,473	89	75
Inventories	18,757	15,822	-	-
Property, plant and equipment	27,634	23,310	53	45
Other assets	40,818	34,431	705	595
	<b>₩ 113,054</b>	<b>\$ 95,364</b>	<b>₩ 1,129</b>	<b>\$ 953</b>
<b>Liabilities:</b>	<b>₩ 44,822</b>	<b>\$ 37,809</b>	<b>₩ 4,408</b>	<b>\$ 3,718</b>
<b>Net assets</b>	<b>₩ 68,232</b>	<b>\$ 57,555</b>	<b>₩ (3,279)</b>	<b>\$ (2,765)</b>
<b>Acquisition share ratio</b>	<b>60%</b>	<b>60%</b>	<b>100%</b>	<b>100%</b>
<b>Acquisition net assets</b>	<b>₩ 40,966</b>	<b>\$ 34,556</b>	<b>₩ (3,279)</b>	<b>\$ (2,766)</b>
<b>Transfer price</b>	<b>₩ 37,472</b>	<b>\$ 31,609</b>	<b>₩ -</b>	<b>\$ -</b>
<b>Capital surplus</b>	<b>₩ 3,494</b>	<b>\$ 2,947</b>	<b>₩ (3,279)</b>	<b>\$ (2,766)</b>

**34. Business combination (cont'd)**

Assuming that SUZHOU POSCO-CORE TECHNOLOGY CO., LTD. is incorporated into the consolidated entity from January 1, 2021, the sales and consolidated net income to be incorporated are ₩152,779 million (\$128,873 thousand) and ₩2,727 million (\$2,300 thousand), respectively. In addition, the sales and net income generated by SUZHOU POSCO-CORE TECHNOLOGY CO., LTD. after incorporation into consolidation were ₩34,537 million (\$29,132 thousand) and ₩279 million (\$235 thousand), respectively.

**35. Uncertainty of the impact of COVID-19**

Various prevention and controls, including movement restrictions, are being implemented around the world to block the spread of COVID-19, and as a result, the global economy has been widely affected. In addition, various forms of government support policies are being announced to cope with COVID-19. Items affected by COVID-19 are mainly recoverability of accounts receivable (see Note 5).

The Group has prepared financial statements by reasonably estimating the impact of COVID-19 on the Group. However, the spread or end of COVID-19 in the future may affect the Group's estimates and assumptions, but the impact cannot be reasonably estimated at this time.

**36. Uncertainty of the impact of the Myanmar coup**

The military government of Myanmar announced the establishment of a transitional government in August 2021, and made it official both internally and externally to extend the state of emergency declaration until August 2023 and hold a general election after the state of emergency ends. In addition, the military government of Myanmar mentioned that the National League for Democracy (NLD), led by Aung San Suu Kyi, would be disbanded in the near future. However, as of December 31, 2021, the impact on the business of the Group such as Myanmar gas field in the future could not be estimated reasonably, and the impact from this was not reflected in the consolidated financial statements.

**37. Uncertainty of the impact of the Ukraine crisis**

As of December 31, 2021, account items such as trade receivables, goodwill, and accounts receivable are expected to be affected by the Ukraine crisis. It is expected to affect the payment guarantee arrangements provided by the reporting entity for the borrowings of subsidiaries GRAIN TERMINAL HOLDING PTE. However, the Group cannot reasonably estimate the financial impact of the Ukraine crisis.